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**Better Communication With Quality Nursing Documentation**

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**Objectives:** Introduction  
Nursing Documentation encompasses observation, assessment, planning of nursing action, care provided, patients’ response and effectiveness of nursing actions with professional account of critical thinking and judgment. However, there are various documentation format in TWEH which lead to undesirable impacts on documentation. A nursing documentation audit was conducted in 2014/15 and the overall compliance was 88.32% with 100% compliance on all critical items. It was relatively lower than the previous audit in 2011 (96.08%). Planning of nursing action and care provided were dropped particularly. Aiming at effective supervision and monitoring of nursing documentation, a series of improvements have been initiated.

**Objectives**  
- To improve nurses’ compliance to HAHO Nursing Standard for Patient Care (M2.1) on documenting patient’s condition and care provided.  
- To provide an accurate account of assessment, care planning, treatment and care evaluation  
- To improve communication and dissemination of information between and across service providers

**Methods:** Standardization of Nursing Practice  
Working group members standardized Nursing Prescriptions with pre-print items, revised Nursing Care Plan format and developed the TWEH References on Nursing Documentation Practice to unify practices of different documentation. An integrated Patient Discharge Checklist was also developed to strengthen communication across healthcare providers for ensuring the continuity of care.

**Nursing Staff Training on Documentation**  
3 identical Nursing Documentation Workshops was organized for all TWEH nurses. Good documentation samples, practices not recommended and other professional perspectives of documentation were illustrated. Staffs had to complete a Nursing Documentation Quiz in the workshop for cross-checking their understanding. Training video and materials were also uploaded onto web for staff easy reference.

**Nursing Care Management Round**  
Periodic Nursing Care Management Care Round is done by nurse supervisors with frontline staff to strengthen the management of different patients. It emphasizes on review of nursing assessment, nursing care plan, nursing prescription and discharge planning so that proper, clear, concise and comprehensive nursing documentation is further enhanced.

**Results:** Over 95% of TWEH nursing staff obtained full marks in the Nursing Documentation Quiz.  
100% of nursing staff would receive training on nursing documentation by 2Q15.  
Nursing care management rounds findings were shared among staff to reinforce proper practice continuously.

**Conclusion:** The Way Forward:  
Since nurses have to be accountable and responsible for all aspects of care delivered, quality nursing documentation is certainly very essential in the care process. It actually reflects the application of nursing knowledge, skills, expertise and professional judgment. Thus, regular evaluation audits with suggested improvement strategies would be continued to ensure the quality of nursing documentation.

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http://nursenet.home/Corporate%20Nursing%20Meetings/Coordinating%20Committee%20
Improving The Workflow Of Sample Drugs In Outpatient Pharmacy

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Objectives: Outpatient pharmacy keeps a total of 88 sample drug items. In order to maintain accountability, we practice the use of ‘Voucher System’ as outlined in hospital policy MB-COP-006. Stocks received from the vendors has to be accounted for with regards to the vouchers stating the corresponding drug name, batch number and expiry date. A designated staff has to endorse the vouchers with their signature, department stamp and pharmacy location. Despite our effort, there were still times where we had difficulty tallying physical sample drugs with their corresponding vouchers. The goal of this quality improvement (QI) project is to minimize the discrepancy of sample drugs and to standardize the workflow of handling sample drug vouchers.

Methods: Before the project, there were at least 8 cases of discrepancy every month and an upward trend was recorded. With these, improvement in the sample workflow was identified to be urgently reviewed and revised. Since end April 2014, we prepared and implemented the following:

1. After receiving the prescription with sample vouchers attached at the reception counter. Typist will need to photocopy the original sample vouchers and place it where the bin is located (as shown in figures 5 and 6), to reduce chances of missing vouchers.
2. Typist will then paste the price summary label onto the photocopied sample vouchers and send out to the dispenser. This facilitates backend tallying.
3. Inserting shelf/bin talker to remind pickers to double check batch number and expiry date when picking sample drug.

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2. Typist will then paste the price summary label onto the photocopied sample vouchers and send out to the dispenser. This facilitates backend tallying.
3. Inserting shelf/bin talker to remind pickers to double check batch number and expiry date when picking sample drug.

Results: From an average of 12 discrepancies before implementation to an average of 6-8 cases with the new workflow, we have observed a steady reduction in the discrepancies with every new measure instituted. It is now easier to track the sample vouchers. At the same time, for manpower deployment, with less time spent in tracing and tracking dispensing records, staff members can be freed for other duties.

Conclusion: Successful root-cause analyses and implementation of the QI project led to an improvement in the accountability of our drug samples. It was not only beneficial for our inventory management, but also has potentially reduced waiting time for our patients collecting sample drugs through clear documentation and streamlined workflow.

Disclosure of Interest: None Declared

Keywords: accountability, inventory management, Quality improvement, QI programs in hospitals, TQM/CQI principles, Implementation effectiveness, QI infrastructure determinants.
Evaluation Of Staff Managers’ Satisfaction Walkrounds At The Geneva University Hospitals
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Objectives: The walkrounds management program at the Geneva University Hospitals (HUG) is entitled QuaP (Quality oriented towards the Patient). It includes all 113 in-hospital care units and has started in August 2012. Its objectives are to develop a common culture of quality, identify units’ strengths and weaknesses and highlight areas for improvement. The purpose is not to evaluate employees or stigmatize care units.

The objective of this study is to assess the Staff Managers’ Satisfaction.

Methods: Units are visited by a tandem combining physician or nurse with an administrative executive (top or middle manager). A 1 and 1/2 hour session regarding awareness on how to lead the visit is given to all. Participants are not allowed to visit their own department. A visitor’s guide serves as a helping support. Each care unit is to be visited at least thrice a year. The visit lasts 1 hour and 30 minutes and includes a total of 45 questions divided into 5 domains: general observation, interview with a patient or relative, interview with a doctor or nurse, review of medical and nursing records. Potential good ideas or critical points are highlighted at the end of the visit. A computer application was developed and all observations are entered on a tablet. The results are presented as a colour mosaic synthesizing the last 10 visits with chronological tracking scores and are accessible to unit leaders and services with an individual code.

A satisfaction survey was done in February 2014 among 105 Nurse Unit Managers (NUMs).

Results: After 18 months of deployment (August 2012 - January 2014), 335 visits have been carried out involving 181 visitors. 77 % of the units have been visited 3 times or more, 20 % twice and 3 % once. The response rate of NUMs satisfaction study was 70% (74/105). Respondents answered that the visit’s concept enables: to improve the quality of care at HUG (74%), to identify potential areas of improvement for the units visited (82%), to improve staff knowledge (82%). 95% of NUMs consult results and discuss them with team (92%) and managers of other units (52%). 75% of staff confirmed that they detected areas of improvement concerning: medical and nurse record (31%), patient information (27%), medication (17%) and fire (15%). 75% of NUMs have programmed improvement actions and 62% conducted improvement actions. 72% of NUMs are globally satisfied with this project and 68% would recommend it to colleagues working in other institutions. Analysis of open comments: some NUMs experienced visits as a control and expressed some fears that results could be use to assess their performance by the top hierarchy.

Conclusion: The project is now deployed across all care units. This project has led to several actions for improvement initiated by the care units themselves. The next steps will be to document actions for improvement following the visits, and ensure the sharing of good ideas for a generalization in other sectors.

Disclosure of Interest: None Declared

Keywords: satisfaction survey, Staff Managers, walkrounds management
Impact Awareness of Kab Collaborators in the Release of Examination Protocols Results in Unimed Santa Helena Hospital
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Objectives: Comply with the release timing of tests results of institutional protocols.

Methods: This study was developed at Unimed Santa Helena Hospital, a general – predominantly surgical with 252 beds – tertiary, private hospital in São Paulo, in south-eastern Brazil. Trainings were performed, in site, with laboratory collaborators in November/14, in a playful way, with andragogical vision approaching relevant aspects in adults training where learners are prepared to start a learning action by getting involved with their role in facing real problems. These trainings were performed by the protocols and continuing education sectors, aiming to aware the laboratory staff about the timing to release laboratory tests according to the sepsis and chest pain protocol, which exceeded the agreed timing of release. Thus, we developed two panels, one for the sepsis protocol and another one for the chest pain protocol, in order to represent the managed cases in September/14 and October/14. The laboratory tests were represented by figurative tubes and for all missed timing we put a black cross to cause impact. We also worked with the term ‘saved lives’ for all those laboratory tests that were released at the agreed timing for the protocol.

Results: As a result, we noticed that in sepsis protocol in September/14 and October/14, from 60 managed protocols, 29 (48.5%) were released at the agreed timing. After the intervention we noticed that in December/14 and January/15, from 81 protocols managed, 61 (64%) were released at the agreed timing, ie, an increase of 15.5% in released tests within the agreed timing. The chest pain protocol in September/14 and October/14, from 26 managed protocols, 15 (54.8%) were released at the agreed timing. After the intervention we noticed that from December/14 and January/15, from a total of 11 managed protocols, 8 were released in the agreed timing, an increase of 16% in released tests within the agreed timing.

Conclusion: We have concluded that the andragogical methodology helped to raise collaborator awareness about the importance of releasing protocol tests on time, since we have obtained a significant increase in the decreasing of tests release timing.

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2. Instituto Latino Americano de Sepse (Latin American Sepsis Institute).

Disclosure of Interest: None Declared

Keywords: Impact Awareness, Lab Results, Protocols
Clinical Prevention Protocol For Catheter-Associated Urinary Tract Infection (CAUTI) Designed To Serve Socio-Cultural Differences Of Brazil
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Objectives: To develop a clinical protocol to prevent Catheter-Associated Urinary Tract Infection (CAUTI) using a set of best practices and disseminate this practices as "critical markers", ie, markers that add therapeutic value, and have impact on the results, understanding the differences in maturity of hospitals in Brazil, in respect to patient safety.

Methods: In 2008 the IQG – Health Services Accreditation (IQG), with the support of the Canadian Patient Safety Institute (CPSI), of the Institute for Healthcare Improvement (IHI) and of Accreditation Canada International, developed the Brazilian Patient Safety Program (PBSP). Through the voluntary participation of Brazilian hospitals, the Program promotes the dissemination of safety practices and the exchange of experiences among the participating institutions.

The Catheter-Associated Urinary Tract Infection (CAUTI) has become increasingly more common in Brazil. Based on that, in the last quarter of 2013, the Brazilian Patient Safety Program (PBSP), in collaboration with the Canadian Patient Safety Institute (CPSI), reviewed the prevention of CAUTI clinical protocol considering the reality of the Brazilian hospitals. A set of best practices were used as clinical markers that, when implemented together, should result in a reduction in CAUTI incidence. To develop this study an n = 74 participating institutions were involved, identifying 28,580 patients at risk during the year of 2014. For the method to be successful it was necessary that all the critical markers were used together. The participant institutions of this study have different maturity levels regarding the quality and safety of the patient and they all have followed the same markers and ways of data collection, in order to standardize the protocol.

Best practices recommended and used as critical markers of the protocol are: Hand hygiene before and after insertion of the indwelling catheter; Aseptic technique in the insertion of indwelling catheter and Closed System; Proper maintenance of Indwelling Catheter; Daily review of Indwelling Catheter indication; Scientific and technical support to participating institutions through monitoring and guidance throughout the process of protocol implementation, ie, from the implementation to data collection, analysis and feedback to institutions.

Results: Our results have shown that the compliance to all the critical markers defined by the Protocol reached or were very close to the goal of 95% during the year of 2014. We have also noticed a decreasing tendency when analyzing the density of incidence of CAUTI through the same year. Comparing the data of the first half of 2014 to the second half of the same year we observed that the average density of incidence of CAUTI was impressively decreased by 46.3%.

Conclusion: Our data suggest that the markers proposed in this clinical protocol, when used together, have a impact on the reduction of CAUTI incidence, adding therapeutic value and presenting a positive impact on the clinical outcome of the patient. This result indicates that the methodology used for the dissemination of the safety practices elected in the protocol was effective in improving the safety and clinical outcome of patients seen in the participant hospitals of the Brazilian Patient Safety Program.

Disclosure of Interest: None Declared

Keywords: CAUTI, PBSP (Brazilian Patient Safety Program)
A Foreign Caregiver Oriented Educational Program Improved Care Quality of Dialysis Vascular Access


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Objectives: In Taiwan, the percentage of foreign care-giver engaged in HemoDialysis (HD) patients’ care has increased in recent years. However, educational program in these subjects is unavailable and the general care might be limited and incomplete. We design and introduce an educational program for foreign care-giver to improve their quality of care in HD fistula.

Methods: A total of forty foreign caregivers were enrolled to receive an educational program in HD unit of a medical center. Their nationality included Indonesia and Philippines. Questionnaires were used to evaluate the following items regarding fistula care: accuracy, confidence and stress impact. In the first phase, the questionnaires were used to assess the primary situation before educational program. A cause-and-effect diagram was utilized to analyze the data in the first phase, then, an educational program was introduced according to the components of House of Quality. This video-assisted education provided an original—language based program to facilitate understanding and performance of fistula care. In the second phase, the same questionnaires were applied again to examine efficiency of the educational program.

Results: After the introduction of education program, the accuracy rate was improved from 69.4% to 95.3% in arteriovenous fistula care, 70% to 100% in temporary HD catheter care. The confidence rate increased from 17% to 63%. The rate of stress impact decreased from 100% to 70%.

Conclusion: A caregiver oriented educational program effectively improved the care quality in vascular access care of HD patients. Moreover, the psychological benefit was also enhanced. These results may lead to a better outcome of dialysis fistula.

Disclosure of Interest: None Declared

Keywords: EDUCATIONAL PROGRAM, FOREIGN CAREGIVER
The Willingness to Pay for Public Healthcare Quality Improvements in Saudi Arabia

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The universal publicly funded healthcare system in Saudi Arabia, financed entirely from oil revenues and “free at the point of delivery” (non-contributory), is coming under increasing strain, and is likely to be unsustainable in the medium to long term. Moreover, there is some dissatisfaction with the quality of current public healthcare services. In this paper, we estimate the Saudi people willingness to pay values for improvements in the quality of public healthcare services, using a contingent valuation method. The study also determines the association between the willingness to pay for quality improvements and the respondents’ demographics and socioeconomic characteristics. A multi-stage sampling technique was used to recruit the study sample of 1187 households. Empirical analysis shows that the majority of the sample are willing to pay for quality improvements in the public healthcare services. If the quality of the services improved, the Saudi people would be willing to participate in the financing of the healthcare system, and, an insurance premium could be set. The results of this study can be of use to the policy makers to help in both priority-setting and fund allocation.

Keywords: Healthcare Finance, Health Insurance, Public Preferences, Willingness to Pay
Improvement of Customer Satisfaction through Development and Application of Smart Health Questionnaire

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Objectives: Filling out health questionnaires regarding checklist for medical checkup, medical history, past disease history and medication history before medical checkup is the essential process to derive accurate results and suitable inspections. Commonly used paper health questionnaire frequently involves restriction in time and space for filling out, and shows the unnecessary questions for some respondents, resulting in confusion. Some respondents even lose a paper health questionnaire. As such, the voice of improvement of paper health questionnaire has rung out. In light of this, smart health questionnaire system based on internet web can be used, which has no restriction in terms of time and space and can be filled out easily in PC. Basic information without big variation every year is automatically updated to reduce data error rate and the time taken to fill out questionnaire. This activity aims to examine how much the customer satisfaction has improved through development of web health questionnaire (smart health questionnaire).

Methods: To apply for smart health questionnaire, several rehearsals were conducted on the employees in April. 2013 and the problem were compensated. In April ~ May, the problems generated at the early phase of introduction were improved on the first basis, the demonstration project was applied on young generations. With step-by-step expansion and application, full-scale smart questionnaire has been carried out since July and it was tried to minimize inconvenience of examinees in this process. Quality was managed through verification of web data and with preparation of indicators after that, it has been verified regularly and the problems were complemented.

For active promotion strategy, service design team was organized. With focus on image of nature-friendly eco examination, there have been various kinds of promotions including promotion on how to use video, banner on homepage and blog, leaflet production, recycled pencil give-away event, creation of QR code, sending of information SMS on smart questionnaire, arrangement of helper in the center so that examinees can be familiar with smart health questionnaire.

Results: After improvement activities, satisfaction of examinee on smart health questionnaire reached 78%, and filling-out rate reached 75% in October. 2013, far exceeding the goal (customer satisfaction: 70%, filling-out rate: 65%). Besides, smart health questionnaire have been sent accurately and promptly on the date of health examination so that safe examination can be performed. System management has been made easier and printing costs reduced, showing significant effects in terms of operation. In 2015, customer satisfaction and filling-out rate has been continuously improved through steady post-management.

Conclusion: Smart health questionnaire, taking a total of 10 months for development, has been registered as the computer program work under Korea Copyright Commission. Programs have been developed, which enables to check the results by e-mail or by phone (mobile) through smart health questionnaire. By enabling “Family Love SMS Service” that shows the progress of medical examination to the mobile phone of a guardian, further development has been achieved advancing from smart health questionnaire to smart medical checkup.

Disclosure of Interest: None Declared

Keywords: Customer Satisfaction, Medical checkup, Web browser questionnaire
Evaluation of a National Electronic Medical Record Exchange System in Taiwan
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Objectives: To improve the patient information sharing in Taiwan, a national Electronic Medical Record (EMR) exchange system was established in 2012 by the Ministry of Health and Welfare. A 3-year evaluation study of EMR exchange across nation was conducted in a medical center (National Cheng-Kung University Hospital, NCKUH). Several suggestions of user evaluation and critical issues concerned were proposed for future enhancement of interoperable EMR exchange.

Methods: The national EMR Exchange Center (EEC) has been implemented for three years. It is time to do an evaluation of EEC functions and its clinical use. To transmit hospital’s EMR to EEC correctly, a multidisciplinary project team of EMR in NCKUH was organized, an EMR transmission service which used HL7-mandated codes from hospitals to gateway and gateway to EEC was implemented. Four categories of EMR (medical image and report, blood examination report, inpatient prescription, discharge summary) were transmitted to EEC for exchange in a daily basis. A standard operation of EEC procedure and one-stop service window were setup. Statistics of EMR transmission and frequencies of user enquires had been monitored and analyzed by the project team periodically and systematically.

Results: After a 3 year follow-up study of EMR exchange, the correct transmission records of EMR from NCKUH to EEC had been up to 3,000,000 yearly on average; 70% was blood examination reports, 25% was inpatient prescriptions. The number of medical institutions enquiring EMR via EEC was up to 56 different hospitals within the collaborative network of NCKUH. Among them, 80% of EEC users was from small hospitals and clinics located in north, central or south regions, the other 20% was from other large medical centers. In addition, we used an onsite visit to evaluate system functions and user experiences of EEC. Our study showed that users considered the information security and transmission error handling of EEC were the most concern issues. EEC should provide a better resending mechanism and more error log analysis information to hospitals.

Conclusion: The national EEC service coupled with the hospital EMR exchange gateway proved to be effective in improving the patient information sharing across nation in our study. We suggest that more efforts should emphasize on the information security management, the resending mechanism and the user satisfaction of EEC. We believed that the evaluation of NCKUH case will be beneficial to future enhancement of interoperable EMR exchange in Taiwan.

Disclosure of Interest: None Declared

Keywords: Electronic Medical Record (EMR), National EMR Exchange Center (EEC)
Secondary Use Of Routine Data To Improve Medication Safety In Hospitals: A Systematic Review

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Objectives: The widespread development and implementation of Electronic Hospital Pharmacy (EHP) and Electronic Prescribing (EP) systems has created an opportunity for Secondary Use of Data (SUD) to improve quality and safety. We aimed to review and synthesise the available evidence concerning the practices and effectiveness of SUD from EHP and EP systems to improve medication safety.

Methods: Method: PRISMA reporting guidelines were used. SUD was defined broadly as ‘re-use of clinical and operational data for purposes other than direct patient care’. Study eligibility was therefore defined as all articles which evaluated re-use of pre-existing electronic data in a hospital setting to assess medication safety, errors or quality improvement. The search strategy had 5 facets: electronic databases, medication safety, quality and safety, hospitals, and secondary use of data. The search was conducted in the following 4 databases with no limits applied: Medline, EMBASE, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and International Pharmaceutical Abstracts (IPA). Articles were processed through 5 stages: title screening, abstract screening, full text screening, data extraction and quality assessment. In selection of articles for inclusion, we focused on those that reported evaluations of SUD interventions, defined as re-use of existing electronic data (from EP or EHP) to change a process, either directly or as part of a complex/multi-faceted intervention. At all 5 stages, a sample of articles were reviewed by a second reviewer and inter-rater reliability was calculated.

Results: We retrieved 3,308 articles after deduplication. Assessment of these records for inclusion revealed that in addition to evaluative reports of SUD interventions, the SUD concept was implemented in various ways within the research literature, including as a means of evaluating unrelated interventions and in studies which sought to quantify the prevalence of medication errors or other outcomes. Studies reporting empirical evaluations of SUD interventions were identified and these were mostly based in UK and USA. These evaluative studies focused upon a number of outcomes including: reducing dose omission rates to improving medication quality and safety. Reported SUD interventions included provision of feedback to clinicians, dashboard displays and to steer care omission meetings. While heterogeneous, all studies reported positive findings in improving medication safety.

Conclusion: There are a variety of articles reporting SUD to identify areas of concern or assess the processes in place. However, relatively few robust evaluative studies have been reported in which SUD is assessed as an intervention to improve medication safety. In the current healthcare climate where resources are scarce, re-use of existing data is appealing as a means of maximising return on investment in electronic systems. Considerable scope exists to develop both SUD as an intervention within improvement science and evaluative methodology in this area. SUD interventions can provide process monitoring and stimulate quality improvement. Therefore more empirical evaluative research is required in this area to assess the sustainability of SUD interventions, as well as explore the potential barriers or limitations to SUD interventions in relation to medication safety.

Disclosure of Interest: None Declared

Keywords: Electronic prescribing and pharmacy systems, Medication Safety, Secondary use of data
Nursing Experience of a Haemodialysis Patient who Faced Frequent Vascular Access Occlusion
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Objectives: This article is to discuss a nursing experience with a patient who received long-term haemodialysis and suffered from frequent vascular access occlusion up to 18 times in six months period although received invasive medical procedures repeatedly. The care period was from September 10 to October 19, 2013.

Methods: The author collected information of the patient by actual nursing care, physical examination, face to face communication and other skills during haemodialysis three times weekly. Through nursing process and recall, the Gorden’s 11 functional health assessment was used to evaluate patient condition. The main nursing problems were ineffective ability of health maintenance, hopelessness and anxiety. In nursing process, a good therapeutic relationship between the author and the patient was established. Author understood actively and listened to the anxiety and thoughts of case for frequent vascular access occlusion. According to the individual needs of the case, used leaflets of nursing health guidance, providing self-care related information for dialysis vascular access.

Results: Requested the patient to reply the proper execution of teaching content then gave verbal encouragement and affirmation timely. The author with the patient co-designed a personal "Tables of vascular access self-examination" to increase the opportunity of participation in vascular access self-care and motivation to learn, so that case enhanced self-worth feeling.

Conclusion: When patient had doubt, we discussed the proper method of solving and monitor the effectiveness together; enhanced confidence of self-care in vascular access to make the case to extend the life of vascular access, and to accept the physical and psychological comfort haemodialysis.

Disclosure of Interest: None Declared

Keywords: haemodialysis, vascular access occlusion
The Effects Of The Application Of Barcode Technology In Tracking Specimens And Minimizing The Laboratory Test-Related Errors
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Objectives: Collecting and delivering the specimens are important issues in patient safety. In order to improve the safety of patient identification and simplify the workflow for the collecting the specimens, we conducted the barcode laboratory system comprehensively with the blood collecting in a 1,300-bed medical center in Southern Taiwan.

Methods: We developed and conducted the barcode laboratory system in the periods of nurses preparing specimen labelling, patient identification when drawing blood, specimen delivering, analyzing in the clinical laboratory department in 2014 until now. We used the barcode labels in order to make up of the safety barriers from specimen collecting, delivering to analyzing period. By using the barcode laboratory system, the specimen barcode labels will be produced by the barcode information system automatically and correctly when nurses scan the barcode on the specimen sheet. For this reason, nurses retrench time for writing, avoid mislabelling, moreover, they use the barcode equipment on the mobile e-nursing cart to confirm patient identification by scanning the barcode on patient name band and the kinds and numbers of the specimens will be showed automatically in the medical information system in the specimen collecting period at the patient’s bedside. For increasing the correct rate of collecting, we designed the friendly information system including the informative function on collecting sequence and announcements. In the delivering period, we developed the barcode tracking system to recode the information and time of the staff drawing blood, delivering and analyzing in order to trace and provide information for physicians, nurses, deliverymen and laboratory technicians. In the analyzing period, we used the barcode on the specimen to track the progress of the analysis and monitor the turnaround time.

Results: By the implementation of the barcode laboratory system, the numbers of the laboratory test-related errors reduce from 18 to 10 in 2013 and 2014 respectively. Further we analyzed the reasons and stages of those events, the events of errors in mismatch specimen sheet reduce from 3 to zero. The events of errors in collecting wrong time and volume reduce from 1 to zero separately. The events of errors in patient identification reduce from 11 to 6. Further to analyze the 6 patient identification errors in 2014, we found out that the nurses did not follow the standard operation procedures for using barcode to identify patient completely. The events of errors in delivering period did not reduce (from 3 to 4), because initially we do not request the laboratory personnel to count the total numbers of specimens when deliverymen transferring the specimen. In order to improve the 10 laboratory test-related errors in 2014, we reacted the plan to audit the compliance rate of the barcode standard operation procedures and revised the standard operation procedure for the delivering the specimen in September 2013. Then there is no related error occurred again.

Conclusion: This result came to the conclusion that the application of the barcode technology not only improve the workflow for the healthcare personnel related the laboratory procedures, but also reduce the laboratory test-related errors in order to promote the patient safety.

Disclosure of Interest: None Declared

Keywords: Barcode Laboratory System, Information Technology, Patient Safety
Improving Quality Of Care Through Standardization And Computerization Of Endoscopic Medical Records
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Objectives: At the Gangnam medical center, healthcare professionals handwrite patient information useful in the endoscopic examination process (preparation, examination and recovery) and include the information in their medial notes/charts to share. These medical records are currently retained for three months and then discarded although they contain important patient information such as past medical history, medications, sedation assessment, evaluation of recovery, an occurrence of an event under examination. By standardizing and computerizing medical documentation on endoscopy and related processes, we intend to effectively manage patient information.

Methods: After multiple revisions, we created a new endoscopic medical record documentation form to improve the current recording practice. First, we standardized the format of medical records for each phase of the endoscopic examination process (preparation, examination and recovery). The preparation phase form now contains nine items such as endoscopy related medication history and past endoscopic information and personal requests for examination. The examination phase form has ten items such as events that may occur during examination and customized recovery related to the examination process. The recovery phase form is composed of six items, and the discharge form has three items. After incorporating all the staff’s feedback, we computerized the documentation form with the goal of minimizing an information omission rate to less than 5%.

Results: After implementing the new endoscope documentation form, we have examined an information omission error rate three times. The first attempt yielded a 35.3% of the omission error rate, which was higher than initially projected. After identifying the root cause of the omission and fixing the problem, we noted that the omission error rate gradually decreased to 16.4% and 1.1%, respectively, in the second and third surveys.

Conclusion: Electronic endoscopic medical records have allowed us to capture and review all the necessary checklist items for the endoscopy examination process in a centralized location, resulting in managing patient information more effectively. This new electronic documentation form will also help us store patient information and utilize it for the patient’s next examination visit, making the examination process more seamless. Additionally, providing customized care service to patients by utilizing endoscopic medical records stored and reviewed will further increase the patient’s satisfaction and improve quality of care. To streamline the endoscopy examination process, the electronic medical document management system should be continuously monitored and improved.

Disclosure of Interest: None Declared

Keywords: standardization
Predictors for 7 Day Hospital Re-Admission
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Objectives: Find a methodology to predict patient readmissions to hospitals within seven days of discharge & Discover predictors to identify patients who may need additional interventions in preparation for a safe discharge.

Methods: Based on the domain knowledge provided by the clinicians, 22 variables were used to predict the readmission of patients, within 7 days of their discharge. Neural network (NN) based machine learning (built using MATLAB NN toolbox) and Binary logistic were applied to predict readmission rates. Several models were built using different combinations of the 22 variables with varying numbers of hidden neurons. The selection of variables was based on a combination of domain knowledge, where features that contributed to higher classification accuracies were retained. The result section shows the average accuracy for the best models which were obtained after 10 iterations.

The following variables were extracted from the patient electronic medical records for this study:

1. DX_ALERT =Patients diagnosed with depression or Failure to Thrive (FTT)
2. PRIM_PAYOR_BEN_PLAN_ROLLUP =payment model: self, government or company
3. AGE_YEARS =age of patient
4. DEPT_DESC =department
5. ADMIT_SOURCE_DESC =department from which patient got admitted
6. TOT_3MTH, TOT_6MTH, TOT_12MTH = # times patients were admitted in last 3, 6, 12 months
7. IP_3MTH, IP_6MTH, IP_12MTH = admitted in last 3, 6, 12 months
8. CLINIC_3MTH, CLINIC_6MTH, CLINIC_12MTH = # clinical visits in the last 3, 6, 12 months
9. MED_CNT = # medications the person was on, at admission
10. DEPT_DESC = Type of clinical service
11. Admit_Clinical_Service_Desc = Dept. patient got admitted
12. Diagnosis rank = Primary diagnosis
13. Days = Length of hospital stay

Results: The 22 variables were extracted from the patient electronic records. It shows accuracies related to statistical and machine learning methods.

Model Stat1: 1, 2, 3, 5, 8, 11, 14, 17, 18 variables; accuracy 96.6%
Model Stat2: 1, 2, 3, 5, 8, 11, variables; accuracy 96.7%
Model NN1: All 22 variables; # neurons 15; accuracy 97.5%
Model NN2: all variables except 20, 5, 19; # neurons 15; accuracy 96.4%

Previous experience indicates that depressed and FTT patients were more likely to be readmitted, but we found no significant difference between these and other groups of patients, as also discovered by studies in literature [1]. Although the models in this study produced high classification accuracies, their capacity to recall readmissions were limited. The lower recall rate could be partially attributed to the lack of information from patients on circumstances surrounding care in a home environment. Continued hospital support during care transitions have proved to be beneficial in reducing readmissions.

Conclusion: Machine learning methods produced slightly better results over the statistical methods. The best results are obtained when all the 22 features are used for our analysis. This study reiterates the need to gather more information from patients on factors related to home environments that might be beyond the influence or control of the hospital. This knowledge can facilitate better managed care transitions. Nevertheless, this study provides a significant understanding of the factors that influence safety and quality involved in patient care and discharge from hospital.

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Disclosure of Interest: None Declared

Keywords: Hospital re-admission, prediction models, safe discharge
Predication Model For Time Interval By Using Haemoglobin A1C From Pre-Diabetes Progressing To Diabetes

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Objectives: Haemoglobin A1c (HbA1c) values are universally accepted as a mean for monitoring diabetes control, its measurement is important to detect progression of diabetes earlier rather than random glucose. We aim to evaluate the time interval between pre-diabetes to diabetes with anti-diabetic drugs by using HbA1C as a diagnostic tool, and predicting it using a mathematic model.

Methods: We collected HbA1C data from Taipei Medical University Affiliated Hospitals database between Jan. 2007 and Jun. 2011. We identified 49,648 potentially eligible subjects who took HbA1c tests but only 1252 subjects fulfilled criteria of having at least two HbA1c tests before start taking anti-diabetic medications. A linear regression trend-line applied to calculate the time interval of HbA1c level ranges from 5.7% to 6.5% in overall subjects as well as three individual groups (i.e. low risk – patient with first time HbA1c level less than 5.7%; increased risk - patient with first time HbA1c level in between 5.7% to 6.5%; high risk - patient with first time HbA1c level higher than 6.5%). Other confounding factors such as lab tests were also adjusted during the analysis process.

Results: We found that overall subjects with HbA1c level rising from 5.7% to 6.5% was 907 days (SE, 103) to start talking anti-diabetic drugs. While we observed in each group mean days for low risk group was 1169 days (SE, 332), increased risk group 1080 days (SE, 176) and 729 days (SE, 131) for high risk (diabetes) group (Table). This model is valuable as it helps to predict the diabetes progression based on HbA1c values in individuals with risk of diabetes.

Conclusion: This prediction model is very useful to help prioritize the diagnosis at an early stage for targeting individuals with risk of diabetes. Using patients’ HbA1C before anti-diabetes drugs are used we predicted the time interval from pre-diabetes progression to diabetes is 2.49 years without any influence of age and gender. Additional studies are needed to support this model for a long term prediction.

Disclosure of Interest: None Declared

Keywords: HbA1c time interval detection for diabetes onset, Prediction model for diabetes
Decision Support System Reduced Pharmacy Interventions In An Emergency Department
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Objectives: This study evaluates the impact of Computerized Physician Order Entry (CPOE) used in conjunction with a Decision Support System (DSS) on the prevalence and types of interventions by pharmacy staff during the prescription-filling process in an Emergency Department (ED).

Methods: We conducted a retrospective cohort study comparing 6 months of pharmacy interventions before and after implementation of DSS on an existing CPOE in an academic tertiary care medical center ED. The primary outcome measure was overall incidence of prescription interventions made by pharmacy staff during the study period. The secondary outcome measure was the difference in the incidence of prescription interventions made by pharmacy staff within each category of intervention type. A Chi-square test was used to compare the difference in the prevalence of prescription interventions performed before and after implementation of DSS.

Results: In the 83912 patient encounters during the study period, pharmacy intervened on 1560 medication prescribing errors. Of these, 836 prescribing errors occurred from 40606 patient encounters before the implementation of DSS and 724 prescribing errors from 43306 patient encounters occurred after the implementation of DSS. The total percentage of interventions declined from 2.06% to 1.67% (p <0.01) with the implementation of DSS. The types of interventions that decreased after DSS implementation were avoidance of adverse drug event (0.27% to 0.08%, p <0.01), clarification of drug order (0.44% to 0.10%, p <0.01) and inappropriate dosage regimen (0.36% to 0.21%, p <0.01). However an increase in therapeutic substitution (0.57% to 0.83%, p <0.01) was observed after DSS.

Conclusion: Implementation of DSS was effective in reducing the overall number of prescription interventions performed by pharmacy staff and this implies its efficacy in reducing the number of medication errors due to prescribing errors in ED.

Disclosure of Interest: None Declared

Keywords: emergency department, Health informatics, Pharmacy
Physicians’ Perspective on Clinical Decision Support System for Adverse Drug Events
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Objectives: We have developed a clinical decision support system on the IIMS (Integrated Intelligent Management System), which enabled physicians to order any medication with recommended doses for the renal function of each patient. It also alerted all healthcare professionals about the incidence of diarrhoea of patients who were administered any antibiotics during their hospitalization. Such implementation of additional steps of orders in daily practice might be associated with delay of practice and evoke irritations among healthcare professionals. We thus conducted cross-sectional study to evaluate the acceptance and opinions of physicians after the implementation.

Methods: We distributed questionnaires anonymously in July 2014, 7 months after the implementation of the decision support system. We asked about:
1) experience of the discrepancy of dose of drugs between the intention of physician and the recommendation of decision support;
2) experience of override of recommendation;
3) experience of withdrawal or change of antibiotics after the alert of diarrhoea;
4) usefulness of decision support for recommended dose or diarrhoea alert;
5) experience of promoted communication between healthcare professionals. We also collected the background of physicians.

Results: We obtained 82 responses from 167 physicians (response rate 49%). 54% (44/82) physicians experienced the discrepancy of dose of drugs between intention and recommendation. However, 41% of physicians (34/82) also overrode the recommended doses due to clinical conditions. 23% (19/82) of physicians withdrew the antibiotics when they saw the alert, and also 23% (19/82) changed the antibiotics. 74% of physicians reported the recommended dose was beneficial while 7% were useless. 44% reported the alert of diarrhoea was also beneficial but 16% were not. 32% (26/82) of physicians reported our decision support system improved the communications between healthcare professionals.

Conclusion: The clinical decision support system equipped with recommended dose by renal function and alert of diarrhoea from antibiotics was generally accepted by physicians and had changed the practice and communications.

Disclosure of Interest: None Declared

Keywords: adverse event, decision support system
Objectives: The objective of this research was to analyze telemedicine as a tool to expand access to healthcare in Brazil, within the context of the Unified Health System (SUS). Currently, access difficulties are a major problem for healthcare systems and countries worldwide.

Methods: We have used analytical qualitative methodology of the "Theory Building from Cases" kind, involving the study of two current systems: The Telehealth Network of Minas Gerais and the Telehealth Network of Canada, seeking to provide positive arguments for the incorporation of telehealth on the strategies and the policies of public healthcare in Brazil.

Results: The results have showed that telemedicine can increase access to healthcare in remote and rural areas, produce savings of resources due to reduction on patient travelling expenses, enable distance training of healthcare professionals and, thus, improve the quality of the healthcare provided altogether.

Conclusion: In conclusion, our research has showed that telemedicine can be an efficient tool to increase access to healthcare in Brazil, contributing to the compliance with the principles of SUS universality, comprehensiveness, equity and solution. The incorporation of telehealth within the healthcare system policies with financing integrated in the public budget is critical to the success of this tool.


Disclosure of Interest: None Declared

Keywords: Access to healthcare, E-health, Telemedicine
Exploring The Feasibility And Acceptability Of Remote Consultations Via Skype In A Diabetes Service

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Objectives: The DREAMS project (Diabetes Review, Engagement and Management via Skype) aimed to explore the role of remote (Skype) consultations in a Diabetes service. Key objectives were to:

- Understand how the introduction of remote consultations alters patterns of service use
- Explore the patient experience (positive and negative) of remote consulting
- Identify the challenges of introducing remote consultations in a clinical setting

Methods: The two-year study was designed as a mixed-method organisational case study within a Diabetes clinic in East London. The sample consisted of six staff members (doctors, nurses, administrative) and 104 patients. The project consisted of three components:

a) quantitative study of service use;
b) clinical case studies of 16 patients; and

c) qualitative process evaluation of the organisational challenges involved in the Skype service.

The data on service use included number of appointments (face-to-face and via Skype), ‘do not attend’ (DNA) rates, and acute diabetes-related admissions. The clinical case studies consisted of narrative interviews with the patient, extracts from medical case notes and a semi-structured interview with the doctor and nurse caring for that patient. The process evaluation consisted of three patient focus groups, one staff focus group and 12 hours of ethnographic observations in the clinic.

Results: The quantitative data on service use showed a lower DNA rate for Skype appointments (7%) compared to face to face appointments (24%). Participants reported that Skype helped save time and fit appointments around their lives, but also emphasised the importance of face-to-face encounters for emotional support and hands-on practical guidance (e.g. how to use an insulin pump, discussing fluctuations in blood sugar reading).

The clinical case studies revealed that patients live very varied lives and cope to different extents and in different ways with the challenges of diabetes. Some were unwilling to engage with the service face-to-face or via Skype due to psychosocial rather than practical reasons. Skype was used flexibly and adaptively to fit consultations around the patient’s life and support needs. This was possible through Skype functionality (messaging, ‘online’ status) and positive relationships between the patient and clinician.

The process evaluation highlighted technical and logistical challenges to implementation of Skype in the clinic. Formalised processes were required to setup and maintain the technology (e.g. installing/updating software, managing Skype accounts) and align the technology with existing processes and practices. We found that the technology can sometimes change a patient’s expectations about the clinician’s role and availability (e.g. seek support outside office opening hours), and so it was necessary to continually assess how such changes can be managed within service.

Conclusion: Skype can play an important role in helping fit consultations around everyday lives and maintain ongoing communication between patients and clinicians. The use of the technology needs to be adapted to the patients’ lives, technical and clinical knowledge. Implementation requires some formalised procedures to align the technology with existing processes, but must provide sufficient flexibility to fit the technology around the needs of the patient, and allow them to take the lead in service engagement. The service development requires a deep understanding of how the technology changes the dynamic between the patient and service, and so ongoing discussion among staff (and patients) about how it affects their work should be encouraged, and fed back into the service design.

Disclosure of Interest: None Declared

Keywords: Diabetes, Health informatics
Improving Productivity With Information Technology Challenges For Hospitals With Limited Resources
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Objectives: To underline the difficulties in HIT selection and implementation, and propose solutions to improve safety and productivity from IT drawing on practical experience and literature review and study of available systems and resources.

Methods: Literature review, current systems, practical experience analysis

Results: Hospitals have to juggle between a wide choice of systems to meet a multitude of increasing needs while trying to improve safety and productivity in a setup that is neither optimal nor prepared for the digital transition.

Conclusion: No system can answer all needs. Communication and integration are key success factors to achieve the objectives. Business intelligence tools can be used to increase the inter-operability between systems and improve the visibility of the hospital upon its operations.

References: Benchmarking health IT among OECD countries: better data for better policy Julia Adler-Milstein, 1, 2 Elettra Ronchi, 3 Genna R Cohen, 1 Laura A Pannella Winn, 4 Ashish K Jha Health Information Technology in the United States: Better Information Systems for Better Care, 2013 Health Care Quality Indicators Project Conceptual Framework Paper, Edward Kelley and Jeremy Hurst Using health information technology to improve safety, David Bates

Disclosure of Interest: None Declared

Keywords: Health Information Technology, hospitals, productivity, business intelligence
Reduce The Incidence Of Cardiopulmonary Arrest And Initiate The Process Of Mock Drills
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Objectives: The purpose of this project is to initiate and availability of standardization process of Mock Drills of CODE BLUE for Health Care Professionals at Secondary Care Hospital, Hyderabad which located at Interior Sindh, Pakistan. Which leads promote patient safety as “we believe that quality and safety are integral to our mission”

Methods: Quality improvement projects studies aimed for making positive changes in health care processes to effecting favourable outcomes, for our project we used Plan-Do-Study-Act (PDSA) model. In our project, GAP analysis was identified which were as follow:

- Compliance rate was 47% in initial assessment in mock drill audit
- Only 5% nurses and doctors certified for Advanced Cardiac Life Support. (ACLS).
- 4% nurses and doctors certified for Paediatrics Advanced Life Support. (PALS).
- 0% nurses and doctors were certified for Neonatal Resuscitation Program (NRP).
- 80% nurses and doctors were certified for Basic Life Support. (BLS).
- Incomplete crash carts were found which was unapproved from CPR committee.
- No BLS instructor available
- No ACLS instructor available.

No crash cart available at out pt., however, cardiology services is available

Results: Healthcare organizations have an obligation to provide a high-quality resuscitation service, and to ensure that staff are trained and updated regularly to a level of proficiency appropriate to each individual’s expected role. Following intervention were done in order to initiate the mock drill process. Educational Session was conducted of early warning signs for HCP.

- 50% nurses and 50% doctors certified for Advanced Cardiac Life Support. (ACLS).
- 90% nurses and 50% doctors certified for Paediatrics Advanced Life Support. (PALS).
- 50% nurses were certified for Neonatal Resuscitation Program (NRP).
- 100% nurses and doctors were certified for Basic Life Support. (BLS).
- Ensured completion of crash carts with approved CPR committee list.
- 1 BLS Instructor available
- No ACLS instructor available.
- Availability of crash cart at out Pt care areas.
- Crash cart workshop is part of annual educational plan 2015.
- Spot Check by BLS instructor for real code for compliances of blue code by team.
- Audit tool was develop for sustainability.
- Develop calendar for Mock drill practices and audit.

Conclusion: The conclusion actions has been proven that the mock drills are preparing the health care team members to act according to the situation to handle the dying or code situation effectively

Disclosure of Interest: None Declared

Keywords: cardiopulmonary resuscitation
Audit Of Ankle X-Rays In HGH Emergency Department To Look For Use Of Ottawa Rules In Emergency Department And Its Impact On Positive And Negative X-Rays

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Objectives: HGH ED is one of the busiest department in the region where almost 30,000 to 40,000 patients attend in a month. The Daily Census varies between 1200 to 1600 patients. The busiest area in the ED is see and treat area which is gateway to almost 80-90% patients visiting ED. We made major changes in the male see and treat area in the year 2013 aiming at improving the system and services such as reducing the time of first encounter with the physician, reducing length of stay in the see and treat area and early triaging and redirecting of sick patients immediately to appropriate treatment area. These changes has resulted in positive outcome in the see and treat area but when we reviewed all the statistics in detail we found that one of the parameter which worsened was length of stay in see and treat. We did a detailed analysis of see and treat area to find out the reason of this deterioration. After analysing we discovered that there was delay in discharging cases post X-ray, and X-rays were one of the major factor which resulted in prolonged length of stay. To analyse it meticulously. We chose ankle injuries and sprain for audit to See if Ottawa rules were used to X-ray these cases. We audited 1500 patients out of which 250 were excluded and the results were surprising.

Methods: All the ED medical record for patients with ankle sprain was reviewed by the ER physician. Following information was retrieved from electronic as well as paper record.

1. Time of registration
2. Time of first physician encounter
3. Time of X-Ray Request and done
4. Application of Ottawa rule
5. Time of discharge

Results: Ottawa Rule was applied only in 273 cases out of 1250(21.85%) patients, where as in 977 patients (78.15%) Ottawa rule was not applied: Ottawa Rule applied in: 21.85% (273/1250), Total Cases with Positive X-rays 8.24 % (103/1250) and Negative Xrays.91.75 % (1147/1250), Positive cases with Ottawa rules 28.57 % (78/273) and without Ottawa Rues 2.5 %(25/977), Negative X-rays with Ottawa Rule 17 %(195/1147) and without Ottawa Rules 83% (952/1147)

Male: 1009 (80.72%) Female:241(19.28%) Time of contact with Physician:
Average: 61.05minutes, minimum: 1minute Maximum: 221minutes

Time of X-ray Completion
Minimum: 4min, Maximum.214 min Average.47.5m

Time of Disposition:
Average: 187min, Minimum.47min, Maximum.353min

Conclusion: Application of Ottawa rule reduces the number of unnecessary X-rays in the ED. It is clear that the number of positive x-rays with Ottawa rule is 28.57% and without Ottawa rule was 2.5%. So simply by applying Ottawa rule we can increase the yield of positive X-rays by 26%. Negative X-rays with Ottawa rules: 17% and without Ottawa Rules: 83%. This shows that the negative X-rays would have been reduced by 990 if Ottawa rule would have applied. This would be reflected in to appropriate cost reduction as well as averagely 3085 hours in 990 cases. We Aim at increasing compliance to use Ottawa rules for ankle X-rays.

References:

Disclosure of Interest: None Declared

Keywords: Ankle sprain, Ottawa Rule in Emergency Department
1053

**Improvement In Discharge Process: The Hospital Perspective**

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**Objectives:** To determine the possible methods to minimize the discharge time and increase the patient satisfaction.

**Methods:** The study design was descriptive cross-sectional design & convenience sampling method was used. In-Patient feedback forms (secondary data) that are given to the patients at the time of discharge as well as discharge tracking sheets were analysed and DMAIC approach was used to improve the patient discharge process. The attributes related to discharge process in IP feedback form were considered:

1) Timely discharges as per the time frame informed to you;
2) Timely & accurate billing was done & explained;
3) Post discharge instructions & medications were well explained.

Firstly, the three aspects of DMAIC i.e. define the process, measure the process variations and analyze the problem by doing RCA, was done and feedback forms was collected for the period of Dec’13 to Feb’14 and then the last two aspects of DMAIC i.e. implement the solutions and control or sustain the changes done in the process, was done for a period of two months i.e. from March’14 to April’14.

**Results:** After analyzing the feedback forms (1022) for the period of three months, patient satisfaction related to discharge process came to be 73% and TAT for discharge process for the first month of study was 179 minutes and for subsequent month, patient satisfaction was 78% and TAT was 168 minutes. Out of the three parameters of discharge process it was observed that “timely discharge as per the time frame informed to you” has scored the least i.e. (7) marks whereas “post discharge instructions & medications were well explained” has scored the highest marks of (8).

Most of the complaints were being raised because of the long discharge process, slow billing process, delay in getting approval from Insurance/TPA, delay in preparing discharge summary, waiting for baby’s discharge notification in maternity cases.

**Conclusion:** In this project, DMAIC approach was applied to streamline patient discharge at the hospital. Several tools are used including process mapping, Pareto charting, RCA and FMEA to analyze and solve the problem. It was found out that after following the recommendations, reduction in the average discharge time from 3hrs to 2 hr 49 mins was seen in 30 days.

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**Disclosure of Interest:** None Declared

**Keywords:** Discharge, Feedback, Patient
Nursing Experience Of A Patient Diagnosed With HIV

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Objectives: The Human Immunodeficiency Virus (HIV) is a life-threatening disease that usually develops with no warning. According to the Centers for Diseases Control, R.O.C., 22,296 reported cases of HIV have been reported as of September, 2010 (Centers for Disease Control, May 30, 2012). HIV patients frequently come under physical, psychological and social pressure, resulting in negative emotional reactions such as panic, fear, anxiety and even suicidal behaviour. Apart from impaired social interaction due to fear of discrimination, recovery is affected by the feeling of helplessness and uncertainty associated with the future of the disease as well.

Methods: During the care period lasting from May 10 through to May 18, 2012, the author used interviews, observations and physical assessments for data gathering. By applying Roy's adaptation model, the following primary nursing problems were identified in the patient: ineffective breathing pattern, sleep pattern disturbance, anxiety and social isolation. The nursing process began with establishing a sound nurse-patient relationship. Oxygen treatment was provided along with training in breathing techniques and comfortable posture to facilitate stable breathing pattern and improved sleep. HIV nursing information and techniques to alleviate anxiety were provided to change the patient's perception and attitude towards HIV as well as reduce anxiety. In collaboration with the HIV case manager, the patient was induced to voice inner concerns. Listening, empathy and emotional support was adopted to re-establish the techniques for social interaction. The patient was encouraged to become involved in the care plan for the disease to improve confidence in self-care as well as adapt to the fact of the disease's progression and co-existence.

Results: During the care period, the patient had to come to terms with the fact that the diseases was untreatable as well as cope with the complex medical treatment. The patient was also didn't know how to tell family members about being HIV-positive so decided to conceal the diseases. The pressure of facing the diseases alone led to negative emotions such as anxiety, interrupted sleeping pattern and social isolation. Assisting the patient cope with the pressure and impact of disease notification as well as the development of adaptive behaviour motivated the author to explore this topic.

Conclusion: During the care period, initial intervention covered treatment of physical symptoms as well as maintenance of basic physical comfort. The patient showed signs of withdrawal at the start of the disease adaptation process however. Due to the fear of exposure, the patient was unwilling to engage in active conversation and rejected several interviews. After the author built a relationship of mutual trust through expression of concern and channelled the patient's anxiety, the author found that the patient's tone with nursing personnel was one of anxiety and feeling of helplessness with life. The patient's favourite activity of using the Internet was used to provide information about HIV and help the patient understand protective measures relating to sexual activity that the patient was too embarrassed to ask about. Multi-sensory stimulation provided by multimedia was used to boost the patient's learning motivation. Together with planned treatment and nursing measures these induced the patient to actively engage in the learning process.

Disclosure of Interest: None Declared

Keywords: HIV
Impact Of Pharmacist Discharge Counselling Service On Hospital Readmission Rate
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Objectives: When patients are discharged from hospital, multiple changes to patient’s medication regimen and lack of patient understanding of their drug regimen are factors commonly leading to adverse drug events and hospital readmission. To close the service gap, pharmacist discharge counselling service was implemented to enhance patients understanding on their discharge medications. This study aims to investigate the impact of pharmacist discharge counselling service on 30-day hospital readmission rate and to identify factors that are associated with increased readmission rate.

Methods: Pharmacist discharge counselling service was piloted in Pamela Youde Nethersole Eastern Hospital, a regional tertiary hospital in Hong Kong, since November 2014. Through implementation of this service, pharmacists have a greater role in the discharge process to enhance patients understanding on their discharge medications. A dedicated pharmacist is responsible to:

- reconcile discharge medication regimen
- assess patient’s ability to manage their medications
- provide discharge medication list and emphasize changes in drug regimen
- give appropriate tools and education leaflets to improve drug compliance

To investigate the impact of the service on hospital readmission rate, a prospective controlled quasi-experimental study was conducted from November to December 2014. The study included patients discharged from medical ward. Patients who lived in elderly home were excluded from the study. Patients in intervention group receiving pharmacist discharge counselling on discharge were compared to patients receiving usual care in a matched historical control subjects in 2013. Primary outcome is the 30-day readmission rate from emergency department. Secondary outcome is the relationship of readmission rate with selected patient characteristics, including age, sex, polypharmacy with more than five chronic medications and use of high risk medications (including anti-hypertensives, hypoglycaemic agents, anticoagulants and narcotics).

Results:
308 and 290 patients were included in the interventional group and control group respectively. Baseline characteristics of intervention group and control group were similar. (Table 1).

Table 1
<table>
<thead>
<tr>
<th>Variable</th>
<th>Intervention group (n=308)</th>
<th>Control group (n=290)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, no. (%)</td>
<td>154 (50)</td>
<td>156 (52)</td>
<td>0.35</td>
</tr>
<tr>
<td>Median Age, yr</td>
<td>72</td>
<td>70</td>
<td>0.05</td>
</tr>
<tr>
<td>No. of chronic med</td>
<td>5</td>
<td>6</td>
<td>0.59</td>
</tr>
<tr>
<td>Polypharmacy ≥5 chronic med no. (%)</td>
<td>173 (56)</td>
<td>171 (59)</td>
<td>0.49</td>
</tr>
<tr>
<td>Use of antihypertensives no. (%)</td>
<td>203 (66)</td>
<td>215 (74)</td>
<td>0.03</td>
</tr>
<tr>
<td>Use of hypoglycaemic drugs no. (%)</td>
<td>65 (21)</td>
<td>76 (26)</td>
<td>0.14</td>
</tr>
<tr>
<td>Use of anticoagulants no. (%)</td>
<td>20 (6.5)</td>
<td>19 (6.6)</td>
<td>0.93</td>
</tr>
<tr>
<td>Use of narcotics no. (%)</td>
<td>13 (4.2)</td>
<td>11 (3.8)</td>
<td>0.79</td>
</tr>
</tbody>
</table>

The 30-day readmission rate from emergency department after discharge in interventional group was 19%, which was significantly lower than 26% from historical cohort in 2013 who received routine dispensing service from pharmacy (p=0.014). For secondary outcome, age older than 65 years old, polypharmacy, use of antihypertensives and anticoagulants were associated with increased 30-day readmission rate.

Conclusion: Pharmacist discharge counselling service significantly reduced 30-day readmission rate after discharge. Risk factors associated with higher readmission rate include age older than 65 years old, presence of polypharmacy, use of anti-hypertensives and anticoagulants. Through identification of risk factors of readmission, pharmacist discharge counselling service may be prioritized to the above patients with high risk characteristics in the future for better resource allocation.

Disclosure of Interest: None Declared

Keywords: Hospital readmission rate, Pharmacist counselling
A Program To Improve Implementation Rate Of Dysphagia Screening For Patients With Stroke
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Objectives: Sixty three per cents of patients with stroke have problem of dysphagia which caused aspiration pneumonia. It is not only to extend length of stay in the hospital but also increase medical expense even causes the death due to respiratory failure. How to implement the dysphagia screening at early stage and to react correctly depends on patients’ status are very important to the nurse who are as front line of patient care.

Methods: Chocking is happened often to patients with stoke clinically. The statics shows there is only eighteen per cents of patients with stoke did swallow tests before their first time oral intake. Therefore, we consider the factors: lack of ability to execute dysphagia screening, ignoring the importance of dysphagia screening, no initiative analysis, uncertain responsibilities between nurse and doctors, no guidance or tool for dysphagia screening and so on. We implemented countermeasures: on-side training (included MINI-CEX for new nurses), meetings which is in order to distinguish responsibility between nurses and doctors, establishing swallowing check-in list, standard operating procedure for swallowing checking, experience sharing with colleagues and case study for dysphagia.

Results: From January to March 2012, eighty nine per cents of patients with stroke had followed the standard operating procedure for swallowing checking as standardized after those countermeasures were implemented.

Conclusion: The result shows executing swallowing test may decrease percentage which aspiration pneumonia happens. We recommend test should be executed at early stage in order to enhance patients’ life quality and save medical expense.

Disclosure of Interest: None Declared

Keywords: dysphagia, stroke, swallowing screen
Care Quality And Patient Choice
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Objectives: Patient choice and empowerment is widely seen as a positive, welfare-increasing development. However, since patients may not necessarily choose wisely, many scholars and practitioners suspect that choice may endanger quality of health care. This study investigates the relations between patient choice and quality and aims to explore the possible solutions to the apparent tensions.

Methods: This paper is based on literature reviews on patient choice and care quality. A conceptual construct is developed, with the aim of building a model with measurable variables that can be used to develop empirical studies on the issues.

Results: Care quality and Patient choice are both multi-dimensional issues. Three distinct aspect of care quality should be treated separately:
1) the quality of clinical decision making and design of care plans;
2) the quality of processes (conformance to requirements);
3) perceived quality or patient satisfaction.

The issue of patient choice has five aspects:
1) the choice of caregiver and the choice of care are separate. The former can be seen as consumerist choice, while the latter is constrained by information asymmetry;
2) patient choice is situational. The relevant situations can be defined as demand (what needs to be done) and provision (what can be done) constellations. In some situations, e.g. urgencies, very complex cases, or situations where evidence-based solutions exist, paternalism is justified; while in others, such as trade-offs between different risk profiles, liberalism is needed;
3) Choice relies on preferences. These can be divided into universal and situational person-dependent preferences. Preferences may form trade-offs, to which there is no obvious clinically best solution;
4) the result of choice is influenced by patients’ willingness and capability to exercise choice.
5) Between medical paternalism and full patient sovereignty is an area where choices can be managed by framing the choice architectures. Our main argument is that there is no one-dimensional choice-quality connection in health care. The relation between the patient choice and quality depends on the type of choice, choice situations, patient preference, the willingness and capability in choice making as well as the types of quality.

Conclusion: This study develops insights into the understanding of quality-patient connections. We believe that patient choice does not necessarily lead to decreasing quality. It depends on the situations. Situations can be analysed and managed. The proposed solution for the choice-quality issue is based on the notion that choice can be managed by constructing choice architectures that can navigate patients to smart choices.

Disclosure of Interest: None Declared

Keywords: choice architecture, patient choice, service quality
Use Process Re-engineering To Enhance The Efficiency Of Patient Discharged In Northern Medical Center In Taiwan

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Objectives: Patient discharged process and length of stays were key points of hospital efficiency and process management, so we try to use process reengineering method improving patient discharged rate at 12 o’clock, and it could be increased bed turnover rate, shorten patient waiting admission time. We also expect to build management dashboards to monitor process, and thus improve patient satisfaction and efficiency of hospital management.

Methods: In March 2013, we set up a cross-functional team include units of clinical, nursing, and administrative, accepted “Lean 6 Sigma Training Program”, and further find key process and weak point. We used "SIPOC" (Suppliers, Inputs, Process, Outputs, and Customers) to explore patient discharged process, include patients' assessment, education, and other prepare discharged items, and finally according to "Effort-Benefit Matrix" to improvement it. We priority to perform high effort and high benefit quadrant, example physicians can use I-PAD to execute patient discharged order, and next nurses and administrative staffs can prepare patient's discharged. We also to perform low effort and high benefit quadrant, example patient discharged information linked inpatient center let it can early to arrange bed. In addition to, we choose three wards and experiment with medicine direct delivery services to reduce patient waiting discharged time.

We use EXCEL tools (Self-service business intelligence) establish cloud management dashboard to monitor implement outcome in July 2013 to December 2013, include rate of physicians execute discharged order at 10 o’clock, rate of patients discharged at 12 o’clock, and rate of inform patient admission at 14 o’clock, and rate of medicine direct delivery services, and length of stays of adjust patient disease severity.

Results: After improve it, rate of patients discharged at 12 o’clock was increased 0.5% to 1% and rate of inform another patient admission at 14 o’clock was increased 0.5% to 1.3% (discharged at 12 o’clock of medical patient was 59.1% vs surgery patient was 78.7%; admission at 14 o’clock of medical patient was 68.5% vs surgery patient was 86.1%). Finally, the length of stay in all patients after adjust of disease severity was decreased 0.6 day. There was 3,154 patients (93.3%) use medicines direct delivery services at wards, and thus rate of patient discharged at 12 o’clock was 88.6%, compare improve it before increase 2.6%.

Conclusion: We improve convenience physicians use IPAD to execute patient discharged order, increase patient discharged prematurely, increase another patient early admission, and thus decrease the length of stays, especially chemotherapy treatment patient. In Taiwan, many hospitals implemented clinical pathways in surgery, so already early to prepare patient discharged increasing bed turnover rate. The reason maybe explain why outcome of medical unit improve better than surgery. Finally, we found medicine direct delivery at the wards can improve patient discharged process, so we extended it to others wards to increase patient satisfaction and efficiency of hospital management.

Disclosure of Interest: None Declared

Keywords: Length of stay, Process reengineering, Self-service business intelligence
Simple Frailty Score For Acute Medical Care
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Objectives: A model for frailty in 4 aspects physical, mental, environmental and social was previously developed and tested using administrative UK hospital unscheduled care data demonstrating similar predictive power to previous frailty models. Based on this data our objective is to operationalize a simple clinically usable tool to predict in hospital mortality based on all four aspects and test its accessibility.

Methods: The model was presented at ISQUA 2014 (abstract 2277), based on this a short simple frailty score was derived with 5,3,3,2 co-domains for the aspects of physical, mental, environmental and social respectively. The weighting for each of the aspects and co-domains is as yet still unknown (i.e. should a particular question be given more primacy). Consecutive patients over 65 years old (n=107) admitted to Acute Assessment Unit (AAU) at a North West London hospital between 10 Jan - 21Jan 2015 were included. Data were collected as part of ordinary care by a Consultant Acute Physician on weekdays and weekends. A junior doctor trialled the score to gauge its accessibility. We present descriptive statistics for this cohort. Distributions of frailty scores were simple summations of the individuals attributes; stratifying length of stay (LOS) and in hospital mortality by frailty score. We contrast this score with national early warning score (NEWS), a tool used to identify and escalate at risk patients, and examine any event of in hospital mortality in more depth.

Results: 107 patients were included (67 females and 39 males). Each score took 5-10 min to complete. Stratification by frailty and NEWS score was undertaken counting number of patients with that score and the corresponding average LOS (Table 1). The score of 4 was a single individual with urinary tract infection from a nursing home.

Table 1: Number of patients, average LOS and average NEWS score for each frailty score

<table>
<thead>
<tr>
<th>Frailty Score</th>
<th>Sum/ average sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Number of patients</td>
<td>58</td>
</tr>
<tr>
<td>LOS (mean)</td>
<td>3.7</td>
</tr>
<tr>
<td>NEWS (mean)</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Males generally have a shorter average LOS with peak at 76-85 years of age (LOS =5 days), females average LOS peaks at 91-95 years of age (LOS= 6.1 days). NEWS and frailty scores were cross-tabulated and we find 62 individuals who score less than 3 on NEWS (i.e. this would not trigger escalation) of whom 32 scored at least 1 on the frailty tool. There were 3 in hospital deaths in this period; 1 male with cancer and a corresponding high NEWS score (10) with no frailty score. 1 female scored on news (9) and frailty (3), she scored 2 in the physical domain and 1 in the social domain, the other female scored only on frailty (3) 2 on the physical domain and 1 on the mental domain). The majority of the frailty scores were in the physical domain (falls, reduced mobility and poly-pharmacy). Ethnicities of all 3 mortalities were white British.

Conclusion: This small study suggests that all 4 aspects are important to assess in frail individuals. It is a simple score which may have clinical applicability and usability (takes 5-10 min to complete). The simplicity and ability to discriminate more vulnerable patients’ makes more research on this model justifiable.

Disclosure of Interest: L. Dinesen Other: CLAHRC, J. Soong Grant / Research support from: Royal College of Physicians, Other: CLAHRC, A. Poots Other: CLAHRC, D. Bell Other: CLAHRC

Keywords: acute medical care, Frailty Score, improve outcomes
Indicators For Quality In Residential Care – A Need For International Consensus
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Objectives: It has been predicted that the number of dependent older people receiving care in institutions will almost triple by 2060 - and these forecasts are based on a conservative scenario in which it was assumed that there would be no change in the current prevalence of disability. It is thus clear that residential care for the elderly population is, and will remain, an integral component of a comprehensive aged care strategy. This present work aimed to identify international benchmarks of quality against which this care might be assessed.

Methods: A literature search was performed in June 2014. International guidelines, national standards, and systematic reviews which were relevant to the improvement of residential care for older persons were retrieved. Websites of relevant organisations and institutions (n=30) were also examined for relevant literature.

Results: There is currently no internationally accepted set of quality indicators against which residential aged care might be evaluated. This failure likely results from the necessary extension of care beyond traditional clinical boundaries in the residential aged care setting, and reflects the challenges posed in attempting to evaluate quality of life versus quality of care in this setting. Regulatory standards have traditionally focused on the latter, with a trend towards measuring what could be measured as opposed to what should be measured. There is now a need to develop appropriate indicators which concentrate instead on the multidimensional construct that is quality of life, and which take cognisance of the care needs of residents and the setting in which this care is being delivered. Appropriate indicators will reflect the unique nature of the carer-client relationship in residential care settings, in which residents can be significant contributors to their own quality of life and in which staff training and support are recognised as prerequisites to achieving quality. These indicators should be results oriented and should be directed towards evaluation of outcomes from, rather than inputs to, care. A number of common themes, which should be considered in the development of quality indicators for residential aged care, have been identified. These include the need for patient and relationship centred care. As noted, there is a need to differentiate between quality of life and quality of care, and both the social and physical environment in which the resident lives should be incorporated into the quality agenda.

Conclusion: Implementation of regulatory standards which focus on quality of care remains the dominant method used to improve quality in residential aged settings. This approach has been limited by its inability to reflect the complexity of care provided in this environment and its failure to incorporate the potential and actual role of residents, their families and care staff. There is hence a need to broaden the concept of quality in residential care to reflect the themes identified in this review. While recognising the challenges inherent in doing so, efforts should be made to move from the status quo of measuring inputs to residential aged care to instead developing internationally accepted methods of holistically evaluating outcomes from care in this setting.

Disclosure of Interest: None Declared

Keywords: aged care, quality and safety, residential care
Patient Involvement In Quality Management: Rationale And Current Status
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Objectives: The aims of this paper are to:
1) to review how patient and public involvement (PPI) can contribute to quality improvement functions and
2) describe the levels of PPI in quality improvement functions at hospital and departmental level in a sample of European hospitals.

Methods: We employed literature search strategies to identify studies that illustrate issues related to the implementation and the impact of PPI in quality improvement. These studies were selected in line with an a-priori defined conceptual framework. Our search was conducted using MEDLINE and EMBASE database. We developed a search strategy using the key terms (patient participation OR patient involvement OR patient centred care OR user participation OR patient representative) AND (hospitals OR tertiary health care) AND (quality improvement OR quality assurance OR quality improvement project). This yielded 323 hits in MEDLINE and 969 hits in EMBASE. After review of the studies we maintained 21 studies. In addition, we draw on the results of cross-sectional survey among hospital managers and department managers from hospitals that were randomly selected in European countries. The data reported here is based on surveys to the hospital quality manager and heads of Departments. PPI was measured using a validated score on the involvement of patients and their representatives in QM functions. The levels of PPI in quality management emerging from the empirical study are then juxtaposed with the theoretical underpinnings and practical examples emerging from the literature review.

Results: PPI takes multiple forms in health care and there is not a single strategy or method that can be considered to reflect best practice. PPI appears to be still a young field and open to experimentation. The studies reveal that PPI can serve important functions to support quality improvement efforts, in particular regarding defining how services should be provided and working with health professionals in specific projects to identity quality improvement opportunities. In contrast, the assessment of actual patient and public involvement in quality improvement in a sample of EU hospitals shows that PPI is low, in particular with regard to important activities such as establishing quality standards or organizing processes, for which evidence suggests that patients can make important contributions.

Conclusion: A diverse set of methods and tools that can be employed to realize PPI. Service providers should consider PPI at all stages, in particular in setting quality standards and criteria and in evaluating the results.

Disclosure of Interest: None Declared

Keywords: Hospitals, patient involvement, quality management
"It Just Hit Me Like A Sledgehammer": Impact Of Indoor Noise On The Lifestyle Choices Of Older Adults

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Objectives: Healthy lifestyle choices through community participation are associated with increased wellbeing and chronic disease prevention in older adults. Barriers to participation include the negative effects of indoor noise in community settings. This study examined how noise impacts the lifestyle choices and avoidance behaviours of older adults.

Methods: An explanatory mixed method study was conducted in two phases in 2014. Older adults were recruited from an independent living community. First, 50 participants completed a survey including questions from: the validated Noise Sensitivity Scale (3-NS); Noise Sensitivity Questionnaire (NoiSeQ); and items relating to indoor noise in community locations. Second, 20 participants took part in four focus groups which were audio recorded and transcribed. Questions covered participants’ experience of indoor auditory environments, perceptions of the effects of these environments on health, and suggestions for improving indoor auditory environments. Survey data was analysed using descriptive statistics, and interview data was analysed thematically for emerging themes that represented participants’ experiences.

Results: Results indicated that the majority of participants (76%) had a high sensitivity to noise. Most respondents (88%) scored high on statements about the impact of noise on their life. Demographic information indicated that almost half of participants (46%) wore hearing aids, and suggested that older adults with hearing impairment or hearing aids were significantly more noise sensitive than older adults without hearing impairment. Participants indicated that shopping centres, food courts and clubs were the noisiest indoor locations in the community. Older adults described their experience of indoor noise in the community and their lifestyle responses in terms of 1) ‘noise’ versus ‘music’; 2) acceptance of sound; and 3) coping strategies. Factors affecting the perception of sound as noise included the qualities of the sound, the current health of the listener, familiarity of the sound, and the perceived necessity of the sound. Older adults employed a range of avoidance and coping strategies related to noisy locations in the community, including adjustment of hearing aids, online shopping, shopping at certain times of day and planning shopping trips to be well before the busy holiday season. Few participants reported cancelling activities due to noise, however many had elaborate coping strategies to address the effect of indoor community noise on their health and lifestyle.

Conclusion: Older adults are highly sensitive to indoor noise found in environments where they pursue lifestyle activities, such as community shopping centres. In order to maintain an active lifestyle, older adults demonstrate a range of avoidance and coping strategies. Although building standards exist for indoor noise, if healthy lifestyle choices are to be encouraged, greater engagement with consumers to determine their needs is necessary. Our findings have implications for environmental noise policies and marketing strategies employed by community providers to better cater for the older adult population. With the aging of the population it is an increasing critical issue that has individual emotional/ psychological and social impacts, as well as economic consequences for the community.

Disclosure of Interest: None Declared

Keywords: aged care, barriers, quality of life
Objectives: Early reperfusion in the setting of an ST-elevation myocardial infarction is utmost importance. However, to provide optimal care to patients with ST-Segment Elevated Myocardial Infarction (STEMI) is challenging. If a patient suffers from chest pain and calls the emergency number, initiation of a cascade of actions leads to a diagnosis, start of treatment and reperfusion of the infarcted myocardium. Previous studies have shown that reporting or transmitting pre-hospital ECG to the emergency department is an important part of treatment for patients with STEMI. The main benefit of pre-hospital ECG is its potential to reduce the overall treatment time to administration of reperfusion therapy. Furthermore, pre-hospital ECG enhances early arrival and triage to the emergency department, which is associated with increased use of reperfusion interventions and shortened time to treatment. However, it remained a challenging issue to set up pre-hospital ECG in Taiwan because of involvement of complicated multidisciplinary team work. Therefore, we reported first successful experience of establishment of pre-hospital ECG in Kaohsiung city.

Methods: A multidisciplinary team among Kaohsiung veteran’s General hospital, fire bureau and department of health, Kaohsiung city government was organized since Sep, 2011. The key interventions include to establish pre-hospital automatic interpretation ECG system with immediate ECG transmission over mobile networks, to design a ECG exam accessory device, to set up a incentive and auditing system, to arrange EMT educational program, to set up a standard operative procedure with transfer to appropriate hospital and Asian first ambulance pre-hospital mobile transmit ECG system. The consecutive chest pain patients received ambulance ECG exam were enrolled from Jan. 2011 to Feb. 2013 in 6 different fire brigades at Kaohsiung city. The patients were divided into three group: pre-interventional group from Jan to Dec 2011, Interventional group from Jan 2012 to Feb 2013 and post-interventional group from March 2013 to Feb 2014. The ECG implementation rate is defined as chest pain patients received ambulance ECG exam divided by all patients with chest pain.

Results: We developed a ECG exam accessory device, which could shorten ECG exam from 252 seconds to 30 seconds. The number of monthly chest pain patients received ambulance ECG exam increased from zero patient in pre-interventional group, to 0.4 patients in interventional group and to 14.2 patients in post-interventional group (p<0.001).The ECG implementation rate increased from 0% in pre-interventional group, to 0.6% in interventional group to 33.6% in post-interventional group (p<0.001). Total 14 patients with STEMI was detected in 175 chest pain patients received ambulance ECG exam. In these STEMI patients, average door to balloon time was 53.5 minutes, average ischemia to balloon time was 111 minutes and in-hospital mortality was 0%.

Conclusion: The key factor to establish pre-hospital ECG system in Kaohsiung city is cooperation of hospital, fire bureau and department of health of government. Furthermore, comprehensive EMT education program and development of a ECG exam accessory device were also critical to set up the pre-hospital ECG system.

Disclosure of Interest: None Declared

Keywords: Ambulance, Electrocardiogram, ST-Segment Elevated Myocardial Infarction
Treatment Of Patients With Terminal Cancer Who Do Not Wish For CPR In Relation To The Likelihood Of Consciousness Recovery And Prognosis: The Current Situations In Japan

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Objectives: Some patients with cancer express to their treating medical team their advance wishes for not receiving cardiopulmonary resuscitation (CPR) in case of cardiopulmonary arrest. Although it is important to take such patient’s wishes into account when making medical treatment decisions, there are situations where it is considered possible to successfully resuscitate them and prolong life for a period of time. To investigate the likelihood of providing CPR to patients who do not wish to be resuscitated in case of cardiopulmonary arrest in relation to the chance of recovery of consciousness and prognosis of the patient.

Methods: 20% of the general hospitals funded or managed by members of the Japan Medical Association (n=1357) and all of university hospitals (n=60). Anonymous, self-administered questionnaire survey carried out between 9th and 28th of February 2013. Participants were asked if they would provide CPR to (1) patients who are highly likely to regain consciousness with CPR and appropriate medical interventions and (2) those unlikely to regain consciousness, and if the decision would be influenced by the life expectancy of the patients.

Results: Overall response rate was 22.4% (General Hospitals (n=277; 20.4%), University Hospitals (n=20; 33.3%). The results are summarized in the table 1.

Table 1: Provision of CPR against patients’ wishes in relation to their chance of regaining consciousness and prognosis.

<table>
<thead>
<tr>
<th>Prognosis</th>
<th>Provision of CPR</th>
<th>General Hospitals (n=277) n (%)</th>
<th>University Hospitals (n=20) n (%)</th>
<th>Combined (n=317) n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High chance of consciousness recovery</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 month</td>
<td>Yes</td>
<td>71 (28.0)</td>
<td>7 (35.0)</td>
<td>84 (29.1)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>183 (72.0)</td>
<td>13 (65.0)</td>
<td>205 (70.9)</td>
</tr>
<tr>
<td>1-6 months</td>
<td>Yes</td>
<td>136 (54.0)</td>
<td>12 (60.0)</td>
<td>155 (53.8)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>116 (46.0)</td>
<td>8 (40.0)</td>
<td>133 (46.2)</td>
</tr>
<tr>
<td>6-12 months</td>
<td>Yes</td>
<td>188 (74.9)</td>
<td>15 (78.9)</td>
<td>213 (74.5)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>63 (25.1)</td>
<td>4 (21.1)</td>
<td>73 (25.5)</td>
</tr>
<tr>
<td>Over 1 year</td>
<td>Yes</td>
<td>204 (81.0)</td>
<td>15 (78.9)</td>
<td>231 (80.5)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>48 (19.0)</td>
<td>4 (21.1)</td>
<td>56 (19.5)</td>
</tr>
<tr>
<td><strong>Unlikely to regain consciousness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 month</td>
<td>Yes</td>
<td>16 (6.3)</td>
<td>2 (10.0)</td>
<td>22 (7.6)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>240 (93.8)</td>
<td>18 (90.0)</td>
<td>269 (92.4)</td>
</tr>
<tr>
<td>1-6 months</td>
<td>Yes</td>
<td>44 (17.6)</td>
<td>6 (30.0)</td>
<td>50 (19.6)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>206 (82.4)</td>
<td>14 (70.0)</td>
<td>220 (80.4)</td>
</tr>
<tr>
<td>6-12 months</td>
<td>Yes</td>
<td>93 (37.2)</td>
<td>8 (42.1)</td>
<td>101 (38.2)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>157 (62.8)</td>
<td>11 (57.9)</td>
<td>168 (61.8)</td>
</tr>
<tr>
<td>Over 1 year</td>
<td>Yes</td>
<td>111 (44.4)</td>
<td>10 (52.6)</td>
<td>121 (45.3)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>139 (55.6)</td>
<td>9 (47.4)</td>
<td>158 (54.7)</td>
</tr>
</tbody>
</table>

Where no response was given the number was excluded from analysis.

Conclusion: The study showed that medical teams are more likely to provide CPR to the patients who do not wish to be resuscitated when there is a higher chance of recovery of consciousness and their life expectancy is longer. These factors should therefore be included in the discussions with patients when deciding DNR order, so that the patients are able to make a fully informed decisions and the physicians are able to respect their wishes.

Disclosure of Interest: E. Kamishiraki: None Declared, M. Baba: None Declared, S. Maeda Grant / Research support from: Japan Medical Association Research Institute

Keywords: cardiopulmonary resuscitation, DNR, Treatment of patients with terminal cancer
Enhancing Patient Satisfaction Through The Establishment Of A Pain Management System
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Objectives: To establish a standardized Pain Management System (Pain Control Pathway). To build effective communication among healthcare providers with objective and accurate pain assessment. Patients' satisfaction via pain control may be improved through patient-centered pain management and quicker pain intervention, while also helping to build a consensus among healthcare providers.

Methods: Design: Data was collected using a pre-post design in two measurement cycles, before and after implementation of Pain Control Pathway. The Head Nurse measured main outcomes by direct observation and analyzed nursing records about reducing the arbitration time of pain and the complete record of pain. Patients' satisfaction of pain management was evaluated using a survey. Setting: A metropolitan hospital. Participants: 301 nurses and nurse assistants from ward nursing departments. Intervention: Developed and applied a standardized Pain Control Pathway through consultations with a team of doctors. All nurses and nurse assistants were trained in pain assessment and record-keeping. Public relations for pain management consensus were done.


Results: The pain control pathway was developed for urologic, otorhinolaryngology, gynaecologic, orthopaedic, plastic, and general surgery departments, and cancer pain management. Time spent on pain control was 11.8 minutes before implementation of pain control pathway and was reduced to 5.0 minutes after pain control pathway. Using Prn order (as needed) reduced time from 10.4 minutes to 6.8 minutes. The time was reduced from 30.25 minutes to 22.44 minutes when no extra medication was available, and further reduced from 6.87 minutes to 4.56 minutes when extra medication was available. Percentages of pain reassessment improved from 36.8% to 63.9% after implementation of pain control pathway. Usage of a standardized pain assessment scale increased from 78.5% to 90.7%, and overall patients' satisfaction improved from 90.2% to 96.3%.

Conclusion: The process of cooperation with clinical departments to construct a organized pain control pathway made it possible to build consensus between doctors and nurses by building positive acceptance of physicians' opinions on nurses work improvement. In most aspects, goal index for improvement activities showed satisfactory results; however, recording pain reassessment has shown a slight decrease after peaking. We need to keep monitoring constant application of pain control pathway.


Disclosure of Interest: None Declared

Keywords: Patient Satisfaction, Pain Control Pathway Consensus among healthcare providers
Increase The Oral Care Compliance Rate For Patients With Oral Endotracheal Intubation In Medical Intensive Care Units

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Objectives: The study aims to: assess the oral condition of patients with oral endotracheal intubation using the Oral Assessment Guide (OAG), provide appropriate oral care intervention methods to protect the oral hygiene of patients with oral endotracheal intubation, and lower the incidence rate of VAP

Methods:
1. Collection method: Thirty people from the evening shift group and 30 people from the night shift group were randomly selected each month. (On average, the number of patients with oral endotracheal intubation within the unit is around 10 to 12 per day. Therefore, around 10% of the population was selected on a monthly basis.)
2. A standard oral health evaluation tool - the OAG (Figure 1) - was provided.
3. A standard oral care protocol was created:
   - A nurse from the evening shift and a nurse from the night shift each carried out one oral care routine.
   - A soft-bristled toothbrush or a foam swab, toothpaste containing fluoride, and 0.12% Chlorhexidine mouthwash was used to help with oral care for patients.
   - After cleaning the oral cavity, a foam swab dipped in a 0.12% Chlorhexidine solution was used for wiping teeth, gums, cheeks, upper and lower jaws, and the tongue of the patient. Emphasis was placed on cleaning coated tongues.
   - The toothbrush or the foam swab was kept in a ventilated place to dry after use.
   - Removable dentures of a patient were removed. Dentures would be cleaned and then stored in a container with clean water.

Results: During the period between January 2014 and June 2014, there were eight incidents of VAP. Two incidents of VAP were excluded: one caused by tracheotomy and another by oral bleeding as no oral care could be provided to the patient. Between January 2014 and June 2014, the rate of VAP caused by oral endotracheal intubation was 6/2854=2.10‰. The incidence rate of VAP per capita seemed to be gradually decreasing.

Conclusion: Lowering the occurrence of VAP is one of the most important topics in patient care in intensive care units. Providing appropriate oral care will not only improve the oral hygiene of patients with oral endotracheal intubation, but also lower the occurrence of VAP. This is the most economical and effective prevention method. In addition, it increases the quality of patient care. This is particularly beneficial for patients within intensive care units.

Disclosure of Interest: None Declared

Keywords: Oral Care with Endotracheal, ventilator-associated pneumonia
Safety Improvement Through Identifying Patient
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Objectives: Since surgery requires very complicated and systemic preparation process. We should check every step in the preoperative phase thoroughly for patient safety. Our hospital has built up a system to confirm these procedures and we have tried to comply with it. However, it has still happened to miss critical items which should be checked in the preoperative phase. As a result, patient safety has been threatened and many complaints have been reported. Therefore, it is necessary to seek the efficient and accurate way to check the critical items affecting patient safety in the preoperative phase. We tried to make more affective systems to identify the items by analysing the causes and process of mistakes which we had made.

Methods: We applied the method of PDCA. The main strategies for this approach are as follow. First, we selected the most important 5 items (marking on the surgical site, checking on the dental condition, informed consent, fasting maintenance and identifying the patient ID) which affected patient safety critically if we miss them among the 20 items that should be checked in the preoperative phase. Then, a specific strategy for each item was developed. In order to mark accurately on the surgical site, guideline for surgical site marking was educated. An advice note including related pictures was offered to nursing staffs as well. This material was available at any time if patients had some questions related to marking on the surgical site. 45.2% of nurses responded that system of checking on patients’ dental condition needed to be improved so we simplified the checking system and started using a figure of teeth which could be uploaded on EMR after filled out by patients themselves of caregivers. This systemic change was conferred with anaesthesiologists, surgeons, nurses, and QI department. After this change complaints related to the dental problem were reduced. Also, it became easier and more accurate for anaesthesiologists and surgeons to check on patients’ dental condition. To improve awareness of NPO, information about NPO was given to patients and caregivers. Also, the notice for it was provided on the fluid. At last, both nursing staffs assigned to the patient and ward unit manager confirmed an informed consent of operation and whether the patient was keeping to fast or not before leaving ward to operating room.

Results: Data of these indicators were collected between July 1st and August 29rd, 2014. We analysed 12,080 items, we found 126 items (1.043%) missed among the total items. The missing rate was decreased by 8.7% compared to the previous date having a statistically significant difference (p=.001). The staff’s satisfaction with changing process of checking on the dental condition was improved by 37.0% compared to previous date. Also there were no accidents and complaints related to the error of identifying patients in preoperative phase.

Conclusion: This result showed that the diverse strategies such as using a teeth-shaped figure confirmation, educations and a double checking system for identifying the patient before leaving ward to operating room helped to increase staff’s satisfaction and improve patient safety.

Disclosure of Interest: None Declared

Keywords: medication error
Personalised And Patient-Centred Care From The Perspective of Nursing
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Objectives: To analyse the difference between personalised and patient-centred healthcare as seen from the perspective of nursing staff. To consider how these two approaches might differ in practical nursing. To look at the NANDA diagnostic system as an example of how a system may be used in personalised healthcare. To look at Dorothea Orem’s theory of self-care as an example of a patient-centred approach. To consider whether the two can be used in complement to each other.

Methods: An analysis of the NANDA diagnostic system as used in nursing and as an example of personalised medicine. An analysis of Dorothea Orem’s theory of self-care in terms of how it might be used in nursing and as an example of patient-centred care.

Results: The difference between personalised and patient-centred care can be seen in the way in which the patient’s perspective is incorporated in the process of decision making. In personalised medicine the patient and the patient’s needs are assessed by somebody else – by DNA analysis in genomics, by a physician in medicine, or by a nurse in nursing, etc. When using the NANDA International (North American Nursing Diagnosis Association) diagnostic system, the nurse diagnoses unmet needs after conducting a full examination of the patient. The nurse will then makes decisions as to what action should be taken. The nurse makes a decision as to which unmet needs should be dealt with and ascertains the extent to which the patient requires assistance in fulfilling these. When NANDA is used, the patient is the receiver of assessment and care. In patient-centred care the patient’s perspective is seen as being a key element in the patient assessment. Dorothea Orem’s self-care theory recognizes the fact that all human beings take care of themselves in order to maintain bodily health and a psychological/social balance. Nurses provide care by ascertaining the way in which the patient’s self-care routine operates. The nurse then looks for possible changes in the patient’s self-care routine and establishes how it could be adapted or supplemented in order to restore or maintain health. These two modes of healthcare are not contradictory but should be seen as complementary.

Conclusion: The NANDA diagnostic system provides a means of assessing the patient in relation to a system established externally, while the theory of self-care takes account of the patient’s role in determining their own health and assessing their health and deciding on treatment options. The two approaches can be combined to reflect current perceptions of the role of the patient.

Nursing Diagnoses 2012-14: Definitions and Classification, John Wiley & Sons

Disclosure of Interest: None Declared

Keywords: nursing, patient-centered care, personalised healthcare
Nursing Experience Of An Initially Diagnosed Patient With AIDS
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Objectives: This is an article that describes the nursing experience of caring a 37 year old male patient who was initially diagnosed with AIDS. Because the patient was afraid of the news of having the disease being exposed, discrimination from others and scold from his mother etc., he selected to face the physical and mental stress of the disease all by himself and experienced negative emotional reactions.

Methods: Nursing care was given during April 6 to 28, 2014. With interview, observation and physical assessment, Gordon 11-items functional health pattern was used for data collection.

Results: The nursing diagnoses that had been established were ineffective breathing pattern, sleep disorder and anxiety. The nursing process included the establishment of a good nurse-patient relationship, provision of oxygen therapy to promote respiration, teaching skills on how to improve the respiratory gas exchange and achieve a smooth breathing pattern, and the improvement of the quality of sleep. The author provided information on AIDS and consulted the AIDS team for this patient. The patient was encouraged to describe his concerns and uneasy feelings, through listening, showing a caring attitude and giving emotional support for the patient to re-establish his social and interpersonal skills.

Conclusion: The patient gradually changed his negative perception and attitude towards AIDS, his uncertainty reduced and his confidence for self-care increased, and therefore finally adapted to the course of the disease. Hopefully, by this nursing care experience we may further pay attention to provide a comprehensive nursing care for patients with AIDS.

Disclosure of Interest: None Declared

Keywords: AIDS, ineffective breathing pattern, sleep disorder, anxiety
“Health Services Educational Network” – A New Medical Educational Approach In Health Service Using Design Driven Strategic Planning Within The Brazilian National Health System

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Objectives: This collaborative project is an attempt to contribute to a new model of health services organization using planning and strategic design methodologies.

Methods:
a) Scenario/Planning Object - Regional healthcare network driven toward medical and health sciences teaching programs;
b) Regulatory context – New Brazilian regulations for the improvement of new medical schools and expansion of the distribution of physicians throughout the country;
c) Methods and Tools – planning and strategic design methods based on “Business Planning” using Canvas Model and Brainstorming tools;
d) Participants – university professors, public and social workers from the 4 cities involved in the project and the management and planning teams from a Hospital & Health System in Porto Alegre, RS, Brazil.

Results: The work group made a complete diagnosis of the capacity and the structure of the health service network in the 4 communities in order to plan the new model of operation and management of the teaching of medicine and of the health services assistance. In order to achieve this, the workgroup surveyed:
1) different ways for the governance, as well as macroeconomics, meso-economics and microeconomics environment of the network;
2) the health facilities and regulation and aims of the Brazilian National Health System;
3) the public and private resources for improving the health goals and indicators.

Workgroup recommendations: Teaching Method
1) An educational program to offer students opportunities to participate in the different levels of assistance;
2) Personal education, training and experience so as to produce a new kind of professional. This professional will be capable of autonomously participating in different contexts of the health system and able to change their epidemiological and demographic reality;
3) Develop and stimulate the personal competences to see, understand and manage the complexity of the Brazilian context;

Research Process
4) Aimed at the population health problems;
5) Oriented by the epidemiological priorities and health needs of the population;
6) Focused on developing a modern and autonomous national health industrial complex based on technology, research and knowledge;

Health Care
7) Citizen-centered health care system focusing on the community needs and expectations, aligned with their cultural and anthropological setting and reality;
8) Focused on vulnerable social groups to reduce inequities;
9) Focused on changing morbidity and mortality rates and improving health care indicators for the acute and chronic diseases;
10) Aimed at building a new model of care based on primary care priority;
11) The access, quality and safer care are the priority matters of Quality Control in Health Services;

Management Process
12) Offer medical students practical experience in health care management;
13) Integrate public and private initiatives in the health system;
14) Citizen driven health system and health care organizations;
15) Intensive use of IT and communication technologies for the new strategy.

Conclusion: This approach was guided by the logic of health as a permanent national and local policy, and as such it needs a new governance model based on the cooperative and collaborative approach in public affairs.


Disclosure of Interest: None Declared

Keywords: Health Policy, Outcomes, Patient safety, Surgery, Data analysis, Health services, Tourism, Winter, Sports, Mountain, patient centered care, patient involvement
Application “Friendly Procedure-Related Program” To Reducing The Anxiety Of Lumbar Puncture In Children With Cancer

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Objectives: Triple intrathecal therapy is central nervous system preventive therapy in childhood acute lymphoblastic leukaemia, and where| is given into chemotherapy around the spinal cord during a lumbar puncture. It is one of the necessary treatment of cancer. Lumbar puncture is often viewed as one of the worst experiences in children with cancer. Lumbar puncture is often associated with high levels of anticipatory fear and anxiety and pain. The purpose of this study, performed by our quality-control group, was to develop a “friendly procedure-related program” for Children between 4~12 years old with cancer and was to evaluate its effects in the behavioural responses of the anxiety during lumbar puncture process.

Methods: June 2013 to July 2014, children with leukaemia, who were due to undergo lumbar puncture at the paediatric oncology ward in a medical center in northern Taiwan. The first applied instruments was based on literatures review. Data collection started immediately before the lumbar puncture and the anxiety scores were monitored and recorded throughout the procedure. It’s including crying, screaming, changing facial expressions, muscle tension, resist behaviour, physical constraints and sweating. The main factors identified by data collection were: children who complain of unpleasant for side effects of general anaesthesia (about 67%), inadequate information about procedure of children (about 24%) and the lack of good explanation from staff (about 9%). We worked out those methods:

1. Redesign the friendly procedure-related program for children.
2. Set up to develop the standard of operating procedure for general anaesthesis.

Results: The result was distributed to 16 children who were undergoing lumbar puncture. The behavioural responses of anxiety scores of children were decreased from 5.93 points to 2.24 points after implementation of the program.

Conclusion: Anxiety often leads to significantly prolonged changes in behaviour, alterations in self-concept, and depression. Based on our results, we found “friendly procedure-related program” what will help to reduce a child’s negative psychological response to a medically necessary procedure and will enhance the quality of medical. The paediatric nurse or doctor needs to keep it as friendly as possible.

References:

Disclosure of Interest: None Declared

Keywords: behavioural responses of anxiety, friendly procedure-related program, Lumbar puncture in Children
Using Team Resource Management And Promote Complete Care For Children Diagnosed With Cancer
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Objectives: To confront the family pressures that occur as a result of the process of the disease and of providing care for a child who has been diagnosed with cancer. We have established a system of team care that focuses on the patient in order to help the parents receive information at the earliest time possible. This enhances effective communication between staff members and allows the medical team to intervene with care measures according to their specialties. This also helps the child patient and his/her family receive comprehensive physical, emotional, spiritual, and social care.

Methods: The care team consists of doctors, nurses, nutritionists, social workers, and chaplains who create a "Team Care e-Platform". This platform integrates the work contents of each field, and utilizes Team Resource Management (TRM) tools: the Shares Mental Model, the ISBAR communication model, and the “Brief, Huddle, Debrief” methods. When a child has been diagnosed with cancer, the doctor initiates the "e-platform" and all of its members are immediately contacted. Each member evaluates the needs of the patient and parents according to his/her area of expertise. Nurses give care guidance; nutritionists conduct a nutritional evaluation; social workers give economic or educational information; chaplains provide emotional and spiritual support. The team members are aware of each other’s work progress and are able to understand the patient’s issues. This enables them to revise the care plan according to the patient’s needs and to track results.

Results: We increased the rate of involvement of the integrated system on the first day from 60% to 95%; increased the rate of implementing the integrated system team care from 80% to 100%; increased the rate of self-care awareness of both family and patient from 65% to 95%; increased family members' satisfaction rate from 70% to 100%.

Conclusion: Team resource management can enhance medical staff's clinical care as well as patient self-care. By using the "Team Care e-Platform" as a care team and as a joint hand-over and communication pipeline, the team worked together to ensure prompt handling of patient information. They provided consistent care, allowing the patient and family to be notified of the treatment process, future plans, and self-care awareness as quickly as possible, and to obtain a support system. They promoted the TRM structure in order to provide a safe "physical, emotional, spiritual, and social" environment for the patient, and to help the patient obtain individual and comprehensive care.

Disclosure of Interest: None Declared

Keywords: Team Resource Management
Developing A Patient-Centered Care Culture – A Model Of Compassion Care Establishment

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Objectives: Caring is widely acknowledged as an essential part in patient-centered care. We try to develop a patient-centered care culture through establishing a model of compassionate care.

Methods: We introduced the CICARE communication method (Connect, Introduce, Communicate, Ask, Response, Exit) which had been adopted in UCLA Health System. Chaired by the deputy superintendent, 40 frontline staffs drew up a "perpetual care programme", and the multidisciplinary team programme consisted of six main parts:

1. Built platform of sharing caring experience;
2. Held etiquette workshop focusing on the courtesy, respect, and professionalism;
3. Invited mass communication professionals to guide that how to create interaction with patients;
4. Reward and recognition approaches that spotlight service excellence including compassionate care model acknowledgements, the superintendent celebrated those who demonstrate excellence in patient care, and encouraged excellent staffs shared their experience with peers;
5. Invited senior investigative reporters to guide reporting the story of compassionate care models;
6. Held poster competition on the theme "caring in daily clinical practice".

Results: Since September 2013, we have held eight lectures about caring practice, and three sessions of outstanding staff award ceremony. 20 caring teachers, 61 outstanding employees (compassionate care models) were rewarded, and 29 posters were published. We created a satisfaction questionnaire, named "Caring scale", which was referenced the five principles of UCLA Health System in the area of "communication". We interviewed patients with the "Caring scale" before and after the programme introduced, and the satisfaction score increased from 79.89% (n=673, Cronbach's Alpha =0.85) to 91.44% (n=591, Cronbach's Alpha =0.83). Satisfaction survey in 40 frontline caregivers revealed that more than 90% (91.56%+11.67 %, Cronbach's Alpha =0.93) were satisfied with the perpetual care programme.

Conclusion: We build a environment to arouse the staff’s commitment to caring, and also strengthen the trust relationship between medical staff and patients. A patient-centered care culture can be created by CICARE method fulfilment & compassionate care models establishment.

References:

Disclosure of Interest: None Declared

Keywords: CICARE, compassionate care model, patient centered care
Getting A Foot In The Door: Engaging Primary Health In Interventions For Low Incidence Conditions
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Objectives: Engaging generalist primary health services in interventions for very small client populations can be difficult. Spinal Cord Injury (SCI) is a complex chronic condition but relatively rare (incidence in Australia 14.5 per million). We report on effective and ineffective engagement strategies for two community-based interventions for people with a SCI.

Methods: Retrospective analysis of meeting minutes, emails, and field notes of negotiations with 4 community health services, and 4 Medicare Locals (ML) (agencies that coordinate local primary health services) for 2 separate projects, one for chronic pain after SCI, the other for pressure injuries in this group. Five to 15 clients per site would benefit from the interventions.

Results: Effective strategies Harnessing stakeholders A statewide SCI Community Of Practice (CoP) of 120 specialist and generalist clinicians and consumers was formed through ACI activities. Successful engagement of 5 of our sites was directly due to links to the CoP.

Leveraging interest We leveraged interest in SCI issues by timing dissemination activities to coincide with the launch of NSW Pain Plan, the Clinical Excellence Commission’s Pressure Injury Policy and National Safety and Quality Health Service Accreditation Standard on Pressure Injuries. This facilitated 2 invitations to speak at broader pain seminars, a PI forum and a 2 hour workshop for GPs.

Starting with Consumer - Consumers in our CoP who have chronic pain are approaching their GPs and asking them to partner them in User Acceptability Testing of the intervention. This is generating valuable detailed feedback. Using existing workflow MLs told us our open-access NSW Health sponsored SCI website was a click too far from HealthPathways, their existing clinical software. We are therefore commissioning an SCI pathway for HealthPathways to link them.

Tailoring systems We knew from feedback from generalist clinicians in the CoP that they lacked SCI specific knowledge and skills. All sites reported variable outcomes for their clients with SCI related to the SCI skills of the clinician involved. We took special care therefore when designing interventions to make SCI-specific information easily accessible, embed automatic alerts in clinical software and include SCI-specific criteria in clinical priority tools. Red flags in the SCI Pain tool recently helped identify an epidural abscess that the GP stated would otherwise have been missed.

Ineffective Strategies General pitches of our intervention to MLs had a lukewarm reception. Reasons for lack of engagement included the seeming lack of relevance (GPs reported few or no clients with a SCI), a perception that it was outside their scope of practice to do anything except refer on, and the SCI website did not fit with HealthPathways.

Unclear roles GPs told us they were uncertain of their role in this specialized area so were reluctant to engage with us. We are now working on clear pathways that define roles and facilitating links between general and specialist services.

Low priorities All community health centres had high turnover of staff and low capacity for quality improvement. Offering intensive support from researchers helped in 3 sites but in the 4th, people with SCI were seen as rare and a low priority.

Conclusion: Finding and harnessing the enthusiasm and specific needs of stakeholders, including consumers is an effective strategy to engage primary health services in interventions for low incidence conditions. Existing software and workflow needs to be considered and interventions tailored to fit. Offering support may assist where lack of capacity means low incidence equals low priority.

Disclosure of Interest: None Declared

Keywords: implementation strategies, primary health, spinal cord injury
End Of Life Decisions In Terminal Cancer Patients In Japan: Hospital Policies Regarding Informed Consent In DNR

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Objectives: Health care providers at health care facilities often ask patients to declare their wishes and provide consent regarding cardiopulmonary resuscitation, the so-called “DNR status.” In patients with terminal cancer, this decision affects both providers and patients alike, with utility and futility of care and patient wishes hanging in the balance. Little is known about the current state of hospital policies about informed consent and DNR status in terminal cancer patients in Japan. Therefore, we seek to clarify the ways DNR status is explained, how consent is obtained, and the particulars of established hospital policies with regards to terminal cancer patients in Japan.

Methods: We sent anonymous, self-administered multiple-choice questionnaires to a hospital administrator affiliated with the Japanese Medical Society in a subset of general hospitals (n=1357, 20% of total general hospitals) and university hospitals (n=60) from 9/2/2013 to 9/28/2013.

Results: The overall participation rate was 22.4% (general hospitals n=277, 20.4%, university hospitals n=20, 33.3%).

Table 1 Informed Consent for DNR order

<table>
<thead>
<tr>
<th>1 How is DNR explained?</th>
<th>General Hospitals (n=277)</th>
<th>University Hospitals (n=20)</th>
<th>Combined (n=317)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written explanation only</td>
<td>50 (18.6)</td>
<td>4 (20.0)</td>
<td>56 (18.4)</td>
</tr>
<tr>
<td>Oral explanation followed by documentation in the chart</td>
<td>206 (76.6)</td>
<td>15 (75.0)</td>
<td>230 (75.7)</td>
</tr>
<tr>
<td>Oral explanation without subsequent chart documentation</td>
<td>9 (3.3)</td>
<td>0 (0.0)</td>
<td>11 (3.6)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (1.5)</td>
<td>1 (5.0)</td>
<td>7 (2.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2 How is DNR consent obtained?</th>
<th>General Hospitals (n=277)</th>
<th>University Hospitals (n=20)</th>
<th>Combined (n=317)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written consent</td>
<td>70 (26.3)</td>
<td>5 (27.8)</td>
<td>77 (25.8)</td>
</tr>
<tr>
<td>Oral consent with subsequent chart documentation/ordering</td>
<td>186 (69.9)</td>
<td>13 (72.2)</td>
<td>208 (69.6)</td>
</tr>
<tr>
<td>Oral consent without subsequent chart documentation/ordering</td>
<td>7 (2.6)</td>
<td>0 (0.0)</td>
<td>9 (3.0)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (1.1)</td>
<td>0 (0.0)</td>
<td>5 (1.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3 Hospital policy regarding informed consent for DNR order</th>
<th>General Hospitals (n=108)</th>
<th>University Hospitals (n=7)</th>
<th>Combined (n=120)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal written policy</td>
<td>13 (4.8)</td>
<td>0 (0.0)</td>
<td>13 (4.2)</td>
</tr>
<tr>
<td>Informal policy</td>
<td>95 (34.9)</td>
<td>7 (35.0)</td>
<td>107 (34.7)</td>
</tr>
<tr>
<td>No established policy</td>
<td>164 (60.3)</td>
<td>13 (65.0)</td>
<td>188 (61.0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4 When is informed consent performed with regards to life expectancy?</th>
<th>General Hospitals (n=120)</th>
<th>University Hospitals (n=7)</th>
<th>Combined (n=120)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy</td>
<td>General Hospitals (n=108)</td>
<td>University Hospitals (n=7)</td>
<td>Combined (n=120)</td>
</tr>
<tr>
<td>Less than 3 months</td>
<td>46 (47.9)</td>
<td>5 (100.0)</td>
<td>52 (49.1)</td>
</tr>
<tr>
<td>3-6 months</td>
<td>22 (22.9)</td>
<td>0 (0.0)</td>
<td>24 (22.6)</td>
</tr>
<tr>
<td>6-12 months</td>
<td>8 (8.3)</td>
<td>0 (0.0)</td>
<td>8 (7.5)</td>
</tr>
<tr>
<td>1-3 years</td>
<td>1 (1.0)</td>
<td>0 (0.0)</td>
<td>2 (1.9)</td>
</tr>
<tr>
<td>3-5 years</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Over 5 years</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Other</td>
<td>19 (19.8)</td>
<td>0 (0.0)</td>
<td>20 (18.9)</td>
</tr>
</tbody>
</table>

Blank answers were excluded from analysis

Conclusion: Of hospitals surveyed, about 40% have a formal or informal policy regarding informed consent in establishing the patient’s wishes about CPR. About half of these hospitals apply these policies only to patients with a life expectancy under 3 months while some applied it to patients with a longer life expectancy. This could be problematic if patient discussions are not frequently readdressed in patients with a longer life expectancy.

Disclosure of Interest: S. Maeda Grant / Research support from: Japan Medical Association Research Institute, E. Kamishiraki: None Declared, J. Starkey: None Declared

Keywords: DNR, end of life care, Informed Consent
Organisational Constraints Affecting Patient Centred Care In Teaching Hospitals: The Case For Change
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Objectives: Hospitals strive to deliver patient-centred care but they operate in complex organisational and health professional environments. This study sought to investigate the pattern of doctors’ work within a teaching hospital environment to gain insights into the effects of organisation on their interactions with nurses and allied health professionals.

Methods: An ethnographic method was used for the study which took place in three tertiary referral hospitals between 2011 and 2012. Participants were junior doctors in their pre-vocational years of training, two from each hospital. Preliminary observation was conducted to develop an overall perspective of their hospital environments. This was followed by shadowing the doctors for over 50 hours to observe their interactions with nurses and allied health professionals as they carried out their daily tasks. Doctors were followed on ward rounds which extended to attending their ‘outlier’ patients admitted to other wards. They assessed patients in the emergency department and at outpatient clinics; reviewed patients in day surgery units; and liaised face-to-face with radiology and operating theatre staff and if needed, spent time in the operating theatre with their registrar. Detailed records were made of observations and situational data captured relevant to the ward settings where doctors were based. Descriptive content analysis of data was conducted. NVivo 9 was used for the management of data.

Results: Doctors were seen as itinerant members of the health care team. The nature of their role and the location of patients affected their capacity to work collaboratively with nurses and allied health professionals to deliver patient centred care. Doctors are drawn away from their wards and therefore their patients to perform a range of clinically based functions in different areas of their hospitals, often located at a distance from their wards. Nurses conduct handovers independently of doctors whose ward rounds tend to be intra-professional and swift, leaving little time for more than cursory interaction with patients. On the wards, doctors were observed working at their stations in relative isolation, ordering procedures and investigations, prescribing medications, pursuing test results, writing up patient notes and communicating by telephone, email or face-to-face, mainly with other doctors. Their tasks were focused on the care of patients but were consuming almost to the exclusion of nurses and allied health professionals involved in the care of the same patients.

Conclusion: Organisational arrangements in large teaching hospitals are barriers to effecting optimal patient-centred care. Despite the interdependence of all the health professionals on the patient care team, the present disconnect between doctors, nurses and allied health professionals compromises their potentiality to work inter-professionally. For the locus of care to reside with and include patients, health professional and organisational structures require closer alignment and strongly agreed aims about delivering patient-centred care. Improvements to bring about convergence of health professionals require changes including the organisation of doctors, physical proximity of doctors to nurses and allied health professionals, appropriate physical location of patients to prevent outliers and a greater focus on establishing multi-professional ward rounds. Organisational readiness is pivotal to embracing such changes.

Disclosure of Interest: None Declared

Keywords: Organisation of care
Improving Patient Access By Reducing The No Show Rate In Pediatric Neurology Outpatients
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Objectives: To study the root causes for high no-show in paediatric neurology. To implement system improvement that will reduce no-show and improve patient access.

Methods: A project team was assembled, No show rate was evaluated for a baseline period. Root cause analysis was undertaken creating a fishbone causation diagram. A simple PDSA cycle was implemented and a post intervention data collection was undertaken.
Two KPIs were identified: no-show rate as a percentage of patients given appointments and the average time patients wait for their clinic appointment.

Results: The mean no show rate at the baseline was 49% with a mean time to be seen of 8.5 weeks. Several causes were identified including long waiting time and ineffective communications by the appointment team with the patients, two changes were implemented, to have a two way communication strategy which is agreed by all appointment clerks and to book patients in the vacated slots by those who declined the appointment for any reason. Post intervention the no-show rate fell to 18% and remained around the 25 % mark for 12 months. The mean time to be seen fell to 5 weeks and remains at around 5.5 weeks for 12 months.

Conclusion: Effective interventions to reduce no-show improve patient access and reduce waste in outpatient settings. Such changes can be sustained if rigorous communication strategies are enforced and reviewed regularly. Further work is needed to understand the effect of such interventions on patient satisfaction.

Disclosure of Interest: None Declared

Keywords: Access to healthcare, No Show
Collaborative Efforts To Improve Patient Satisfaction Via Interpersonal Relationship In Labor & Delivery Ward
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Objectives: Our observation, that, women were often improperly attended in labor ward, and increase in patient complaints prompted us to take quality project to improve care. To bring 20% improvement in patient satisfaction in women in labor ward.

Methods: The quality objective was conducted from June 2013 to April 2014. A survey questionnaire was developed on communication, attitude, responsiveness, respect and care. Initial survey in labor ward showed compliance of 72%. Deming's PDSA problem solving tool was adopted. Cause and effect analysis was done. Implemented strategies and recommendation included workshops on communication skills and sessions on CARR standard covering 100% labor ward staff. NICE guideline clause 1.3 addressing communication with laboring women, was adopted. Staff was motivated through pictorial instructions and appreciation tickets, and on spot feedbacks given. Post implementation survey was conducted.

Results: The compliance rate (interpreted as patient satisfaction) increased to 95%.

Conclusion: Communication Attitude Responsiveness Respect & care (CARR) standard is an excellent tool, in addition to NICE guideline for improving care and has significant implication on patient satisfaction.

Disclosure of Interest: None Declared

Keywords: CARR- Communication attitude, responsiveness, respect & care, NICE- National Institute for health & care excellence, PDSA- plan do study act
Improving Emergency Response For Children At A Tertiary Facility In Ghana Through ETAT And QI Approaches
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1Public Health, 2Child Health, Korle Bu Teaching Hospital, Accra, Ghana

Objectives: To improve emergency response for children at a tertiary facility in Ghana through ETAT and QI approaches
Other specific objectives included:
1. To identify the waiting time of clients at the various stages of the out-patient journey
1. To baseline data to facilitate the implementation of ETAT

Methods: A descriptive analytical design was chosen as the design for this study. The study site was the Department of Child Health of the Korle Bu Teaching Hospital in Accra, Ghana. The study population included all patients (i.e. children <12years) who attended the outpatient department (OPD) for their routine recall visits and emergency room. All folders were tagged at the various service points (records department, nurse station, health insurance desk and the bank) from 06:00GMT to 11:00GMT by members of the project team. Measures that were tracked included patients waiting time from entry to exit of the consulting room; and the time of first drug administration of inpatients. The clock at the nurses’ station, consulting rooms and that of all the members of the project team were reset and synchronized. Data that was collected was entered into Excel sheets and later analyzed with SPSS V.21.

Results: Of the total number of respondents (i.e. 538) who took part in the study, 42.3% (219) of them were >5years while 57.7% (319) were <5years. More than two-thirds (i.e. 90%) of the cases were seen at the OPD. Males (309, 57.4%) were 16.3% more than females (221, 41.1%). Gender had no statistical significance on the waiting time. Two-thirds (68.8%) of the respondents also assessed services by the national health insurance while less than a quarter (78, 14.5%) of the cases were new. The age of the respondents; the type of clinic (i.e. Neuro, NICU, Sickle cell, others); type of case (i.e. New or Old); Facility patient was referred from (home, private, government); and the day of week were statistically significant (p<0.05) with the waiting time. House officers (17.0-53.0Minutes) spent 8minutes more time complete their consultation than Residents/Specialists (20.0; IQR:13.0-39.0Minutes) and Consultants (20.5; IQR:17.5-72.5Minutes). Patients spent the longest waiting time of 118minutes waiting to see a doctor whereas only a fifth (22.1minutes) of this time was time spent by the doctors on these patients. It took a mean of 2.6Hours for the time of first drug administration in the ER. The median overall waiting time was 4.2 (2.9-6) Hours. Only a percentage of the patients completed the journey in less than 1Hour. An ETAT system and a redesign of the patients’ journey introduced reduced the waiting time by 57% in the ER and 48% in the OPD.

Conclusion: It can be concluded that, with the appropriate system redesign such as the introduction of an ETAT system, emergency response time and time for routine recall visits of children could be reduced to the barest minimum. Variables such as age, day of the week, type of clinic, category of doctor and the type of case were statistically significant (p<0.05).

Disclosure of Interest: None Declared

Keywords: Emergency Triaging Assessment & Treatment (ETAT)
Objectives: Evidence the results which were obtained through the implantation of a therapeutic plan instrument, aiming at the assistance planning and decreasing the permanence at intensive care.

Methods: It’s a retrospective analysis which source was the Adult ICU database. The instrument was developed with the medical coordination and the multidisciplinary team. It would be used on the visits that daily happen in the morning. This instrument would forecast the professional’s definition whose will be involved on the patient’s care and what would be the actuation focus inside the purpose time of admission. The therapeutic plan would be executed by the diarist doctor and re-evaluated always necessary by the physician doctor. In the end of the determined period the diarist doctor will define the upshot. The instrument must be added to the multidisciplinary visit daily to be followed in the rounds which the therapeutic project to the next 24 hours would be discussed, always answering the plan purpose. It was implanted on August, 01st, 2014. This study analysis 257 patients in 6 months of Adult ICU utilization on Unimed de Americana Hospital. The data were collected daily in the end of each round and charted by the physician nurse. In the end of each month these data were discussed and analyzed by the medical and nurse coordination and they were stated to the multidisciplinary team to elaborate improvement plans. The goal was in the end of 06 months achieve 100% instrument support and analyses the effective of the improvements deployed in the clinical upshots of patients, when compared to the clinical improvement proportion discharge, re-evaluations and deaths. After three months of utilization the instrument was re-evaluated and restructured. In July 2014 we started the evaluation and effectiveness to the team approval. With the official instrument implantation in August, the patients were valued by the physician doctor up to 24 hours of the Adult ICU admission and the actions were planned and followed, in the programmed period, while the multidisciplinary visits.

Results: In the analyzed period was noticed an increase from 88% to 98% of instrument support. There was 55% of discharges accomplished in the fixed time and 27% re-evaluations with upshots of clinical improvement, 15% of deaths in population and 3% of case prognostics considered as palliative care which the therapeutic plan was not re-evaluated and defined as comfort. The permanence media was 07 days in the first semester of 2014, falling to 4,6 days in the second semester.

Conclusion: The multidisciplinary visit was implanted in the institution 5 years ago, but the profits could never be valuated in terms of numbers. Also was apparent that the professionals were involved in no criteria assistance, in other words, everybody was involved in the care of all patients. With the structured implantation of the therapeutic plan the team realized a better actions distribution in profit of the therapeutic measures and, this way, it was possible guarantee to the patient a safer, planned, individualized and effective assistance, ensuring more time of permanence at intensive care. Parallel to the plan, the team of adult intensive care keeps a diary communication with the bed management helping the planning of the bed map, which the objective is a better bed optimization.

Disclosure of Interest: None Declared

Keywords: Multidisciplinary Teams, Patient Safe Assistance, Therapeutic Plan
Objectives: The objective of this study is to demonstrate the use of Gemba as a strategy to solve problems.

Methods: The work was developed in a private, tertiary hospital in São Paulo, south-eastern Brazil. The Gemba methodology means “where the work happens” and is part of the Lean philosophy, which has proven its success in healthcare organizations, bringing improvements to common problems such as long queues, high costs and various types of waste, both applicable in intellectual and complex work as in production lines.

The Quality sector has been encouraging this methodology in several moments, allowing easy understanding of the problems and emergence of more effective solutions, not just identifying failures and improvements presented in management meetings, spread sheets and emails.

Being in the Gemba brings many procedural benefits by enabling the visualization of the real flow of activities, and avoiding administration by numbers. However, nothing is useful if during the Gemba there is commitment to other activities of daily routine that could interfere the flow to be displayed.

Although Gemba should be done by all hierarchical levels, organizations use this methodology also as a strategy to assist managers in relationships, because when there is interest from the manager in the steps of each activity, people feel more important and appreciated.

Results: During the Gemba that has been performed in the Paediatric ICU focused on dispensing medications every two hours, it has became clear the gaps between the nursing and pharmacy staff: no definition of the request schedules and materials and medicines return; failure in the computerized process and unnecessary stock in the unit. Failures that during the daily routine were not identified because of the “addictions” of those involved.

Another Gemba has been performed in the Maternity and Neonatal Intensive Care Unit - focusing on the flaws in the vaccination process of new-borns (duplicity of BCG vaccine). In this case, we have noticed the some failure during the records of the activity (vaccine control book, checking medical prescriptions, nursing notes in patient charts, record on vaccine portfolio, record in the computerized system, shifts chart). These failures have been accumulated over the years, only being adapted and not corrected. Besides, the vaccination process was only under the supervision of two nurses in the NICU. This fact made the process dependent on these professionals, and so they failed in their absence. When applying Gemba, we have identified that the processes between the different sectors were not connected, they were only fulfilling activities randomly, compromising the effectiveness of it.

Conclusion: Although Gemba is not a common term among the people involved, today, after its introduction, we can highlight the improvement in communication, the involvement in activities, and in discussions based on data and facts. The use of Gemba has contributed to the culture of not being punitive but wondering “what” and “why” instead of “who?”. Thus the Gemba methodology should be part of the daily lives of all hierarchical levels.


Lean Institute Brasil – O “vá ver” e as relações humanas. Available in: <http://www.lean.org.br/leanmail/100/o

Disclosure of Interest: None Declared

Keywords: Gemba, Quality
Central Line-Associated Bloodstream Infection (CLABSI) Clinical Prevention Protocol Oriented To The Reality Of Brazilian Culture
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Objectives: To ensure central line-associated bloodstream infection prevention (CLABSI) by monitoring the application of a set of best practices elected in a clinical protocol designed for the Brazilian reality. A central line, according to National Health Care Safety Network, the NHSN, are intravascular devices which end is located in the heart or close to it, in a large vase, and are used for infusion, blood collection or hemodynamic monitoring. Any device ending at the heart or near the heart, used for the purposes described above, is called as central line. Current data of central line-associated bloodstream infection (CLABSI) have been the focus of attention dual to the worsening of clinical condition of the patient and to a possible SEPSIS progression.

Methods: In 2008 the IQG – Health Services Accreditation (IQG), with the support of the Canadian Patient Safety Institute (CPSI), of the Institute for Healthcare Improvement (IHI) and of Accreditation Canada International, developed the Brazilian Patient Safety Program (PBSP). Through the voluntary participation of Brazilian hospitals, the Program promotes the dissemination of safety practices and the exchange of experiences among the participating institutions. In the second half of 2013 the Brazilian Patient Safety Program (PBSP) reviewed, in collaboration with the Canadian Patient Safety Institute (CPSI), the clinical protocol defining a set of best practices that, when implemented together, should result in a reduction in CLABSI incidence. To develop this study an n = 76 participating institutions were involved, identifying 4569 patients at risk. For the method to be successful it was necessary that all the practices were performed together. Best practices were divided into two phases: The Device Insertion Package and Care Package. Device Insertion Package includes: Proper hand hygiene before insertion of central line; Maximal barrier precautions during the insertion procedure of central line; Antisepsis with chlorhexidine before the insertion procedure of central line; Right selection of the insertion site. Care Package includes: Daily review of central line and of the indication of permanence; Lumen aseptic access; Caution with the site and the catheter. The Brazilian Patient Safety Program gave scientific and technical support to participating institutions through monitoring and guidance throughout the protocol implementation process, i.e., from the implementation to data collection, analysis and feedback to institutions.

Results: Our results showed that compliance to the practices of the protocol reached or were very close to target of 95%. We could also observe a declining trend line in the CLABSI density of incidence. When comparing the data from the analysis related to the years 2013 and 2014 we observed that the CLABSI density of incidence was decreased by 21.5%. Comparing only the data of the first quarter of 2014 to the fourth quarter of the same year we also observed that the density of incidence of CLABSI was decreased, this time by 18.1%.

Conclusion: Our data suggest that the practices proposed in this clinical protocol, when performed together, had a positive impact on the clinical outcome of the patient. This result indicates that the methodology used for the dissemination of the safety practices elected in the protocol was effective in improving the safety and clinical outcome of patients seen in the participant hospitals of the Brazilian Patient Safety Program.

Disclosure of Interest: None Declared

Keywords: CLABSI, PBSP (Brazilian Patient Safety Program)
Compliance With Planned Systematic Approach To The Provision Of Patient Care In Ambulatory Care Services
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Objectives: To measure the compliance with planned systematic approach to the provision of patient care in Ambulatory Care Services in Malaysian accredited hospitals, year 2013 and 2014.

Methods: A set of standard on planned systematic approach for patient care was developed in 4th Edition Malaysian Hospital Accreditation Standards to improve the levels of patient safety in ambulatory care services. The set of standard on planned systematic approach comprise of 10 sub-standards which includes:

a) available criteria for selection and assessment of cases;
b) policy on use of sedation during procedures;
c) documentation of the admission policies including age or disease limitations and the restrictions concerning the scope of clinical services offered;
d) the booking and admission of patients comply with these admission policies;
e) essential information is given to all patients;
f) the requirements for a pre-anaesthetic assessment to be performed by a medical practitioner;
g) patient identification, with the nature and site of the procedure marked and verified by the surgeon and the consent documents checked;
h) observations of the patient’s pre-, intra-, and post-procedure status and vital signs are monitored and recorded in the medical record;
i) a dedicated anaesthetist is present or readily contactable until all patients who have undergone anaesthesia/sedation are discharged;
j) the discharge procedure ensures the patient is given relevant documented postoperative instructions and there is a responsible person accompanying the discharged patient. The address and phone number of the discharge custodian is recorded in the medical record.

This set of standard is assessed by hospitals providing ambulatory care services. Compliance ratings for each sub-standard were obtained from the survey reports in years 2013 and 2014. Percentages of Substantial Compliance (SC) rating, which is be given when surveyor believe sufficient key elements of the standards are achieved (80% and above), were then tabulated according to each of the 10 sub-standards posed.

Results: All planned systematic approach display more than 88% of substantial compliance status in both years. Of ten systematic approaches, three systematic approach (a, d & e) exhibit percentage increases of substantial compliance status, while four (b, c, i & j) showed slightly lower percentage and three (f, g & h) have sustained with 100% substantial compliance from year 2013 to 2014. Compliance performance is increased in year 2014 where five out of ten systematic approaches have substantially complied by all hospitals surveyed in year 2014 as compared to four in year 2013.

Conclusion: Despite of some partial compliance, the compliance with planned systemic approach is good in overall with high percentage of substantial compliance to all planned systematic approach and half of the systematic approaches have achieved 100% substantial compliance in year 2014. Such compliance also implied a state of preparedness of Malaysia healthcare system toward providing more ambulatory care services. However compliance to planned systematic approach needs to be improved in public hospitals providing endoscopy services and also private hospitals in that same healthcare group. In year 2013, systematic approach (a, d & e) regarding to policies and procedures were partially complied by three (3) hospitals from same healthcare group as these policies and procedures are not available. However, the compliance has improved for other hospitals in the same group in the subsequent year. Poor compliance on systematic approach (b, c, i & j) also observed in public hospitals providing endoscopy services in year 2014.

Disclosure of Interest: None Declared

Keywords: patient care
Utilizing Team Resource Management (TRM) To Implement Lean Process On Outpatient Examination

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Objectives: The priorities most often requested by patients for improvement are:
1) excessive documentation for scheduling outpatient testing,
2) complicated process of scheduling examination appointments, and
3) easiness in finding the examination location. Considering the above priorities, we aim to implement a lean process for outpatient examination with the introduction of Team Resource Management (TRM).

Methods: A total of 3,333,000 outpatient examination request forms were collected as the study samples from October 1, 2012 to December 26, 2013 in a community hospital in Taiwan.

Strategies:
I. Integrated outpatient checklist:
   ➢ Integrate the order of payment checklist, inspection sheet and check sheet,
   ➢ patient-centered information of check results,
   ➢ reduce printing and save the cost of materials and supplies, and
   ➢ use information systems to review and format the report.

II. Simplified procedures for the examination:
   ➢ Streamline the process through information systems,
   ➢ use a barcode to read the information, and
   ➢ access to online information related to the checklist.

III. Clear indication of the location for the medical exam:
   ➢ A site number allocated to each examination unit, and
   ➢ the checklist labelled with the site number of the medical exam.

Results:
1. Patient Satisfaction - According to the survey results about the length of time patients wait for medical tests in 2013, the ranking of waiting time for patients to receive medical tests and of waiting for appointments or waiting in line for payment were risen to the 1st and 4th place respectively with the improvement rate increasing by 16.2% and 13.6% separately.

2. Outcomes of Lean Process Implementation - The improvement rates for:
   ➢ integration of request forms for scheduling outpatient testing,
   ➢ outpatient testing integration for cost savings,
   ➢ time required to schedule the testing appointment,
   ➢ workforce reduction in medical testing, and
   ➢ appropriate signs and clear directions to the exam rooms were 85.71%, 9.16%, 80.36%, 40.75% and 150%, respectively.

Table 1

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Before</th>
<th>Aim</th>
<th>After</th>
<th>respectively</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration of request forms for scheduling outpatient testing (sheets)</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>85.71%</td>
</tr>
<tr>
<td>Outpatient testing integration for cost savings(NT$)</td>
<td>1,310,000</td>
<td>1,220,000</td>
<td>1,190,000</td>
<td>9.16%</td>
</tr>
<tr>
<td>Time required to schedule the testing appointment (seconds)</td>
<td>224</td>
<td>56</td>
<td>44</td>
<td>80.36%</td>
</tr>
<tr>
<td>Workforce reduction in medical testing(NT$)</td>
<td>2,110,000</td>
<td>1,370,000</td>
<td>1,250,000</td>
<td>40.75%</td>
</tr>
<tr>
<td>Appropriate signs and clear directions to the exam rooms (exam rooms)</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>150%</td>
</tr>
</tbody>
</table>

Conclusion: With the "patient-centered" aims, our hospital reorganized the entire process of patient visit, integrated the documentations for outpatient examination, and streamlined the process in order to create a friendly environment.

References:
Improving Patient Care By Providing The Radiological Images Hospital—Wide Through PACS And Creating Filmless Environment

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1Radiology, The Aga Khan University Hospital, Karachi, Pakistan, Karachi, Pakistan

Objectives: Improving patient care by providing the radiological images hospital-wide through PACS and creating filmless environment.

Methods: The Aga Khan University Hospital took initiative of digitization in the year 2004 with the ultimate goal to become a filmless and at the first stage replaced the conventional screen-film radiography by Computed Radiography (CR) system. The PACS was implemented in the year 2005. The first DR units were acquired in the year 2011 and now there are four DR systems. The Radiology department ensures that the exam images are acquired, processed and transferred to PACS. The IT team ensures that the underlying network, storage and computing infrastructure for end-users to access the images through their respective portals/applications, backup and safeguard of the PACS data and availability of the PACS images throughout the campus. In November 2014, Radiology decided to gradually stop the printing of the images. At the first stage the printing of images for critical areas was stopped and then all inpatient areas. In third phase film printing of ER patients was stopped. We are planning to extend the project to out-patients by the end of the year 2015. The image printing for out-side referral will be continued. In-case the PACS system fails the film-printing and distribution process are in-place and will be activated to meet the patient care needs of uninterrupted access to the patients images and reporting for providing the healthcare timely.

Results: All images are transferred to PACS within 30 min after image acquisition. No film is now lost. The chances of infection due to films circulation in patient areas reduces to zero. Cost savings due to reduction in film usage is approximate PKR 50 million per annum ($500,000). Record is now in soft form so instead of huge File rooms a small office will suffice the need.

Conclusion: The PACS system provides the Stadium Road users with access to exam images (of Radiology procedures) throughout the campus. At present, the Radiology department is integrated with the PACS and RIS and all exam images are archived into the system. The internal radiology workflows now have eliminated the film and all radiology reporting is now essentially carried out without any films. The PACS system provides advantages that include access to exam image access throughout the campus in all clinical areas as well as serving as an accessible repository of previous exams. The system can provide a significant potential advantage in terms of infection control by reducing and/or eliminating film circulation within the patient care areas. At present most of the clinicians use the online PACS facility to view the relevant exam images and films are not used in most of the clinical areas. The institution now aims to reduce or stop the film printing in a phased manner and use the PACS facility for all image viewing needs. The PACS facility relies heavily on the computing infrastructure for storage, management and distribution of the exam images and with the consolidation of this infrastructure, we are now all set to initiate film-lite environment for all our inpatient and outpatient settings. The image availability on PACS has not only improved the patient care through swift access to images shortly after the radiological procedures but has also reduced the number of films lost during transportation from and to Radiology and patient areas. The added advantages of financial savings to the department and the hospital through reduction in film printing and availability of space cannot be ignored.

Disclosure of Interest: None Declared

Keywords: filmless, PACS, Radiology AKUH
To Reduce Inpatient Appointment Times For Non-Urgent Peripherally Inserted Catheters (PICC) In The Department Of Radiology From 7 To 3 Calendar Days

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1 Diagnostic Radiology, Tan Tock Seng Hospital, Singapore

Objectives: To reduce the time interval between placements of non-urgent inpatient request via a computerised clinician order system to performance of Peripherally Inserted Central Catheters (PICCs) in the Department of Radiology from 7 to 3 calendar days.

Methods: The placement of Peripherally Inserted Central Catheters (PICC) is a centrally located service provided by the radiology department. It is performed by radiology residents under the supervision of senior colleagues. The appointment time given can be a long as 7 days and this adversely impacts patient care in addition to delaying patient discharge and contributing to a hospital bed crunch. A team comprising an interventional radiologist, two radiology residents, an internal medicine resident, a nurse clinician, a staff nurse, a radiographer and a patient service associate was formed. Clinical Practice Improvement Programme (CPIP) methodology was employed. A cause and effect diagram was derived from the analysis. A Pareto chart was subsequently drawn and the five main root causes identified were:

- Lack of formalised training for radiology residents in PICC insertion.
- No dedicated listing for PICC.
- Portering issues leading to delay in patient transfer to the radiology department.
- Lack of awareness of computerised clinical order system leading to inaccurate and duplicate orders.
- Suboptimal ward co-ordination to meet scheduled PICC appointment.

The interventions consisted of firstly creation of a formal training programme for residents and team members. Secondly, an experienced proceduralist was made available during each session to ensure effective direct supervision of residents. Lastly, the PICC schedule was amended to dedicate the entire session to PICC cases, thus decreasing the time taken for each procedure and at the same time improving overall efficiency and flow.

Plan-Do-Study-Act (PDSA) cycles were carried out following introduction of each intervention to evaluate outcome, troubleshoot and implement optimisations.

Results: After six months, the maximum wait time for a PICC to be performed in our institution decreased to 3 calendar days. Mean wait time decreased from 4 to 2 days. We met with significant obstacles in the form of public holidays that created long weekends and also lapses in orientation and training of new staff to the computerised scheduling system.

Conclusion: We were able to decrease the time taken for PICCs to be inserted within our hospital. Maintenance of gains would depend on adherence to continual training, regular review and audit. This endeavour illustrates the concept of improvement of an essential service using the CPIP methodology.

Disclosure of Interest: None Declared

Keywords: Appointment Times, Peripherally Inserted Central Catheter
Patients’ Perception of and Satisfaction with Surgical-Care Quality and Safety in Libya: A Post Revolution Survey
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Objectives: To assess patient perception of and satisfaction with surgical-care quality and safety in a Libyan public hospital in Benghazi after revolution and establishment of democracy in the country.

Methods: A cross sectional survey was conducted during February 2013 in Al-Jala hospital for Accident-Surgery in Benghazi. A sample of 147 patients at discharge was interviewed out of 165. Patients aged <15 years, >65 years, not consented to participate and discharged without any surgery were excluded from this study. Total 27 patient perceptions and satisfaction items on surgical-care quality were included in a structured interview Performa which was pre tested. Each scale item was measured with a 5-point Likert-type scale. Data was analysed in SPSS. Cronbach's alpha coefficient (minimum recommended value 0.7) was used to measure scale reliability and Pearson Chi-Square test was used to measure statistical significant associations (p<0.05).

Results: Patient participation in this study was as high as 89%. Cronbach's alpha coefficient 0.85 for 27 quality perception and satisfaction scale items infers the fact the scale items are internally consistent and reliable. Majority of patients revealed positive perceptions of overall surgical-care quality (11.6% as excellent, 18.4% as very good and 53.7% as good) compared to negative perception (12.9% as poor) and 3.4%, neutral. Patient satisfaction with overall surgical-care quality was 56.5% as compared to 27.2% who were dissatisfied and 16.3%, neutral. While 65.3% patients felt their surgical-care was affected by mistakes committed by hospital staff-physicians 25.2%, surgeons 22.4%, anaesthetists 6.1%, and nurses 11.6%. Professional staff mistake is found significantly (p<0.05) associated with patient satisfaction with nurses and anaesthetists care but not with physicians and surgeons care. Out of all patients, 66% experienced long waiting time for surgical-care (23.1% for operation, 15% for final diagnosis, 13.6% for consulting surgeon, 9.5% for nursing care, 2% for anaesthesia induction and 1.4% each for final date of operation and preoperative care). A significant (p<0.05) association between professional staff mistakes and long patient waiting time reveals that staff mistakes induce and/or prolong patients' waiting for surgical-care. While 44.2% patients complained to hospital administration for deficiencies in the quality of hospital's surgical-care, a significant (p<0.05) association between long waiting time and patient complaint and also between staff mistakes and patients complaint makes clear that both long waiting time and staff mistakes insist on patients to complain. 12.2% of patients felt hospital's surgical-care was 'unsafe' and this perception has significant (p<0.05) association with their perception of and satisfaction with overall surgical-care quality. However significant (p<0.05) association between staff mistakes and patients perception of unsafe surgical-care imply staff mistakes result unsafe surgical-care.

Conclusion: Positive patient perceptions of hospital's surgical-care quality did not rule out poor patient satisfaction with quality of surgical-care, unsafe surgical-care and staff mistakes in and prolonged waiting time during surgical-care. To improve surgical care quality and to promote safe surgical practice, implementation of WHO Surgical Safety Checklist is highly recommended for the hospital during post-revolution phase. An intervention study is recommended for the hospital to investigate whether implementing WHO Surgical Safety Checklist diminishes patients' perceptions of staff mistakes and unsafe surgical practice.

Disclosure of Interest: None Declared

Keywords: patient satisfaction
Patient Centred Care Lessons Learnt from New Accreditation Standards Implemented in a Resource Limited Setting: A Case Study of Uganda’s Faith Based Health Network

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Objectives:
Quality Problem: New evidence suggests that accreditation needs to capture patient centered care standards. Yet, a recently developed and used accreditation system has not been scrutinized for inclusion of these standards.

Initial assessment: Uganda Protestant Medical Bureau is a faith based network of over 280 Private-Not-For-Profit (PNFP) lower and higher level health institutions. After years of using old supervision standards, the bureau found them ineffective insofar as understanding patient centered care processes and structures was concerned.

Methods: Choice of solution: A new accreditation system was developed majorly as an adaptation of the safe-care standards used in most resource limited settings in Sub-Saharan Africa. Some old supervision standards were added.

Implementation: We scrutinized new accreditation standards for inclusion of some 10 patient centered selected indicators from allied international and government documents.

Results: Evaluation: The patient safety indicators captured in new tools are:

1. signage to direct patients and visitors,
2. signage is in the languages of the communities served,
3. effective health worker/patient interaction using flip chart, email, notice boards, telephone contact and
4. patient satisfaction survey.

Conclusion: Lessons Learned: Five patient centered care standards need to be added in future accreditation revisions including:
1) provider asking clients about their history and problems
2) list of available services at outpatient departments,
3) patients asking questions about their illness and the management plan,
4) patient rights pinned up on wards and the health worker is able to identify at least five of the patients’ rights and
5) patient’s rights and responsibilities in the local language are displayed.

Disclosure of Interest: None Declared

Keywords: accreditation standards, patient centered care,
A Perspective of Patients Concerns and Priorities in Different Parts of the World Beyond the Standard Six Key Features of High Reliability

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**Objectives:** Health care excellence rating is frustrated by media critics’ comparison of health service institutions to technological giants like NASA, Swiss watch makers and the airlines engineering. These industrial giants supercede accuracy criteria to precision. The known six key features of high reliability adopted by experts and accreditation bodies are not necessarily applicable or adoptable by individuals. The objectives of this short presentation is to explore and provoke discussions about the relevance of organizational high reliability to individual patient concerns in different parts of the world.

**Methods:** Perspective

**Results:** Patients may be preoccupied with their immediate experience and what they assume as local shortcomings of their health care provider. Concerns of one community are not necessarily similar to others. The country’s position in this accompanying table is therefore not interchangeable.

<table>
<thead>
<tr>
<th>Western Developed</th>
<th>Asian Fast Developing</th>
<th>African Developing</th>
<th>Middle East Troubled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal GP access</td>
<td>Liberal specialist access</td>
<td>Free medications</td>
<td>Shelter</td>
</tr>
<tr>
<td>Cancer screening</td>
<td>Tertiary care access</td>
<td>Immunisation</td>
<td>Secure access</td>
</tr>
<tr>
<td>Shorter Waiting lists</td>
<td>Recruiting expatriates</td>
<td>Emergency services</td>
<td>Mobile blood bank</td>
</tr>
<tr>
<td>Modern Medico-legal issues</td>
<td>Sponsored treatment abroad</td>
<td>Access to secondary care</td>
<td>Epidemics management</td>
</tr>
</tbody>
</table>

**Conclusion:** High reliability features should bear some consideration to the local patient concerns and characteristics of the local health care set up. Degree of affluence or deprivation dictates patients’ expectations. The economic capability of the country has an impact on patient needs and demands. Efforts, budgets, and aid should be tailored accordingly.

**Disclosure of Interest:** None Declared

**Keywords:** Patients concern.
Optimizing Care Coordination through improving Medication reconciliation at hospitals under the Abu Dhabi Health Services Company –SEHA
SEHA medication Safety subcommittee (SEHA MSS)

Background Medication reconciliation is the process of comparing patient's medication orders to all of the medications that the patient has been taking. It is part of both The Joint commission National Patient safety Goals, and the institute for healthcare improvement. Admission reconciliation was designed to ensure patient’s pre-admission medications are ordered correctly upon hospital admission to avoid medication errors such as omissions, duplications, or drug interactions. The average Compliance with medication reconciliation upon admission across SEHA hospitals as per Q3 Data of 2013 was 38.9%.

Objectives To increase the average compliance of the medication reconciliation upon admission among all SEHA hospitals and at each single hospital from the baseline at Q3 2013 to reach > 70% by March-2015. This project was designed to improve the reconciliation upon admission as a first step toward improving the full reconciliation process including transfer and discharge.

Methods 5 out of 7 SEHA hospitals with total 1722 beds participated in this project since two hospitals were in advance with their compliance. SEHA-MSS members steered several meetings and served as a platform for sharing experiences and monitoring compliance. Each hospital worked independently using a multidisciplinary approach where physicians, nurses and pharmacists worked together to improve this safety measure. The project designed by SEHA-MSS and each facility followed the agreed PDCA (plan, do, check act) improvement cycle. The “Plan” phase included: benchmarking, selecting the target and defining ownership. The “Do” phase included: gaining hospital leadership support, increasing health care providers awareness of medication reconciliation process as a patient safety initiative, re-training physicians on medication reconciliation module, developing a monitoring mechanism to assess the compliance, and share result with all health care providers and leaders, conducting meetings with medical departments to discuss the challenges and find solutions, conducting educational activities like DEMO videos and hospital educational fairs to explain the flow process and targets, modifying the existing flow process to accommodate clear roles and responsibilities for the prescriber, the nurse, and the pharmacist. In addition, the compliant department was recognized and acknowledged. The “Check” phase included: adopting system generated daily reports as a method to monitor compliance, continuous follow up by Pharmacy and Therapeutic Committee (PTC) and by Chairs and Chiefs meeting. The “Act” phase: to be followed once target was reached, a trigger tool plan will be followed by generating reports mid of each month as an early prediction of the monthly compliance. If the compliance of any department within the hospital is less than 60%, an action will be taken immediately.

Results Compliance rates for medication reconciliation upon admission improved all over SEHA hospitals from 38.9% in Q3-2013 to 79.9% in Q1-2015. For some hospitals the compliance improved up to 5 folds from a baseline of 17% to 93% applying the above strategy.

Conclusion An increased compliance rate in medication reconciliation upon admission across SEHA facilities was achieved following best care practices. Future plans would focus on the enhancement of the medication reconciliation process during patient discharge and care transitions and reflecting this to improve the medication error data.

References:
Objectives: Patient safety in primary care is an emerging field with a growing evidence base. This study will be first of its kind to explore the safety culture in primary health care in Muscat Oman. The aim of this study is twofold firstly, to review literature on patient safety measures used globally to assess the effectiveness of safety culture in primary care. And secondly, to explore the patient safety culture in primary care in Muscat, Oman.

Methods: Searches where preformed in Medline, EMBASE, CINAHL and Scopus on 15th December 2014 from 2000 to 2014, in English. Terms defining safety culture were combined with terms identifying patient safety and primary health care was used.

Results: The searched revealed 3072 articles and only 62 articles were selected in this systematic review following the inclusion criteria. Most of the literature addresses the themes of incident analysis (35%), safety culture (30%), medication error (24%) and miscommunication (6%). The selected studies were from developed and developing countries, including 17 in the United States (27%), 11 in United Kingdom and the Netherland 18%) 5 in Germany (8%), 4 in Canada and Spain, 3 in Australia (5 %), 2 in Brazil (3%) and 1 each in Saudi, Kuwait, Iran, Malaysia, Switzerland, and Serbia (2%). Between 2000 and 2005 there were 4 publications from 2006 and 2010, 21 publications and 39 publications between 2011 to 2014. As for designs: 58% were individual studies including interviews, focus groups and questionnaires: 25% retrospective studies, 6% systematic reviews and 5% narrative reviews.

Conclusion: This systematic review identified an extensive literature on patient safety in primary care published in the last few years on the subject of safety culture. The most common emerging theme from 2011 onwards is the assessment of safety culture in primary care (18 studies, 42%). Furthermore, there is emerging literature on patient safety culture in primary care from developing countries. Oman provides fertile ground for exploring patient safety culture because no such study has been conducted to date. The healthcare system in Oman is one of the most efficient in the world according to the World Health Organization but little is known about the role of safety culture in primary care in Oman. Oman attracts a wide range of health care professionals from different parts of the world with different experiences of patient safety culture. Thus, the study aims to contribute to the literature on safety culture in primary care with a culturally and linguistically diverse work force.

Disclosure of Interest: None Declared

Keywords: Patient safety, Primary Care, Safety culture
Surgical Safety Checklist: Outcome And Challenges Of Six Years Implementation In Two Saudi Hospitals
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Objectives: To assess the impact of implementing the surgical safety checklist on patient safety outcome in two hospitals: Aseer Central and Abha Private Hospitals, Abha, Kingdom of Saudi Arabia, to estimate the level of compliance with implementation, and the incidence of non-compliance and its reasons.

Methods: Retrospective study over 6 years following an educational and training program of staff in the implementation of the World Health Organization (WHO) surgical safety checklist utilizing audio-visual means. Incidents of non-compliance were treated as sentinel events and were audited by the process of Root Cause Analysis (RCA).

Results: There were 62860 elective surgical cases in both hospitals during the 6-yr period. There was gradual improvement in compliance (average compliance rate was 98.7%). Reasons of non-compliance included staff shortage, turn-out of staff, excessive workload, communication problems, and presence of existing process.

Conclusion: There were 62860 elective surgical cases in both hospitals during the 6-yr period. There was gradual improvement in compliance (average compliance rate was 98.7%). Reasons of non-compliance included staff shortage, turn-out of staff, excessive workload, communication problems, and presence of existing process.

References:

Disclosure of Interest: None Declared

Keywords: surgical checklist, safety checklist, patient safety
Role Of Software In Optimizing Image Quality And Reducing Radiation Dose To The Patients

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Objectives: The objective of this study was to quantitatively determine the extent to which the Computed Radiography (CR) software can compensate for inappropriate radiographic exposure factors.

Methods: The advent of Computed Radiography (CR) systems has been a revolutionary step in the radiographic imaging world. It has been a major factor in improving the quality of x-ray image and ensures better patient care and diagnosis. Though the CR systems have proved to be durable and reliable source of image acquisition and modification, one of its main objectives was to reduce the radiation dose to the patients. Conventional screen film radiographic procedures required very specific exposure techniques for each examination which varied from patient to patient depending on the body habitus and even after application of careful exposure factors, the result were sometimes not satisfactory. Using the software it is easy for the technologist to bring the image to a diagnostic quality even if the exposure factors applied on the patient are not up to the standard.

At the AKUH, we initiated a project to measure the extent to which the computed radiography software was able to produce an image of optimum diagnostic quality while using different exposure parameters in abdominal x-rays. The abdominal x-ray procedure was chosen because it is one of the most common x-ray examinations and requires a heavy amount of exposure factors to substantiate that an optimum diagnostic quality image is achieved.

An abdominal water phantom was used for this project. The thickness of the phantom is 30 inch which was increased up to 50 inch using 1 inch phantoms. The factors were selected according to thickness of the phantom.

Results: The computed radiography software has the capability to improve the quality of image up to around ±30%.

Conclusion: The CR software plays a vital role in producing x-ray images of optimum diagnostic quality and to a certain extent it can compromise for the inappropriate exposure factors which have resulted in reduction of avoidable radiation exposure dose to the patients.

Disclosure of Interest: None Declared

Keywords: radiation protection
A.W.H. Against Catheter Associated Urinary Tract Infection, 6 Northern Medical Inpatient, Al Wakra Hospital, 2014 (Assessment Of Risk, Watch Out For CAUTI, Heighten Education)

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Objectives: In a survey made in American Hospitals more than 50% did not monitor which patients are catheterized and 75% did not monitor duration and discontinuation of Indwelling Foley Catheter (IFC). In Al Wakra Hospital 6 North Medical Inpatient, it was observed a median of seven (7) indwelling foley catheter days with a maximum of 88 dwelling days. Nosocomial bacteraemia or candiduria develops in up to 25% of patients requiring a urinary catheter for > 7 days, with a daily risk of 5%. Catheter Associated Urinary Tract Infection (CAUTI) was observed in two of the inpatients with more than 20 IFC days in 7-month period. The aim is to decrease hospital acquired CAUTI, decrease the utilization of IFC to prevent CAUTI and implement bundles if catheterization is required to prevent CAUTI

Methods: A.W.H. against CAUTI by PDSA: Assessment of CAUTI risk, Watch out for CAUTI by the use of the Insertion and Maintenance Prevention Bundles, Heighten Education to Healthcare Workers, Patient and Family members and Follow-up and monitor the CAUTI rate and compliance to CAUTI prevention bundle.

Results: During CAUTI Surveillance in Medical Inpatient, there has been prolonged catheterizations. We have seen in 9 months of surveillance, two (2) hospital acquired infections with both patients having more than 10 dwelling days. The program then geared towards:
1. Development of the Revised Insertion Bundles highlighting appropriate indication for Indwelling Foley Catheterization, which includes: Acute Urinary Retention or bladder outlet obstruction, Strict urinary output measurement if patient not able to collect the urine, Incontinence in patient with open sacral or perineal wounds (Incontinence in general is not an indication), Prolonged immobilization (e.g., unstable thoracic or lumbar spine, pelvic fractures, etc.), Improve comfort for end of life care.
2. Decrease in the indwelling days among patients in foley catheters—early removal.
3. Identification of CAUTI cases and increasing compliance to prevention bundles

Conclusion: NO Indwelling Foley Catheter, NO Catheter Associated Urinary Tract Infections! By decreasing Foley Catheter Utilization can markedly decrease the incidence of hospital acquired CAUTI. Having definite indications for the use of the IFC will guide clinicians on the appropriate use of this indwelling device. Daily review and maintenance bundle prevention can decrease patient’s potential to develop CAUTI. Sustaining the project will include continuous feedback and collaboration between nursing, clinicians and infection prevention and control has to be established to create a culture of CAUTI reduction. Risk assessments has to be done and reviewed regularly to ensure that prevention techniques are being utilized. The lesson learned were communication and collaboration is the key to this project. Start talking about CAUTI prevention with the staff and clinicians, involve the patient and family members in the prevention of CAUTI and reduce use, prevent CAUTI; Utilize the prevention strategies, reduce CAUTI.

References:
4. Maki, DG & Tambyah, PA. Engineering Out the Risk for Infection with Urinary Catheters.*University of Wisconsin Medical School, USA, and †National University of Singapore Medical School, Singapore

Keywords: catheter associated urinary tract infection CAUTI, healthcare associated infections, Infection control- IC
Switch: Al Wakra Hospital Journey To 90% Hand Hygiene Practice Compliance, 2011 -2014
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1Infection Prevention and Control, 2Quality and Patient Safety, Al Wakra Hospital - Hamad Medical Corporation, Al Wakra , Qatar

Objectives: Healthcare associated infections (HCAIs) can be a major cause of morbidity and mortality among all population, particularly those admitted in the intensive care units. Numerous studies have provided strong evidence that HCAIs can be prevented by a simple intervention, Hand Hygiene. The Objectives were to establish infection control programs with actual application of infection control standards by orienting and training staff highlighting Hand Hygiene, all staff knows the hand hygiene technique and ultimately prevent hospital outbreak by establishing strong hand hygiene practices.

Methods: To reach zero tolerance to hospital acquired infections through hand hygiene following the SWITCH for CHANGE principle as conceptualized by Chip and Dan Heath.

1. Directing the Rider. Provide crystal-clear direction. Units started monitoring hand hygiene with target of 90% compliance. Validation of hand hygiene done, frequent feedback given and compliance results readily available in the boards located in each unit of the hospital.

2. Motivating the Elephant. Engage people’s emotional side-get their Elephants on the path and cooperative. Decreases are reviewed and compliances are celebrated. Certificates with cash prizes were given 2013 to Top 3 Hand Hygiene performers of the hospital. In 2014, top 15 unit performers were recognized during the Infection Control Recognition Day. Unit standings shared to all monitored units, to give healthy competition, identified compliances among physicians are forwarded to department heads for follow up. “We are working to be stewards of healing”, highlighting the advocacy to ‘do the sick no harm’. Do not bring the bugs’ home... Hand Hygiene protects your patients and most importantly your family.

3. Shape the Path. What looks like a people problem is often a situation problem. We call the situation the "Path." Together with AWH Engineering Department, allocated hand washing sinks in strategic locations with one sink for every four beds. Hand rubs were placed easier for staff reach and access. Supplies are ensured to be stocked.

Results: In Al Wakra Hospital, it took 25 months before reaching 90% Hand Hygiene. In September 2011, Al Wakra Hospital started surveillance for Hand Hygiene with use of WHO My 5 Moments and on October 2013 reached 90% overall hospital compliance.

<table>
<thead>
<tr>
<th>Year</th>
<th>Compliance Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>60.78%</td>
</tr>
<tr>
<td>2012</td>
<td>77.60%</td>
</tr>
<tr>
<td>2013</td>
<td>85.56%</td>
</tr>
<tr>
<td>2014</td>
<td>93.05%</td>
</tr>
</tbody>
</table>

With this single intervention, Al Wakra Hospital has reached 1095 Cumulative Outbreak Free Days. Furthermore, it was observed that as hand hygiene compliance increases, incidence of healthcare associated infections decreases to the point of zero healthcare associated infections.

Conclusion: The willingness to perform hand hygiene can exemplify Al Wakra Hospital staff’s commitment to the hospital mission “to improve people’s lives by providing the highest quality of healthcare services safely, effectively and efficiently ...”. Staff who values his role of being a patient advocate strives hard to prevent infection transmission. Fortunately, in Al Wakra Hospital we can proudly say that our staffs from the Executives all the way to the housekeepers are supporting our great cause to prevent healthcare associated infections by Hand Hygiene.


Keywords: Hand Hygiene, Hospital Acquired Infection, Cultural Influence, Infection control- IC, staff engagement
Decreasing Sepsis Mortality Through The Use Of A Comprehensive Intervention In The Emergency Department And Inpatient Settings
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1Office for Excellence in Patient Care, Mount Sinai, New York, 2Chief Medical Office, Mount Sinai Brooklyn, Brooklyn, United States

Objectives: To describe how a comprehensive sepsis reduction program can be used to improve sepsis mortality.

Methods: This study took place in the inpatient and Emergency Department settings of a 1,170 bed, urban academic medical center. The “Stop Sepsis” program initially started in the Emergency Department in early 2012. The protocols were leveraged and spread to Medicine units in late 2012 and then hospital-wide in 2014. The comprehensive patient-centered approach to decrease sepsis mortality encompassed: 1) sepsis prevention, which includes clinician education on central venous catheter care, skin care assessment, urinary catheter care, and isolation precautions; 2) early recognition which uses real-time tracking and alerts within the electronic health record (EHR), based upon clinical criteria, to prompt care escalation; 3) early intervention and treatment, which includes rapid assessment of patients who have triggered the clinical criteria, the initiation of goal-directed therapy with fluid resuscitation and antibiotics and 4) prospective and retrospective weekly case review, of patients with a sepsis alert and lactate greater than 4 and/or systolic blood pressure less than 90, to discuss adherence to the sepsis protocol and outcomes. Providers use Sepsis order sets to initiate early, standardized, aggressive sepsis care. Patients are reassessed with Lactate levels and continued monitoring of vital signs.

The study uses a retrospective cohort design comparing outcomes for pre and post-intervention periods, 2011 and 2014 respectively. Analysis performed using Chi-square testing. The primary outcome measure is inpatient sepsis mortality. The observed to expected (O/E) Sepsis mortality ratio is also an outcome of interest.

Results: Sepsis mortality has had a statistically significant annual downward trend since program implementation. Sepsis mortality decreased from 31.5% in 2011 to 23.8% in 2012 to 19.8% in 2013 and finally to 16.4% in 2014, p<0.001 for each year. The sepsis O/E ratio has also declined during that same time period, decreasing from 2.51 in 2011 to 1.34 in 2014 (p<0.001).

<table>
<thead>
<tr>
<th>Chi Square Comparing Sepsis Mortality by Intervention Year</th>
<th>Chi-SQ</th>
<th>P-value*</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 vs 2012-2014</td>
<td>110.02</td>
<td>&lt;.001</td>
<td>0.55</td>
</tr>
<tr>
<td>2011 vs. 2012</td>
<td>26.61</td>
<td>&lt;.001</td>
<td>0.69</td>
</tr>
<tr>
<td>2011 vs. 2013</td>
<td>71.85</td>
<td>&lt;.001</td>
<td>0.55</td>
</tr>
<tr>
<td>2011 vs. 2014</td>
<td>133.44</td>
<td>&lt;.001</td>
<td>0.44</td>
</tr>
</tbody>
</table>

Conclusion: A patient-centered, data driven hospital-wide “Stop Sepsis” program has been shown to decrease Sepsis mortality. Early identification and management of patients with suspected sepsis are drivers in reducing overall hospital mortality. As our review process has matured and our clinical data set has become more robust, we have begun additional analyses to compare administrative and clinical outcomes data. Leveraging both data sets will enhance our ability to identify and treat septic patients.

Disclosure of Interest: None Declared

Keywords: Sepsis, Sepsis Mortality
Decreasing Healthcare Acquired Multidrug-Resistant Organisms In A Surgical Intensive Care Unit (ICU)
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1Surgical, 2Infectious Diseases, 3Office for Excellence in Patient Care, Mount Sinai Hospital, New York, United States

Objectives: To illustrate how a multidisciplinary team can implement a targeted infection control protocol to create a reduction in Multidrug-Resistant Organism (MDRO) acquisition that is sustainable in a Surgical ICU. The infection control protocol was developed and implemented subsequent to an outbreak of Burkholderia cepacia (B. cepacia) in the Surgical ICU.

Methods: The outbreak occurred in a 14-bed intensive care unit in a large, urban academic medical center. In early 2014, 6% of patients in the Surgical ICU were identified as being colonized or infected with B. cepacia. The unit was closed and temporarily cleaned using hypochlorite solutions and ultraviolet (UV) germicidal irradiation. Terminal cleaning also included disposal of patient care items and replacement of ventilators. A multipronged infection control protocol was initiated once patients were moved back to the unit which included: 1) active surveillance for carbapenem-resistant Gram-negative organisms on admission and weekly, 2) terminal cleaning of all rooms after every patient discharge, regardless of length of stay or colonization/infection status, including curtain changes, 3) daily high touch surface cleaning with 10% bleach, 4) post-cleaning adenosine triphosphate (ATP) testing to audit environmental cleanliness, and 5) patient and staff cohorting to minimize exposure. Patients with an ICU length of stay over 14 days, irrespective of colonization or infection status, were moved to a clean room to allow for terminal cleaning to decrease bioburden. The Surgical ICU was the only ICU to implement the new protocol. Other ICUs implemented standard universal precautions for all patients. MDRO surveillance was implemented as per the hospital infection control protocol and was defined using National Healthcare Safety Network (NHSN) standards. Overall MDRO rates for the five months preceding and seven months after the implementation of the protocol were compared using normal-theory (Z) test for comparing incidence rates.

Results: MDRO infections in the Surgical ICU decreased 65% from 9.09 per 1000 patient days in the pre-intervention period (January-May 2014) to 3.40 per 1000 patient days in the post-intervention period (June – November 2014), p=0.03. ICUs that did not implement the infection control protocol had no statistically significant improvement over the same period of time. The incidence of B. cepacia reduced to zero and remained zero over the seven month post-intervention.

MDRO Incidence in the Surgical ICU Compared to Other ICUs between 1/2014-12/2014

<table>
<thead>
<tr>
<th>ICU MDROs (Rates reported as the # of new cases per 1000 patient days)</th>
<th>Jan-May 2014</th>
<th>June-December 2014</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical ICU</td>
<td>17/1870</td>
<td>9/2756</td>
<td>0.02*</td>
</tr>
<tr>
<td>Cases/patient days</td>
<td>9.09</td>
<td>3.27</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICU 2</td>
<td>10/2082</td>
<td>16/3078</td>
<td>0.99</td>
</tr>
<tr>
<td>Cases/patient days</td>
<td>4.80</td>
<td>5.20</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICU 3</td>
<td>19/1892</td>
<td>17/2728</td>
<td>0.20</td>
</tr>
<tr>
<td>Cases/patient days</td>
<td>10.04</td>
<td>6.23</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICU 4</td>
<td>9/4742</td>
<td>15/6617</td>
<td>0.83</td>
</tr>
<tr>
<td>Cases/patient days</td>
<td>1.60</td>
<td>2.27</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusion: A multipronged infection control protocol to reduce MDROs in a Surgical ICU can be successful and sustainable. A dedicated multidisciplinary team including intensivists, nurses, environmental services, and infection prevention is needed for surveillance, identification of areas for improvement, and maintaining sustainable results. Aggressive clinical and environmental interventions were critical to significantly decrease MDROs in a Surgical ICU. Efforts are underway to replicate the intervention in other ICUs.

Disclosure of Interest: None Declared

Keywords: Healthcare Acquired Infections
Incidence And Variations Of Hospital Acquired Venous Thromboembolism In Australian Hospitals
H. Assareh, J. Chen, L. Ou

Objective: Venous Thromboembolism (VTE), consisting of both Deep Venous Thrombosis (DVT) and Pulmonary Embolism (PE), is potentially fatal but preventable and treatable. Over half of VTE incidents result from hospitalisation and accounted for approximately 10% of all hospital related deaths. Despite the recognition of Hospital-Acquired VTE (HA-VTE) and subsequent deaths as patient safety indicators by Australian Commission on Safety and Quality in Health Care (ACSQHC), data on its incidence and variation in different patient groups and health providers is lacking. We aim to explore HA-VTE incidences and associated mortality rates, and their trends and variations across all acute hospitals in New South Wales (NSW)-Australia, which may be used in monitoring the impact of the implementation of VTE prevention and treatment guidelines.

Methods: We conducted a population-based study using all admitted patients (aged between 18 and 90, with length of stay of at least two days and not transferred to another acute care facility) in 104 public and private acute hospitals during 2002-2009 in NSW. We used nine ICD-10-AM codes as indicative of a VTE diagnosis (I26.0 and I26.9 for PE, and I80.1, I80.2, I80.3, I80.8, I80.9, I82.8, and I82.9 for DVT, respectively). Cases with no VTE code as the principal diagnosis were identified as patient at risk and those who had at least one VTE code in the 54 secondary diagnoses but not in principal diagnoses were identified as HA-VTE cases. Poisson mixed models were used to derive adjusted incidence rates (IR) and rate ratios (IRR) in presence of patient (age, gender, country of birth, marital and socio-economic status, and medical vs. surgical admission) and hospital (public vs. private, metropolitan vs. rural, and peer groups) characteristics.

Results: Of all 3,331,677 patients studied, 38,161 patients (11.45 per 1000 patients), developed HA-VTE during hospitalisation; 3716 of them (10%) died prior to discharge. Over 80% of the patients at risk were patients who underwent surgeries (elective or non-elective) during hospitalisation and they accounted for over 90% of HA-VTE incidences. Surgical patients were 128% (IRR=2.28, 95%CI: 2.19-2.38) more likely to develop HA-VTE compared to medical patients; however, the risks of post HA-VTE death were consistent between two groups. For medical patients, HA-VTE incidence rate was significantly higher in private hospitals compared to public hospitals (IRR=1.87, 1.51-2.32); whereas it was lower (IRR=0.80, 0.65-0.98) for surgical patients. The risk of post HA-VTE death in private hospitals was almost half that in public hospitals (IRR=0.54, 0.42-0.70). HA-VTE incidence rate peaked in 2004 (12.1 per 1000 patients) with an 13% increase from 2002, and then declined and remained stable over the second half of the study period (2005-2009). Post HA-VTE fatality adjusted rate significantly declined by 22% from 117 to 91 per 1000 patients (from 2002 to 2009). Private hospitals exhibited a larger variation in outcomes compared to public hospitals. Higher variations were found in larger private and smaller public hospitals compared to their counterparts respectively.

Conclusion: The incidences of HA-VTE and associated fatality were declining; however there were large variations in incidents between medical and surgical patients, public and private hospitals, and different hospital peer groups. The causes of such differences warrant further investigation and may provide potentials for targeted interventions and quality improvement initiatives.

Disclosure of Interest: None Declared

Keywords: Patient Safety, Hospital Acquired Complication, Venous Thromboembolism
A Retrospective Audit Of Venous ThromboEmbolim (VTE) Among High Risk Patients In An Academic Medical Centre
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Objectives: VTE (DVT & PE), increases morbidity & mortality as well as the cost of patient care. [1] Proper use of prophylaxis & other preventive measures are known to be clinically effective in reducing VTE rates. PE is one of the preventable causes of hospital deaths. Regardless of the differences in the actual incidence of VTE in Asia; more studies have now indicated that VTE incidence could be the same as in western countries. [2] The level of VTE risk depends on clinical-setting & patient-related risk factors. VTE incidence rate is one of the indicators monitored under the NSoC in NUH. Arising from a sentinel event of a death due to PE, a Policy on VTE was implemented in NUH, Singapore in Feb 2011. The purpose of this study is to investigate the post-op VTE incidence rate & to identify the impact of the policy on post-op VTE rate & adherence to VTE prophylaxis guidelines.

Methods: VTE incidence rates (before & after the implementation of policy) were compared & a retrospective audit was conducted to check compliance to the policy and its impact on VTE rate. Four departments were chosen for the study, in view of higher post-op VTE incidence rate; orthopaedic, colorectal, O&G & Gen Surgery. The target population audited comprised patients who underwent high-risk surgeries in NUH from Jan to Dec 2012.

Results: The overall post-op VTE incidence rates were 0.29 (2010), 0.20 (2011), 0.18 (2012) & 0.29 (2013) per 100 surgical discharges. Though there was an initial dip in years 2011 & 2012, the yearly trend did not show any significant improvement after the implementation of the policy in 2011. The audit results of adherence to VTE prophylaxis were:

1. Orthopaedic Surgery: Medical prophylaxis 49%, Mechanical prophylaxis 98%, General measures 100%
2. Colorectal surgery: Medical prophylaxis 68%, Mechanical prophylaxis 45%, General measures 100%
3. General surgery: Medical prophylaxis 12%, Mechanical prophylaxis 18%, General measures 100%
4. O&G: Medical prophylaxis 11%, Mechanical prophylaxis 2.3%, General measures 100%

Conclusion: VTE prevention, even with the existing policy & guidelines appears to be suboptimal as the thromboprophylaxis usage was not adequate. VTE Incidence rate following high risk surgery remained consistently similar over the years. This highlights that reliance on only passive dissemination of guidelines was not effective. Moreover it demonstrates the need for engaging relevant healthcare professionals on an ongoing basis to ensure adherence to the guidelines to improve quality of care via the use of cost-effective measures to reduce the burden of VTE when hospitalized. Regular monitoring of VTE rates & evaluation of adherence to the hospital policy has been very helpful in finding gaps in clinical care. Awareness of the incidence & risk factors of thrombosis will encourage widespread use of antithrombotic prophylaxis in future. Further, well-designed clinical study is necessary to evaluate the risk factors of VTE & appropriate use of thromboprophylaxis in different clinical settings at NUH.

Abbreviation: NSoC-National Standard of Care, NUH-National University Hospital, PE-Pulmonary Embolism, DVT-Deep Vein Thrombosis

References:

Disclosure of Interest: None Declared

Keywords: Venous Thromboembolism
Medication Reconciliation As Part Of WHO Project ‘High 5s’ In Germany – Interim Findings

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Objectives: Acute admissions to a hospital are critical transition points in the medication management process. Medication Reconciliation (MedRec) is an effective intervention to reduce medication errors and loss of information at this transition. This issue is addressed in the WHO initiative “High 5s”. The aim of the High 5s Project is the implementation and evaluation of Standard Operating Protocols (SOP) to improve patient safety in hospitals within a multinational learning community. Medication Reconciliation in the High 5s Project is defined as a formal process in which the home medications of emergency patients older than 65 years are reconciled with the prescribed hospital medications.

Methods: Over a period of 1 month baseline data collection was conducted in the participating hospitals. During this step discrepancies that had existed before the MedRec process implementation were collected. In a second step MedRec data collection started and discrepancies that existed after the MedRec process implementation were recorded. For the investigation of the discrepancies (documentation and medication errors) four indicators were used. A MedRec-Database for data collection was installed in 14 German hospitals in 2013. So far, 8 hospitals have provided data for evaluation. 1 hospital has independently collected data (excluding data tool). In addition to the international data collection further national data was recorded and evaluated such as the duration of taking the Best Possible Medication History (BPMH) and causes for discrepancies in the MedRec process.

Results: From November 2013 to August 2014 a total of 574 patients were included in the study (baseline data collection and MedRec data collection). For these patients a total of 264 discrepancies (46%) were found, of which 130 (49%) were documentation errors and 134 (51%) were medication errors. Discontinued, added and paused medications were the most common errors. In documentation errors “added medications” were named most often (37%) and in medication errors “discontinued medications” (36%). The average of the BPMH-duration varied from 75.5 minutes to 8 minutes between the hospitals. A further inquiry of the hospitals showed, that reasons for this large range are different definitions of the BPMH-duration in the hospitals, different patient population, missing information and long walking distances. For this reason the results of the average BPMH-duration are difficult to compare. In two hospitals documentation and medication errors decreased markedly after the introduction of the MedRec process. In one hospital documentation and medication errors were reduced to 0% after 5 months.

Conclusion: Implementing the Medication Reconciliation SOP in Germany is feasible and reduces the number of discrepancies between a BPMH and admission orders. A survey on implementation experiences and expert workshops which were also part of this project evaluation revealed significant structural implementation challenges. In addition to the translation of the international tools, national and local adaptations are crucial. Hospitals require flexibility in defining responsibilities and in modifying established documentation standards. Additionally communication processes have to be restructured and extra staff and time resources are needed for the implementation.

Disclosure of Interest: None Declared

Keywords: Medication Error, Medication Reconciliation, Medication Safety
Monitoring Of Quality Indicators At An Intensive Care Unit: Analysis Of Adverse Events And Their Correlations

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Objectives: Assess the prevalence of adverse events (AE) at a general Intensive Care Unit (ICU) and recognize the variables that influence their occurrence.

Methods: Prospective study undertaken at a general ICU in the city of São Paulo, SP (BRA) in a four-month period (September till December 2013). The patient variables were age, gender, prognostic score (APACHE II), care classification index using the Nursing Activities Score (NAS), the Braden scale for predicting pressure ulcer (PU) risk, the Glasgow coma scale and the assessment of the risk of falls. The institutional variables were: the daily scale of professionals, considering the patient/nurse and patient/nursing technician index and the quality indicators managed by the nursing team [occurrence of PU and fall; number of cases of nasogastric tube (NGT), central venous catheter (CVC), peripherally inserted central catheter (PICC) and orotracheal tube (OTT) loss].

Results: The analysis considered 304 hospitalizations. In total, 39 AE happened during the study period. The highest prevalence was found for PU (43.6%), followed by loss of NGT (30.8%), PICC (12.8%) and CVC (10.3%) and falls (2.5%). When correlating the patients who were victims of AE with those who were not, it was verified in Table 1 that the more advanced age, higher APACHE II score, higher NAS score, greater risk of PU showed significant differences. Patient victims of AE showed a significantly higher nurse/bed ratio than those who were not.

Table 1. Distribution of variables according to hospitalization group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category / measures</th>
<th>No event</th>
<th>With event</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>n Variation</td>
<td>279</td>
<td>25</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>68.0</td>
<td>82.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>63.9 (20.6)</td>
<td>78.6 (12.4)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Female</td>
<td>142 (50.9)</td>
<td>16 (64.0)</td>
<td>0.209*</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>137 (49.1)</td>
<td>9 (36.0)</td>
<td></td>
</tr>
<tr>
<td>APACHE II</td>
<td>n Variation</td>
<td>275</td>
<td>25</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>13.0</td>
<td>16.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>13.7</td>
<td>17.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard Deviation</td>
<td>5.9</td>
<td>5.8</td>
<td></td>
</tr>
<tr>
<td>NAS</td>
<td>n Variation</td>
<td>271</td>
<td>25</td>
<td>0.011</td>
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<td></td>
<td>Median</td>
<td>65.5</td>
<td>71.9</td>
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<tr>
<td></td>
<td>Mean</td>
<td>64.8</td>
<td>73.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard Deviation</td>
<td>16.0</td>
<td>16.4</td>
<td></td>
</tr>
<tr>
<td>Braden</td>
<td>n Variation</td>
<td>276</td>
<td>25</td>
<td>&lt;0.001</td>
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<tr>
<td></td>
<td>Median</td>
<td>13.0</td>
<td>11.0</td>
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</tr>
<tr>
<td></td>
<td>Mean</td>
<td>13.2</td>
<td>11.1</td>
<td></td>
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<tr>
<td></td>
<td>Standard Deviation</td>
<td>2.7</td>
<td>1.8</td>
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<tr>
<td>Dimensioning Patient/nurse</td>
<td>n Variation</td>
<td>278</td>
<td>25</td>
<td>0.043</td>
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<tr>
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<td>Median</td>
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</tr>
<tr>
<td></td>
<td>Mean</td>
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<tr>
<td></td>
<td>Standard Deviation</td>
<td>1.3</td>
<td>1.2</td>
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<tr>
<td>Dimensioning Patient/technician</td>
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<td>25</td>
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<tr>
<td></td>
<td>Median</td>
<td>1.9</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>1.9</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard Deviation</td>
<td>0.4</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

p-value obtained through Mann-Whitney's U-test; NA, impossible to assess statistically.

Conclusion: A small number of AE managed by the nursing team at the ICU studied occurred, demonstrating the quality of care at the service. The AE were related to more complex and more severe patients who demanded more hours of nursing care in the universe of hospitalizations at the service. Despite the higher nurse/bed ratio, this aspect
deserved further analysis in view of the complex care scenario for critical patients, also considering a re-dimensioning of the nursing staff.

Disclosure of Interest: None Declared

Keywords: adverse events, intensive care unit, PATIENT SAFETY
How Does A Greenfield Healthcare Organization Accurately Measure And Benchmark The Culture Of Safety Before The Hospital Opens For Patients And Families?

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Objectives: Introduction: Patient safety is an integral part of nursing practice. In order to foster a safety culture, healthcare organizations must have a blame-free environment where individuals are free to report errors or near misses without fear of reprimand or punishment. Healthcare providers at all levels use surveys to measure their safety culture. Developing a safety culture within a Greenfield hospital site is a rare opportunity. With the intention of developing a robust safety culture, a safety issue of how does a greenfield healthcare organization accurately measure and benchmark the culture of safety before the hospital opens for patients and families has been identified.

Objective: The aim was to explore how a Greenfield healthcare organization accurately measures and benchmarks the culture of safety before the hospital opens.

Methods: The following databases were searched: Cochrane/EPOC resources (DARE, CENTRAL, and the EPOC Specialized Register), PubMed, CINAL Plus, CAB Health, Virginia Henderson International Nursing Library, the Joanna Briggs Institute database, The British Library, international theses databases, as well as generic search engines.

Selection Criteria: Randomized control trials, controlled clinical trials, controlled before and after studies and interrupted time series analyses of interventions relating to culture of safety, surveys, and Greenfield hospital sites.

Results: There were 3215 studies that were potentially relevant to the review. Following a detailed examination of each study, 25 were included in the review. The Hospital Survey on Patient Safety (HSOPS) tool has undergone varying levels of validation. Although the HSOPS is a validated tool to assess the culture of safety in a hospital setting with patients, there is no international published evidence to validate its reliability on a Greenfield healthcare organization in a developing country. Adaptation of the HSOPS is required, and this adapted tool would need to be tested for validity and reliability, to guarantee the proper dimensions are measured in a Greenfield healthcare organization.

Conclusion: There is a current focus on measuring and improving patient safety climate to enhance patient safety in hospitals. Accurate measurement of patient safety culture is limited by the ability to define measurable components of culture. Therefore, the demand for reliable, validated data is needed to assess the culture of safety and has resulted in a reliance on patient safety climate questionnaires. Further research is needed to provide Greenfield healthcare organizations in developing countries with a well-structured, consistent, valid and reliable tool to measure patient safety culture. The validated tool should guarantee that the tool assesses the important dimensions of patient safety culture in Greenfield healthcare organizations. Such a validated tool would allow researchers to compare the safety culture across hospitals at the national and international level.

Disclosure of Interest: None Declared

Keywords: Greenfield hospital site, patient safety culture, safety survey
Prevention Of Post-Operative Pneumonia Program For Surgical In-Patients In Hong Kong

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Objectives:
As post-operative pneumonia is one of the major post-operative complication, it increases both the morbidity and mortality rate, and the Prevention of Postoperative Pneumonia Program (4P) was introduced in 2012 July to protect patients from developing post-operative pneumonia. The 4P mainly consists of 3 elements:
1. Perform Triflow or Deep Breathing & Coughing exercise
2. Maintain Oral Hygiene
3. Encourage early Ambulation

Objectives: To prevent patients from acquiring post-operative pneumonia

Methods:
Subjects were patients admitted to North District Hospital for performing major or ultra-major elective surgery. Triflow were provided to the patients prior the surgery or just after the operation. And a Chest Promotion Video about deep breathing exercise was shown to patients to ensure they had proper technique on using Triflow for deep breathing exercise. Besides, to reduce the oral bacterial count, the maintenance of oral hygiene was emphasized, and Thymol gargal solution was used for oral care to the post-operative patients twice per day. Finally, to improve the lung expansion, the post-operative patients would either be propping-up on bed or sitting out on daytime. Outcome measures were categorized as the post-operative pneumonia counts in Surgical Outcome Monitoring & Improvement Program (SOMIP) report which would be released every year.

Results:
Throughout the research period, there were totally 7419 patients performed major/ultra-major operations. Before launching the program (July 2009 to June 2012), there were 238 out of 4462 patients acquired post-operative pneumonia. And the Prevention of Post-operative Pneumonia Program was launched since July 2012, and from July 2012 onwards to June 2014, there were 119 out of 2957 patients acquired post-operative pneumonia. That means before the implementation of 4P, there would be 1 patient acquired pneumonia on every 18.75 major/ultra-major operations; but for now, it decreased to 1 patient would acquire pneumonia on every 24.85 major/ultra-major operations. It was 24.5% reduction (p<0.05) when compared with the results in 2009-2012.

Conclusion:
The Prevention of Post-operative Pneumonia Program was effective in protecting patients from acquiring post-operative pneumonia. And besides the doctors and nurses, the engagement of the whole healthcare team such as physiotherapist, healthcare assistance, the patients and their family members were equally important, and all of them contributed to the great success.

Disclosure of Interest: None Declared

Keywords: Pneumonia, Post-operative complications, SOMIP
The Impact Of The Blood Watch Program On Red Cell Blood Transfusion Among Colorectal Surgery Patients
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Objectives: It was well-known that unnecessary blood transfusions were common which constitutes a major health hazard to patients and waste of resources. The Clinical Excellence Commission (CEC) of New South Wales, Australia launched a state-wide world-first campaign, namely the Blood Watch (BW) program in 2006-2007, to reduce the inappropriate blood transfusions. Our current study was to provide an evaluation of the impact of BW programme among colorectal surgical patients.

Methods: Interventions: The CEC had applied 21 change strategies relied heavily on IHI breakthrough series collaborative; clinical practice improvement; organisational change management and social marketing. Evaluation methodology: An interrupted time-series approach was used through the link of four population-based databases in NSW (inpatient database, emergency department admission data, blood bank data and laboratory blood test data) between July 2004 – June 2009. The total number of elective colorectal surgical patients included in the analysis was 124,581. Study outcomes: Seven study indicators were developed (three outcome indicators and four process indicators): 1) percentage of all inpatients transfused per admission; 2) frequency of transfusions per admission; 3) the number of units of blood transfused per admission. The process indicators were: 4) Hb min >=100g/L (transfusion is rarely indicated); 5) Hb min >=70g/L & <=100g/L (need both a laboratory and clinical indication to transfuse); 6) Hb max<=70g/L and (need to consider why wouldn’t transfuse); 7) the frequency of two or more units of blood transfused at a single transfusion episode (it is recommend one unit and then review patient prior to a second unit). Statistical methods: A three-level multivariate logistic regression and a multivariate linear regression model was utilised in order to explore the time-trend of the study outcomes and partition outcome variance into three-level: hospitals, doctors and patients. Time indicator variables and patient characteristics were included (i.e.; age, gender, Aboriginality, marital status, ARDRGs) in our three-level models where patients (first-level) were deemed as being treated by doctors (second-level) at certain hospitals (third-level).

Results: The number of colorectal surgeries each year over the study period increased (e.g., from 23,236 in 2005 to 26,478 in 2008). The % of had at least one transfusion during the admission increased from 2.8% in 2004 to 4.2% in 2007, then decreased to 3.6% in 2009. Similar pattern were observed for the number of times transfused per 100 admissions (5, 8, 7 in 2004, 2007 and 2009 respectively), total units of blood transfused per 100 admissions (9, 15, 14), % of transfusion with Hbmin >=100g/L (4%, 9%, 3%), % of transfusion with Hbmin > 70g/L & < 100 g/L (35%, 57% and 27%) in 2004, 2007 and 2009, respectively. However, the reduction was less strong for number of two or more blood units per transfused admission (1.12, 1.16, 1.12 in 2004, 2007, 2009, respectively). Among 69 hospitals included in the outcome analyses, the hospital factors and doctor factors combined accounted for 22% of the variation on the outcome of ever had least one transfusion (hospital vs doctor ratio: 1.23), 10% of variation on how many times transfused, 5% on how many units transfused, and 20% on the chance of having a transfusion with Hbmin >100g/L (hospital vs doctor ratio: 2.41).

Conclusion: The implementation of the state-wide BW program was feasible and associated with significant reduction in inappropriate blood transfusions. The large variations on outcomes between hospitals and doctors provided further opportunities for policy interventions.

Disclosure of Interest: None Declared

Keywords: blood transfusion, Patient Safety and Quality
Physiological Track And Initiation Of A Team-Based Daily Goal Round To Avoid Unexpected Cardiopulmonary Resuscitation (CPR) Among Patients In Internal Medicine Ward


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Objectives: In the present study, we used Simple Physiological Scoring (SPS) system to identify high risk patients and applied daily goal worksheet in routine care to achieve good communication between members of care team.

Methods: A retrospective study of consecutive adult (≥18 yrs) admission to a 51-bed General Medicine Ward of a single centre over a six-month period was conducted. We validated the SPS system in identifying patients with subsequent unfavourable outcomes. Daily goal worksheet was applied in routine ward rounds for high-risk patients identified by SPS system. The incidence of unexpected CPR events and satisfaction on medical service of admitted patients were compared before and after one year of practicing SPS and daily-goal ward round.

Results: SPS score on 883 patients were collected between December 2013 and May 2014. SPS score for patients with unfavourable outcomes within 48 hours were higher than those with favourable outcomes (2.81 vs 1.69, P<0.0001). The incidence density of unexpected CPR in general ward was significantly reduced after introducing team-based daily goal round for patients with SPS score ≥ 3 (16/17,921 vs. 6/18221 case/person-day, P=0.0372). The patient satisfaction degree was significantly increased in 10 of 23 aspects for service provided by medical team (all P<0.05).

Conclusion: Combination of SPS system in identifying high-risk patients with subsequent responsive team-based daily goal round wound improve quality of patient care.


Disclosure of Interest: None Declared

Keywords: physiological track, daily goal worksheet, simple physiological scoring
Prevention Of Chemotherapy Errors In A Regional Hospital
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Objectives:
1. To develop a clear road map for identifying and preventing chemotherapy problems.
2. To establish a checklist for in-patient chemotherapy.
3. To apply a systematic approach for enhancing chemotherapy safety.

Methods: A work group including one senior nurse and a lead nurse with haematology background applied the HFMEA to identify the risks and improvement in the chemotherapy administration by developing a process map. The group has also developed an in-patient chemotherapy checklist. The checklist uses as a tool to walk through and identify the steps from ordering to administration for any potential chemotherapy error/ risk. Based on these, possible improvement measures were identified. HFMEA is a prospective assessment that identifies and improves steps in a process, thereby reasonably ensuring a safe and clinically desirable outcome. Additionally, it provides a systematic approach to identify and prevent product and process problems before they occur (U.S. Veterans Affairs National Center for Patient Safety 2012). There are 5 steps in the HFMEA tool.

- Step 1: The topic is preventing In-patient chemotherapy errors of ward.
- Step 2: A group with one ward manager and one senior RN has been established.
- Step 3: An In-patient chemotherapy process map was developed.
- Step 4: Conduct a hazard analysis with all possible failure modes for each of the processes will be listed and numbered consecutively.
- Step 5: A description of actions established with outcome measures of each failure mode recognized.

Results: From the staff-perspectives, an In-patient chemotherapy checklist has been designed and applied in ward daily operation for patients with various chemotherapy protocols at 3Q 2012 so as to confirm the chemotherapy consent and other preparations are completed and double checked with at least one senior nurse (ward shift in charge line). Additionally, appoints a trained nursing staff during each shift to be responsible for following the chemotherapy process. Education such as attending online chemotherapy update course by IANS is a must and training will be speed up with on-the-job coaching to the junior nurse so as to maintain 24 hour safe practice. Assessment of chemotherapy handling skills by nursing staff has been conducted from end of 2013 to June 2014 with 100% passing rate of 13 nurses who work in the 5 beds Haematology and Haemopoietic Stem Cell Transplant Unit of an acute medical ward, and cluster chemotherapy administration audit has been carried out from mid-June to mid-July 2014 at ward with 100% compliance.

Conclusion: Complex, multi-drugs chemotherapy protocols are commonly administered to patients with haemato-oncological diseases, the process in the ward used to comprise several risky procedures such as human prescription error, miss of consent, incorrect dosing calculation, reliance on personnel to prevent errors, and staff inexperience. Up to this moment, after the application of the HFMEA and the development of the checklist, there is zero defect in the chemotherapy administration in ward with high vigilant of the frontline staffs and implement safe with effective chemotherapy practice.


Disclosure of Interest: None Declared

Keywords: chemotherapy safety
Central Venous Catheter Related Incidents Analysis And Improvement In The Intensive Care Unit

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Objectives: The Central Venous Catheter (CVC) is used for introduce the drug, supply the parenteral nutrition and monitor the hemodynamic. The CVC is also one of the most important tubes in intensive care unit. Once the CVC related incidents occur, this could influence the patient treatment plan, length of stays, or threatening the life. The tube safety is always one of the annual patient safety goals in Taiwan joint commission on hospital accreditation. We want to analyze the reason cause the CVC related incidents and reduce the CVC related incidents in order to improve the care quality and increase the patient safety.

Methods: In our ICU, The CVC related incidence is 0.09% in 2012, but the CVC related incidence increase to 0.14% from January to June in 2013. From the year of 2012 to 2013, 75% of the CVC related incidents is self extubation; 25% is accidental dislodgement. The location of the CVC: 75% is in femoral vein; 25% is in internal jugular vein. 50% of the nurse working experience is less than 1 year. We find that:

1) the nurse has low evaluation capability for the self extubation patients,  
2) remove the unnecessary tube not early enough while no retention CVC indications and 3)not confirming the place for CVC with the change-of-shift report.

We can improve the CVC related incidents in many ways:
1. Creating a TRM (Team Resource Management) training programs, including leadership, situation monitoring and mutual support.  
2. Announce the methods to evaluate the self extubation patients,  
3. Make CVC safety training a necessary program for the new nurse.  
4. Check the CVC location and discuss the necessity of the CVC between different shifts.

Results: The CVC related incidence reduced to 0.07% in 2013, and become 0% from January to January in 2015. After we introduce those methods to help the CVC related incidents from July 2013, has lasted 546 days no CVC related incidents was found in our ICU.

Conclusion: We aim to improve the quality of care and improve the tube safety through the proper training and care for the new nurse, standardization of the tube safety care and the cooperation and collaboration of medical teams.


Disclosure of Interest: None Declared

Keywords: CVC related incidents, patient safety, Intensive Care Unit
The Effectiveness Of Applying The Barcode Medication Administration In Reducing The Medication Errors
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Objectives: Medication administration has been paid close attention in patient safety. In recent years, many health care facilities apply the barcode medication administration system to improve the patient identification and the accuracy of the medication administration. On the other hand, we face the ascending trend of the medication errors in a 1,300-bed medical center in southern Taiwan in recent years rigorously. So the purpose of the study was to develop and apply the barcode medication administration system, and then evaluate the effectiveness of the system.

Methods: From the second season in 2014 up to the present, we developed and conducted the barcode medication administration system in the periods of drug dispensing in the inpatient pharmacy, drug delivering by the deliverymen, patient identification, medication preparing, and medication administration at the bedside in order to recheck for the patient and the drugs. In the dispensing stage, we scan the patient barcode on the medicine bag and then the medical information system is brought out the sorts, numbers, and photos of the drug automatically. The pharmacist can identify the appearance of the drugs readily. In the stage of delivering, the deliverymen need to scan the barcode to record that they receive the drugs in order to trace the drugs when those drugs were disappeared in delivering. In the stage of medication administration, nurses use the barcode equipment on the mobile e-nursing cart to confirm patient identification by scanning the barcode on patient name band and the sorts, numbers, and photos of the drug are also brought out automatically. Then nurses scan the barcode on the medicine bag and the system will be automatically checked the drug with the prescription order to make sure the correct medication administration.

Results: The major findings in the study were as the follows that the mean events of the medication errors per season were 57 versus 40 before (from 2013 to first season 2014) and after (from second to fourth season 2014) applying the barcode medication administration system respectively. Analyzing the causes and stages of the medication errors, the medication errors in the dispensing stage decrease from 13 to 7 per season, the delivering errors decrease from 2 to zero per season, the medication errors in the medication administration stage decrease from 39 to 30 per season, and the medication errors excluding above causes were 3 per season before and after the study. Further to analyze the 30 medication errors per season in the medication administration stage after applying the barcode medication administration system, we found out that 55% of the events were attributed to nurses not to follow the barcode standard operation procedures. So we started to audit the compliance rate of the barcode standard operation procedures for medication administration since November 2014 and then the medication errors were decreased to 5 events in January 2015.

Conclusion: The application of the barcode medication administration system not only simplifies the workflow for the healthcare personnel related the medication administration procedures, but also reduces the medication errors in order to promote the patient safety.

Disclosure of Interest: None Declared

Keywords: Barcode Medication Administration System, Information Technology, Patient Safety
The Development And Monitoring Of The Computerized Critical – Value Reporting System (CRS) For Image Examination

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Objectives: To improve the timeliness in reporting the critical value of imaging studies and the responsiveness to reported critical results.

Methods: As soon as the reading is completed, the critical results of imaging examination should be reported to the physician immediately. Otherwise, it would be difficult to take appropriate measures following verification of the results in a timely manner. This delay raises the possibility of adverse events to patients. In the past, the telephone was often used in relaying this information. But telephone communication was prone to omissions and errors. This led to the need to develop a computerized notification system that triggers an alarm on the EMR (Electronic Medical Record) screen of the physician upon the completion of the reading of the image, and sends an SMS (Short Message Service) to their phone automatically. First, results that adhered to the critical value were sorted, from level 1 to level 3 based on the severity and urgency of the symptom. Second, a screen where the physician who has been informed of the reading through an EMR alarm and an SMS can input measures to be taken has been realized. This report system allows confirmation of whether appropriate measures have been taken for the patient. Third, in order to analyze the number of cases where reports were made through CRS and the changes of input rates for measures during the period from 2012 to 2014, a descriptive statistics and chi-square test was conducted. The moment when the report was filed to the moment when measures are input are reviewed to calculate the time it took from the completion of the reading to measures taken for the patient. Even when measures are not in put on the computer screen, doctors sometimes record measures on patient records (inpatient record, ambulatory medical record, etc). Therefore a retrospective EMR monitoring was conducted to investigate how many cases there were where the ordered measures had not been taken.

Results: Since CRS was first adopted in October, 2011 the input rate increased from 49.21% in 2012 to 63.44% in 2013 and to 68.97% in 2014(χ²=68.1057, p-value<.001). Although the input rate of the screen in CRS is below 70%, when cases where patient records were taken were also included, the actual number of cases where ordered measures had not been carried out were only 13 cases out of a total of 785 cases in 2013 and 9 cases out of a total of 651 cases in 2014. The duration from the moment a report was filed using the computerized CRS to the moment measures were input was an average of 20.7 hours from October, 2013 to December, 2014. This means that after the reading of the images, measures were taken within 24 hours.

Conclusion: We sought to develop a computerized critical-value reporting system for images to prevent any omissions or errors during the time from the reading of the image to the moment the ordered measures are taken. Since this system was introduced, we could provide appropriate interventions responding to emergencies in timely. In case that doctors didn’t input measures into CRS screen or patient record, staffs of quality and safety center followed up the EMR and sent SMS to the doctor’s phone again. This continued monitoring of the system and its implementation, as well as a sharing of the monitored results among medical staff is carried out so that the system goes beyond simply being a reporting method and leads to improved quality in medical services provided.

Disclosure of Interest: None Declared

Keywords: Critical results, Patient safety, Quality Improvement
Installing An Automatic Dose Monitoring System For Managing Patients’ Exposed Dose
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Objectives: An automatic dose monitoring system in Seoul National Univ. Bundang Hospital, introducing the problems we confronted and how to address those problems during the deployment process.

Methods: An automatic dose monitoring system based on a dose monitoring software of DoseTrack for all 947 examinations associated with all 37 imaging modality systems using ionized radiation. The modality systems included six CT scanners, and eight digital radiography, eight mobile radiography, two mammography, one dual-energy x-ray absorptiometry, two diagnostic fluoroscopy, six mobile C-arm, and four interventional x-ray systems. The problems to be confronted during the installation were as follows: First, different modalities delivered the dose with their particular. We converted the various units to effective dose in mSv which is the tissue-weighted sum of the equivalent doses in all specified tissues and organs of the body and represents the stochastic risk. Conversion factors from ICRP60 and 102 publications were applied to CT scanners. Conversion factors from NRPB-W4 report were applied to remaining systems. Second, different modalities exported the dose in their particular ways, using x-ray absorptiometry database, modality performed procedure step service (MPPS), or DICOM header information. We made the modalities supporting such export of the dose send the information automatically to the dose monitoring system. However, some modalities only displayed the dose on the operator’s monitor while not providing the dose export. For this case, we modified our EMR program to enable an operator to manually input the dose information. A modality of portable CR did not even show the dose information. In this case, we determined to use the dose data of a compatible modality. Third, the conversion factors for CT scanners (i.e. ICRP conversion factors) were given only for 7 parts of human body including head, neck, head & neck, chest, abdomen & pelvis, trunk, and extremity. For an examination involving more than 2 parts, a new conversion factor was required. For such examination, we calculated the conversion factor by weighting the corresponding conversion factors according to the ratios of the involved parts. Fourth, it was often the case that more than two CT examinations were ordered to be performed at once. In this case, our CT scanners attached the dose information to only one examination. To solve this problem, our dose monitoring program automatically extracted the exact dose for individual examinations from the CT dose sheet, and then attached the individual dose to corresponding examinations.

Results: After installing the dose monitoring system, we recorded the dose information for all examination orders issued during a full month of October 2013. The percentage ratio of the number of dose-recorded orders to that of total issued orders was measured to be 99.5% (54895/55176). For 281 orders, the dose information was not recorded: two orders were canceled; and for 279 orders relating to the modalities not providing the dose export, the operators missed the input of the dose in the EMR program. Based on the recorded dose data, we set dose reference levels (DRLs) of our hospital for abdomen, chest, and genitourinary CT examinations to be the 75th percentile of the recorded data.

Conclusion: After the deployment of an automatic dose monitoring system, the dose information for 99.5% of all examination orders was recorded. Based on the recorded dose information, we achieved quality assurance by establishing the DRLs and changing per-modality scanning protocols accordingly. Our dose monitoring system should serve as a cornerstone for monitoring, analyzing, and optimizing the radiation dose performance of our hospital.

Disclosure of Interest: None Declared

Keywords: dose monitoring system, Dose Track, Patient Dose
From Policy To Practice: A New Way Of Developing Protocols That Work
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Objectives: In healthcare, Work-as-Done (WAD) on the frontline of patient care is frequently different to Work-As-Imagined (WAI) by those who write protocols.[1] Hence written protocols, while technically correct, can be impractical when implemented, creating a need for clinical workarounds and additional effort. This can create unsafe conditions for patients. To improve safety and uptake, we tested a method of assessing the practicality of protocols prior to implementation.

Methods: Two protocols were identified for study. The first was a Danish protocol developed to resolve conflict between ICU and medical ward about safe transfer of ICU patients to the ward. The ward felt that transferred ICU patients were not sufficiently recovered for safe transport, whereas the ICU felt that the ward did not allocate sufficient resources to support transfer. Relatives were concerned that their family member would receive less care in the ward with reduced monitoring; ICU staff felt that ward staff did not give sufficient consideration to this distress. The protocol was written to improve cooperation for transfer and safety of patients. The second case was an Australian protocol designed to manage conflict between ICU and surgery departments. Frequent cancelling of elective surgery at short notice due to lack of ICU beds resulted in distrust between surgery and ICU. The protocol was written to establish rules for making ICU decisions about post-surgery beds, and to repair relationships between the two departments. Superficially, both protocols were well written and appeared ready for implementation. New protocols are typically created without consideration of potential interaction with processes already in place. By identifying links and interdependencies between functions, Functional Resonance Analysis Method (FRAM)[2] can show how new protocols interface with current practices. FRAMs were constructed for each protocol, and used to support reflective dialog [3] with ICU and ward clinicians (Denmark), and ICU and surgery clinicians (Australia), to identify where WAD differed from WAI. Versions of each protocol were then developed via an iterative collaboration between researchers, leaders and clinicians to align with WAD.

Results: Critical elements of both protocols were missing, and re-design was required. In the Danish protocol, no functions supported the desire to reassure relatives. In the Australian protocol, no functions alerted surgeons when ICU beds were available. Also, both protocols created frequent stakeholder meetings that, on reflection, were deemed impractical. The new protocols have been tested and support the new practice. The revised protocols will make it easier for clinicians to adopt while still meeting the needs of the two organisations.

Conclusion: FRAM is useful for supporting reflective dialog leading to successful development of new protocols, for preventing unsafe conditions caused by gaps between WAD and WAI, and for avoiding the frustration associated with introducing a new protocol that fails to be adopted in the workplace. In both ICUs, participants realised that their protocols required major re-design in order to work. The strength of this method is that it allows clinicians and leaders to identify the problems with a proposed protocol themselves, without the need for expensive and time-consuming external support.


Disclosure of Interest: None Declared

Keywords: Clinical guidelines, Functional Resonance Analysis Method, Quality improvement
Trade-Offs Between Hospital Policy And Effective Care: The Case For And Against Workarounds In Medication Safety
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Objectives: Despite the rapid spread of quality and safety initiatives, including electronic medication management systems (EMMS), there has been relatively little investigation of their enactment in real time and the extent to which they support, or undermine, other quality and safety initiatives. The aim of this study is to explore whether the intended use of EMMS challenges other quality and safety strategies.

Methods: This ethnographic study was conducted in six wards in two Australian hospitals between 2011-2014. EMMS, comprising Electronic Medication Administration Records (eMARs) which were accessible from desktop computers and laptops mounted on trolleys (COWs), were used at both hospitals. Over 50 nurses were shadowed on morning (n=26), evening (n=24) and night shifts (n=11) to observe how they used the EMMS when administering medication. Hospital-specific process maps depicting the ‘ideal’ Medication Administration Process (MAP) informed if and at what stage of the MAP the EMMS was not used as intended, when nurses used workarounds. Participants explained to the field researcher their rationale for using workarounds during the shift. Field notes were analysed for themes relating to the study aim.

Results: While the EMMS supported medication safety practices, participants explained that in some contexts, when the use of EMMS as intended undermined the realisation of other safety strategies, they used MAP workarounds. Medication safety policy required a COW to be taken to the patient when administering medication. Infection control policy required non-disposable equipment that was used with other patients not enter isolation rooms or be cleaned and disinfected prior to leaving the room. In some contexts, nurses worked around the medication safety policy requirements by, for example, writing patients’ identification and medication information on paper in lieu of taking the COW to the bedside. However, in other contexts, such as in the use of chemotherapy, strict adherence to medication safety policy was observed. When medication orders required review by a doctor, but were still available for administration in the eMAR, some nurses described feeling conflicted. They either had to follow medication safety policy recommending they wait for a reviewed order, or potentially risk patient safety by not administering required medications on time. The medication safety policy that required two nurses to observe administration of some medications was noted to undermine the goal of timely medication administration. This was onerous particularly in contexts where numerous patients were prescribed multiple medications requiring witnessed administration. While in some contexts the checking nurse did not attend the bedside and witnessed the medication as administered, in other contexts nurses did not workaround the policy.

Conclusion: In some contexts the intended use of EMMS challenged other quality and safety initiatives. Workarounds were used to compensate. Patient care requires delicate trade-offs. Quality and safety strategies should be integrated, mutually supportive and reflect a shared understanding of both their purpose and potential risks. Workarounds provide opportunities to identify misalignment between the requirements of multiple quality and safety strategies and professionals’ implementation of those strategies. Ground-up approaches to the study of implementation can potentially promote ownership of quality and safety initiatives and contribute to the integration of quality and safety into healthcare systems.

Disclosure of Interest: None Declared

Keywords: Guideline Implementation, patient safety and quality, quality improvement, healthcare systems
Sleep Disruption Is A Significant Preventable Patient
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Objectives: Sleep is notoriously scarce in hospitalized environments and of poor quality when it does occur. While sleep is generally understood to be critical to maintaining good health it’s importance has been overshadowed by the acute medical needs of hospitalized populations. The objective of this research effort is to identify the harm done to patients as a result of sleep deprivation and fragmentation caused by exogenous factors, and raise awareness about solutions.

Methods: The research team conducted a structured systematic search of key academic databases (Medline, CINAHL, PsycINFO, and Web of Science) and culled through the over 10,000 titles of journal articles pertaining to sleep in hospital settings. The search terms were developed to capture descriptive and experimental studies in hospitals. The project team assembled research from disparate domains and organized the findings into a series of mind maps that are powerful tools for simplifying dense material in a visual communication format.

Results: The literature review yielded a wealth of evidence that sleep is critically important for hospitalized populations in many specific ways, but that multiple factors conspire against sleep in hospital rooms. Workflows and technology are designed with the needs for staff in mind and as a result the ecosystem of inpatient rooms at night is not conducive to sleep. Patients in hospital rooms experience sleep loss, sleep fragmentation and disrupted sleep-wake cycles. Sleep deprivation is in itself a patient harm—it is a recognized form of torture—but also has been linked to decreased patient satisfaction, to adverse outcomes such as delirium that have detrimental impacts for months after discharge. Reduced nighttime interruption by changing the timing of care steps has been linked to improved outcomes such as significantly reduced incidence of delirium. It has been reported that ICU patients may get an average total sleep time as low as 2.1 hours of fragmented sleep spread over the course of a day. A recent rigorous sleep study using polysomnography in an ICU environment found that the median duration of sleep without waking was only 3 minutes, the total median time of sleep for a 24-hour period was only 5 hours, and over 40% of that occurred during the day. Patients have poor sleep because of endogenous factors such as severity of their disease or presence of pain, but the most significant and modifiable cause of sleep deprivation and fragmentation is from exogenous factors from the hospital environment such as frequent care steps waking patients throughout the night, omnipresent light, high levels of noise from the corridor, and frequent alarms. Studies have found that patients are awaken between 40 and 60 times a night for routine care activities, leaving only short blocks of time for quality sleep. However, these exogenous factors are under the control of multiple departments and individuals and are difficult to control without a systems solution.

Conclusion: The chronic deprivation of sleep across hospitalized environments is a significant form of patient harm that has not been sufficiently addressed to date. Healthcare systems need to recognize the full implications and impacts from sleep deprivation and take the necessary, but difficult, steps to change their environments, work flow and care process to honor and preserve the integrity of patient sleep.

Disclosure of Interest: None Declared

Keywords: Night time care, Nursing Interruptions, Sleep
Patient Mortality Is Associated With Staff Resources And Workload In The Intensive Care Unit: A Multicentre Observational Study
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Objectives: Matching healthcare staff resources to patient needs in the Intensive Care Unit (ICU) is a key factor for quality of care. We aimed to assess the impact of the staffing-to-patient ratio and workload on ICU mortality.

Methods: We performed a multicentre longitudinal study using routinely collected hospital data. Information pertaining to every patient in eight ICUs from four university hospitals from January to December 2013 was analysed. We employed a shift-by-shift varying measure of the patient-to-caregiver ratio in combination with workload to establish their relationships with ICU mortality over time, excluding patients with decision to forego life-sustaining therapy. Using a multilevel Poisson regression, we quantified ICU mortality-relative risk, adjusted for patient turnover, severity, and staffing levels.

Results: A total of 5,718 inpatient stays were included. The risk of death was increased by 3.5 (CI95% 1.3 to 9.1) when the patient-to-nurse ratio was greater than 2.5, and it was increased by 2.0 (CI95% 1.3 to 3.2) when the patient-to-physician ratio exceeded 14. The highest ratios occurred more frequently during the weekend for nurse staffing and during the night for physicians (P<0.001). High patient turnover (RRa 5.6, 2.0 to 15.0) and the volume of life-sustaining procedures performed by staff (RRa 5.9, 4.3 to 7.9) were also associated with increased mortality.

Conclusion: This study proposes evidence-based thresholds for patient-to-caregiver ratios, above which patient safety may be endangered in the ICU. Real-time monitoring of staffing levels and workload is feasible for adjusting caregivers’ resources to patients’ needs.


Disclosure of Interest: None Declared

Keywords: intensive care, mortality, staffing
Objectives: Knowledge of a patient’s weight is essential when calculating doses of drugs which are dosed based on bodyweight. These ‘weight-sensitive drugs’ include drugs with a narrow therapeutic window such as anti-coagulants and aminoglycoside antibiotics. It was not known to what extent patients’ weights were documented within our hospital trust or whether this represented a patient safety risk. Therefore, our objectives were to measure the prevalence of patients who had their weight documented within 24 hours of admission and at least once during their inpatient stay. Additionally we wanted to compare weight documentation for patients prescribed weight-sensitive drugs versus those not prescribed such drugs.

Methods: We used an audit approach to meet our objectives, with audit standards (set at 100%) derived from guidelines by the National Institute for Health and Care Excellence (NICE) and local hospital policy. We included adult inpatients but excluded those on intensive care units or admitted for less than 24 hours. A data collection tool was developed and piloted prior to data collection. Data were obtained from two sources:

1. paper drug-chart and
2. a risk-assessment booklet completed by nurses, both of which were located at the patient’s bedside.

Details of documented weight and any weight-sensitive drugs were recorded. Data were summarised descriptively and a chi-squared test used to test for a difference between the prevalence of documented weight for patients prescribed and not prescribed weight-sensitive drugs. The audit was approved locally.

Results: Data were collected from 762 patients on 51 wards across three hospitals. Data collected from the risk-assessment booklet indicated that weight was documented for 309 (41%) patients within 24 hours of admission and for 359 (47%) at least once during admission. Data from drug-charts indicated that 278 (37%) patients had their weight documented during their admission. Overall, 549 (72%) patients had their weight documented in one or other source during their admission, although only 88 (16%) had their weight documented in both. There were 536 patients prescribed at least one weight-sensitive drug. Of these, 402 (75%) had their weight documented, compared to 147 (66%) of the 223 patients not prescribed a weight-sensitive drug (p=0.014). The most common weight-sensitive drugs prescribed without a documented weight were amikacin, gentamicin and treatment doses of tinzaparin.

Conclusion: While the large sample size was representative of the trust, findings were potentially limited by data not being collected from additional sources such as medical notes, which may contain patient information. Findings were encouraging in that the majority of patients had their weight documented, particularly if they were prescribed a weight-sensitive drug, which is crucial for accurate drug dose calculation. However 25% of patients prescribed weight sensitive drugs had no weight documented, with important patient safety implications. An electronic patient record system is now being introduced in the trust; a repeat audit will be conducted following its implementation as it will be important to consider how this may affect practice around weight documentation.

References: 1. 2006 Nutrition support in adults: Oral nutrition support, enteral tube feeding and parenteral nutrition [Online].

Disclosure of Interest: None Declared

Keywords: medication
Improved The General Ward Outcome By Creating Highly Effective And Collaborative Women’s Hospital Multidisciplinary Care Team

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Objectives: By June 2015, the WH multidisciplinary teams conduct a regular daily multidisciplinary team rounds and documents the daily goal for all moderately risk patients.

Methods: The WH APC Team collaborates and guides the 5 clinical care teams composed of physicians, the Clinical Care teams refer pharmacist, and case managers in conducting regular daily MDR, nurses, clinical and invite other specialties if need. The team utilizes an individualized patient daily goal worksheet to highlight the focused areas. APC team monitors improvement by conducting a small scale PDSA Cycles.

Results: The MDR program though still on the testing stage, got a very favorable outcome. Coordination of care among specialties improved, critical clinical issues were properly discussed during the rounds, patient satisfaction increased and timely patient discharge.

Conclusion: The teams consistently doing MDR however a lot of doctors went for holiday so teams were not always complete. Patient Daily Goal Sheet is not properly utilized as they considered it as duplication of Interdisciplinary Care Plan.


Disclosure of Interest: None Declared

Keywords: MDR Poster
Safety Management For Correct Patient Identification In Medication And Transfusion

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Objectives: To cope systematically with safety accidents in medication and transfusion, it is necessary to identify patients correctly by safety culture. According to an SNUH nursing research in 2012 on the factors that inhibit correct patient identification in medication and transfusion, we lacked several things:
1) The lack of consciousness both about correct patient identification and safety culture
2) The lack of habituation in identifying patients correctly
3) The lack of open communication between patient and nurse.
So we did a QA to solve these problems. The goals were:
1) To emphasize the importance of correct patient identification
2) To establish safety system by spreading safety culture
3) To improve the accuracy of patient identification by habituating the process of correct patient identification in medication and transfusion.

Methods: We investigated secretly the process of correct patient identification bimonthly from February to August in 2013. In February we made questionnaires to survey both actual conditions of correct patient identification and safety culture. We did the preliminary research in March and the post research in September. The strategies for improvements were 1)Monitoring the actual conditions of correct patient identification bimonthly. 2)Encouraging and rewarding the safety-guardian nurses who were in charge of monitoring. 3)Publicizing the necessity of correct patient identification: ①Adding new contents of correct patient identification to the guide video for admission life ②Making an icon for publicizing and attaching it on the patient’s bed console ③Adding the information that reads “Identify together with 2 persons” to the blood-type board used in transfusion 4)Conducting a campaign to spread safety culture: ①Having a poster contest entitled “I am the best in correct patient identification” and giving prizes to winners ②Using the excellent posters as screen savers of ward computers 5)Having a “Praise relay” campaign to attract attention from the nurses: Posting pictures and messages on the bulletin board of hospital intranet under the titles of “Oh! The nurses have changed a lot” “Let’s praise the nurses” 6)Wearing a promotional badge every Monday for attracting for the continuous efforts of the nurses.

Results: Much improvement in the accuracy of patient identification in medication and transfusion (by the evaluation of others: Y/N):
1. The improvement rate in the accuracy of patient identification in medication was 20.4%.
2. The improvement rate in the accuracy of patient identification when the blood arrived at ward was 2.1%.
3. The improvement rate in the accuracy of patient identification just before when the blood was connected to the patient was 8.8%.
4. The improvement in the accuracy of patient identification in medication and transfusion(by the self-evaluation:5point scale): The accuracy of patient identification in medication and transfusion was improved from 4.40 point to 4.55 point through QA activities, which was statistically significant(t=-206.26, p<.001).
5. The improvement both in consciousness of correct patient identification and settlement of safety culture(by the self-evaluation: 5point scale):
1) The consciousness of correct patient identification was improved from 3.92 point to 4.12 point through QA activities, which was statistically significant(t=-152.29, p<.001).
2) The settlement of safety culture was improved from 3.57 point to 3.62 point through QA activities, which was statistically significant(t=-161.60, p<.001).

Conclusion: We got successful outcomes in this QA. Especially the accuracy of patient identification in medication and transfusion was chosen as the SNUH Common Index for annual plan management in every ward through our QA activities.

Disclosure of Interest: None Declared

Keywords: correct patient identification, medication and transfusion, Safety management
Objectives: Operation complications will not only increase medical costs but also threaten medical quality. There also exists potential medical negligence with or without legal problem. For reduction in complications, it is not only cost concerns, but also patient’s safety. The objective of this study was to evaluate the perioperative and postoperative complications and try to promote a discussion for surgeons, and eventually improve patient’s safety.

Methods: We prospectively collected data from July 2011 to July 2013. All patients undergoing operations with general anaesthesia were included and those with local anaesthesia were excluded. The cases of immediate mortality were also included. Some patient undergoing operations, e.g. DM foot, open fracture, fasciitis with debridement, will not be eligible for analysis because further and repeated post-operation management can be expected.

Results: Of 35476 hospitalized patients, 27489 underwent operations with general anaesthesia. A total of 143 eligible patients had perioperative and postoperative complications which were related to surgical procedures. One had immediate mortality due to massive bleeding. One had on-table CPR due to failed intubation after anaesthesia induction. The leading three complications in sequence were wound infection and abscess, hematoma, and active bleeding. Other complications were miscellaneous (e.g. dehiscence, rupture). For plastic surgeons, the most common complications were flap related problems, like cyanosis, failure, and necrosis. For general surgery, most of complication cases were bleeding and hematoma. For orthopaedic surgeons, wound infection and abscess and hematoma were quite common.

Conclusion: Based on the results, some clinical considerations could be helpful for clinical practices. The most important reason is for patient’s safety because almost all complications of bleeding, hematoma, flap failure require revision operations to avoid catastrophe. The rate of immediate morbidity and mortality is about 0.01%. Hence, in spite of low rate, it should be necessary to review patient’s pre-op conditions, especially heart and lung functions. The leading complications, bleeding and hematoma imply that haemostasis should be done more thoroughly. The infection and abscess are quite common complications and the process of sterilization should be monitored. In addition, postoperative antibiotics might be important issues, especially for orthopaedic procedures.

Disclosure of Interest: None Declared

Keywords: Complication
**Why Are Patients Still Dying? Multidisciplinary Findings From An FMEA**

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**Objectives:** The failure of bedside health care providers to recognize and rescue patient from unexpected acute physiologic deterioration is the number one cause of unanticipated death in our hospital. Using a very systematic and formal failure modes and effects analysis, we set out to understand why patients continue to die in spite of a multitude of efforts to curb this problem.

**Methods:** We performed a multidisciplinary and multi-specialty failure modes and effects analysis. We involved practicing nurses and physicians from 12 hospitals in our system (academic and community based). We identified 33 failure modes within the period of time required to assess and act upon a patient’s clinical condition. These were ranked by the providers at each of the hospitals using a standard rate, severity and recognition product (rpn score).

**Results:** There was a 34% response rate (699 of 2046 providers) with 83% of these respondents being nurses. The top 10 failure modes differed by type of hospital (academic vs. community). There were 5 similar failure modes across these different types of sites. These included:

1. clinical condition is not reassessed following an intervention;
2. too many complex things to do in too short of a period of time;
3. care teams fail to recognize subtle changes in vital signs over time;
4. a standard definition of acute deterioration does not exist; and
5. providers believe that the RRT calling criteria are not relevant to their patient. There were no significant differences between nursing and physician perceptions of these failure modes.

**Conclusion:** We learned that the opportunity for failure while caring for patients are numerous and differ by type of hospital (academic versus community). We also learned that education regarding signs, symptoms and responses to deterioration will never be sufficient. The results of this FMEA included concrete design parameters of a new system for recognition and rescue of acutely deteriorating patients outside of the ICU.

**Disclosure of Interest:** None Declared

**Keywords:** diagnosis, FMEA
A Decade Of Experience With Mortality Review: Lessons Learned For Saving Lives, Improving Culture Of Safety And Engaging Clinicians

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Objectives: After years of performing the global trigger tool, our institution was less than satisfied with the lessons we could learn from any of the existing adverse event measurement activities. We opted to develop a robust multidisciplinary approach that would provide the following:
1) patient stories;
2) easily quantifiable denominator;
3) meaningful data;
4) understandable results;
5) mitigatable system failures; and measureable results.

This abstract and presentation detail the system developed and the lessons learned.

Methods: Every death occurring on the Mayo Clinic campus, Rochester, MN was reviewed in a multidisciplinary fashion. A mixed method, qualitative and quantitative, review was employed by frontline, practicing nurses and doctors. Findings from the reviews were reconciled with differences of opinions highlighted. Every case with any issues in care identified were discussed in a multidisciplinary, monthly learning session. Key adverse events and system failures were named and categorized through a process of consensus. Results were reported to quality and hospital clinical practice leadership quarterly. These reports included in-person presentations with recommendations of possible mitigating solutions and patient stories. Likewise, paper and electronic reports were created to send to every clinical care nursing floor, physician specialty and leadership.

Results: In the last 10 years, more than 10,000 consecutive deaths have been reviewed by practicing nurses and physicians. The learning has been substantial and lead to the launch of enterprise-level practice improvements in care. Some key learning’s include the following:
1) more than 80% of the errors or events identified are related to acts of omission rather than commission;
2) practicing nurses find more events than nurses who are no longer involved in direct patient care;
3) improper triage of a patient to an inadequate level of care in the hospital leads to a 62 fold increase risk of a failure to rescue death;
4) inability of providers to recognize and rescue patients from acute physiologic deterioration is our primary cause of improvable deaths;
5) delayed recognition and treatment of respiratory failure and shock account for the primary causes of unanticipated deaths.

Conclusion: Closely evaluating failures in systems and processes of care delivery experienced by patients preceding their deaths illuminates many of the mitigatable adverse events in health care delivery.


Disclosure of Interest: J. Huddleston Consultant for: Brandix iThree, T. Morgenthaler: None Declared, P. Santrach: None Declared

Keywords: methodology, mortality
Patient Safety And Team Resource Management Training In Neonatal Intensive Care Unit
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Objectives: The patients in Neonatal Intensive Care Unit (NICU) are at the extremes of age and are particularly high-risk, making them a special area of concern. Team Resource Management (TRM) is one approach for reducing error and enhancing patient safety. The study is to apply the activity of TRM to our NICU.

Methods: We apply TRM in our NICU in four ways:

1. “ISBAR” will be performed when doctors or nurses get hand-off. We design the check list of shifting record and to compare the difference before and after TRM.
2. There will be three times a day to perform “I’M SAFE”. The activity related to fatigue management is to encourage the staff to express discomforts and can get help. The “I’m safe” indicates domains that require special attention
3. We will use “Brief-Debrief-Huddle” in invasive or some important procedure like cardiopulmonary resuscitation (CPR), endotracheal tube intubation (ET), standby at a delivery, indwelling central venous catheter (CVC) including peripheral central venous catheter (PCVC) and patient transfer.
4. General assessment of clinical patient safety improvement. It helps the team maintain situational awareness so that members do not get fixated on one part of the picture in clinical issues.

Results: We applied TRM in our NICU from July, 2010 to Jun, 2013. During this period, 176 patients were admitted to our ward and were enrolled to the study. The patients who were admitted to our ward from July, 2008 to Jun, 2009 were enrolled as control group. Thirty four nurses and doctors in our NICU were also enrolled. After applying TRM, satisfaction degrees from the patents, the nurses and the doctors elevated from 87.9%, 92.1% and 91.4% to 93.4%, 95.6% and 95.1%, respectively. Besides, the mortality rate, blood stream infection rate and nosocomial infection rate decreased from 3.5%, 9.4% and 15.3% to 2.7%, 7.5% and 12.4%, respectively. Additionally, the average body temperature from premature infants arriving to our NICU raised from 34.2±0.3°C to 35.1±0.2°C. There were also significant changes in other quality indicators.

Conclusion: TRM is a practical skill to improve the quality of medical care in NICU. It builds up the value and the culture of teamwork in a unit. The teamwork skills can be implemented into clinical practices.

Disclosure of Interest: None Declared

Keywords: Neonatal Intensive Care Unit, Patient Safety, Team Resource Management
Role Of The Patient Safety Promotion For Improvement Of Patient Safety In Japan
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Objectives: The Patient Safety Promotion (PSP) is a voluntary association of accredited hospitals aiming at improving patient safety. In the late 1990s, the medical accidents and near-miss events were reported successively in Japan, and worries about medical care and hospital care had been spreading among our society. In this situation, we established the PSP in order to tackle the problem by bottom-up approach. JCQHC has provided support as secretariat for the PSP.

Methods: We established the PSP in 2003. Before its establishment a research group was organized in 2001, which comprised 48 hospital directors and the person in charge of medical safety. Then, from the standpoint of supporting the spontaneous improvement for the patient safety, the PSP defined its task as follows:
1) collecting and analyzing serious or perceptive errors in medical care;
2) investigating and researching;
3) promoting the result of analysis/research via seminars/forums and journals;
4) consulting or advising to the members; and 5) providing suggestions/requesting to stakeholders.

Results: In the beginning, the PSP had 550 accredited hospitals in 2003 and the membership hospitals shared their accident reports each other for discussion. Later in 2005, it had 1050 hospitals, as the on-site medical workers became highly interested in patient safety. However, around the same time, the membership hospitals did not tend to share their concrete accident experiments, as they were afraid of being accused of the accident in the future. In response to the situation, the PSP changed gradually its methodology from discussing individual accidents to setting some missions or focusing the themes, which help the hospitals reduce their problems or risks. Today, over 1300 accredited hospitals participate in the PSP. The PSP has a steering committee and some task forces. Each task force makes annual plan and implements it based on each mission. Task forces consist of various practitioners, who are selected by their careers and job types. Each task force decides how to summarize the discussion and how to publish final products. These days, the needs of educational programs are rising and some forces actively develop and provide some instruction for medical staffs. In FY 2014, concrete outcomes are as follows: held 7 seminars and 4 forums on various themes, published 5 journals, made the educational movie about safe patient transfer, and issued the suggestion about the alarm fatigue.

Conclusion: The PSP has 2 characteristic points:
1) activities are based on spontaneous membership hospitals;
2) it is not-for-profit association, and financially covered by membership fee. Thus, any hospital can participate in this association if hospital agrees with the purpose, “Promote patient safety”. The PSP leads the activity about to improve patient safety in Japan.

However, the uneven distribution of the participants depending on the region, the number and the type of beds has become a serious issue in the past several years. So, we assume that it is essential to tackle the problem through grasping and dealing with hospitals and/or social needs.

Disclosure of Interest: None Declared

Keywords: patient safety
Leadership, Safety Culture And Patient Safety In Hospitals
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Objectives: Background of the study - At least since the publication of “To Err is Human” in the year 2000 we know that hospitals could be safer than they are [1]. In the meantime, knowledge about patient safety and evidence-based safety practices has grown substantially but too often these practices do not reach the patients [2]. Evidence-based medicine, nursing and therapy are advancing but the implementation gap also seems to be growing [3]. Is evidence-based leadership and an appropriate safety culture the solution to this implementation gap since “more than enough evidence exists to prompt decisive action” [4]? Do we suffer blind spots in the roles of leadership and safety culture?

Objectives
1. Review and conceptualize theories, models and empirical evidences of the functions, roles and interdependences of leadership practices, safety cultures and patient safety outcomes in hospitals.
2. Develop a contextually and culturally sensitive safety leadership framework for hospitals.
3. Conduct empirical studies and organizational development projects to test and validate the framework.

Methods: Databases and gray literature have been searched and the selected publications systematically reviewed to develop a framework for evidence-based safety leadership. The framework was discussed with and validated by patient safety experts, hospital staff and organizational scientists.

Results: The theoretical model derived from the literature and the work-shops shows the respective influences and interdependences between leadership practices, safety cultures and patient safety outcomes. An understanding and a framework for evidence-based safety leadership in hospitals has been developed. Definition of evidence-based safety leadership in hospitals
1) OBSERVE, REFLECT & LEARN
2) ALIGN STRATEGY, STRUCTURE & PROCESSES
3) DEVELOP A BROAD CULTURAL EMPOWERMENT

Conclusion: The model seems to be functional as a framework for empirical studies (preferably action research) and organizational development projects to analyse the influences and interdependences between local leadership practices, safety culture and patient safety outcomes. Subsequently it is possible to elaborate adequate, evidence-based individual, team and organizational development approaches that are contextually and culturally sensitive. Otherwise the chances to fail are high.


Disclosure of Interest: None Declared

Keywords: leadership, Patient Safety, safety culture
Activity to Prevent Wrong Invasive Procedure
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Objectives: To improve the compliance of correct procedure verification which is very important to reduce sentinel event related to invasive procedure.

Methods: This project was done in one teaching hospital which is a tertiary referral hospital with 2,800 beds in South Korea. A task force for correct invasive procedure was organized under the full support of CEO. It was composed of Medical/Surgical/Radiology staff physicians, residents, Performance Improvement team and nurses.

We listed the invasive procedure which needs verification and marking before procedure throughout hospital wide, especially bedside, outpatient and other intervention department except operation room. The process was analyzed for each department to identify changing point and redesigned along IPSG from Joint Commission International. We referred to patient safety data from Safety report related wrong procedure to redesign As-is process. We established ‘The policy of correct invasive verification’ and set up detailed guideline for each department to easy for improving compliance.

We educated to related physicians, nurses and technician about the importance and key process of correct procedure verification. Especially the UCC contest was implemented to reduce medical error related wrong procedure. The poster for correct procedure was designed and displayed where physicians and related staffs could watch easily. And hospital director awarded the staffs and department submitting UCC for campaign and shared with hospital wide staffs in Patient safety day.

The computer system and medical record sheet were made to record easily after verification process, the record sheet included not only timeout checklist but also important information for user convenience at each department. Leadership named the compliance of verification correct procedure as AMC (Asian Medical Center) core indicator and reported the monitoring result regularly.

Results: The correct procedure verification compliance was monitored quarterly. Before the start of the improvement activity, it was carried out at only one department for PCNA but after the activity, it was applied overall hospital. During the improvement activity for correct procedure verification, the rate of compliance has increasingly risen to 95.2% for 4 month.

Conclusion: The promotional strategy for correct procedure established one of the most important safety policy and distributed to each department. To maintain good compliance, the correct procedure verification course was installed in the new employee training program and the simulation training course is considered.

References: Joint commission international accreditation standards for hospital, 5th edition

Disclosure of Interest: None Declared

Keywords: invasive procedure
The Process Improvement Of Critical Values Reporting
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Objectives: To improve the process of Critical Values Reporting (CVR) which is important to provide care timely.

Methods: This project was done in one teaching hospital which is a tertiary referral hospital with 2,700 beds in South Korea. A task force for improving the CVR was organized under the full support of CEO. It was composed of Reporting and Receiving department which Radiology/Pathology/Laboratory/Nuclear Medicine/Cardiac examination department and Medical/Surgical/Emergency medicine staff physicians. Also the team involved in a staff of nursing department for delivery result when the physician cannot contact, medical information department for technology support and Performance Improvement (PI) office. We reviewed current situation and identified problems about the existing CVR system throughout hospital wide. Especially we focused on reporting subject and result level, reporting process (time limit, right staffing for receiving, communication method), monitoring system, using technology and usability from a patient safety point view. The reporting subject and process was analyzed for each department to identify changing point and redesign. We referred to patient safety data from Safety report related delayed therapy to redesign as is process. Patient safety data was used to inform leadership of the importance of CVR and induce related physician and staffs to attend this project actively. We established 'The policy of CVR' and set up detailed guideline for each department to easy for improving compliance. It has detailed guide, especially reporting subject and level, person in charge, process and technology system for hospital wide plus particular patient condition. First of all, the reporting subject and level was divided into two level, red and yellow along urgency. And then we designed reporting and sending process via two another urgency. The CVR communication was implementing through the way of face to face or telephone in 1 hour for red category. And Yellow category can communicate by Auto EMR system within 14 days. After reporting critical result, the physician in charge for patient care have to record for care plan along the result. The reporting computer system was established to communicate and record related care plan easily and included the information of person in charge. We educated physicians, nurses and technician about the importance and key process of redesigned CVR system. We provided the related information to whole staffs and physicians about it periodically by PI newsletter, bulletin board and SMS in hospital. Leadership named the compliance of reporting and receiving compliance as AMC (Asian medical center) core indicator and reported the monitoring result regularly. In addition, we share indicator, CVR policy regularly and plan to improve compliance or redesign better process within CVR Committee that is included in Health Quality Improvement Committee.

Results: The correct communication compliance of CVR was monitored monthly. Before the start of the improvement activity, we are not able to know about success or fail of CVR communication, but now we can oversee the correct CVR communication rate continuously by AMC core indicator overall hospital. During the improvement activity for improving CVR, the rate of compliance has increasingly risen from 70.1% to 95.4 for 6 month.

Conclusion: The promotional strategy for correct CVR communication established one of the most important safety policy and distributed to each department. To maintain good compliance, the CVR process was installed in the new employee training program and the simulation training course is considered.

References: Massachusetts Hospital Association CVR List

Disclosure of Interest: None Declared

Keywords: Critical Value Reporting, CVR
Optimization Of Feedback Of Laboratory Results By Establishing The Integrated Critical Value Reporting Process

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Objectives: Critical Value Reporting (CVR) means that critical laboratory results affecting the safety and life of patients are immediately reported to an attending physician. Monthly average of about 400 cases of CVR occurred in SNUBH. Since the CVR process is being separately operated in each laboratory, the reporter, the reporting time and methods are all different. Thus, the medical staffs may get confused or miss some important reports. If critical laboratory results are not reported, patients may be deprived of timely treatment and opportunities for therapy. Therefore, the integrated CVR process has been established for prompt treatment by establishing a standardized process and strengthening the communication between medical staffs and each laboratory.

Methods: The DMAIC technique of 6-Sigma was used to improve the CVR process. Current levels were measured by comparing and analyzing 1,196 CVR cases occurring in each laboratory from January to May, 2013 with Electronic Medical Record (EMR). Root cause analysis and improvement plans were made on the basis of brain writing, failure mode and effects analysis performed through the participation of doctors, nurses and laboratory staffs.

Results: When CVR occurred, the laboratory immediately informs an attending physician the results via a mobile Short Message Service (SMS) and a Groupware Message (GM). CVR target items and ranges were selected through opinion coordination between laboratories and clinical departments on the basis of existing standards. Departments of laboratory medicine, radiology, nuclear medicine and pathology would send the CVR. The system was established to report the CVR to appropriate medical staffs in order to give the proper treatments to patients without missing the notification of CVR on the basis of classification of patients such as inpatients, outpatients and ER patients. A CVR computer program has been developed in EMR with consideration of users. A program has been developed in the Picture Archiving Communication System (PACS) in order to immediately send the results when departments of radiology and nuclear medicine read images. You could select common sentences or send the contents which you typed on the sender's screen through SMS. The screen was configured for the laboratory to easily check and send it to the designated recipient list. Clinical departments, recipients, recognized the CVR through SMS. Then they connected to the EMR in order to check the contents of GM and determine whether they have to observe or take further actions on the patient. It was linked to check whether observation or further actions were taken for patients with consideration of patient’s conditions. In addition, the management screen has been developed to check the CVR cases in each laboratory, the list of patients, the receipt of CVR by medical staffs and implementation of further actions in order to handle 1,000 cases of CVR in a month. Thereby, the system has been improved to check and measure the receipt of CVR and implementation of further actions, which were impossible through the previous system.

Conclusion: The efficient communication can be made, since an attending physician is immediately informed for critical laboratory results. It is helpful for prompt treatments of patients. Standardized guidelines of CVR process have been established. Validation is performed to avoid the occurrence of errors. It is being modified by collecting opinions of users. We will implement training for medical staffs regularly to settle down the integrated CVR process. Also we will analyze CVR to develop the indicators and enhance the monitoring for patient safety.

Disclosure of Interest: None Declared

Keywords: CRITICAL VALUE REPORTING
Activities For Improvement To Ensure Patient Safety At The Sedation
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Objectives: The purpose of this project is to ensure a safe sedation that is not yet founded systematically in health care institutes in South Korea.

Methods:
1. Amended guidelines: An evidence-based sedation was amended so that safe treatment can be provided. To amended guidelines, applied was a review on requiring monitoring items and post-sedation recovery evaluation tools, the kinds of sedative drugs and medication administration guidelines.
2. A department selected for sedation object: A department to which sedation was applied was expanded after discussion with medical teams and analyzing departments. In particular, as children’s hospitals often need sedation even in a ward, unlike adults’ hospitals, the whole of wards and ICU was included in the object of sedation.
3. The update of a sedation consent form and a sedation record form: To reinforce patient safety under sedation, a sedation consent form and record form were complemented. The items requiring confirmation in advance included in a sedation consent form as mandatory input data.
4. Expanded sedation infrastructure: Infrastructure including staff, space, and equipment was expanded to provide safe sedation. In case there is no medical team performing sedation, one sedation nurse is assigned further, in case there is no recovery space, the examination room is prepared and emergency supply list are supplemented.
5. Selecting and educating qualified sedation performers: Based on legal advice sedation monitoring should be conducted by medical staff (only doctors or nurses), one sedation nurse is assigned for the department which medical staff dose not reside. It was set up to regularly conduct CPR education and sedation education.

Results:
1) A guideline was amended to safely conduct sedation.
2) Departments were all-out extended through consulting with each department and analysing sedative drugs and examinations.
3) A sedation consent form, and a sedation record form were compensated based on amended guidelines.
4) Assigned one sedation nurse and expanded post-sedation recovery space, monitoring machine and emergency supply items.
5) Qualified medical staff as sedation performers, they are required to complete CPR and sedation education.

Conclusion: To perform safe sedation, a prerequisite is to establish a safe process from preliminary evaluation, treatment, monitoring and discharge evaluation, and a staff should comply such a process. Nevertheless these massive investment, there is no medical fee on them. General environment should be prepared with medical fee, and monitoring whether or not sedation is safely conducted also should be performed.

Disclosure of Interest: None Declared

Keywords: standards development
Adaption And Validation Of The Safety Attitude Questionnaire For The Danish Hospital Setting

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Objectives: Measuring and developing a safe culture in health care is a focus point in creating high reliable organizations. Questionnaires can be used to capture a snapshot of the employee’s perceptions of patient safety culture. The most commonly instrument used to measure safety climate is the Safety Attitudes Questionnaire (SAQ). The purpose of this study was to adapt the SAQ for use in Danish hospitals, assess construct validity and reliability, and present benchmark data.

Methods: A cross-sectional study design was applied across five regional somatic hospitals and one psychiatric university hospital in Denmark. Across the somatic hospitals 15 in-patient bed units were included. In the psychiatric hospital six out-patients units, and 10 in-patients bed units were included from the same ward. The SAQ was translated and adapted to the Danish setting. A Danish version of SAQ (SAQ-DK) was distributed to 1263 staff members from the 31 clinical areas by meeting administration, hand-delivery and mailing. Goodness of fit indices from confirmatory factor analysis was reported along with inter-item correlations, Cronbach’s alpha, and item and subscale scores.

Results: Participation was 73.2% (N=925) of invited health care workers. Results from the confirmatory factor analysis is shown in table 1.

Table 1. The confirmatory factor analysis

<table>
<thead>
<tr>
<th>Goodness-of-fit indices</th>
<th>Entire model&lt;sup&gt;8&lt;/sup&gt; N=925</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square test of the model fit (c2, df, p-value)</td>
<td>c2=1496.760, df=419, p&lt;0.001</td>
</tr>
<tr>
<td>Comparative fit index</td>
<td>0.901</td>
</tr>
<tr>
<td>Root mean square error of approximation (RMSEA)</td>
<td>0.053</td>
</tr>
<tr>
<td>90% CI for RMSEA</td>
<td>0.050 - 0.056</td>
</tr>
<tr>
<td>Probability RMSEA (p close)</td>
<td>0.057</td>
</tr>
</tbody>
</table>

Inter-scale correlations between the factors showed moderate to high correlations. The factor stress recognition had significant negative correlations with the other scales respectively. Questionnaire reliability was high, (Cronbach’s alpha (a)= 0.89), scale reliability ranged from a=0.70 to a=0.86 for the six scales. Across the entire sample %>positive ranged from 42.6% for perception of unit management to 64.8% for teamwork climate. Most variation in %>positive across the 31 clinical areas was found for working conditions, where the clinical areas with the least %>positive was 5.0% and the clinical area with the highest %>positive was 91.7%. Proportions of participants with a positive attitude to each of the six SAQ scales did not differ between the somatic and psychiatric health care staff. Substantial variability at the unit level in all six scale mean scores was found within the somatic, and the psychiatric samples.

Conclusion: Meeting administration worked well and provided good support for the survey, however leadership support seemed more essential to get a high response rate. Participation varied among clinical areas, and different professional groups. Variation might have been reduced by tailoring the way of administration of the SAQ-DK according to customs at hospital and unit level, as well to preferences among different professional groups. The adopted Danish translation showed good construct validity and internal consistency reliability. SAQ-DK is potentially a useful tool for evaluating perceptions of patient safety culture in Danish hospitals.

Disclosure of Interest: None Declared

Keywords: patient safety culture, Safety Attitude Questionnaire, Validation
Cluster-Wide Strategies To Reduce Transcription Errors In NTEC
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Objectives: Trend of transcription errors was rising and interns were frequently involved. A cluster-wide Taskforce was formed to look into the concern and department representatives were mostly internal coordinators. A transcription error was defined as a documented prescription which was copied or brought forth to Medication Administration Records/Medication Order Entry. 147 cases were analyzed in a systematic 9-year review of transcription incidents in NTEC from 2004-2012. 3.4% errors resulted in significant severity or patient death. Top 3 error types were wrong dosage, patient drug profile and frequency. Contributory causes included distraction, unclear seniors’ orders, checking failure/inadequacy, complicated regime and look-alike drugs. The aim is to identify effective strategies to reduce transcription errors.

Methods: Conducted first survey of interns/junior trainees (first year medical officers) in 4 main medical departments in NTEC. Developed a survey form with finding from systematic case review. Participants were asked to rank pitfalls and difficulties encountered in transcription errors and to suggest solutions. Developed trial strategies to reduce transcription errors, Promoted strategies locally in departments through department representatives. Trial ran strategies in a ward of the participating departments in NTEC. Promoted adjusted strategies for second stage trial or rolling out in participating departments. Conducted evaluations (survey/onsite observation/staff feedback) to monitor progress. Target participants were interns/junior trainees. Nurses were invited to supplement findings but a simpler survey form was used. 46% NTEC interns responded. Top 3 pitfalls were wrong dosage, unnecessary drugs and omitted drugs. Top difficulties were distraction/multitasking, handing many patient folders at one time and illegible writing. Unclear seniors’ instruction was highly ranked. Developed 3 strategies:

1. direct prescription by prescriber; reject “resume usual medication” unless supplemented with effective communication method as needed;
2. barcode scanning to access correct patient profiles in CMS;
3. protected routine transcription time. Intern coordinators to strengthen interns’ training. Suggested OPMOE enhancement to CMS team. Post-trial evaluation was overall better than pre-trial especially on MO’s direct prescription and use of alternative communication method which were completely rolled out in some departments. Compliance of onsite observations were 57%>100%. Nurses’ responses were positive. Protected transcription time in daytime was considered impractical and limited to night.

Results: Refined strategies were rolled out to participating departments. 227 returns received in post-trial evaluation showed satisfactory results. 74-78% intern respondents observed MO ordered drugs on MAR directly especially when admitting patients/changing prescriptions or used alternative communication means (ePR drug sheet, elaborated drug list on progress sheet) to guide interns’ prescribing. Intern respondents considering MO’s instruction on drug prescription was clear increased from 77% in 1st trial to 94%. Use of barcode scanning to access correct patient profile rose from 40% in 1st trial to 55-70%. Positive regard of no routine transcription at night time to reduce unnecessary workload increased from < 50% in 1st trial to 70-90%.

Conclusion: 33 and 38 transcription errors were reported in years 2011 and 2012 respectively. Strategies to reduce transcription errors were introduced in Oct 2013 and 16 errors were reported in 12 months. Strategies are effective.

Disclosure of Interest: None Declared

Keywords: Medication Error, Prescribing, Transcription
Proactive Risk Management Approach In Preparing For In-Patient Medication Order Entry
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Objectives: The In-patient Medication Order Entry (IPMOE) is a computerized system with built-in safety features, workflow support and clinical intelligence for prescribing, dispensing & administering drugs for in-patients. Prince of Wales Hospital is the 1st hospital in NTE Cluster and 3rd hospital in Hospital Authority to implement the system. Risk management of system and implementation was yet to be developed and refined. In view of complexity, tight coupling, time constraint and dependence on human interaction of medication process, introduction of IPMOE was projected to fall on the high risk red zone of the risk matrix.

Methods: A proactive safety mind-set was hypothesized would set the scene safe, effective and user-friendly for implementation. A multidisciplinary workgroup involving frontline doctors, nurses and pharmacists was formed to look into anticipated risks. Proactive risk management approach was adopted to contain risk in the yellow zone (medium risk).

1) Risk scanning and prioritization: vertically critical steps in a single IPMOE process of prescribing, dispensing, and administration, data upload and transmission and horizontally significant scenarios along patient’s hospital journey from ward admission, investigation or procedures in designated suites, transfer between IPMOE and non-IPMOE areas and discharge/transfer to a non-IPMOE hospital, using the Failure Mode and Effect Analysis.

2) Strategies recommendation to subject officers.

3) Preparedness for contingency and downtimes. Procedures would be prepared and a pre-implementation drill would be conducted.

Results: Assessed and prioritized for action root causes and impact of factors in system, workflow, human, equipment and environment. Nearly 90 potential failure modes were identified, mainly related to IPMOE features, workflow, IT system/hardware, knowledge/skills and staff concerns. Adopting the principle of 80/20, critical and commonly applied failure modes were dealt with. About 40 actions were recommended: including risk mitigation, feature enhancement, workflow management especially between IPMOE and non-IPMOE areas, technical/information support and staff engagement/training. Managed staff’s over expectation of system safety and recommended strategies to subject officers. Downtime procedures for prescribing/administration and dispensing modules during scheduled and unscheduled downtimes were developed by Quality & Safety Division with clinical departments, pharmacy, Head Office Information Technology Department (HO IT); local IT; Health Informatics. Consulted staff and trial run procedures. Conducted a real play drill coded “Mission Giraffe” in pilot ward for downtime procedures before implementation, with participation of pharmacy, HOIT Team and Call Centre. Issues like communication between hospital and HO and patient data confidentiality were addressed. Inherent technical risks in system and hardwares were dealt with by IT experts, local Implementation Team organized staff engagement activities e.g. staff forums and staff training. The downtime procedures were endorsed. Videos and quick tips with illustration were prepared. Cluster IT contingency plan was supplemented with procedures.

Conclusion: Although common/significant potential failure modes in general in-patient settings were addressed without specifically risk-scanning medication process in special areas like Intensive Care Unit, there was no serious IPMOE related medication error since implementation. Continual collection of staff’s feedback for improvement and addressing needs in special areas is crucial.

Disclosure of Interest: None Declared

Keywords: Medication order entry, Medication Safety, Risk
Activities For Hospital Falls Prevention
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Objectives: Falls is one of the adverse event that often occur in Hospitals. JCI also includes it as one of the required standard items in its International Patient Safety Goal (ISPG). Falls can be predicted based on the environment or physical attributes, making it preventable. As such, this paper seeks to develop a scale for predicting Falls based on complex risk factors of admitted patients with acute symptoms in hospitals, thereby reinforcing the selection and preventive mediation of patients with high risks for Falls. By reducing the incidence rate of Falls, the quality of medical care and patient safety will also be improved.

Methods: Reports on 330 cases of falls that have been reported to SNUH in 2012 and data of admitted patients from 2012 to 2013 were analyzed to identify measures for improvement.
1. Only 4.2% (n=330) of the fall group were categorized as high risk. As such, a more accurate scale for assessing the risk of falls needed to be developed.
2. A multivariable analysis of the fall group and the non-fall group was used to apply weight to specific factors (history of falls, intake of high risk medication, related symptoms, disability in walking, administration of intravenous fluids) to develop a new scale. A value that maximized the difference in falls rate was used as the reference point for classifying the high risk group.(>3.5 points , total of 8 points)
3. The rate of falls within 7 days of hospital admittance was 56%, and those who fell two times or more accounted for 11.8%, raising the need for reinforced prevention training and continued training. Training to prevent falls was reinforced at the time of admittance, and a handout on how to prevent falls was drafted and distributed throughout the hospital.
4. A high percentage of falls, at 40.6%, occurred during the night time (23:00~06:00). As such, prevention activities during night shifts were reinforced. Unnecessary administration of intravenous fluids were kept to a minimum and guidance on toilet needs was provided before bedtime.
5. Outpatients of the hospital also accounted for 6.6% of the falls, and as such prevention measures were taken for outpatients. The use of DID was encouraged, guidelines on how to prevent falls were posted in the elevator, handouts for outpatients were drafted and distributed and an overall campaign to prevent falls was launched.
6. The threshold in the bathroom was replaced with a ramp and the wheels of the pole were made larger to reduce the risk of falls. The height of the beds in the test rooms were also lowered.
7. Stickers indicating high risk of falls were shared, and patients with high risk of falls were marked on the EMR screen. The risk of outpatients were screened to reinforce preventive measures.
8. Staff training was conducted to raise awareness of falls.

Results:
1. When applied to admitted patients from 2012 to 2013, the new scale, compared to the existing scale, had a sensitivity of 0.378 for patients in 2012 and 0.480 for patients in 2013. This is in contrast with the sensitivity of the existing scale at 0.004.
2. The number of falls cases reported decreased from 330 in 2012 to 307 in 2013 and 293 in 2014. And proportion of harmful falls cases decreased from 26.7% in 2012 to 23.5% in 2013 and 25.3% in 2014.
3. Measures to prevent falls in high risk patients and outpatients were reinforced.

Conclusion: Based on the analysis results, a scale that caters to the characteristics of falls patients at SNUH was developed to identify high risk patients. Tailored training and prevention guideline activities were carried out to reduce the incidence of falls and training of the staff in particular, helped improve the preventive mediation reinforcement activities.

Disclosure of Interest: None Declared

Keywords: FALL DOWN
Reduced Cardiopulmonary Arrests By Rapid Response Team Activities

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Objectives: We want to reduce the CardioPulmonary Arrests (CPA) by the RRT public relations and promotion. Our Rapid Response Team (RRT) is operating as an early screening through the Electronic Medical Record (EMR). Because of vital signs recorded delays and errors, lack of publicity RRT, we found that the difficulties in early response. The rapid early response will be made by improving this problem.

Methods: We compared the incidence of CPA during the three months before and after improvement. The study was conducted at a 1300-bed tertiary hospital in Korea. Indicators of CPA rate was defined as the rate of only 18 years of age or older hospital patients in general wards. To improve the problem was to establish an improved strategy, as shown below. First, to establish a standardized management system, made the RRT work instructions, and was shared with team members. The item was added to the basic training for new nurse. In addition, to promote better quality CardioPulmonary Resuscitation (CPR), CPR monitoring system and feedback methods was established. The team name was unified avoid confusion. Second, in order to improve the system, through the hospital intranet. This letter was sent to the team so that made other plans for the activity. The CPR report was modified for accuracy of rate CPA. Third, as a method for improving the recognition by utilizing the hospital intranet and offline media are going to promote the need for RRT. Fourth, utilizing ward conference, all nurse’s education, we are informed the RRT necessity and improvement plan for CPR quality.

Results: In total, 23 cases of CPA occurred during 6 months. There was a significant difference in the incidence of CPA from 0.02% to 0.01(P<0.05).

Conclusion: This study was conducted focusing on the incidence of CPA to find a way to check the current level of the Hospital RRT activities to actively provide better patient safety and health care services. And seeking to build on the current system improvements by focusing attention on the cause through publicity and education. We, and the interest and support of the department need for ongoing management, it will continue to seek ways to continue.

Disclosure of Interest: None Declared

Keywords: rapid response team
Prospective Observational Study Of The Effectiveness Of Combining Reporting And Trigger Tool Methods To Measure Adverse Events And Errors In The Emergency Department

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Objectives: A growing body of research suggests combination of measurement methods to identify injuries caused by healthcare. We developed a comprehensive monitoring system for adverse events and errors in the Emergency Department (ED) and investigated its efficacy.

Methods: This 1-year prospective observational study evaluated a monitoring system combining 3 reporting methods and 5 trigger tool methods to capture adverse events and errors at the ED of an academic medical center. They included a voluntary electronic adverse event reporting system (track 1), incident reports from the ED nurses’ daily log book (track 2), high-risk patients identified by the Team Resource Management (TRM) briefing and debriefing meetings (track 3), 72-hour revisit admissions (track 4), unexpected cardiopulmonary resuscitation (track 5), in-hospital cardiac arrest of ED patients (track 6), unexpected transfer to monitor observation room (track 7), and unscheduled transfer to intensive care unit within 24 hours of admission to general ward (track 8). Measurement outcomes included the occurrence rate, amount, and yield rate of adverse events and errors of different methods. The physical impact, type, and cause of adverse events were also analyzed.

Results: Among 69,327 adult non-trauma ED visits, 3205 incidents were analyzed. There were 293 (9.1%) adverse events and 365 (11.4%) errors. The occurrence rate of adverse events and errors was 1.0%. Among adverse events, 77.8% were captured by reporting methods and 82.9% incurred temporary minor physical impacts. Four patients (1.4%) died from adverse events. Type of 87.3% of adverse events was clinical performance. There were 90.1% of adverse events caused by human factors. Comparing with reporting methods, trigger tool methods had lower yield rate of adverse events (odds ratio 0.1, 95%CI 0.09-0.16), greater proportion of adverse events during both the pre- and post-intervention phases (odds ratio 17.0, 95%CI 8.48-34.16), and with severe physical impacts or death (odds ratio 5.4, 95%CI 2.62-11.10).

Conclusion: Combining reporting and trigger tool methods for adverse event and error in the ED is effective with quantitative and qualitative benefits.

References:

Disclosure of Interest: None Declared

Keywords: adverse event, emergency department, Patient Safety
Patient Care Assessment Index (PCAI-IDA): An Instrument To Evaluate Patient Care And Safety In A Brazilian Hospital Network
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Objectives: Aim is to help evaluate patient care safety in different size hospital facilities network with a benchmarking indicators tool.

Methods: The Patient Care Assessment Index (PCAI-IDA) is an instrument for monitoring patient safety in a Brazilian hospital network. Is configured with eight different sizes and complexity facilities. Located within 200 km from Porto Alegre, Brazil. The methods steps: analyse of the assistance profile of each hospital; define of the patient safety care processes performed in each unit using the 15 years Corporate Patient Safety Methodology. Organize and start the operational processes on each unit. IT Systems (ERP, EMR and others) was configured for an integrated operation in each unit. All IT systems were configured in a Corporate Clinical Information System so as to supervise the indicators continuously. The elected indicators for each unit based on their common clinical profiles was:
1) correct patient identification rates;
2) correct allocation and management controlled medications rates;
3) correct surgical safety check-list use rates;
4) correct body side mark for surgical procedures rates;
5) hands washing rates;
6) patient falls rates;
7) compression ulcers incidence rates;
8) phlebitis incidence rates;
9) prescription time one hour before medicine administration due time rates;
10) correct antibiotic prevention use in clean surgical procedures rates;
11) infection in the clean chirurgical procedures rates. For facilities with adult patient ICUs:
12) rate readmission in 48 hours without any clinical justification rates;
13) catheter infection rates;
14) mechanic ventilation infection rates. For facilities with neonatal ICUs:
15) catheter infection rates and
16) mechanic ventilation infection rates.

The each weigh of indicators was calculated based on the past year clinical (case mix) profile of each facility using the estimated number of patients if the care process run correctly. Thus this procedure each indicator reflects the correct contribution of each process in each facility. With this formula and statistical treatment the result for each facility is a 0 – 1 (0 – 100%) case mix adjusted score.

Results: The mean and the standard deviation results for each unit (facility = H1, H2 ... Hn) was presented in two six month period (S1 and S2) for 2014. H1: S1 = 94.85 ± 6.81; S2 = 89.32 ± 5.63 (p 0.156); H2: S1 = 69.32 ± 4.58; S2 = 89.03 ± 1.88 (p <0.001); H3: S1 = 82.36 ± 3.88; S2 = 91.76 ± 5.00 (p<0.005); H4: S1 = 99.15 ± 1.19; S2 = 97.79 ± 4.69 (p 0.507); H5: S1 = 53.48 ± 14.31; S2 = 87.25 ± 11.23 (p<0.001); H6: S1 = 83.55 ± 6.62; S2 = 95.66 ± 3.73 (p<0.003); H7: S1 = 69.53 ± 4.47; S2 = 65.53 ± 12.66 (p 0.482); H8: S1 = 80.11 ± 17.81; S2 = 96.21 ± 1.19 (p 0.052).

Conclusion: This quantitative method of assessing patient safety results in different facilities is an alternative for corporate and collaborative management for a hospital network and improvement patient safety culture in health organizations.


Keywords: patient safety and quality improvement healthcare systems, patient safety culture and work life, quality & patient safety improvement quality assurance program
Objectives: This study aims to assess the adequacy of nursing documentation of Modified Early Warning Score (MEWS) and collect staff opinion towards the integrated color graphic “Vital Signs Observation Chart” six years after implementation of MEWS in a public hospital.

Methods: MEWS is a scoring system for bedside application to help identify patients at risk of clinical deterioration. We developed an integrated color graphic “Vital signs observation chart” with built-in features of MEWS parameters and introduced MEWS monitoring across different specialties at Pamela Youde Nethersole Eastern Hospital in 2008. The integrated observation chart incorporated 5 vital parameters, including temperature, conscious level, systolic blood pressure, heart rate, and respiratory rate. Recording of MEWS was performed for newly admitted or transfer-in patients to general wards and continued for those requiring 4 hourly or more frequent vital sign observation according to our hospital MEWS protocol. We performed a retrospective record review study. Samples of inpatient medical records were retrieved through simple random sampling method. Review of medical records was performed in July 2014 to assess the completeness of recording of vital signs and documentation of MEWS. Self-administered questionnaires were sent to medical and nursing staff to seek their opinions on the integrated color graphic observation chart for MEWS monitoring during the same period.

Results: Recording of all five vital parameters with accurate documentation of the value of MEWS was observed in 81% of newly admitted or transfer-in patients. Over half of them (53%) required 4 hourly or more frequent vital sign observation. Among them, continual recording of all five vital parameters with accurate documentation of the value of MEWS was observed in 78% of the patients. A total of 381 questionnaires were obtained from nurses while 101 questionnaires from doctors. The majority of nurses agreed (73%) or strongly agreed (11%) that the integrated color graphic “Vital Signs Observation Chart” was user-friendly for documentation of vital signs. At the same time, a large percentage agreed (69%) or strongly agreed (12%) that calculation of MEWS on the “Vital Signs Observation Chart” was easy. Most doctors agreed (77%) or strongly agreed (13%) that the patient’s vital signs and MEWS were easy to be read on the “Vital Signs Observation Chart”.

Conclusion: The integrated color graphic “Vital Signs Observation Chart” is deemed useful by nursing and medical staff for MEWS monitoring. There is satisfactory documentation of MEWS six years after its implementation at our hospital.

Disclosure of Interest: None Declared

Keywords: MEWS, Modified Early Warning Score
Improve The Healthcare Quality Of Bacteraemia

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Objectives: The intervention of infectious diseases specialties can reduce mortality and healthcare costs. Appropriate use of antibiotics can reduce the days of hospitalization.

Methods: Establish the treatment, healthcare, and management model for bacteraemia infection cases.

Results:
1. Manage bacteraemia cases follow-up:
   a) The effectiveness of active intervention conducted by infectious diseases specialists/physicians: our two infectious diseases specialists/physicians review the antibiotic treatments of bloodstream infection cases, and actively make a phone call to discuss and suggest the use of antibiotics with the attending physicians.
   b) Modify the expiration of antibiotics into less than 48 hours according to the infectious diseases physicians’ suggestions. After the notification of reports of bacterial identification and susceptibility tests, the duration from the second intervention conducted by infectious diseases physicians to second intervention time to the revision of appropriate antibiotics done by the healthcare physicians was average 0.9 days, from March to November in 2014.

2. The appropriate use of antibiotics: The appropriateness of empirical antibiotics used by physicians from different departments: the infectious diseases specialists/physicians discuss the use of antibiotics with physicians from different departments based on the each case, and guide the principles of sensitivity tests results and empirical antibiotics in various medical conferences.

Conclusion:
1. The appropriateness of antibiotics was decreased from 30% to 15% after the improving program. This shows that after infectious diseases physicians directly gave feedback about biological reports and suggested the use of antibiotics, attending physicians’ knowledge about empirical medication was increased. Therefore, the appropriateness of empirical antibiotics was increased as well.
2. When the primary microbiological report was issued, the first modification of appropriate antibiotics took 1.4 days averagely, and the rate was 86%. The second modification took 0.9 days, and the rate was 95%. These two modifications were completed within 48 hours. This shows that attending physicians took an accepting attitude toward this mechanism, and the acceptance was better than previous literatures, which rate was 81%.
3. The mortality rate before the improving program was 15.2%, which compared with 18-30% in foreign literatures was slightly lower. After the improving program, the mortality rate went down to 9.7%, indicating that the timely intervention of correcting appropriate antibiotics can truly improve the mortality rate.

Disclosure of Interest: None Declared

Keywords: BACTEREMIA
Improvement X-Ray Imaging Quality Through Quality Control
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Objectives: A Quality Control Circle (QCC) approach was adopted by the study to reduce the imaging defect rate of patients while performing general diagnostic radiology imaging. After conducting the improvement program, it is aimed to enhance the imaging quality and prevent patients from undergoing repetitive radiation exposure to reduce harm.

Methods: Shimadzu UD1502-30E X-ray equipment and Fuji CAPSUAX CSL CR X-ray imaging equipment were used by the study to perform a QCC approach from March 1, 2014 until October 31, 2014 by gathering data before and after using these equipment. Pareto Analysis was then used to identify the causes of defect rate and countermeasures (Table 1) were then made on these causes based on 80/20 rule.

Results: The imaging defect rates before and after the improvement were 0.96% and 0.25%, respectively. Based on an expected target of 0.5%, the achievement goal rate was 154% and the progress rate was 73.95%.

Conclusion: The imaging defect rate averagely dropped from 0.96% to 0.25%, indicating a significant improvement in imaging quality of the Radiology Department. Good imaging quality has the merits of enhancing the clinicians to control the illnesses, thereby allowing the patients to trust the hospital and the clinicians to trust the radiologist of the Radiology Department, and eventually improving the overall health care quality. In intangible outcome perspective, QCC personnel have the opportunity to learn the QC technique, brainstorm to explore problems, and interact, communicate and coordinate mutually to demonstrate the spirit of teamwork.

Disclosure of Interest: None Declared

Keywords: achievement goal rate, imaging defect rate, progress rate
Effectiveness Of Using Creative And Diversified Teaching Mode To Promote Medication-Use Safety In Community Health Education

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Objectives: According to the data from the Food and Drug Administration, Ministry of Health and Welfare in Taiwan, people in Taiwan took more than 2.2 billion pills related to stomach diseases in 2013. Among these, more than 1.7 billion pills were antacid drugs and their folded height was about 6,693 Taipei 101 Building. Due to the common misconception of “All the drugs are harmful to the stomach”, many people will actively ask medical doctors to prescribe antacid drugs in order to reduce the damage to the stomach. Therefore, the study would like to have the guidance about correct medication-use safety for children in this county. Promote the correct health care concepts as early as possible to avoid incorrect medication behaviour.

Methods:
1. We cooperated with the authorities in charge of health education and arranges an exclusive pharmacist for each elementary school, 103 elementary schools in this county, responsible for the medication counselling and health education guidance window.
2. Host training program of school consulting pharmacists to teach how to use the videos, materials and health education tool made by the hospital to guide students in class.
3. From May to September in 2014, with fifth-grade children of 103 elementary schools as subjects, the pharmacist in charge of each school used role-playing, interactive games, group discussions, scenario analysis and other diversified approach along with "practice aids" and "digital materials" for guidance programs. Questionnaires about medication-use safety will be conducted before and after to evaluate the effectiveness of the guidance program.
4. Host the contest about correct medication-use safety to evaluate the learning effectiveness and enhance the importance of medication-use safety issues in every school.

Results: Schoolchildren with diversified and creative teaching mode had better understanding of using antacid drugs after the course, and their after-course score was higher than the before-course one:
1. "Does taking medicine together with antacid drugs cause less damage to the stomach?" The correct answer rate of pre-test was 61.1%, and post-test was 83.3%.
2. "What is the risk of taking large doses of antacid drugs for a long time?" The correct answer rate of pre-test was 81.5%, and post-test was 98.1%.
3. "Will taking antacid drugs together with other drugs affect the efficacy of other drugs? "The correct answer rate of pre-test was 72.2% and post-test was 94.4%.
4. "Is it correct to take leftover antacid drugs when having stomachache? "The correct answer rate of pre-test was 83.3%, and post-test was 94.4%.
5. "Will drinking less stimulating beverages or not staying up late be able to reduce the excessive secretion of gastric acid?" The correct answer rate of pre-test was 92.6 %, and post-test was 96.3%.

We successfully attracted these students to play games and learn medication knowledge at the same time.

Conclusion: Based on the above results, diversified, lively, and interactive teaching model can stimulate students more learning motivation and interest. Schoolchildren can easily take medication knowledge which is considered tedious lecture, to establish the concept of self-health management, and affect the family and friends, so the wrong medication-use behaviour is able to be corrected. Our findings can be considered as reference guides to develop teaching programs on medication-use safety and health promoting education for school teachers and health education professionals in hospital.

Disclosure of Interest: None Declared

Keywords: community health education, diversified teaching mode, medication-use safety
Reduction Of Lip Injury Incidence During General Anaesthesia
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Objectives: The following goals were achieved when 0.65% was used as the target value to reduce inpatients lip injury during general anaesthesia for intubation:
A. Standardization of general anaesthesia for intubation.
B. Organization of regular educational training on intubation equipment.
C. Strengthening the skills of aesthetic practitioners in intubation.
D. Regular checks on general anaesthesia for tracheal intubation.

Methods:
1. Standardization of instruction manual on tracheal intubation.
   ➢ Amendment, promulgation and implementation of general anaesthesia for tracheal intubation.
   ➢ Educational training for aesthetic nurses.
2. Strengthening the educational training on general anaesthesia for end tracheal intubation and its relevant equipment.

Results: There was a drop of 1.29% to 0.61% for lip injury incidence rate of patients under general anaesthesia before and after improvement had been made. Through amending the standard operating norms of general anaesthesia for tracheal intubation, educational training and establishment of evaluation form, the passing rate of aesthetic nurses in tracheal intubation skills were determined to achieve 99.6%. The average lip injury incidence rate during the tracking period was able to maintain at 0.57%.

Conclusion: Under the premise of improvement, the research members of this study have adhered to the basic principles of patient safety with the aims to reduce injury caused by personal operating skills, improve patient satisfaction and maintain good doctor-patient relationship. During the activity, the study found that intubation skills were affected by different individual learning process. So, to achieve a desired goal, old habits of intubation had been changed and intubation skills were checked regularly by the study. However, some patients were found to have dry lip symptom due to their personal illnesses. Despite attentive care from nurses, such injury was still unavoidable. It is suggested to rub the lips with Vaseline to keep them moist and reduce the injury rate. The lack of any form to register the lip injury caused had resulted in misleading low injury rate due to negligence. Hence, it is recommended to amend the form contents in order to produce more realistic outcomes.

Disclosure of Interest: None Declared

Keywords: general anaesthesia, lip injury
Use Quality To Improve The Inpatient Identification In Paediatrics

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Objectives: Pediatric care is complex due to developmental and dependency issues associated with children and family. The aim of this study was to reduce errors associated with patient misidentification in hospitalized. We exploited experimental quality management program to test whether it can improve patient safety in the Pediatric oncology ward.

Methods: The setting of this study was about a 24-bed Pediatric oncology ward in northern regional teaching hospital in Taiwan from July, 2013 to February, 2014. We applied the experimental quality management program to the ward and compared the frequency of adverse events before (2013/07) and after (2013/08 to 2014/02) the implementation of the policies. The policies were as follows:

1. Set up standard of operation procedure for paediatrics identification.
2. Scheduled education and evaluation about patient identification for nurses.
3. To design alternative method for identification band.
4. To establish safety education and management of caregiver.

Results: After the administration of our quality management program, the inpatient identification rate increased from 88.3% (2013/07) to 98.25% (2013/08~2014/02). In addition, we found that establish safety management of caregiver about identification band were difficult.

Conclusion: Healthcare providing safe and high quality patient care continues to provide significant challenges, especially about cognition of caregiver. Nurses are critical to the surveillance and coordination that reduce such adverse outcomes. Based on our results, we suggested that to provide appropriate tools to educate caregivers about patient safety was important.


Disclosure of Interest: None Declared

Keywords: INPATIENT IDENTIFICATION, QUALITY MANAGE, PEDIATRICS WARD
Changes In Nurse Work Environments And Perceived Quality Of Care In Intensive Care Units In Guangdong Province In China: A Two-Stage Cross-Sectional Study

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Objectives: To describe the nurse work environments and the quality of care in Intensive Care Units (ICUs) in Guangdong province in China, to investigate whether the nurse work environments and the quality of care changed in the past five years, and to explore the relationship between nurse work environments and the quality of care.

Methods: The study was a two-stage cross-sectional study, surveying ICU nurses across Guangdong province in 2008-2009 (T1) and in 2013-2014 (T2). Two hundred and seventy one nurses were surveyed at T1 from 19 ICUs and 484 nurses were surveyed at T2 from 22 ICUs. The nurse work environment was measured with the Practice Environment Scale of Nursing Work Index (PES-NWI). The nurse work environment was graded as “good”, “mixed” or “poor” based on the scores of PES-NWI. The quality of care was assessed by nurse-reported overall quality of care and hospital-associated infections (HAIs) frequency. Nurses were asked to evaluate the overall quality of care on their units as “excellence”, “good”, “fair” or “poor”. Nurses were also asked to identify the frequency of HAIs [surgical site infection (SSI), urine tract infection (UTI), central line-associated bloodstream infection (CLABSI), and ventilator-associated pneumonia (VAP)]. The frequencies of HAIs greater than “once a month” were graded as “high” frequency. Chi square test and Fisher’s exact test were used to analyze the changes of nurse work environments and the quality of care between two time periods. Logistic regression analysis was used to analyze the relationship between the nurse work environment and the quality of care, after controlling for time, hospital characteristics (hospital level and location), and nurse characteristics (education and work experience in nursing).

Results: The ICU nurse work environments significantly improved from T1 to T2 [five units (26.32%) had “good” work environments at T1 vs. 9 units (40.91%) at T2; fourteen units (73.68%) had “poor” work environments at T1 vs. 9 units (40.91%) at T2; Fisher’s exact test, p = .04]. In the study, 40.67% of nurses reported the overall quality of care on their unit as “poor/fair” at T2, comparing to 35.82% of nurses at T1. The Chi square test revealed that the perceived poor/fair quality of care was not significantly changed in the past five years (X^2=1.70, p = .19). While nurse-reported HAIs frequencies were significantly decreased in the past five years [SSI (24.81% vs. 11.41%, X^2=22.23, p< .01) UTI (21.80% vs. 8.52%, X^2=25.61, p< .01), CLABSI (21.05% vs. 7.66%, X^2=27.42, p< .01), and VAP (27.82% vs. 14.19%, X^2=20.14, p< .01)]. Logistic regression models found that nurses in “good” work environments were less likely to rate the overall quality of care as “poor/fair” [odds ratio (OR) 0.29, 95% confidence interval (CI) 0.19-0.46, p< .01] than nurses in “poor” work environments. Comparing to “poor” work environments, nurses in “mixed” work environments were less likely to report SSI (OR 0.22, 95%CI 0.05-0.94, p=.04) and UTI (OR 0.11, 95%CI 0.01-0.82, p=.03).

Conclusion: From 2008 to 2014, the nurse work environments have been improved and the frequencies of HAIs have decreased in ICUs in Guangdong province in China, however, the nurse-reported overall quality of care was not significantly changed. The improvement of quality of care should still be highlighted in the future. Enhancing nurse work environments might be an option for quality improvement, since better work environments related to higher quality of care. While more evidence was needed to explore the factors that affect the quality of care, to help policy makers establish effective measures to improve the quality of care.

Disclosure of Interest: None Declared

Keywords: Quality of care, work environment
Nurse Job Burnout And Quality Of Care In Intensive Care Units In Guangdong Province In China
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Objectives: To describe nurse burnout and the quality of care in Guangdong province in China, and to explore the relationship between nurse burnout and the quality of care.

Methods: The study was a cross-sectional survey, conducted in December 2013 to August 2014. Twenty-two intensive care units (ICUs) in 22 hospitals across Guangdong province were investigated. A two-stage sampling plan was used in the study. Quota sampling was used in the selection of hospitals, in order to obtain equal number of hospitals in each hospital level (level 2 vs. level 3) and location (the capital city of Guangdong province vs. other cities). Cluster sampling was used to select all the nurses in ICUs, except nurse managers. A total of 527 nurse surveys were distributed and 484 valid responses were received (valid response rate was 91.84%). Burnout was measured with the Maslach Burnout Inventory (MBI). Total scores were calculated for each subscale [i.e., Emotional Exhaustion (EE), Depersonalization (DP) and Personal Accomplishment (PA)] of the MBI. Scores on EE ≥ 27, 19-26, ≤ 18 were coded as high, moderate, and low level of burnout in emotional exhaustion. Scores on DP subscale ≥ 10, 6-9, ≤ 5 were coded as high, moderate, and low level of burnout in depersonalization. Scores on PA subscale ≤ 33, 34-39, ≥ 40 were coded as high, moderate, and low level of burnout in reduced personal accomplishment. Quality of care was measured with a single item, asking nurses to rate the overall quality of care on their units as “excellent”, “good”, “fair” or “poor”. Multivariate logistic regression analysis was conducted to estimate the relationship between nurse job burnout and the quality of care, before and after controlling for organizational characteristics (hospital level and hospital location) and nurse characteristics (age, gender and education in nursing).

Results: In the study, more than one third of nurses were highly burnout in EE (40.22%) and DP (33.98%), and 61.64% of nurses were highly burnout in reduced PA. “Poor/fair” quality of care was reported by two fifths (40.67%) of nurses. “Poor/fair” quality of care was more likely to report “poor/fair” quality of care than nurses that rated low level of burnout in EE and PA. In the fully adjusted models, the likelihood of reporting “poor/fair” quality of care was higher in nurses who were highly burnout in EE or reduced PA, which was consistent with the results of unadjusted models.

Conclusion: The study suggests that nurse burnout was a prominent problem in Chinese ICUs. High level of burnout, especially in emotional exhaustion and reduced personal accomplishment, predicts inferior quality of care. Chinese nurse administrators should take actions to alleviate ICU nurse burnout, for the sake of providing better quality of care in ICUs.

Disclosure of Interest: None Declared

Keywords: burnout, Quality of care
Applying Airway Management System To Enhance Patient Safety: Multidisciplinary Team Integrated Care

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Objectives: Unanticipated difficulty with endotracheal intubation may result in catastrophic outcomes. We introduced an airway management system through multidisciplinary team integrated care to enhance patient safety.

Methods: This study was conducted in the Chi Mei Medical Center, Liouying branch, an 870 bed hospital providing primary care in southern Taiwan since June 2004. The interventions for reducing unanticipated difficult intubation were performed through multidisciplinary team integrated care, including anaesthesiologists, intensive care unit physicians, ward attending physicians, nurses, nurse practitioners, and quality control staffs. We applied the airway management system only to admitted patients, and the system consisted of five main parts:

1) Set up the standard operation procedure for difficult airway assessment, including applying the rule of LEMON: L-Look externally, E-Evaluate (3-3-2 rule), M-Mallampati score, O-Obstruction/Obesity, N-Neck mobility; defined high risk group patients for difficult intubation, including high disease severity, post-oral surgery patients, head & neck cancer patients after receiving radiation therapy;
2) established the protocol for difficult intubation order setting in computerized physician order entry (CPOE);
3) defined the responsibility and role of anaesthesiologists, patient’s attending physicians, resuscitation team doctors, nurses, and nurse practitioners when difficult intubation order established;
4) designed bedside reminding card for those potential difficult intubation patients to remind first-line healthcare providers;
5) held staff education with simulation training programs, including early identify potential difficult airway, and rehearse a series of predetermined airway management strategies for dealing with an unexpected difficult intubation. The airway management system was introduced since November 3, 2014. The preintervention period was between January 1, 2014 and November 2, 2014, and the post-intervention period was between November 3, 2014 and January 31, 2015.

Results: A total of 8,865 admissions in the post-intervention period, and every admitted patient was received potential difficult airway evaluation and the airway management system was applied. There were 11 patients (0.12%) eligible for potential difficult intubation and were set in computerized physician order entry. 957 patients were intubated in the preintervention period, and 241 patients were intubated in the post-intervention period. There were 13 cases of unanticipated difficult intubation during the preintervention period, and only one unanticipated difficult intubation occurred during the post-intervention period. The rate of unanticipated difficult intubation decreased from 1.36% to 0.41%.

Conclusion: Introducing the airway management system through multidisciplinary team integrated care could effectively reduce the unanticipated difficult intubation and enhance patient safety.

Disclosure of Interest: None Declared

Keywords: Airway management system, Difficult intubation, Patient safety
Taiwan Antimicrobial Stewardship Program: How To Improve The Turnaround Time Of Clinical Microbiology Report And The Quality Of Clinical Specimens

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Objectives: The human beings face a new challenge of the shortage of effective antibiotics due to resistant strains spread rapidly and the new drugs develop slowly. In 2013, Joint Commission of Taiwan was tendered three-year Antimicrobial Stewardship Program (ASP) by Taiwan Centers for Disease Control, R.O.C. (Taiwan) to decrease the antimicrobial resistance, hospital associated infections, and wisely antimicrobials use. The purpose of this research is to study how the clinical laboratory technologists to enhance the turnaround time of clinical microbiology report and the quality of clinical specimens, in order to provide the fast and accurate results to the physicians as reference for antibiotic orders.

Methods: In 2013, Joint Commission of Taiwan played the Management Center to work with 7 demo centers. We established the strategies, including surveillance of antimicrobial resistance and antibiotic use, antimicrobials use appropriately, infection control and prevention, and culture sustainability. In 2014, 54 participating hospitals joined into this program working with 7 demo centers to adopt the experiences. Thirty-nine indicators were used to track the outcomes.

Results: 7 demo centers and 54 participating hospitals provided the data of 39 monthly indicators to Management Center. After collecting and analyzing the data, the findings include the followings:
1. At the beginning of the program, specimen contamination rate was high. One of the reason was participating hospitals did not follow the same definition of the contamination of blood culture, urine culture, and sputum culture. After the interact meetings of 7 demo centers, the definitions came to the conclusion and implemented.
2. The specimen delivery time after collecting was longer than 2 hours. After the interact meetings of 7 demo centers, the specimen had to be delivered within 2 hours as the goal to achieve.
3. Some hospitals used barcode system to track the specimen delivery process. Moreover, some hospitals even set up alarm system to remind the laboratory personnel to track the un-arrived specimen.
4. The majority of participating hospitals do not have enough staff for 24-hour shift in microbiology department. Therefore, in evening shift and graveyard shift, the staff must at least perform once on the blood culture machine, stain and subculture of the positive blood culture bottles to improve the performance.

Conclusion: Comparing the data of January and September of 2014, the average preliminary report time of the blood culture shortened 6.5 hours in participating hospitals, and 3.2 hours in demo centers. The average final report time of the blood culture shortened 8.9 hours in participating hospitals, and 4.5 hours in demo centers. It is expected that the successful experience can be shared to other hospitals in Taiwan to make effort of providing fast and accurate results to physicians and other care providers to improve the quality of medical care.

Disclosure of Interest: None Declared

Keywords: Antimicrobial Stewardship Program, clinical microbiology report, quality of clinical specimens
**National Quality And Safety Goals (NQSGA): Five Years Of Experience**

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**Objectives:** To demonstrate the impact of National Quality and Safety Goals on health care organizations in Jordan

To demonstrate how simple quality improvement and patient safety initiatives can provide the base for building quality systems

**Methods:** One of the Health Care Accreditation Council (HCAC) goals as stated in the bylaws is “To state national healthcare quality and safety goals and recognize those facilities and programs that meet the criteria for evaluation success”. NQSG is considered as part of HCAC social responsibility to engage and attract healthcare facilities in quality improvement and patient safety activities. To review Jordan experience and measure the impact of NQSG on the health care organization in Jordan; data was obtained from two main sources: an interviews of five organizations that have been involved in the NQSG journey since 2009 and on a yearly basis and review of the related data and documents available at HCAC offices. The interviews comprise an open ended question that was designed to be non-directive and allowing the organizations to describe their experiences.

**Results:** As shown in the below table; the number of participating organization in a NQSGs is increasing over years, and the number of organizations that get the certificate also increased. In 2012, a decision was taken to involve the Primary Health Care Center in the journey, and they were invited to participate and 10 centers were register to participate in NQSG 2013. A continuous improvement is implemented each year, in 2013, another decision was taken to prolong the look back period, for the purpose of evaluation, for 12 months, which was 7 months previously. This decision resulted in postponing the assessment of the NQSG 2013 to be in April 2014.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. Participating Healthcare organizations</th>
<th>No. Healthcare Organization Granted the Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2009</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Year 2010</td>
<td>24</td>
<td>14</td>
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<tr>
<td>Year 2011</td>
<td>29</td>
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<td>Year 2012</td>
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<td>Year 2013</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>Year 2014</td>
<td>46</td>
<td>will be assessed in Dec, 2015</td>
</tr>
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</table>

By interviewing the participating organization they stated that NQSGs increased the professionalism of care providers working across all hospital departments. They were also increased sense of responsibility towards the patient in resolving and decreasing difficulties for patients. In addition to improve communication and cooperation with the patient and families and the level of medical services provided to patients. The organizations feel that the certificate has positively affected the confidence of the patients and their families in the care provided.

**Conclusion:** These NQSGs are open for all to join at no cost, accredited non accredited, public and private institutions. It allows accredited hospitals and centers to focus on specific processes and improve them, as well as those with no set quality systems to start building systems in priority areas set by the goals. HCAC leads this national initiative and provides registered institutions with the tools and training needed to work on their annual goals. With over 90 institutions having joined and achieved the goals in the past 5 years, HCAC can clearly note the impact and benefit this national initiative had on health service providers. Change in certain quality behaviours were evident specifically in 2012 where, organizations participating in the NQSG’s were requested to voluntarily report and submit monitoring data for the annual goals. It is a continuous cycle, each year a new set of NQSGs are launched to improve quality and patients safety in healthcare organization in Jordan. HCAC will continue working hardly to have a base line data in order to measure the outcome impact of the NQSGs.

**Disclosure of Interest:** None Declared

**Keywords:** quality, safety
“Strengthen The Hand Over Process” SBAR (Situation, Background, Assessment And Recommendation)
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Objectives:
- To implement standardize tool of handover processes for doctors by September 2014.
- To strengthen standardize tool (Kardex) for nursing staff by September 2014.
- To increase patient-centered care and continuity of care for patients.

Rationale: In 2012 and 2013, we received 19 and 28 patient complaints respectively, regarding improper care due to lack of communication at the time of shift change.

Methods: PDSA methodology was applied the team conducted various brainstorming sessions and causes for inefficiencies were identified. To bring improvements, a new SBAR tool for physicians was developed and implemented. Also, the practice of using nursing handover tools (Kardex) was strengthened by frequent sessions, informed and uninformed audits and spot rounds. In addition to these, patients' medical record files were also systematically arranged by assigning color codes to different categories of documents. A unique workshop on patient safety was also arranged for nursing staff.

Results: Implementation of standard handover process in 95% of nursing staff and doctors during year 2014. Decline of 85% observed in patient complaints for care and communication due to improper handover process in year 2014 as compared to year 2013.

Conclusion: This initiative proved that the Patient Safety lies in effective communication among healthcare team. Once written and verbal communication improves, threats to quality care diminish on their own. Incorporating SBAR may seem simple, but it takes considerable training. At times, it can be very difficult to change the way people communicate, particularly with senior staff. But once, team gathers and acknowledge their desire to improve, positive results are guaranteed.

References:
- Aga Khan university handoff policy
- Guideline Kaisar

Disclosure of Interest: None Declared

Keywords: Situation, assessment, background, recommendations (SBAR), handoff policy, communication, Kardex, healthcare
Open Disclosure Approaches In The Spanish Hospitals
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Objectives: Eight-nine per cent of hospitalized patients suffer and Adverse Event (AE). Health care professionals have to inform patients about what, how, when, why an AE has happened, who is involved and what is going to be done in order to avoid similar AE in the future. The Open Disclosure is the process of open communication with a patient, and or their family/support person, following an adverse or unexpected event. This study was designed to identify and analyze the approaches taken in Spanish hospitals to address the Open Disclosure.

Methods: A cross-sectional study was conducted measuring eight key-items for implementing open disclosure. A sample of managers, safety staff and physicians and nurses of 199 hospitals were surveyed in Spain between February and March 2014. A 5-point Likert-type scale (none/very low, low, moderate, high or very high) was applied.

Results: A total of 115 managers and patient safety coordinators (participation rate 57.8%) and 477 healthcare professionals (participation rate 71.2%) replayed. Thirty-nine physicians (18.7%) and 45 (19.6%) nurses had received training on how to inform patients about AEs before the study. Almost half of the physicians (46.7%) working in hospitals reported having informed a patient of an AE. A majority of hospitals has not defined the roles of staff and managers in the event of an AE (only 10.6% have defined roles and 20% have elaborated a protocol for deciding who should inform the patients -or their relatives- that an AE has occurred). Fourteen per cent of hospitals included the patient who suffers an AE at some point in the investigation of the incident, to clarify in detail what had occurred and what to do to ensure that it does not happen again.

Conclusion: Greater effort is needed in Spanish hospitals to consolidate open disclosure. Professionals require support and training in order to report honestly and frankly to a patient suffering an adverse event.

Disclosure of Interest: None Declared

Keywords: open disclosure, Patients, Safety
Attitudes And Practices Of Medical Staff About Patient Safety In Hospitals In The Republic of Macedonia

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Objectives: The national legislation in R. Macedonia, since the year 2012, included a patient safety as one of the quality indicators. Reporting the cases of unsafe healthcare through written forms and procedures is regulated by law. Objective of this study is to analyze the attitudes and practices among medical staff regarding patient safety in hospitals in R. Macedonia.

Methods: Prospective study realized in four healthcare organizations in Republic of Macedonia (two public and two private organizations). Total of 646 medical staff participated in the study and fill out the questionnaire known as “Survey on Patient Safety Culture-SOPs”, originally from the USA Agency for healthcare research and quality (AHRQ), translated into Macedonian language (permission provided).

Results: There were 1225 questionnaires distributed and 646 respondents fill out and returned a questionnaire (52.7% response rate). The patient safety in R. Macedonia, was evaluated as excellent or very good (N=484, 74.9%); the medical staff actively works in improvements of patient’s safety (N=393, 60.8%), with significant association between public and private health sector (t-test=−4.41389, p=0.000012), and between different medical staff categories (F=3.338183, p=0.005540). The biggest part of respondents haven’t reported any case of unsafe care in the last 12 months (N=470, 72.8%), then follows 1-5 reported cases (N=117, 18.1%). The organized system of patient safety is: at hospital level (N=218, 33.7%), at departmental level (N=105. 16.3%), at national level (N=79, 12.2%), don’t know 27.4% (N=177) and 6.2% (N=40) think that doesn’t exist.

Conclusion: Respondents evaluated secondary (hospital) level of healthcare in R. Macedonia as generally safe for patients. However, patient safety is not well known and is not established as an organized system in healthcare facilities in R. Macedonia. There is a lack of public awareness about patient safety in general population as well as in the healthcare organizations.

References:
   • The conceptual framework for the international classification for patient safety, Version 1.1, Technical annex 2,
   • Law for health protection in R Macedonia, Public Gazette 43/2012
   • Law for patient’s rights Public Gazette 82/2008

Disclosure of Interest: None Declared

Keywords: patient safety and quality improvement healthcare systems, safety culture
Essential Neonatal Vaccines: Taking Ownership And Making An Effort To Ensure Newborns’ Safety

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Objectives: To have in-house system for essential infant vaccination to promote customer satisfaction by end November 2013.

Methods: Project was executed from July, 2013. Juran’s continuous quality improvement methodology was used for this project. For diagnostic journey, cause and effect analysis was done where primary vital causes were identified. Pareto analysis was done where vital few were targeted to draw results from the useful many. Actions that were taken in the remedial phase includes Introduction of new literature based vaccination book, training of nurses, increased collaboration with team members, counselling of parents to follow up on vaccines.

Results: This project was a huge accomplishment as we gained empowerment, proper documentation in Medical Record file. We now have record of missed infants, initial counselling of parents to follow-up on the essential vaccines by hospital staff is given, our staffs are credentialed; we replicated AKUH Immunization Reporting System (IRS) and developed literature based vaccination book with patient family education material. For proper utilization and to avoid unnecessary wastage, following steps have been taken: utilization/wastage data being closely monitored, vaccination days fixed (alternate days; 3 days a week), coordination with sister hospital for optimum utilization of doses, save customer time and travel cost by transparent communication and constant follow-up.

Conclusion: Polio eradication is one of the most important issues in Pakistan for which communication, counselling and proper teaching is very necessary. It is very essential to change myths of people so that they can get benefit from services. After taking vaccination responsibility our institution is doing all this effectively to make polio free community. In addition, patients are also satisfied with services and know when to come back for next dose. The costs are limited, but the benefits are infinite. This project substantiated to be advantageous in terms of communication, continuity of care and care coordination, seeking early medical attention, timely treatment, preventing potential complications, in turn improving patient satisfaction. In a nut shell Patient-centered care. “Patient-centered care also positively affects business metrics such as finances, quality, safety, satisfaction and market share.”

Disclosure of Interest: None Declared

Keywords: IRS- Immunization reporting system, OPV- Oral polio vaccine, PDSA- plan do study act
Systematic Approach To Reducing Medication Errors

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Objectives: Systematic approach to reducing medication errors.

Methods: The team first brainstormed for the possible causes of medication errors in the DEM and with an aid of cause and effect diagram. The team is able to identify all the potential root causes of the high medication errors in the DEM. They then analysed the root causes of medication errors and constructed a Pareto chart to determine the vital few root causes of medication errors in DEM. As the root cause analysis shows that lacking of pharmacology knowledge among the new doctors and nurses has resulted wrong dosage being ordered or administrated for patients. The initiatives to reduce the medication error incidents incorporated lecture on “Medication Safety and Good Practices in ED Pharmacology” in department orientation program for both doctors and nurses began in July 2013. Examples of common errors were shared and ways to prevent subsequent errors. Currently, checking of two identifiers and verify with patient on their drug allergy status is performed before discharge. In the last week of July 2013, two identifiers check and endorsement of Registered Nurse name on the prescription was initiated. The new initiative of adding two ticks on the patient’s prescription after verifying two identifiers are performed with patient or the next of kin. Besides that, nurses are required to stamp their names on the prescriptions before discharging patients. Audits to monitor on compliance rate were also done at random. With sudden surge of medication events occurred in October 2013 due to changeover of medical staff, the team implemented the 3rd initiative that is reinforcement and reminders of two identifiers check in Nov 2013. When actual medication incident occurs that reached the patient, all staff involved in medication event will be counselled by A/Prof Fatimah (Director of Clinical Service and Quality of DEM). This was initiated in February 2014. Healthcare workers are encouraged to report near misses into the risk management system when encountering medication errors but the event did not reach patient. These include wrong prescriptions given, doctors ordering of medications patient is allergic to, inappropriate medications ordered, and medications error of near misses picked up by the nurses. This is to ensure that the staffs are aware of their mistakes though event did not reach patients.

Results: Prescription errors have drastically reduced since the various initiatives were implemented in July 2013. From the statistics reported in RMS, we see a 46% drop in medication incidents reported from July 2013 till July 2014. The staffs were more diligent and careful when discharging patients with prescriptions. This project has resulted in significant reduction in relations to prescription errors that are giving the prescription to the incorrect patient. In this project, the mean of medication error rate from Jun 2013 to Dec 2013 was 3.43. It was brought down further to 0.5 since 2014. The initiatives raises healthcare workers knowledge of medications and their alertness which ensures they are mindful towards delivering safe care and practice to our patients. With positive reinforcement given to the staffs, it promotes and cultivates commitment within own self to continue to ensure quality healthcare to meet our organisation’s aspiration.

Conclusion: In conclusion, medication errors represent a failure in the medication use process (prescribing, dispensing and administering) and can lead to morbidity and mortality. Most importantly, the work processes is required to meet the Joint Commission International standards to improve patient safety and quality of health care. Essentially, decreased in medication error represents best outcome for patient, this goes in line with SGH’s Quality commitment.

Disclosure of Interest: None Declared

Keywords: Medication Error
“Improving Diabetes Care In Elderly Home Care Population In Qatar”
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Objectives:

- Increase percentage of patients properly monitored for diabetic complications with HBA1c, LDL, Urine micro albumin, Serum creatinine, eye and foot exam, weight and blood pressure, in compliance with evidence-based HMC guidelines in HHCS elderly patients from 0\% to 30\% from October 2013 to March 2014.

Methods:

- Auditing of patient files to determine baseline supporting data and record review for cause effect analysis and creating process mapping
- Proper documentation of Patients glycaemic status by introducing a new check list.
- Pareto analysis and used run chart to plot diagram

Results:

- Checklist completion rate for diabetic monitoring improved from 0\% to 36\% over a period of 4 months (above target of 30\%) and from 36\% to 60\% over a period of subsequent 4 months.

Conclusion:

- Standardized diabetes care and monitoring of elderly diabetic patients in HHCS
- Created and implemented a checklist for monitoring of diabetic patients
- Checklist completion rate for diabetic monitoring improved from 0\% to 36\% over a period of 4 months (above target of 30\%) and from 36\% to 60\% over a period of subsequent 4 months

References: American Geriatrics Society Expert Panel on the Care of Older Adults with Diabetes Mellitus JAGS volume 6, issue 11, 2020:26, 2013

Disclosure of Interest: None Declared

Keywords: Qatar, Diabetes care, Elderly
Analysis Of The Results Of Mechanical Ventilation Weaning Protocol In A Adult Intensive Care Unit’s Quality Indicators At Hospital Estadual Sumare, Brazil

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Objectives: Evaluate the results of mechanical ventilation weaning protocol from the beginning of 24-hour physiotherapy service in quality indicators of the adults Intensive Care Unit (ICU) at Hospital Estadual Sumaré.

Methods: Observational analytical study was conducted between January 2010 and December 2014. Data were obtained from the Physiotherapy Service and Hospital Infection Control Committee of HES. The data was evaluated and the average number of patients on mechanical ventilation for more than 24 hours, duration of mechanical ventilation, number of extubation and reintubation rates was calculated. The weaning protocol was conducted exclusively by the physiotherapy team consisting of two stages. The first step is to assess whether the patient is eligible to perform the test for take spontaneous breathing. Thus, the following criteria have been met: the reversal of mechanical ventilation reason; appropriate level of consciousness (Glasgow Coma Scale ≥ 10 in orotracheal tube); presence of respiratory drive; infection control; hemodynamic stability; normal electrolytes; radiological evaluation of satisfactory chest and blood gas evaluation. The second step was to submit the patient who met the above criteria to an observation period of 60-120 minutes in minimum ventilation parameters (7 cmH₂O of pressure support, PEEP of 5 cmH₂O and FiO₂ ≤ 40%), and make spirometry tests to evaluate lung volumes and manovacuometer to measure inspiratory muscle strength. If during this period, the patient did not have signs of respiratory distress and the results were satisfactory in respirometry and manometer, he would be subjected to extubation. Otherwise, a ventilation mode for muscle rest was elected for another 24 hours.

Results: In 2010, 36.1 patients / month, on average, were submitted to mechanical ventilation (MV) for longer than 24 hours and remained for 343.2 days on MV. Among these patients, 173 underwent extubation, with 22 failures of extubation (12.7%). In 2011, an average of 36.5 patients remained for 340.9 days in MV, with 162 submitted to extubation and reintubation 10 (6.17%). In 2012, an average of 37.6 patients remained for 242.3 days in MV, with 167 extubations, and 10 extubation failure (5.98%). In 2013, an average of 24.6 patients were 253.25 days on MV and 150 were extubated, 15 patients were re-intubated (10%). Already in 2014, 20.45 patients on average were 241.25 days on MV, and among these, 132 were extubated and re-intubated 12 of them (9.09%).

Table 1 - results

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient’s average on MV</td>
<td>36,1</td>
<td>36,5</td>
<td>37,6</td>
<td>24,6</td>
<td>20,4</td>
</tr>
<tr>
<td>Days on MV</td>
<td>343</td>
<td>340</td>
<td>242</td>
<td>253</td>
<td>241</td>
</tr>
<tr>
<td>Number of extubation</td>
<td>173</td>
<td>162</td>
<td>167</td>
<td>150</td>
<td>132</td>
</tr>
<tr>
<td>Number of reintubations</td>
<td>22</td>
<td>10</td>
<td>10</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Percentage of reintubations</td>
<td>12,7%</td>
<td>6,1%</td>
<td>5,9%</td>
<td>10%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Conclusion: There was a decrease of patients on MV, the number of days on MV and the number of reintubations and its percentage. Thus, the use of weaning protocol and a 24h physiotherapy service seem to have contributed to this results, impacting the quality of service and reducing hospital costs.

Disclosure of Interest: None Declared

Keywords: intensive care unit, mechanical ventilation, weaning protocol
Adverse Events & Maternal Deaths: The Case Of A Large Teaching Hospital In Ghana
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Objectives: The study objective was: To assess the common causes of maternal deaths

Methods: The study was undertaken in the largest urban referral facility for obstetrics and gynaecological services in Accra, Ghana. It was a retrospective medical review of maternal death folders in the hospital from 2010 to the first quarter of 2014. A total of 113 obstetrics folders were reviewed. All gynaecological folders were excluded from the review. The Screening Review Form (SRF) which looked for the presence of some 19 AE triggers used in the “Iberomeric study of AEs” was adapted and used. The review was done by an obstetrician, two (2) midwives with one having a Masters’ in Public Health, a paediatric nurse with specialty in neonatal intensive care holding an Masters’ in Public Health, a Medical Statistician and a Healthcare Quality and Safety Expert.

Results: A total of 113 folders were reviewed from 2010 to the first quarter of 2014. The highest maternal death of 40 was recorded in 2014. Less than 10% of the mothers have had tertiary education while 98.3% of them have had one form of education or the other. The mean was 31.1±5.3 Years. Two percent of the maternal deaths were students, 10% of them were unemployed while 12.9% of them not married. Less than a quarter (21, 18.1%) of the total number of mothers had had less than 4 antenatal visits whereas 26% more of these had had more than 4 antenatal visits. Hypertensive disorders (29, 25%); Haemorrhage (11, 9.5%) and Severe Anaemia (9, 7.8%) were the top three referral diagnosis to the hospital. More than half (72, 62.1%) of the total number cases had complicated medical conditions. Foetal heart was present in 34(29.3%) and absent in 18(15.5%) of the cases. There was no records of foetal heart on more than half (i.e. 55.2%) of the cases. The mean gestational age of the pregnancies was 31.0(24-36) weeks while 16(13.0%) was zero (0) parity. The median reporting time of the cases was <24hours (<24hours-1day) with more than half of them arriving <24hours after referral while 17(14.7%) arrived ≥4days. The median length of stay of the cases was 2.0(<1hour-6.8) days with a quarter each of the cases staying <24hours (31, 26.7%) and >1week (27, 23.3%) respectively. A quarter (43, 37.1%) of the cases delivered live births while less than 10% (8, 6.9%) died with no records on more than half of the cases (65, 56.0%). Less than a quarter of the maternal deaths were judged unavoidable while 52(44.8%) were judged avoidable. The clinical records for 42(38%) of the cases was not sufficient to make any judgment on the avoidability or otherwise of deaths. Adverse events accounted for 18.7% of the deaths with events related to treatment (6.3%), diagnostic related events (5.4%) and events related to surgery (3.1%) accounting for the top three adverse events causing maternal deaths in that hospital.

Conclusion: The major causes of maternal death in this urban referral center were avoidable delays in treatment and diagnosis which altogether accounted for more than half of all the 19 events assessed.

Disclosure of Interest: None Declared

Keywords: adverse event; maternal deaths; screening review form
Working On Patient Safety, Culture Of Safety
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Objectives: Patient safety and culture of safety is a buzzword in the healthcare industry. The internet can generate millions of hits on patient safety and culture of safety. The challenge remains on its implementation and staff buy-in. Healthcare organizations are known to be complex and high risk. Adverse healthcare events can happen anytime and anywhere across institution. Evidence has proven that patient safety saves lives. Creating a culture of safety is an important agenda in patient safety. Our objectives are:

- Fostering active staff participation and collaboration in identifying and addressing safety issues
- Advance patient and workforce safety through unit based education, safety rounds, and leveraging on the utilization of technology
- Engaging patients and family as partners in the patient safety effort

Methods: Women’s Hospital (WH) identified the need, and is dedicated to re-energize commitment to patient safety. Core Team composed of hospital leadership, physicians, pharmacy and nursing was organized to:
1) identify current practices and prior efforts,
2) plan survey and develop culture of safety program, and
3) identify existing efforts on patient safety.

Plan:
1. Executive leadership culture of safety education and video.
2. TOWN HALL MEETING: video presentation, program plan (survey, Logo competition, Lucky draw per week for survey participant)
3. Mass email to WH staff from CEO to announce launching of program.
4. Unit and department based education and video on culture of safety, and data sharing on: Medication errors, Infection Control, JCI measures, Patient satisfaction.

Results: More data will be shared during presentation:

- Logo competition: 11 participants
- Survey status after three weeks: 26%
- Unit and department session: 85%

Conclusion: As Women’s Hospital embarks and take the route to reach their commitment to patient and workforce safety, lessons will be learned and gains will be capitalized to build momentum. At this stage, the creative work of our staff has shown their artistic understanding of patient safety.

References: AHRQ, Culture of Safety

Disclosure of Interest: N. Patel Employee of: Women’s Hospital, N. J. Ambion Garcia Employee of: Women’s Hospital, A. M. A. Ahmed Ma Employee of: Women’s Hospital, M. T. T. Panizales Employee of: Partners HealthCare International

Keywords: Culture of Safety, Patient Safety
Activities For Improvement To Ensure Patient Safety At The High-Risk Procedure

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Objectives: There are many kinds of procedures conducted to patients at hospital including simple procedures like inserting a line to a patient’s vein to complex procedures like burning up cancer cells with high-frequency heat by inserting electrodes into liver cancer cells. Particularly the procedures accompanying high risk for patients tend to be conducted not in a patient’s bed directly, but patients often have to move to a procedure room to get one by a specialized surgeon and then come back to the ward they belong to. Activities for improvement have been performed in order to eliminate problems that might harm patient safety in that process and make it helpful for patients’ care.

Methods:
1) Evaluating patients before procedures: It was more important than anything else to secure continuity of care in the process. Therefore, the patient’s physician was made to draw up a procedure plan based on the patient’s medical history, physical conditions, diagnostic results and data, and prepare electronic medical records, and then, the surgeon in charge of the procedure was made to check it before the procedure to refer to it for the patient’s procedure.

2) Checking right before the procedure: In order to reduce the error of wrong patient or wrong procedure, a 3-step process to check the patient’s name, procedure name, and site before the procedure was introduced in consideration of the patient’s moving line. Before the patient moves from the ward to the procedure room, the ward nurse checks it at the first step, and then, when the patient arrives at the door of the procedure room, the procedure room nurse checks it again as the second step. And lastly, right before the procedure, all the health care practitioners participating in the procedure gather and stop for a while to have a timeout to check all again accurately as the third checking and record them down. The records are entered as a form of checklist into electronic medical records, and patients who are conscious are also supposed to join in this checking process.

3) Recording a patient’s conditions after the procedure: After the procedure, before the patient leaves the procedure room, the surgeon is made to enter electronic medical records such as the procedure name, collected tissue specimens, degree of bleeding, or others. The ward’s nurse and doctor can check all of those records prepared by the surgeon immediately, and this is to realize patient safety and continuity of care by sharing the patient’s conditions with related health care practitioners after the procedure.

Results: For about a year from February, 2014 when the TFT was organized up until February, 2015, this new process has been properly applied for the preferentially selected high-risk procedures. Health care practitioners are positively involved in evaluating patients before procedures, checking right before procedures, and recording patients’ conditions after procedures, and six months after applying the activities of improvement, it was found that 90.8% of the checklist had been well recorded according to the monitoring. During the period that the activities of improvement were being applied, there was not even one patient safety-related incident that happened regarding the above procedures.

Conclusion: In order to help patients not to experience adverse event, it is absolutely important to check patients and procedures accurately and also practice efficient communication among health care practitioners. For the last one year, activities for improvement were performed for high-risk procedure selected preferentially. Moreover, this process to secure patient safety will be applied to all kinds of procedures conducted at hospital in the end in order to improve patient safety further.

Disclosure of Interest: None Declared

Keywords: High-risk procedure, continuity of care
Research Model Implementation And Analysis Of Clinical Incidents From Protocol Of London In A Private Hospital In Sao Paulo: Experience Report

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Objectives: There are failures in all institutions, and incidents have been the subject of worldwide discussion, involving transdisciplinarity in health. They are preventable and require a structured process of reflection.

OBJECTIVE: Report the systematic approach used in the notification system, less threatening than traditional approaches, later identifying the occurrence of critical incident points called Problems in Care Services, allowing the detection of prevention mechanisms as well as survey goals for risk management with reduction of events with an emphasis on patient safety.

Methods: This is a descriptive study of experience report conducted by the quality office in partnership with risk management center through a period of 11 months. The total clinical incidents of the institution were categorized monthly according to the World Health Organization and analyzed in fortnightly meetings, using structured sheet and adapted to the practical use of risk managers with the contributing factors that ensure an exhaustive investigation, enabling a favourable climate at the meetings called London Protocol.

Results: From March 2014 to January 2015 were reported 1,280 incidents. From these, 72% had shown no harm to the patient. Regarding the type of incident, 52% were classified as Clinical Process and Procedure, featuring events variations considered tolerable or beyond the limits of acceptance. Improvement strategies to address deficiencies in internal processes have been 100% checked and had their status monitored according to the time of proposed effectiveness.

Conclusion: We have recognized that the use of the methodology has limitations as the underreporting of notification system and maturation of safety culture, but the benefits derived from the meetings were enriching, facilitating critical thinking about each incident, the peculiarities of each task in the process and the preventive barriers character. Responsibilities in providing safety care are not only in the hands of professional assistance. The challenge is to involve the administrative managers, patient, family and community considering the difficulties encountered. We feel encouraged to continue the study, considering the commitment of the participants.

References:
2) SYSTEMS ANALYSIS OF CLINICAL INCIDENTS THE LONDON PROTOCOL Available in: http://www1.imperial.ac.uk/resources/C85B6574-7E28-4BE6-BE61 E94C3F6243CE/london%20protocol_e.pdf.

Disclosure of Interest: None Declared

Keywords: London Protocol
The Human Factors Engineering As A Facilitator Of Medication Dispensing System In The Emergency Care Of Unimed Paulistana

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Objectives: This paper aims to demonstrate the use of the principles of Human Factors Engineering, supporting the restructuring of Pharmacy that serves the Emergency Care in order to optimize the process of dispensation, adding efficiency.

Methods: The Human Factors Engineering studies issues related to the well-being of professional such as: environment, ergonomics and biopsychosocial aspects. This new concept aims to ensure quality of work and care to the employee, resulting in patient safety. In this concept, when an adverse event occurs, the important thing is not about who made the mistake, but finding how and why the defence barriers failed (REASON, 2000). This study was developed from May/2014 to December/2014 in a private Emergency Care, primary, in São Paulo, south-eastern Brazil. Given the proposal of Human Factors Engineering and guided by the high number of complaints from employees and doctors of the emergency care and by the reported non-conformities, the Quality Office has paid a visit to the pharmacy of the Emergency Care to understand the process and structure of it. At this point some factors have been identified, contributing to the flaws in the dispensing process, among them: lack of technical validation of medical prescriptions and careful reading of the same, lack of standards in the identification on the drawers of materials and medicines, medicines stored together and absence of double checking the separated material. Based on this reality and in order to redesign the project and point out the improvements to be achieved, such as rationalizing inventory, optimizing time and reducing costs, the Lean methodology was used, which according to the Lean Institute Brazil (2010), is a business strategy aiming to enhance customer satisfaction through a better use of resources. Thus, in August/2014 the technical validation of prescriptions by the pharmacist was created, where the pharmacy was reorganized making use of new identification for the drawers, adopting the methodology of using the name of the active ingredient, in alphabetical order, with separated storage to each medication; as well as established the double checking before dispensing.

Results: As a result, it became evident a marked decrease in complaints from internal customers (employees and doctors) and, above all, a greater assertiveness in the process of dispensing materials and medications. We can see that in the months following the implementation of improvements (Sep-Dec/2014), there was a reduction of 20% in the number of open notifications related to medication dispensing errors.

Conclusion: We have concluded that, in order to have effective procedures, it is necessary to have a suitable environment for employees and to needs of the process itself, established steps known by the staff, and establish safety barriers, such as the double checking in order to avoid that inherent flaws of a process/poorly designed environment compromise the care and/or patient safety.

References:
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Disclosure of Interest: None Declared

Keywords: Human Factors Engineering, Medication Dispensing System
Patient Chart Workshop: Encouraging Nurses To Clinical Thinking From The Accuracy Methodology Of Nurses’ Diagnosis Accuracy In Unimed Santa Helena Hospital
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1IQG - Health Services Accreditation, 2Unimed Paulistana, São Paulo, Brazil

Objectives: Describing the application of Patient Chart Workshops as a way to raise the clinical thinking of nurses towards the selection of diagnoses and nursing interventions essential to patient care.

Methods: The study was performed in an adult ICU of a private, tertiary hospital in the city of Sao Paulo, south-eastern Brazil. In order to comply with the objective of this study, 13 Patient Chart Workshops sessions was performed with nurses, in which they were instigated by the Nurses Continuing Education to undertake the accuracy methodology of nurses’ diagnoses in patient charts under study. The charts were randomly selected by the patient charts sector, within the sample of those who were already invoiced from the adult ICU, between the months of July and August of 2014, all of them death cases. Based on the accuracy of nurses’ diagnoses, which is relevant, nurses were encouraged again by Nurses Continuing Education to a clinical thinking of the importance of each one, correlating them to nursing interventions in an attempt to not repeat them, not let them be analyzed by the nursing staff and technicians, and optimize working time, which is mostly during contact with the patient. This is according to Matos, FGOA; Cross DALM; Guedes, ES; et.al (2010), who state that the accuracy of nurses’ diagnoses is important to guide the selection of appropriate interventions to achieve the best outcomes for patients.

Results: Among the four separated patient charts for the workshops, we have had a total of 29 nurses’ diagnoses. After the accuracy and relevance of critical thinking on the diagnosis correlated with the interventions, we have obtained the result of only six (6) nurses’ diagnoses judged as priority. This is what (2003) refers to, when he says that although findings in research confirms this risk by an enormous variation in the accuracy, accurate diagnosis are essential to direct the nursing interventions for the achievement of positive health outcomes.

Conclusion: Through the achieved results, we have noticed that the nurses present unnecessary diagnoses, leading to a range of repeated and/or unnecessary nursing interventions resulting in the banalization from the nursing staff about the items of nursing prescription, checking interventions without actually reading it. Given this reality, the Patient Chart Workshop aims to providing the nurses a more critical thinking regarding the election of Nurses’ Diagnoses correlating them with essential interventions to patient care.

Matos, FGOA; Cruz, DALM; Guedes, ES; et.al Escala de acurácia de diagnóstico de enfermagem: versão 2. 10ª SINADEn Simpósio nacional de diagnóstico em enfermagem; 2010 04-07Aug; Brasília, Brazil.

Disclosure of Interest: None Declared

Keywords: Clinical Thinking, Diagnosis Accuracy, Patient Chart Workshop
1990

Safety Sentinel Project – Promoting Notification And Events Treatment Through A National Network Of Support In Brazil
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Objectives: The Safety Sentinel Project aims to strengthen patient safety culture through a national network of safety and learning, to spread good practice in event analysis and closure in Brazil, and to identify and prioritize critical points concerning patient safety. Participation in the Project is voluntary and free of charge for health institutions.

Methods: Since 2002 IQG - Health Services Accreditation follows the voluntary reporting of Healthcare associated events, carried out by accredited institutions in Brazil, by National Accreditation Organization methodology (ONA). In 2014 it’s decided to conduct a closer monitoring of this process, incorporating the analysis and feedback for the institutions by the PBSP (Brazilian Patient Safety Program). Actions to stimulate reporting and strengthen the communication channels were discussed with organizations during visits and through web conferences. Each notified event was evaluated by the technical team of PBSP, and a feedback on the maturity analysis and effectiveness of the proposed plan of action was held for educational purpose. The PBSP technical team analyzed and summarized the reported events and began publishing quarterly newsletters to study and help institutional processes improvement.

Results: We analyzed 3434 events, voluntarily reported by 107 institutions from all regions of Brazil, in the years of 2012, 2013 and 2014. One of the main results presented was the recognition of the institutions involved of the need to understand the motives of healthcare associated harm and avoid them. This was demonstrated by the number of institutions that voluntarily reported their events in search of our scientific and technical support (51 institutions in 2012; 55 institutions in 2013; 70 institutions in 2014). We note an increasing number of events reported which is significant when comparing the year 2014 with the previous and when we compare each quarter 2014 with the previous quarters of the same year. The increase in notifications is more evident in the events classified as no or mild harm to the patient (from 178 events in 2012 to 2316 events in 2014). We realize that cultural change occurred between the institutions accredited to the highest level of the Brazilian accreditation methodology (which considers three degrees), while among institutions with less time in the process no significant change in number of reported events was noticed.

Conclusion: Until recently, the security assumption in patient care meant more security evidenced by the absence of certain events than by their identification. To break this paradigm, we have focused in trying to understand the reasons of the events that occurred, and to support the analysis and proposals for process improvement. The Safety Sentinel Project was successful in promoting safety culture among the participating organizations. The improved contact with the technical staff for support and guidance and the communication channels used (via phone, email and web conferences) were able to cross the continental distances inside Brazil and raise awareness and perception for patient safety. Institutions that have a greater maturity in the patient safety culture, working for longer time in the accreditation process and achieving the highest level of accreditation (ONA), responded quicker to the Safety Sentinel Project measures to increase the number of notifications, and improved identification of hazardous situations, near-misses and minor events. At this point we need to keep the initiated actions, and plan actions with a focus on less mature institutions, so they can perceive the hazards in healthcare and improve safety and clinical outcome for the patients.

Disclosure of Interest: None Declared

Keywords: National Network, PBSP (Brazilian Patient Safety Program), Safety Sentinel Project

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Methods: Compliance with WHO Patient Safety ‘Safe Surgery Saves Lives’, Surgical Safety Checklist has been incorporated as one of the criterion in 4th Edition Malaysian Hospital Accreditation Standards since year 2013. Compliance ratings to this criterion were derived from survey reports for year 2013 and 2014. In Malaysian Hospital Accreditation Survey Programme, there are four (4) compliance ratings; Substantial Compliance (SC), Partial Compliance (PC), Non Compliance (NC) and Not Applicable (NA). Percentage of substantial compliance (SC), which is be given when surveyor believe sufficient key elements of the standards are achieved (80% and above) on this criterion is tabulated. Only hospitals with operating suite services are included in this study.

Results: In total, 37 hospitals with operating suite services were surveyed in year 2013 (21) and 2014 (16). The study showed that 87.17% of hospitals surveyed in year 2013 have substantially complied with the WHO Surgical Safety Checklist. The compliance rate for 2014 has reached to 100% substantial compliance.

Conclusion: The findings indicated that Malaysian accredited hospitals; both private and public have shown good compliance with WHO Surgical Safety Checklist. 100% of surveys conducted in year 2014 have substantially complied with the Surgical Safety Checklist. This favourable finding may have been contributed by the Malaysian Ministry of Health (MOH) initiatives in adapting the checklist to be used in all MOH hospitals, and Malaysian healthcare accreditation body’s effort to incorporate this requirement as one of the criterion in Hospital Accreditation Standards. The excellent compliance with WHO Surgical Safety Checklist in Malaysian accredited hospitals indicates the commitment of Malaysian clinicians in providing safer surgery, to save more lives.

Disclosure of Interest: None Declared

Keywords: Safe Surgery Saves Lives
Medicine Errors Reduction After Implement Of Protocols During The Process Of Canada Accredit
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Objectives: To identify index of medicine errors in Clinical Medical by implement of protocols during the Canada Accredit Process from first semester 2010 to first semester 2012.

Methods: Following protocols were implemented to prevent errors of medicine: summoning (designation of time, date) of medicine prescription did by the nurse and double check of high-risk medicine also realized by the nurse which observes the preparation and administration of medicine made by nursing assistant. During the implement of the protocols all nursing team was trained by the nurses and all the time monitoring by audit about the adhesion of procedures and constant training by the nurses. The protocols were proposed like strategies to minimize the risks in the medicine therapy bringing to the nurse bigger responsibility in this practice the work was based in the risk administration with focus on reduce them, and also measuring the result of strategies by checking the repetition of occurrences. This is a retrospective and descriptive study realized in the clinical medical sector of the hospital school located in Campinas – SP, metropolitan region. This institution was certified with Seal Accredited with Excellence by National Accredit Organization and by Canada Accredit.

Results: The data have been collected during the period of January 2010 to January 2015. Occurred during this period, 135 medicine errors in the nursing team, notified by the nurse. During 2010 were notified 15 errors of medicine and this total correspond to 10.1% of the notifications from the last five years. In 2011 had an enlargement five years. In 2012 observed a decrease, totalizing during the year 23 medicine errors corresponding a 17.3% from the five last years. In 2013 goes with decrease, being notified 6 medicine errors, corresponding a 4.4% of all the notifications realized from the last five years. In 2014 had no any notification about medicine errors by nursing team.

Conclusion: In view of the results of the last five years, it is evident that the implement of protocols caused the reduction of occurrences adversity, assuring a responsible and safety assistance to the patient.

Disclosure of Interest: None Declared

Keywords: MEDICINE ERRORS REDUCTION
Preventing Medication Errors Based On Nationwide Pharmaceutical Near-Miss Event Reporting System And Medical Near-Miss/Adverse Event Reporting System In Japan

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Objectives: Medication errors are one of the most common incidents occurring in health care system. The nationwide pharmaceutical near-miss event reporting system funded by the government was launched by Japan Council for Quality Health Care (JCQHC), a neutral third body, in 2009. JCQHC also operates nationwide medical near-miss/adverse event reporting system to improve patient safety through sharing information. The objectives of this study are to review the achievement of these projects concerned cooperation between hospital/clinic and community pharmacy to prevent medication errors.

Methods: JCQHC have collected pharmaceutical near-miss events reported from community pharmacies voluntary participating the project, medical adverse events reported from mandatory/voluntary participating medical institutions and medical near-miss events reported from voluntary participating medical institutions. The reported events were analyzed and provided as annual/quarterly reports, monthly alerts, and open data search for patient safety. The results of the projects and the effects of them on medication safety were reviewed.

Results: Between 2009 and 2014, 40,831 pharmaceutical near-miss events were reported from community pharmacies. Most of them related to dispensing, for example, drug mix-up and counting error, and contained many points in common with hospital pharmaceutical departments. In the annual reports published previously, the issues such as similar drug names, high-risk drugs and inquiries about prescriptions were discussed. On the other hand, outcomes of medical adverse/near-miss event reporting system carried the contents helpful to both hospital/clinic and community pharmacy. The monthly alerts titled “Drug mix-up” and “Insufficient confirmation of incorrect prescription” were related to medication errors possibly occur at community pharmacy. In the 35th quarterly report published in 2013, the topic related to cooperation between hospital/clinic and community pharmacy was considered. Besides providing information, JCQHC held a bridging meeting in the presence of hospital/clinic and community pharmacy to improve medication safety in February 2014. Furthermore, pharmaceutical companies have used the open database of the reporting system when issuing warnings about mix-up between drugs with similar names. The projects to collect pharmaceutical near-miss event and medical near-miss/adverse event have exerted a good influence on the public.

Conclusion: The nationwide pharmaceutical near-miss event reporting system and medical near-miss/adverse event reporting system have contributed to the prevention of medication error with the safety culture growing in Japan.

References:

Disclosure of Interest: None Declared

Keywords: reporting system, medication error
Objectives: To describe the implementation process of the pain protocol and awareness of the importance of pain assessment as the fifth vital sign.

Methods: A survey on the experience of implementation of institutional pain protocol in the Surgical Clinic ward of the Sumaré State Hospital. During the Canadian Accreditation process was detected lack of records on pain in-surgical patients. There by, this clinic was chosen as a pilot. Was prepared by the "multi-surgical time", a protocol to adapt the drug to be used in relation to pain intensity. In this, it is necessary to verify the pain at all hours of SSSVV, as the fifth vital sign, for all patients, using as pain assessment tool a visual analog scale and a scale from zero to ten. In order to facilitate understanding of the professional and the patient, as well as your registration, a sticker with analog scale of pain and numerical scale was attached on all existing boards in hospital beds and restructured the vital signs control record adding the information of the fifth vital sign. Signalling pain triggers the protocol that was developed contemplating the choice of the drug in relation to its intensity. After analgesia the patient needs to be reassessed at a time to evaluate the results and continuity of care. If after administration of medication the patient has improved complaint should respect the time interval between doses prescribed for new management. The pain complaint should be measured as the fifth vital sign including with the evaluation of their characteristics (location, intensity, duration, possible etiologic age in identity) and if possible make use of non-pharmacological techniques for pain relief. The contact with the medical team should be performed if there is worse ningorno improvement in pain symptoms and if the patient demands a non-prescribed drug.

Results: It was observed that the culture is being established to verify the pain in times of vital signs in all patients, this was disseminated to nursing employees through enhancements and playful strategies. Since February 2013 records of audits were carried out in order to measure the applicability of the protocol by averaging 80.5% of audited records as appropriate in 2013 and 89% in 2014.

Conclusion: It is believed that work with record pain intensity has a significant impact on the wellbeing of the patient as well as their participation in therapy. The adequacy of analgesic proposal to pain intensity to 100% of patients is still a challenge because it is perceived non-compliance on the requirements of analgesics in 11%. There by, the process of awareness to employees in relation to measuring the fifth vital sign and establishment of strategies will be maintained to improve adherence to protocol.

Disclosure of Interest: None Declared

Keywords: PAIN PROTOCOL
A 10-Year Journey Of Engaging Patients In Patient Safety Education, Research, and Improvement

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Objectives: Engaging patients and patient advocates is an evolving concept based in medical ethics and human rights that historically has not included involvement in patient safety or clinical improvement. Approaches on why and how to best engage patients remains unclear. We describe our 10-year experience engaging patients in Communication and Resolution Program (CRP) education, research, and service.

Methods: A historical prospective approach to examining patient engagement in CRP education, research, and improvement initiatives was employed. Thematic review explored the activities patients engaged in, infrastructure required, characteristics of participants and stakeholders, and the effectiveness of those efforts.

Results: Patient engagement in CRP activities increased between 2004 and 2014. Engagement was influenced by implementation barriers and reframing the roles of patients and patient advocates in outcomes improvement. Engagement was first achieved in education. Patients served as stakeholders on curriculum committees, guest faculty, and advisors for CRP development. In 2009, patients began to actively engage in research as national advisors and collaborators on two funded studies, resulting in more than 30 presentations, 15 abstracts, numerous blog and social media posts, and 3 patient-led manuscripts. Engagement continued to evolve, with patient and family members included on medical staff peer review and patient safety committees, ensuring accountability for learning from medical error and patient harm. Here, engagement resulted in enhanced respect, committee attendance, and improved CRP components.

Conclusion: Our 10-years of experience engaging patients demonstrates several common characteristics for success. First, strong leadership and commitment to improving are needed for active engagement. Second, institutional courage is required to share openly our mistakes and measures to fix them. Third, infrastructure is important to hardwire patient engagement in continuous improvement. Fourth, patient engagement in healthcare is critical for improvement and yields significant and immeasurable results.

Disclosure of Interest: K. Smith Grant / Research support from: Agency for Healthcare Research and Quality, M. Hatlie: None Declared, D. Mayer: None Declared, T. McDonald: None Declared

Keywords: Patient Engagement, patient safety and quality, quality improvement healthcare systems
Why Is It Important To Relate Adverse Events In Hospitals With Patient Condition And Complexity Of Procedure?

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Objectives: To estimate the incidence and preventability of adverse events in Portuguese hospitals and analyse the relation between adverse events and the patient severity and complexity of undergone procedures.

Methods: The study was carried out at 17 acute hospitals that are representative of the Portuguese national health system. A two-stage structured retrospective medical records review was done based on the use of 18 screening criteria. A random sample of 4,350 charts, representative of the 180,000 hospital admissions between 01 January 2012 and 31 December 2012 were analysed. The sampling frame includes all admissions for patients over 18 years old who had a minimum stay in hospital of 24 hours. The ICD codes for main and secondary diagnoses and for the procedures were collected from all patients. Bivariate and multivariate logistic regression models were used to identify independent risk factors for AEs. The measure of association used in the multiple logistic regression analysis was the odds ratio. All tests were performed for a level of significance of 0.05 and 95% confidence interval.

Results: In the preliminary analysis, the main findings are:
1) global incidence rate was 9.8%;
2) from those, around 59% were considered preventable;
3) more than a half of all AEs were related to surgical procedures, drug errors and healthcare-acquired infection (HAI);
4) most of AEs (63.4%) resulted in no physical impairment or disability nor minimal impairment, the latter being resolved during admission or within one month from discharge;
5) 8.1% resulted in death;
6) a set of ICD diagnosis and procedure codes were associated with the occurrence of AEs as reflected in OR values (varying from 2.4 to 8.9).

Conclusion: This study shows that AEs in Portuguese hospitals affect nearly one in ten patients. An important part of these events were classified as preventable. A set of ICD diagnosis and procedure codes was associated with a higher probability of occurrence of an AE. These results give us important insights that can help us investigate avenues of room for improvement in reducing and avoiding AE associated with more severe diagnostics and more complex and invasive procedures. To formulate tailor-made interventions, a profound understanding of the nature and underlying causes of AEs, namely patient conditions and procedures underwent, is necessary to facilitate the implementation of effective interventions.

Disclosure of Interest: None Declared

Keywords: adverse event; patient condition; improvement
Electronic Platform For Handover Improved Quality Of Operation Information Transmission

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Objectives: Proper Handover is critical in patient safety. We tried to improve the handover process in operation room with Electronic Handover System (EHS).

Methods: We developed the EHS to help telephone verbal handover. The EHS used items as checklist to guide handover process. Some patient profile such as name, age, past medical history and allergy history can be filled out automatically from patient’s database. The location of inserted catheter, drainage tube and wound can be illustrated in a figure. Patient’s vital signs recording are achieved by monitors with wireless transmission. Amount of blood component transfusion is recorded according to blood bank records. Laboratory results and prescribed medications can be easily searched and displayed. While patient is transferred, the nurses or physicians use telephone for verbal communication and watch his own computer screen simultaneously. The EHS guides the handover and provided information needed on the screen. We tried to assess the rate of handover satisfactions before and after the system by questionnaire, and monitor the rate of system utilization.

Results: Four surgery-related units in the teaching hospital were enrolled (operation room, post-anaesthesia care unit, general surgical ward, and surgical intensive care unit) in the 3-month study. 162 questionnaire were analyzed (reply rate was 100%) before and after the system implantation. The participant in the survey showed satisfaction at handover process increases from 69.4% to 79.3%. The utilization of the EHS increased from 73% to 96%. The junior nurses relied on the EHS most because of its accurate information and standardization of handover protocol.

Conclusion: With EHS, participants liked to use the platform, and were satisfied their handover process more. The patient information shifted in the surgical unit would be more comprehensive and accurate, and we believed it would associate with better patient safety.

Disclosure of Interest: None Declared

Keywords: electronic handover system
Reduction In Radiation Dose To Patients Undergoing Pelvic X-Rays Through Proper Use Of Protective Shielding

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Objectives: The objective of this retrospective study was to evaluate the use of protective shielding on pelvic x-rays and identifying the need of training required to promote awareness about radiation protection practices among Radiographic Technologists (RT).

Methods: The Aga Khan University Hospital is a 600 bed, tertiary care teaching hospital with state-of-the-art technology in medical equipment. It receives over 500 patients on monthly basis who undergo various x-rays during their time at the hospital. One of the most frequent x-rays which are referred from the Emergency Department (ED), clinics and outside referrals are pelvic x-rays, since it is involved in evaluation of several clinical conditions. Ionizing radiation is said to have more damaging effects on vascular organs such as testes which are located just below the pelvic region in males. It is very important that while performing x-rays of this region, the staff takes necessary steps to ensure that the patients’ organs are not exposed to unnecessary and avoidable radiation.

The data was collected from April 2014 to June 2014 and at random 500 pelvic examinations of male patients were retrieved from the Picture Archiving and Communication System (PACS) and were evaluated whether protective shielding was present on them or not. The patients who had come through ED with history of Road Traffic Accident (RTA) or were suspected of having foreign body in the region were exempted from the evaluation list since providing lead shielding in such patients may cause hindrance in diagnosis. The staff was given training on proper positioning and placement of the lead shields while performing pelvic x-rays of male patients and the importance of radiation protection was also emphasized. The data was then collected from October 2014 to December 2014 to evaluate if the training and awareness sessions had any impact on the practice of the staff.

Results: 367 out of 500 exams evaluated from April 2014 to June 2014 were found to have protective shielding, while in the exams evaluated from October 2014 to December 2014, 491 out of 500 contained protective shielding on the pelvic x-ray examinations.

Conclusion: It is one of the top most responsibilities of the radiographic technologist to ensure that the patients are not exposed to unnecessary ionizing radiation and must take all necessary steps to protect the patients. It is also very important to train and guide staff to practice the use of radiation protective equipment with efficiency and apply them on patients without causing limitations in the diagnosis.

Disclosure of Interest: None Declared

Keywords: radiation protection
Impact Of Peer-Review Report In Terms Of Quality Improvement And Curb Of Lawsuit/Damage Claim In No-Fault Based Compensation/Peer-Review System For Cerebral Palsy In Japan

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Objectives: The Japan obstetric compensation system for cerebral palsy was launched by Japan Council for Quality Health Care (JCQHC) in 2009 in response to the shortage of obstetrician due to surging conflict over profound cerebral palsy cases. The system has underwent first major appraisal and overhaul in 2014. Through the appraisal process, peer-review report compiled in the system was reviewed in terms of quality improvement and curb of lawsuit/damage claim to verify if the system has been effectively operated in consistent with the aim of it.

Methods: The compensation system for cerebral palsy has published peer-review reports which was eventually delivered not only to childbirth facilities but to guardians with children suffering cerebral palsy. Statistics of lawsuit case/damage claim was reviewed and satisfaction survey on the report was conducted to both childbirth facilities and guardians.

Results: The Japan obstetric compensation system provides eligible case with monetary compensation and peer-review report. Review committee to discuss eligibility of filed case only confirms birth weight, gestational week and congenital or post-neonatal factor causing cerebral palsy. It is of note that liability of obstetric care is out of scope in a review committee characterizing the process as "No-fault basis". No-fault based compensation is beneficial in providing with prompt compensation in comparison with lawsuit case which normally takes relatively long period of time to reach resolution. Expert groups have been intensively working to compile peer-review reports. Six hundred and fourteen reports have been completed and delivered to both families and childbirth facilities so far. A survey on the report showed that it was mostly favoured by both childbirth facilities and families. Majority of answer was that they were satisfied with the report because it was crafted by neutral third body which is JCQHC. The result reminded us again that those who underwent harmful healthcare in medicine have said to be keen to know about “The truth in the case”, i.e. “What happened and why it happened in the adverse event?”. Despite the initial criticism which arouse at the launch of the system that compilation of in-depth peer-review report may ignite conflict between childbirth facilities and families leading to reversed effect in light of the aim of the system, no significant rise in the number of damage claim for cerebral palsy has been observed. In contrast, it has been seen that the decline of lawsuit cases in obstetric specialty is sharper than that of entire medical specialties. The system also published a written material in 2014 carrying four important themes to improve quality of obstetric care such as care for uterine rupture, care for intrauterine infection and so on. The report is circulated among obstetricians or midwives on occasions such as annual meeting of scientific societies. With the satisfactory achievements and improved perinatal care on the background, the expansion of the system was approved in the government committee. Therefore, it is expected that the system will be more influential in the improvement of obstetric care in Japan.

Conclusion: The Japan obstetric compensation system for cerebral palsy may have been effective in easing conflict on cerebral palsy cases and improving quality of obstetric care.

References:

Disclosure of Interest: None Declared

Keywords: No-fault compensation, Peer-review, The Japan obstetric compensation system for cerebral palsy
Healthcare System Improvement Among Hospitals Globally By International SOPS For Patient Safety

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Objectives: Experience with standardization in non-health care industries clearly shows that standardized processes lead to improved safety and service excellence. High 5s was launched in '07 to examine the concept of standardization in clinical processes. The main objective was to develop and assess Standard Operating Protocols (SOPs) in a range of health-care systems and cultures, and to provide evidence of the benefits of standardization in health care. Sub goals were to determine the feasibility of implementing SOPs in hospitals in multiple countries, and to measure the impact on patient safety. Eight WHO Member States (MS) (Australia, Canada, France, Germany, Netherlands, Singapore, Trinidad & Tobago, U.S.) the WHO Patient Safety Programme and Collaborating Centre developed and implemented SOPs that address recognized patient safety challenges.

Methods: Two features of High 5s were the use of standardization across multi-country settings, and a carefully-designed, multi-pronged approach to evaluation. Two SOPs were developed ('07-'09) and implemented ('10-'14): Medication Reconciliation (Med Rec) and Correct Procedure at the Correct Body Site (CSS). Safe management of Concentrated Injectable Medicines (CIM) was implemented in '14. SOPs summarize a safety problem, including a solution, evidence and potential barriers to adoption, and delineate unintended consequences. Through implementation guides, each SOP can be used by multiple users in a consistent and measurable way. An Impact Evaluation Strategy using both qualitative and quantitative approaches was designed for data collection in >130 hospitals globally: 1. qualitative evaluation of the SOP implementation experiences; 2. SOP-specific performance measures; 3. event analysis to identify and investigate occurrences that may represent SOP failures; and 4. hospital culture surveys.

Results: The SOPs had significant impact in hospitals. They show that certain process steps were introduced or improved which were not part of everyday care previously. E.g. in Singapore, improvement in clinical practice and staff cooperation showed 98% compliance with complete preoperative verification and Time Outs, and improvement in surgical site-marking from 40% to 97%. Safety components are now built into surgical work flows and a culture of shared ideas and learning among hospitals has been promoted. For Med Rec, some hospitals managed to reduce medication inaccuracies with 75% and to improve the quality of the medication histories obtained. For CIM a hospital-wide evaluation of the policy regarding authorization of the floor stock took place. Overall, culture survey results showed the highest scores on teamwork issues within units (70% positive), and the lowest scores on handoffs and transitions (34% positive). Final results and materials are published in 2015.

Conclusion: Relatively few SOP adaptations and revisions were required and a high degree of standardization of health care processes is feasible. SOPs can be implemented in a standardized way across hospitals within a country and in multiple countries. Implementation is progressing successfully in participating hospitals globally. Dissemination of SOP materials and experiences to more hospitals within each MS, and beyond started from 2014.


Disclosure of Interest: None Declared

Keywords: patient safety and quality, quality improvement, healthcare systems
Feasibility And Added Value Of Executive WalkRounds In Long-Term Care Organisation

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Objectives: To explore the added value and the feasibility of WalkRounds™ for patient safety management in long-term care in the Netherlands, from the perspective of professionals and clients.

Methods: The WalkRounds (WR) were introduced in 6 organisations between July 2012 and December 2013; 2 Mental Health Care institutions, 2 Nursing Homes and Home care organisations, and 2 institutions for the physically and intellectually disabled. Data were gathered by observation and reporting forms. Feasibility was evaluated by open group interviews. A mixed-method analysis was performed using descriptive statistics, and content analysis.

Results: In total 68 WRs were performed, and 298 soft signals were identified. Most signals addressed care delivery (29.9%), followed by communication (17.4%), environment (16.8%), and staffing (14.4%). Soft signals from the client perspective were related to environment (30.4%), care delivery (26.1%) and security (17.4%). Furthermore 138 of the total number of soft signals were identified as high – very high risk. Overall 245 improvement activities were reported, with a majority related to structural interventions. Feasibility and added value of the WRs was demonstrated by an increased sense of urgency by board members, an increased safety awareness and activity in both professionals and clients. The dialogue between board members, professionals and clients was essential in creating a collective patient safety culture. To perform WRs in a way that provides trust and interaction with professionals and clients, communication skills of board members are of great importance; e.g. sensitivity to non-verbal communication, professional curiosity, and listening skills.

Conclusion: WRs are considered useful and feasible for picking up soft signals as early warnings of (potential) risks of patient safety in long-term care. Soft signals from professionals and clients differ and are complementary. Getting both perspectives adds to the value of WRs. WRs seem useful as a leadership tool for risk assessment, in addition to the current quality management systems.

References:


Disclosure of Interest: None Declared

Keywords: Executive Board, Long-Term Care, Soft Signals
How Many Rounding Processes Can A Medical Ward Have?

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Objectives: Ward rounds enable healthcare teams to coordinate patient care, and provide a platform for clinician education. The study aims to explore different processes for ward rounds undertaken in acute care medical wards.

Methods: A literature search was undertaken of works published between 2000 and 2014. Study inclusion criteria were face-to-face ward rounds undertaken in medical units, peer reviewed journals and government publications written in English, available as full text articles. Each article was reviewed and categorised by how it was defined and the purpose of the ‘round’.

Results: A total of 39 papers met the study criteria. The results identified eight different classifications of rounds. The three most common were the: ‘ward’; ‘multidisciplinary’; and ‘consultant’ rounds. The purpose of all eight round processes could be grouped into three themes (Table 1).

Table 1: Round classifications and associated purpose

<table>
<thead>
<tr>
<th>Category of round (n=39)</th>
<th>Purpose of round</th>
<th>Planning care</th>
<th>Education</th>
<th>Planning care and education</th>
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<tr>
<td>Ward round (n=21)</td>
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<td></td>
<td>4</td>
<td></td>
<td></td>
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<tr>
<td>Post–take (n=2)</td>
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<tr>
<td>Traditional (n=2)</td>
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<tr>
<td>Working (n=2)</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review of ward (n=1)</td>
<td></td>
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<td>1</td>
<td></td>
</tr>
</tbody>
</table>

The ‘ward round’ had no single agreed definition, and some papers included a caveat on the difficulty of describing it. The purposes were: planning care; education; and combination of planning care and education. The ‘ward round’ was a most generically described process, and included elements of all the remaining seven classifications. The ‘multidisciplinary round’ used the terms ‘multidisciplinary’ and ‘interdisciplinary’ interchangeably indicating round participants. The purpose was primarily planning care, with education described as incidental rather than planned. The ‘consultant round’ used the terms ‘consultant’ and ‘attending’ interchangeably to describe a round led by the senior medical officer. The themes were planning care and education. Within the ‘consultant round’ the provision of education was described as either interwoven into the care planning, or conducted only after care planning was completed. The ‘teaching round’ indicated its purpose simply within its name. The purpose was to provide education to junior medical officers on disease knowledge, identification, and management. The ‘post–take round’ described the timing of the activity with the consultant reviewing new patients admitted overnight or during the day. The purpose was identified as both planning care and education. Information about the description or purpose of the remaining three rounds was not available. The ‘traditional round’ was carried out for care planning and education. The purpose of the ‘working round’ was care planning. The ‘review of the ward’ described the attendees only but no purpose for it was given.

Conclusion: This research provides a comprehensive summary of different rounds undertaken in acute adult medical units and, to the best of our knowledge, is the first of its kind. The complexities of the clinical environment are illustrated by numerous rounding processes. Variances within each process add further ambiguity. Clinicians need to move between care planning and education. Patients must also adapt to being both an active member and an ‘educational subject’. Alternating between the two within one round may affect clinician and patient interactions and impact on therapeutic relationships. Patient safety relies on effective communication between team members and patients to mitigate risk. This can be achieved through clinical teams working together to deliver cohesive and coordinated care.

Disclosure of Interest: None Declared

Keywords: medical, process, ward rounds
The Hospital Infection Control Center And Patient Safety: The Impact Of The Share On MDR Bacteria Reduction
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Objectives: To evaluate the impact of the dissemination of data, promotional and educational tools and training regarding adherence to hand hygiene in controlling of multidrug-resistant (MDR) microorganisms outbreak, specially the carbapenemase-producing bacteria (KPC).

Methods: Monthly consumption data of products for hygiene was used as hand hygiene adherence measurement. It was related to the density of MDR microorganisms. In late June 2014, the Hospital Infection Control Center (HICC) detected an increase of gram negative carbapenemase producing bacteria in cultures from patients admitted in the Intensive Care Unit. on the State Hospital Sumaré intensified actions to improve adherence to hand hygiene were taken, the unit terminal drive cleaning and disinfecting surfaces were performed, the work processes were reviewed. A weekly swab monitoring routine screening to search MDR bacteria was initiated.

Results: Although there was an increase in surveillance cultures collections the intervention of HICC resulted in a significant increase in adherence to hand hygiene and in the reduction or stabilization in identifying carbapenemase producing microorganisms as it can be noted in the table.

| Chlorhexidine and alcohol-based preparations consumption vs MDR density |
|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                          | Apr  | May  | June | July * | Aug * | Sept * | Oct * | Nov * | Dec * |
| Chlorhexidine and alcohol-based preparations (ml/patient/day) | 30,77 | 31,44 | 37,04 | 71,77 | 42,11 | 41,35 | 41,65 | 19,78 | 25,37 |
| 1 - % MR                 | 4,07 | 3,28 | 2,55 | 4,6   | 4,58 | 4,49  | 6,07  | 6,07  | 4,65  |
| 2 - % KPC                | 0,67 | 0,65 | 0,46 | 5,47  | 1,37 | 1,34  | 1,3   | 0,44  | 1,26  |

1 - The number of MRD bacteria in screening cultures / patient per day x100
2 - The number of KPC bacteria in screening cultures / patient per day x100
*Weekly screening swab

Conclusion: The microorganisms epidemiologically important for the hospital environment are those that have in vitro resistance to one or more classes of antimicrobials, a challenge contain them. For such control there are numerous preventive measures, one of them is hand hygiene. It is evident that the reduction of microorganisms from the hands significantly reduces the transfer of them to patients, reducing risk of infections related to health. The big challenge for infection is to keep the drivers alert and motivated teams as the hygiene measures of hands practiced as a healthcare quality label guaranteeing the safety of hospitalized patients.

Disclosure of Interest: None Declared

Keywords: Hand H
Hygiene, Cultural Influence, infection control protocol
Fall Prevention Program By Vatic
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Objectives:
Fall constitutes the main cause of patient’s physical injury and limitation of activity. There was a fall-related fracture with severity index of 4 happened in 2012. Therefore, the Prevention of Fall Program by VATIC was introduced in 2014.

Objectives:
1. To reduce fall incident
2. To decrease fall severity
3. To enhance fall alertness of patients and relatives

Methods:
Subjects were all in-patients admitted to Surgical wards. The Fall Prevention Strategies are summarized as VATIC:
1. “Video of Fall Prevention” for patients and relatives was provided on admission and broadcasted during visiting hours in order to engage their involvement throughout the care process. An easy-to-read pamphlet was also provided as reminder on admission.
2. Sharing session for staff about Fall Prevention was held to enhance awareness and knowledge of best practices.
3. Investigate all fall incidents by ward representative and case nurse. Prompt evaluation and recommendation of each fall incident facilitated timely improvement.
4. “Checklist of Post Fall Injury” was routinely used for all post-fall cases to reduce the risk of repeated fall.
5. Alert all nurses and supporting staff once high risk case was identified and handover the risk alertness to colleagues of next shift.

Results:
1) In 2013, the number of fall incidents was 17 and it was 12 in 2014. There was a significant reduction of 29% after initiating the program.
2) In 2014, 90% of the severity index was 1 or 2. Moreover, there was “no” fall case with severity index of 4 as compared with 1 in 2013.
3) There were 32 Satisfaction Survey Questionnaires on Video of Fall Prevention obtained from patients and relatives. All of them watched the video within the first day of admission. 81% of participants watched the video for more than 4 times. The mean score they rated on the usefulness of video was 9.3 out of 10; while the clarity of fall prevention message was 8.8 out of 10. It reflected that the education video was easy to understand and useful to increase the alertness of fall.

Conclusion:
The “Fall Prevention Program by VATIC” successfully optimizes patient safety by enhancement of risk-of-fall alertness of staff and patients and risk reduction strategies.

Disclosure of Interest: None Declared

Keywords: FALL PREVENTION, SEVERITY INDEX
An Innovative “Green” Program For New Graduate
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Objectives: Introduction Nursing graduates from universities often face difficulties in familiarizing themselves with hospital setting where they first work as qualified nurse. Heavy workload and stressful working environment further aggravate the problem, resulting in lack of self-confidence at work. For some, coping with death and dying is an emotionally difficult experience for which they feel unprepared. With the aims to better engage graduate nurses and to facilitate their smooth transition & integration into their work duties; a social and professional support induction programme “GREEN” is introduced.

➤ Objectives Growth: Design specific programmes to transform graduates into professional practitioners.
➤ Recognition: Support from management, proactive encouragement & positive feedback from supervisors,
➤ Engagement: Enhance staff competence and equip graduate nurse with a special ‘practical kits of skills and experience’ to make them fully fledged health care team members.
➤ Empowerment: Sharpen patient communication skills to gain trust and strengthen relationship between nurses and patients.
➤ Nurture: Provide psychosocial support to graduate nurses in their course of work

Methods: A 9-month programme through lectures; participating in hand-on practices e.g. use of emergency equipment, special wound & drainage management; skills labs such as resuscitation, insertion of endotracheal tube and with use of ventilator; group activities, clinical scenarios taught by experienced nurses and clinicians. Problem-solving activities e.g. setting up infusion pumps with medication according to doctor’s prescriptions, rather than just information-gathering activities, is organised. Medication safety, calculation, infection control, handling of sharps & trouble shooting of infusion pump is learnt through clinical scenario playing. Problem-solving focus is significant in the development of essential critical thinking skills.(1) Through the ‘Better Patient Communication Workshop’ with role play e.g. care of dying patient, communication with patients / relatives under difficult situations, nurses realize patients / relatives concerns and worries so as to understand ‘why’ behind what they are being taught and what they are expected to do with patients and relatives. In clinical setting, through on-the-job coaching and bedside clinical teaching, graduates will receive encouragement and professional development support through discussion with preceptors/mentors. Preceptors/mentors who gave consistent, balanced feedback are highly praised by graduates. The intent of the feedback is critical to the ability of the learners to receive it.(2)

Results: By pre and post self-assessment and feedback from peers, supervisors, and a positive atmosphere, graduates will gain confidence and feeling of accomplishment. They agreed that the ‘GREEN’ program has built up their competence in both clinical and technical competencies in providing quality and safety of patient care. Graduate nurse has demonstrated high degree of skill in making clinical observation of patient.

Conclusion: The programme is put emphasis on graduate nurses taking active part in the learning process rather than being passive recipients of information. ‘Self –reflection’ will emerge as an important and integral part of the transformation process. With the support and positive feedback from supervisors, peers as well as patients/relatives, graduate nurses find great meaning in their work with confidence to drive for nursing quality services.


Disclosure of Interest: None Declared

Keywords: empowerment, Engagement, graduate nurse
A Medication Management Plan Following Transition From An Acute Hospital Stay: A Partnered Clinical Pharmacist Model

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Objectives: Post hospital transfer requires communication of medication management changes that addresses not only a current medication list, but also provides reasons for changes and plans for management post transfer. At Alfred Health, clinical pharmacists are embedded into all inpatient medical units throughout the three hospitals of the health service. It is widely acknowledged that pharmacists’ involvement in the medication reconciliation process can improve the quality of transfer information. Based on this understanding, the organization facilitated a partnered discharge summary process whereby clinical pharmacists would identify and document the details of the medication management plan, including a summary of the medication changes during hospitalization and plans post transfer. A phased roll out through selected medical units was implemented.

Methods: The proposal required intensive discussions with Alfred Health’s Information Development Division and Discharge Summary Working Group in order to design and incorporate four mandatory data fields into the existing electronic medical discharge summary templates; current medication list on discharge, medications ceased during admission (with reasons), adverse drug reaction list and management plan post discharge. A new communication box was designed within the Cerner Millennium Electronic Medical Record (EMR) to facilitate the partnered approach between medical staff and clinical pharmacists in completing patients’ transfer information and to limit impacts on existing workflow. A program for a phased rollout was developed and focused on units where complex mediation issues were common. Discussions were held with the medical heads of unit prior to implementation. A clinical pharmacist training package was developed, which included an education session and procedure guide. General correspondence was also provided to all medical staff within the organization.

Results: Baseline data on the content of existing medication management plans was collected via an audit prior to implementation, showing 38% of transfer information plans contained an accurate and complete medication list. 67% (31/46) of inpatient medical units across the three campuses were included in the program. A staged roll out started from December 2014, with the initial phase consisting of the Renal, Orthopaedic and General Medicine units. Data one month post implementation shows 75% (102/136) of medication management plans within these three units being completed by a pharmacist. A further eight units have been included in the next phase of the roll out, which started in January 2015. Since the implementation of the program, 87% (70/80) of clinical pharmacists have been approved to complete the medication management plan. The program is being supported by the Department of Health and evaluation is underway for consideration of health sector wide adoption.

Conclusion: Embedding of clinical pharmacists within medical units has facilitated the successful adoption of a partnered approach in completing a medication management plan at hospital transfer following an acute inpatient stay. This will provide medical practitioners with not just a list of current medications, but a comprehensive plan that will help to improve overall patient care.

Disclosure of Interest: None Declared

Keywords: medication management, Pharmacy
A Study Of Potentially Risk Factors In A Teaching Hospital Of Combined Oriental And Western Medicine Therapy
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Objectives: Many people in the world have been utilizing medications to improve their healthcare conditions regardless of western medicine and Korean medicine known as traditional medicine or herbal medicine. In recent years, the cooperative treatment case between physician and doctor of Korean medicine are increasing in Korea in order to improve therapeutic effect for patients. However, the study on adverse drug events between modern medicine and herbal medicines are insufficient still now in terms of patient’s safety and quality. Although herbal medication has been often perceived as "natural" and therefore safe, many different side effects have been reported owing to active ingredients, contaminants, or interactions of drugs.

Methods: We analyzed discharge summary of 1,148 patients who were discharged from a tertiary hospital after taking herbal treatments in the first half of year, 2009. We found out that a total of 832 patients were given both herbal medicine and drug simultaneously. Then, ingredients of the herbal medicines and drugs are carefully compared and analyzed.

Results: The result shows that 89.5% (n=1,027) of the total patients were taken herbal medications, 81.0% (n=832) of them were taken with western medications due to joint control by western physicians. And, 164 patients (19.7%) of the subjects were given prescriptions with possible interactions on their 197 prescription cases.

<table>
<thead>
<tr>
<th>Ingredient of Herb types</th>
<th>Source of herb processing</th>
<th>No. of Pres. (%)</th>
<th>Ingredient of prescriptions</th>
<th>RISK on ADEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>acidic herbal products</td>
<td>Peony root, Citrii Unshiu Immature Peel, Schizandra Fruit, Poncirus Immature Fruit, Cornus Fruit Hawthorn Fruit</td>
<td>108 (54.8%)</td>
<td>Aspirin (n=98, 49.7%)</td>
<td>Increase risk of renal toxicity (nephrotoxicity)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Magnesium hydroxide (n=10, 5.1%)</td>
<td></td>
</tr>
<tr>
<td>Saponin Herbal products</td>
<td>Ginseng, Platycodon Root, Bupleurum Root Sophora Flower, Adenophorae Radix</td>
<td>3 (1.5%)</td>
<td>Calcium drug</td>
<td>Herbal product should be taken at least 2 hours before or 2 hours after any drugs</td>
</tr>
<tr>
<td>Similar action with aldosterone</td>
<td>Licorice</td>
<td>68 (34.5%)</td>
<td>Sulfonylurea-based drug for diabetes (n=53, 26.9%)</td>
<td>on drop in blood sugar level</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>High ceiling loop diuretic (n=15, 7.6%)</td>
<td>Hypopotassemia and myopathy</td>
</tr>
<tr>
<td>Calcium herbal products.</td>
<td>Gypsum, Longgu, Oyster Shell</td>
<td>10 (5.1%)</td>
<td>Prednisolone(5.1%)</td>
<td>reduced efficacy of drug</td>
</tr>
<tr>
<td>Herbal products which is containing a large of K+</td>
<td>Alisma Rhizome, Artemisia capillaris Herb</td>
<td>8 (4.1%)</td>
<td>Spironolactone(4.1%)</td>
<td>hyperkaemia</td>
</tr>
</tbody>
</table>

According to the study, The most probable interaction was one between acidic herbal products containing organic acids and drug containing aspirin which constitutes 49.8% of the cases, which can increase the risk of nephrotoxicity.

Conclusion: The study does not make it prove that there were actual cases of complications causes due to interaction between herbal medicine and drug. Nevertheless, the observation that over 50% of the subjects were at or over 60 years old signifies necessity of computer-based safeguard to prevent hazardous effects due the interaction of adverse drug events between modern medicine and herbal medicine as well as further clinical studies.

Disclosure of Interest: None Declared

Keywords: Drug-Drug Interaction
Identification And Improvement Of Risks Factors Associated With Pathologic Examination To Establish An Efficient And Safety Examination System

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Objectives: Pathologic examination is conducted via continuous multi-step processes mostly carried out manually before reaching a diagnosis. Numerous patient safety-related incidents including inaccurate referral services, pathologic identification number errors, sample switches, and loss of samples reside in all pathologic examination processes. Our goal is to build a safety pathologic examination system by identifying and eliminating risk factors related to the pathologic examination processes.

Methods: To uncover possible errors linked to pathologic examination in practice, 81 potential risk factors related to patients were collected from each process. In addition, we analyzed safety improvement rate by comparing Risk Priority Number (RPN) assessed on a quarterly basis before and after implementation of the safety process system. We introduced an automated computerized system to manage various medical processes and enforced assignment of duties. The procedures from registration to reporting were categorized into the sample registration system, the verification system according to sample preparation stages and the diagnosis reporting system. In an effort to enhance safety in the sample registration system, we adopted a SUB number insertion process through which total number of samples of an identical patient can be verified. Moreover, the patient name was added beside of pathologic identification number in glass slides and paraffin blocks in each stage of pathologic examination, which were able to reinforce the patient verification system. In diagnosis reporting, we applied bar code system for each diagnosis reporting process. Furthermore, we encourage professional expertise and specialty by initiating an efficient delegation of new duties, joint responsibility of the predecessor and the successor and disclosure of individual names responsible for specific duties.

Results: As a result of implementation of the new improved system, the potential risk factors related to patients were reduced by 58%. The improved patient verification system in each pathological examination process escalated the accuracy of pathologic examination, and the assignment of duties and computerized process automation increased operational efficiency significantly.

Conclusion: Advanced examining processes achieved by the new pathologic examination system drastically reduce various errors before, during and after examination which in turn strengthen the patient safety. If the automated verification system in each examination process is adopted in the near future, it will further enhance the patient safety management.

Disclosure of Interest: None Declared

Keywords: pathologic examination
Implementation Research in Quality Management: Assessing Patient Safety in Hospitals in Algeria
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Objectives: The objective of this paper is to show the development and piloting of an Algerian-tailored system allowing measuring and improving quality of hospital services, looking in particular into patient safety. This measure is part of recent efforts to reorganize healthcare services in Algeria, and was supported by the Program for Health Sector Support–PASS from the Algerian Government and the European Union. This pilot project was supposed to show applicability of the QI system on a very heterogeneous sample of hospitals and departments.

Methods: A systemic approach was adopted for continuous quality improvement of health care services. The system that was developed measures quality of care in respect to patient safety by adapted and validated indicators, multi-perspective instruments and according to a scientifically proven method, based on the structure of a evidence-based system to assess, benchmark and improve quality of healthcare services called European Practice Assessment (EPA). In order to tailor the system to Algerian needs, national and international scientific literature, guidelines and standards were screened for indicators in use on patient safety. A multidisciplinary expert panel reviewed and rated the indicators according to relevance and clarity, using a RAND/UCLA appropriateness method. To cover the heterogeneous sample of hospitals and departments, overall patient safety indicators were defined, such as indicators on basic hygiene measures. Nine departments (including anaesthesia, surgery, paediatrics, cardiology, and laboratory medicine) in the five pilot hospitals in the greater region of Algiers and Constantine participated in the assessment, discussed results and immediately defined improvement plans. A large dissemination conference discussed general results and impact of the method on improving patient safety thanks to enhanced dialogue with the departments’ staff.

Results: The results were unambiguous: the system was widely accepted by staff and there was a strong support from the hospitals to continue the implementation and even use it on a larger scale. The developed indicators were perceived as adapted and relevant for the Algerian context. The participative process fostered ownership and acceptance by local staff, who showed strong will to improve quality. Most appreciated were the transparency and the detailed, accessible and clear results that accompany the method.

Conclusion: The positive nature of the results obtained with the inclusive method of indicator development confirms the authors in their assumption that integrative implementation is a low cost high impact approach to improve quality of healthcare services, allowing fast results in very specific areas such as patient safety, even in contexts where little had been achieved so far; the powerfulness of the approach is that it is transparent, inclusive and scalable.

Disclosure of Interest: None Declared

Keywords: Continuous Quality Improvement, EPA, hospital
Surgical Risks Associated with Winter Sport Tourism
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Objectives: Mass tourism during winter in mountain areas may cause significant clustering of body injuries leading to increasing emergency admissions at hospital [1-2]. We aimed at assessing if surgical safety and efficiency was maintained in this particular context.

Methods: We selected all emergency admissions of open surgery performed in French hospitals between 2010 and 2012. After identifying mountain areas with increasing volume of surgical stays during winter, we considered seasonal variations in surgical outcomes using a difference-in-differences study design. We computed multilevel regressions to evaluate whether significant increase in emergency cases had an effect on surgical mortality, complications and length of stay. Clustering effect of patients within hospitals was integrated in analysis and surgical outcomes were adjusted for both patient and hospital characteristics.

Results: A total of 381 hospitals had 559,052 inpatient stays related to emergency open surgery over 3 years. Compared to other geographical areas, a significant peak of activity was noted during winter in mountainous hospitals (Alps, Pyrenees, Vosges), ranging 6-77% volume increase. Peak was mainly explained by tourists’ influx (+124.5%, 4,351/3,496) and increased need for orthopaedic procedures (+36.8%, 4,731/12,873). After controlling for potential confounders, patients did not experience increased risk for postoperative death (ratio of OR 1.01, 95%CI 0.89-1.14, p=0.891), thromboembolism (0.95, 0.77-1.17, p=0.621) or sepsis (0.98, 0.85-1.12, p=0.748). Length of stay was unaltered (1.00, 0.99-1.02, p=0.716).

Conclusion: Surgical outcomes are not compromised during winter in French mountain areas despite a substantial influx of major emergencies.

References:

Disclosure of Interest: None Declared

Keywords: Health Policy, Outcomes, Patient safety, Surgery, Data analysis, Health services, Tourism, Winter, Sports, Mountain
Prescription Errors in Accredited and Non-Accredited Family Health Facilities

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Objectives: Prescribing errors may be errors of omission (incomplete prescription) or errors of commission (incorrect information). The current study aimed to compare frequency and types of prescription errors in Family Practices in accredited and non-accredited family health facilities and to identify some factors contributing to these errors.

Methods: A comparative cross sectional study was conducted in two valid accredited Family Health Facilities (FHF) and two comparable non-accredited (FHF) over the period of one year from July 2011 to June 2012 in a Health District in Dakahlia Governorate, Egypt. A Systematic random sample technique was used to select prescription sheets from the pharmacies of the selected (FHF) after exclusion of the dentist ones. Sample size was estimated to be 300 prescriptions in each one of the selected family health facility with a total of 1200 prescriptions. A structured extraction sheet was developed based on Ministry of Health prescription standard. A physician data sheet was developed to collect data about independent variable relevant for each physician.

Results: A total of 2903 prescription errors were identified with an average of 2.4 errors per prescription. No single prescription was free of errors. The patient’s sex, residency and diagnosis were missed in 2.3%, 0.7% and 3.3% of the prescriptions respectively while prescriber’s name and signature were missed in 1.5% of the prescriptions and weight in children was always missed. Missed data was significantly increased in second and third prescribed drugs than first one. Most of the prescribed drugs (79.2%) were compatible with the written diagnosis. When the errors were classified according to Neville et al; we found that the highest proportion of errors was type D "trivial error" (37.7%), followed by B "major nuisance" (33.9%) then C "mild nuisance" (28%) while type A "potentially serious" was (0.4%). Accredited FHF showed significantly lower mean number of errors per prescription (3.2±1.6) than non-accredited facilities (4.1±1.9), (P< 0.01). However, type of errors according to Neville et al classification was not significantly different in accredited and non-accredited facilities. Other significant factors decreased mean number of errors including level of qualification and training of physician, whereas, the type of the family health facilities whether a center or a unit had no significant impact.

Conclusion: Accreditation of family health facilities significantly decrease mean number of prescription errors. It is recommended to adopt accreditation program as a tool to build up quality and safety in healthcare system.


Disclosure of Interest: None Declared

Keywords: accreditation, MEDICATION ERRORS
EMRO/WHO Safe Medication Standards: Improving Medication Safety Practices at the Hospital Level
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Objectives: Studies have shown that medication errors are the main causes for adverse events in hospitals leading to disability and death in up to 6.5% of hospital admissions [1]. The WHO Regional Office for the Eastern Mediterranean has recognized that safe and appropriate use of medicines is critical for ensuring patient safety in hospitals. The Objective of this work was to develop a set of safe medication management standards that help healthcare organization to make practical improvements in the way they manage medicines. The ultimate goal is to reduce the number of patients harmed by medication errors and adverse drug events across the entire healthcare sector.

Methods: 1- perform a literature review on tools and standards related to the assessment of medication safety practices at the hospital level, 2- suggest a tool that includes set of valid standards that ensure the assessment of safe medication at hospital level, 3- perform a pilot in two hospitals in the region to test the usefulness and feasibility of the standards of safe medication.

Results: a set of requirements that are critical for the establishment of a safe medication system at hospital level have been developed. It covers nine main domains that delineate areas of weakness and encourage improvement to attain standards’ targets. It was designed to be used mainly through self-assessment; however, it may be used also for external survey. The pilot helped to identify the positive safe medication practices that need to be sustained and issues that need to be improved and developed in the two pilot hospitals. The positive issues include selection and procurement of drugs according to laws and regulations and controlled use of narcotics. The areas of attention include the need to improve medication storage, patient education, use of high alert medication, look alike and sound alike medication, medication dispensing and medication errors monitoring and risk management. In general most of policies and procedures that are needed to standardize medication use are missed. A list of recommendations was developed with the leaders of the two hospital staff in addition to six months action plan for each hospital. The plans specify the steps and the responsible persons for each step.

Conclusion: EMRO safe medication standards provide a framework that enables hospitals to assess medication management from a patient safety perspective and identify the gabs. It helps also in building capacity of staff in safe medication practices. It is recommended for the hospitals to use the standards in self-assessment every 6 months, identify the gaps and do required changes to close the gaps and improve medication safety practices.

Disclosure of Interest: None Declared

Keywords: Medication Safety
Reduce Health Care Associated Infection In Intensive Care Units After Applying Healthcare Failure Mode And Effect Analysis
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1Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Chang Gung Memorial Hospital - Kaohsiung Medical Center, Taiwan, Kaohsiung, Taiwan

Objectives: With the advance of medical technology, increasing numbers of critically ill patients rely on medical instruments and invasive therapies for their survival. Health care associated infections are preventable diseases. The most common infections are urinary tract infection associated with urinary catheter use, central catheters associated bacteraemia, and ventilator associated pneumonia. Health care associated infection not only augments patient’s discomfort, lengthens hospitalization stay, consumes extra medical resources, but also increases mortality. This study aimed to investigate whether by implementing HFMEA (Healthcare Failure Mode & Effect Analysis) as the principal strategy can reduce health care associated infection, and therefore improving clinical care quality.

Methods: The ICU involved in this study was a medical ICU where majority of patients were critically due to internal medicine problems. The study period lasted between January 1st 2013 to December 31st 2013, results from collected data showed that bed occupancy rate was 97.3%, mean APACH II score was 23.88, urinary catheterization rate was 60.9%, catheter associated urinary tract infection rate was 5.2‰, central venous catheterization rate was 38.2%, catheter related blood stream infection rate was 6.6‰, mechanical ventilation rate 82.8%, and ventilator associated pneumonia rate was 0.17‰. We apply two-dimensional risk analysis method to analyze severity and incidence of health care associated infection, and utilizing the following steps to reduce infection rate, which included: (1) Focusing on procedures before, during, and after catheter insertion that may predispose to infection, implementing bundle care guidelines, and assigning designator to scrutinize procedures correctness. (2) Assembling a bundle care surveillance team, where physicians were the team leaders and responsible for team goals and plans, other members include physicians, residents, nurses, infection control specialists, and respiratory specialists (3) Depicting an easily understandable flow diagram of bundle care process: to ensure and facilitate application of bundle care elements correctly (4) Utilizing risk matrix to analyze failure mode, the causes leading to failure, risk probability, and the severity of the consequences as a result of the failure (5) Formulating actions and measurements, standardizing bundle care in written form, and monitoring bundle compliance rates and infection rates monthly and providing feedback to team members, aiming for continual improvements.

Results: After applying HFMEA to improve standards when carrying out invasive procedures, results from 2014 showed bed occupancy rate was 97.7%, mean APACH II score was 27.86, urinary catheterization rate was reduced from 60.9% in 2013 to 51.9% in 2014, catheter associated urinary tract infection rate was also reduced from 5.2‰ in 2013 to 3.5‰ in 2014, central venous catheterization rate was reduced from 38.2% in 2013 to 35% in 2014, catheter related blood stream infection rate was reduced from 6.6‰ in 2013 to 5.1‰ in 2014, and mechanical ventilation rate was 82.1%, ventilator associated pneumonia rate was zero in 2014.

Conclusion: Correctness of catheter placement procedure, surveillance and care of the catheter insertion area and regular assessment of the necessity of catheter placement are the most effective ways to prevent infection. The utilization of HFMEA and the cohesiveness of the medical team in this study effectively reduced the catheter usage rate and catheter related infection rate. However, constant surveillance of the catheter bundle practice and compliance with the guideline are required to achieve better care quality and patient safety.

Disclosure of Interest: None Declared

Keywords: health care associated infection, HFMEA
A "Deadly" Need for Methadone/Opiate Education

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Objectives: The proliferation of methadone/opiate treatment in communities across Canada has resulted in intentional/unintentional and/or accidental opiate overdose. Education on preventative measures to reduce premature death associated with methadone/opiate overdose has not kept pace with the needs of clinicians and more specifically it has not kept pace with the needs of the overdose victim either in the community, hospital or correctional setting. The objective of education is to ELIMINATE preventable opiate overdose.

Methods: Through years of research, 8 years of clinical practice, retrospective chart audits, review of clinical practice guidelines, examination of clinical practice tools and peer reviewed articles, there are significant gaps in clinical information. This comprehensive process occurred over a two-year period to determine what, if any, problems existed in the treatment of methadone/opiate overdose.

Results: There are significant knowledge gaps in identifying the signs and symptoms of methadone/opiate overdose. Further there is evidence to suggest that Narcan is not being prescribed to treat methadone/opiate overdose at the right dosage, at the right frequency, or duration – if at all. Other data suggests that there are gaps in methadone treatment guidelines including insufficient patient education on drug-drug interactions that occur with methadone/opiates and other medications including over-the-counter medications, antibiotics, antipsychotics, etc. Clinical tools (i.e. Opiate Manager, ACLS algorithm) are outdated and contain SIGNIFICANT gaps leaving clinicians vulnerable and patients exposed to deadly knowledge deficits.

Conclusion: Prompt and extensive education strategies need to be developed to ensure safe clinical practice by all healthcare providers when prescribing methadone/opiates. Prevention strategies including designing new tools and changing current practice guidelines (i.e. ACLS algorithm, reversible causes checklist, methadone guidelines, resuscitation strategies, and more useful information from the World Health Organization) to develop comprehensive overdose treatment protocols around the WORLD. It is anticipated that this National Canadian strategy will have global impact.


Disclosure of Interest: None Declared

Keywords: methadone /opiate education
Effective Feedback from Centralised Incident Reporting Systems in Patient Safety: A Systematic Narrative Review
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Objectives: Reporting and analysis of data in Centralised Incident Reporting Systems (CIRS) in patient safety is an evolving field of research, with many countries investing in national or large scale systems. There is limited understanding, however, of how best to translate information gained from such analysis into improvement and action in frontline care. The objectives of this review are to synthesise research on effective feedback and learning mechanisms disseminated from non-local reporting systems to the frontline, while gathering supporting evidence on factors affecting use and uptake of interventions to support patient safety improvement. Furthermore, the review aims to draw on implications of previous work on the design and improvement of future outputs from similar systems.

Methods: Results returned from MEDLINE, EMBASE and PSYCHinfo were reviewed using hierarchical inclusion criteria, to primarily identify empirical and non-empirical work evaluating feedback from CIRS and secondary evidence to inform future output development. Articles were synthesised systematically, drawing information on effective feedback and implications for future output development. Two reviewers undertook synthesis and assessment of methodological quality, discussing any disagreements arising.

Results: 34 articles fulfilled the inclusion criteria out of 1350 identified references. 18 studies directly evaluated feedback and interventions from CIRS globally, discussing effective feedback types and impact on quality of care, measured using reporting trends and safety culture. Outputs from the UK system which targeted relevant staff groups were effective in improving safety and risk, improving on generalised outputs to all staff. Feedback combining evidence from incident data, previous improvement efforts and experience from the front line was deemed more engaging, impactful and reliable for clinical staff, thus more favourable for implementation. Disseminating through multiple channels simultaneously, such as journals, training events and newsletters, can result in improved awareness and change locally, particularly when targeted to junior or rotational staff less engaged or involved with the local patient safety agenda. A further 16 articles identified factors influencing dissemination and implementation. Outputs piloted before national dissemination are favoured to minimise issues arising during the implementation process. The role of feedback in engaging staff with reporting and reprioritising patient safety as a core clinical responsibility was highlighted by Australian and UK commentary as an important function of such outputs.

Conclusion: The evidence base for effective feedback from CIRS is currently underdeveloped when compared to similar work on improvements in reporting, notably lack of consensus on outcome measures and frameworks to create optimal outputs from CIRS. Additionally, although some evaluative work exists on the outputs themselves, comparative work between mechanisms does not, leaving scope for further work to examine and understand which approaches are more successful in improving patient safety. The review findings also give rise to several recommendations for improving the use of feedback mechanisms from CIRS, particularly concerning improved dissemination and implementation locally. Future research should focus on developing outputs in line with such recommendations and evaluating their effect on learning and safety culture locally.

Disclosure of Interest: None Declared

Keywords: feedback mechanisms, Incident reporting, learning culture
Epidemiology of Sepsis and Sepsis Related Mortality among Elective Gastrointestinal Surgical Patients in Public Acute Hospitals of New South Wales, Australia

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Objectives: Sepsis is a severe infection and leading cause of deaths for in-hospital patients. Approximately one third of all cases of sepsis occurred during or after surgical procedures, particularly, in abdominal surgery. Patients who developed sepsis during or after operation had significantly higher mortality than those without sepsis complication. This study aimed to investigate epidemiology of sepsis and sepsis related mortality among elective gastrointestinal surgical patients in New South Wales (NSW), Australia.

Methods: We selected elective surgical patients who underwent gastrointestinal surgery in 82 public acute hospitals in NSW from 2002 to 2009 using state-wide administrative data from the Admitted Patient Data Collection (APDC) database. We included patients who were aged between 18 - 90 years old and had a principal procedure (defined as a procedure performed for definitive treatment) within two days of admission. We excluded those who were transferred to an acute hospital or admitted through emergency department. Sepsis cases were defined according to the definition in the American College of Chest Physical and Society of Critical Care Medicine (ACCP/SCCM) Consensus Conference. We derived the outcome using 54 non-principal diagnostic fields in patient medical records. Patients who were diagnosed with sepsis or organ dysfunction at admission were not included as having a surgical related sepsis or severe sepsis. We also classified the infectious agents of sepsis into gram-positive, gram-negative, fungal, mixed infection and other unspecified source. We used Poisson mixed models to derive rate ratios (RR) for sepsis and sepsis related mortality adjusted for patient and hospital characteristics (age, gender, country of birth, marital status, socio-economic status, hospital district (metropolitan and rural) and peer group (by similar type and size).

Results: Of 144,892 admissions undergone gastrointestinal surgery between 2002 and 2009, 963 (6.6 per 1,000 admission) developed sepsis during or after surgery. 213 (22%) of sepsis cases died in hospital. The incidence rate of sepsis was observed increasingly from 5.3 in 2002 to 8.1 in 2009 per 1,000 admissions (P=0.002) from 2002 to 2009. Sepsis related mortality rate did not show significant change from 24.5 in 2002 to 20.1 in 2009 per 1,000 admissions (P=0.103) during the same period. However, after adjusted for patient and hospital characteristics, there were no significant differences over the study period for both the incidence rate of sepsis and sepsis related mortality rates. Compared to non-infection, unspecified infection had highest risk (RR=24.06, 95%CI: 19.99-28.97) to die followed, in turn, by gram-positive infection (RR=17.52; 95%CI: 12.04-25.50), fungal (RR=13.16; 95%CI: 3.26-53.14), and gram-negative (RR=12.17; 95%CI: 8.24-17.98).

Conclusion: Despite international efforts in reducing the incidence rates of sepsis and sepsis related mortality, the rate of sepsis related mortality remained at similar level during study period accompanied by the increasing incidence rate of sepsis among elective gastrointestinal surgical patients. Such findings call for further investigations. Among sepsis cases, unspecified infections had more than doubling the death rates of other four types of infections, suggesting that future research and policy strategy may be needed to early identify sepsis cases, particularly on those with no identifiable specific infection agents.

Disclosure of Interest: None Declared

Keywords: Sepsis, mortality, surgery, infection
Partnering with Patients to Identify and Address Breakdowns and Address Breakdowns in Care
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Objectives: Patients and family members have important insights into care experiences, yet many “suffer in silence” when they suspect a breakdown in communication or medical care, believing that reporting is ineffective, fearing repercussions, or not knowing who will listen. The “We Want to Know” program uses active outreach to patients’ in-hospital or post-discharge to encourage patients and families to speak up about their concerns, and provides a real-time response.

Methods: Three medical surgical units in each of two hospitals, one in Baltimore MD and one in Washington DC (6 units’ total) participated in a pilot beginning in June 2014. Program components include patient interviews, brochures, and a patient reporting hotline. Real-time response navigators interviewed randomly selected patients during their hospital stay or 7 to 30-days post-discharge to elicit their concerns. The navigators sought to resolve any breakdowns identified during the interview and engaged unit support as needed. Significant breakdowns requiring detailed investigation were entered into the patient safety event reporting system and received a hospital system-level investigation and response. Data are presented as simple counts, frequencies, or means and standard deviations (mean (SD)).

Results: A total of 860 interviews were completed between June 1 and December 31, 2014. Most interviews were conducted directly with the patient (95%). Patients were predominantly female (58%) with 75% of patients 51 years of age or older. Approximately 39% (n=336) of patients perceived a breakdown in care with communication issues representing the highest component of those breakdowns (n=180; 20.9% of all patients interviewed). Of these breakdowns, 84% were perceived by patients to be preventable. Breakdowns perceived by patients include communication issues, delays in treatment or diagnosis, pain management, and medication errors were commonly cited breakdowns. For those patients reporting at least one breakdown in care, a variety of harms including emotional distress, damaged patient-provider relationship, physical harm, life disruption, additional care, and financial costs were perceived. Outstanding problems were resolved at the time of the interview or immediately after (n=228; 83%). Thirty-nine events reported while the patients was still an inpatient required further follow-up and 19 received an investigation and system-level response.

Conclusion: The We Want to Know program was effective at detecting patient concerns, many of which had been unknown to providers, and provided a means of addressing and resolving problems in real-time. It also yielded important new information that is expected to result in future health system improvements.


Keywords: adverse events, Patient Communication, Patient Safety and Quality
Heath profile and Quality of Life before and after Hijama: A population-based cross-sectional study in Madinah, Saudi Arabia

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Background: Cupping therapy (Hijama) is a conventional treatment method used for the treatment of many diseases in several contemporary societies. Despite its common use, little is known about its impact on health profile and quality of life (QoL), particularly in our region.

Objectives: This study aimed to assess the health profile and quality of life before and after Hijama in Madinah City, Saudi Arabia.

Subjects and Methods: A population-based cross-sectional study was implemented. A total of 359 subjects (175 males and 184 females) experienced Hijama in the previous three years in Madinah city, Saudi Arabia were included in the study analysis. A predesigned valid questionnaire was developed using the WHO-QoL assessment, short-term SF-36 Health Survey and the International QoL Assessment (IQOLA).

Results: The mean age of the studied subjects was 40.4 ± 12.7 years with an equal proportion of males and females. More than 90% of Hijama was of wet cupping type, with recorded very low complications (5.3%). About 80% reported an improvement of their health after Hijama, mainly among females (p= 0.002), with a higher percentage of improvement was found in physical health, mood and behavior. However, males show significant long-term improvement (> 6 months) compared to females (p= 0.04).

Conclusion: Cupping therapy, particularly wet type, was associated with an improvement of health in general with a few associated complications. There are need to increase and authorize cupping clinics in Madinah City, and to conduct more studies to address the long-term effect of cupping therapy and the underlying mechanisms.

Keywords: Cupping therapy, health profile, Quality of life, Saudi Arabia.
A study on evaluating the awareness among healthcare providers about National Patient Safety Goals (PSGs) in tertiary care spinal cord injury centre
Ms. Nidhi Yadav, Dr. K. Preetham, Ms. Neetu Maitra

Rational: Death by medicine is gaining serious attention from all the stakeholders and safety is becoming central to patient care in modern medicine. PSGs are meant to ensure patient is not harmed due to hospitalization. The awareness regarding PSGs elementary to their implementation, hence the study attempts to gauge the same.

Objectives:
✓ Assessing the awareness level among the nursing staff regarding NPSGs
✓ Identify areas warranting immediate attention about PSGs

Study subjects: Nursing staff

Methods: it is a quantitative, non-interventional and prospective study approved by Institutional Research Review Committee. It was carried out using a pre-tested questionnaire on 25% randomly selected nursing personnel (50) to measure their awareness regarding the PSGs. SPSS 16 was used for analyzing the data on the listed parameters.

Results:
75% nurses had diploma in GNM and 25% were graduates of nursing. The awareness level of nurses was highest for infection control at 91.4% followed by patient identification and medication safety at 86.34% and 76.6%. Effective communication among care provider stood at the last pedestal with 72.5% level of awareness. Out of total of 30 areas, 8 areas scored less than 80% on awareness scale and were triaged for focused intervention. 11 areas scored between 80-95% and will be targeted as level two for intervention followed by left over 7 areas which scored more than 95% on the scale.

Conclusion: Medication safety comes out as the area requiring focused intervention followed by staff communication for increasing patient safety in healthcare organization. The study was limited to only four out of seven PSGs due to paucity of time.
Disaster management in tertiary care hospital: A cross-sectional view

Rationale: A tertiary care Superspeciality hospital with more than 75% of indoor patients of spine and orthopaedic speciality. These patients are post-surgical cases with impaired sensory functions or immobilised due to nature of surgery. Indian subcontinent is prone to various natural and manmade disasters and the NCT of Delhi lies in level 4 seismic zone. Both these facts make the SCI/ orthopaedic extremely prone to any kind of disaster.

Objectives:
- To evaluate the preparedness of hospital staff towards natural disaster demanding evacuation
- To assess the demands of healthcare providers during disaster hours

Study subject: Hospital staff

Methods: Observation and simulation. The simulated situation presented to the study hospital was “earthquake of 6.9 on Richter scale hits Delhi in day time. The epic centre was in Chandighar, Punjab, however strong tremors were felt in NCR region leading to collapse of several buildings and injuring people at large scale”. The hospital was put on high alert following the incident and the casualties were rushed there for treatment.

Results:
- The building of the study hospital is a flat, two storied, H-shaped structure, hence did not suffered any damages
- The admitted patients were triaged for discharge to home or to move them form Intensive care areas to step down care, so that disaster victims can be catered
- The hospital received seventeen patients with varying degree of injuries ranging from multiple fractures and compromised organ function to walking wounded
- The triage desk screened and classified patients based on the severity of injury.
- The emergency department established another four bedded intensive care surge ward for catering the critically ill patients and extended inpatient facility by ten beds in the open area of the hospital for accommodating less critical patients

The timelines were met in establishing the incident command centre and surge wards, triaging the inpatients. Scope of improvement was seen in the following areas:
- Crowd and traffic management
- Information flow among the care providers
- Patient transport

Conclusion: Patient safety during disaster can be strengthened by regular practice and mock drills.
Effective Implementation of Herpes Zoster Vaccination (HSV) Programme Among Elderly

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The vaccine for shingles (Zostavax®) is recommended for use in people 60 years old and older to prevent shingles.

- The shingles vaccine is specifically designed to protect people against shingles and will not protect people against other forms of herpes, such as genital herpes.
- ~1 million cases in the U.S. annually; Lifetime risk of developing zoster is about 30%.
- The HSV not included for elderly vaccination programme in Qatar till the end of 2014.
- The data of reporting shingles increasing in every year in elderly.

Aims & Objectives

- To improve the vaccination rates and documentation of Herpes Zoster Vaccination from zero % to 80 % of geriatric in and out patient by the end of June 2015
- To assess the effectiveness of programme by December 2015.

Methodology

- Introduced HSV, in addition to existing adult vaccines like pneumococcal and influenza vaccines.
- Staff education by hand out and presentation about Zoster Vaccinations indication, contraindications and route of administration.
- Pre - Implementation of adult vaccine card.
- Data extraction from patient files to determine baseline adult vaccination.
- Making vaccination a regular practice for newly registered elderly patients
- Vaccination programme achieved highest rates by 4 months from Dec 2014 to March 2015 and it exceeded the goal of 80% for in patients and out patients.
- A follow up every month revealed further improvement in rate of vaccination among geriatric in and out patients in Rumailah hospital.

Next Steps

- Adding additional vaccines to the program.
- Implementation to Enaya specialized care and Home care services elderly patients in to this programme.
- Meeting with pharmacy for creating alertness for prescriptions to identify non vaccinated elderly patients.
- Follow up of new cases reporting of Shingles after vaccination.
- Gain a strong commitment from physicians and provide frequent and informative follow-up.

References

A comparison study on Patient Safety Grade (PSG) between accredited and non-accredited hospitals in Saudi Arabia
Associate Professor Virginia Plummer, Professor Wendy Cross, Nasser A Altalhi, PhD candidate at Monash University, Australia

Objectives: An exploration of perception of patient safety by clinicians: Is hospital accreditation status a factor?

Method: Using a previously validated hospital survey on patient safety (HSOPSC), an anonymous cross-sectional questionnaire was distributed to a convenience sample of clinicians from three accredited and three non-accredited hospitals at Riyadh, capital city of Saudi Arabia. A total of 1313 nurses, physicians, pharmacists, and allied health staff participated, a response rate of 72.94%.

Results: The key findings included, respondents working in non-accredited hospitals were more likely to report an ‘excellent/very good’ overall patient safety grade and less likely to report a ‘poor or failing’ grade.

Conclusion: The study found no clear association between accreditation and patient safety grade.
Clinician’s perceptions on reporting of adverse events: A comparison study between accredited and non-accredited hospitals in Saudi Arabia

Associate Professor Virginia Plummer, Professor Wendy Cross, Nasser A Althalhi PhD candidate at Monash University, Australia

Objectives: To examine the number of events reported by clinicians in a sample of accredited and non-accredited hospitals.

Method: A cross-sectional study was conducted at three accredited and three non-accredited hospitals at Riyadh, capital city of Saudi Arabia. Staff were asked how many times they reported an adverse event in the past 12 months, they have boxes to tick. A total of 1313 nurses, physicians, pharmacists, and allied health staff participated.

Results: Respondents working in accredited hospitals were more likely to report more than five events over the past years and less likely to report no events.

Conclusion: Accreditation was found to have a positive effect on reporting the events by hospital staff. If events are reported, then action can be taken to examine the factors that contributed to the event and prevent a re-occurrence. This would not be possible if there is no reporting of what occurred.
Which are the Knowledge Gaps on Hand Hygiene among Health Professionals? A Latent Class Analysis with Andalusian Public Health System Professionals

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Objectives: After the Ebola crisis, all healthcare systems in developed world strengthen their attention to patient safety practices. Among the key actions, hand hygiene emerged as the most simple, cheap and effective practice to prevent infection, from professional to patient as well as from patient to professional.

Objective: To analyze knowledge on Hand Hygiene (HH) among professionals of the Andalusian Public Health System, with the aim of identifying, prioritizing and implementing improvement actions.

Methods: Methods: Cross-sectional study with self-completed surveys conducted in 2011, based on the Hand Hygiene Knowledge Questionnaire for Health-Care Workers, elaborated by the World Health Organization (WHO). Analytical technique: latent class analysis.

Results: Results: 2448 questionnaires were received. The average number of questions answered correctly was 17.51±3.68. Questions with lower percentages of correct responses are those regarding the prevention of microorganism transmission to patients through HH after exposure to them, to medical staff before exposure to them and those related to the advantages or disadvantages of using hand rub versus hand washing.

We obtained a model with 7 latent classes. Among individual characteristics that mark differences we highlight three: Those professionals with lowest level of knowledge used to be men, young professionals and non-health workers; having received previous training does not discriminate between those who have excellent knowledge and the rest; and the most common class is more likely to use hand rub products routinely.

Conclusion: We identified a set of areas of improvement: a better and more focus training in hand hygiene to non-health professionals, especially to nursing assistants; reviewing the quality and usefulness of existing training programs for health professionals; and identifying informal leaders to encourage collective adherence to HH.


Disclosure of Interest: None Declared

Keywords: Hand Hygiene, health professional safety, Professional learning
Qatar’s CPD Framework: A Lifelong Experience That Complements Healthcare Quality Improvement

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Objectives:
1. To promote effective, relevant and accessible CME/CPD programs for all healthcare professionals in the state of Qatar To ensure all registered healthcare practitioners in the state of Qatar meet the CME/CPD licensure requirements for registration
2. To sustain a skilled workforce that provides high-quality patient care

Methods: The purpose of the CPD framework is to provide healthcare practitioners (HCPs) with a range of options for engaging in lifelong learning activities. The processes by which HCPs continually seek, acquire, renew, and upgrade their knowledge, skills, and attitudes could include formal, informal and self-directed learning and assessment relevant to their scope of practice. Research has been conducted to study the impact of continuing professional development on the quality of patient care and results establish that engagement in CME/CPD is the foundation of professional development that can lead to improved performance and health outcomes. Engagement in CPD is a personal and professional obligation which motivates HCPs to be lifelong learners and demonstrate quality through their practice.

The CPD programs developed to address the practice needs of HCPs will promote self-reflection on opportunities to sustain or acquire new competencies; close practice gaps and improve the quality of care delivered to patients. CPD accreditation standards for CPD activities will support the process by which HCPs sustain the quality of their practice and encourage acquiring competencies based on its relevance and accessibility. The creation of a national CME/CPD system supports the mandatory participation policy for all healthcare practitioners in Qatar linking CPD to the renewal of licensure by 2016. This landmark decision to uplift the quality of care for better health outcomes is a key component of the national health strategy. A national CME/CPD framework has been developed in collaboration with Royal College Canada International and a full accreditation system is under development to accredit CPD providers, programs and promote lifelong learning amongst practitioners. The pilot phase of the accreditation standards and processes will be completed in 2015. Accreditation of CPD Providers and CPD programs will strengthen the value of healthcare facilities accreditation by improving the quality of the most important resource, i.e., the workforce of the organization.

Results: The path adapted by national health strategy based on best practices has resulted in several healthcare organizations and academic institutions in Qatar seeking to be recognized as accredited CPD Provider organizations. This will encourage other healthcare organizations and institutions providing care to patients to encourage its workforce to engage in lifelong learning and develop to continuously improve the quality of care.

Conclusion: The accreditation of CPD Provider organizations and individual CPD activities enables healthcare organizations to demonstrate the processes they use to promote professional development of its workforce and thereby deliver high quality care.

Disclosure of Interest: None Declared

Keywords: accreditation, CPD and medical education, quality & patient safety improvement
Translating Of Research Finding TO Improve Patient Outcomes In Clinical Settings

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Objectives: Journal clubs have been started in March 2014 among Critical Care Areas of Hamad General Hospital /Hamad Medical Corporation(HMC) /Qatar for different ICU specialties (Trauma, Surgical ,and Medical ICUs ) .The evidences support the importance of Journal Clubs as method to improve the patient outcomes by enhancing implementation of evidence based practice and enhance professional development in clinical settings. The journal clubs enhance the skills of Critical care nurses in evaluating the literature and translating research findings to clinical practice, education, administration, and research. The objectives of the Journal clubs implementation are:

- Develop awareness of current research studies, educational practice, clinical guidelines, and theoretical frameworks in nursing and health care literature
- Motivate participation for current educational, research and/or clinical practice.
- Keep up-to-date with new knowledge
- Learn to evaluate the strength of evidence; improve ability to critically appraise research
- Promote implementation of new knowledge in practice
- Improve patient safety and outcomes
- To have an impact on clinical practice
- Facilitate and enhance best evidence based practice.

Methods: Monthly meeting at a time scheduled for one hour duration, Journal club flyer (Article) posted or email sent out to the critical care nurses one week prior the scheduled activity. It has been proposed to create incentives to participants by reward though continuing education credit (CPD, CNEs), 1CNE /session. A structured review to the selected articles for topics related to patient safety and clinical practices . At the end of the activity the Journal club facilitator will summarize the recommendations which have been decided from that journal club activity and set the action plan accordingly.

Results:

- The Incident report rates decreased significantly for last 9 months by 10%.
- The unit based pressure ulcer rate maintained below benchmark for last 6 months
- The infection rates for Hospital Acquired infections (Ventilator Associated Pneumonia, Catheter associated urinary tract infections) below bench mark for last 6 months.
- Length of stay on Mechanical ventilator decreased by 10%.
- The competence and knowledge level of critical care nurses improved significantly (Formative, summative assessment, and clinical experts review).
- Launching of clinical research activities in critical care areas in 2015.
- Improvement of the professional development involvement rate (Anecdotal )No available data for now

Conclusion: The implementation of Journal clubs activities very effective and useful to:

1. improve patient outcomes
2. Achieve the quality improvement indicators.
3. launch clinical research activities (For more pt outcomes )
4. improve level of clinical competence and knowledge(reflects on patient safety and care)
5. Enhance clinicians professional development (reflects on patient safety and care)

Recommendation: To share the outcomes with other inpatient facilities of HMC and encourage them to start the journal club activities


Keywords: Best practice, patient outcomes, patient safety and care
The Epidemiology Of Adverse Drug Events And Medication Errors In Psychiatric Inpatients In Japan: The Jade Study
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Objectives: The epidemiology of Adverse Drug Events (ADEs) and Medication Errors (MEs) in psychiatric inpatients is limited outside Western countries. The difference or similarity of nature of ADEs is important for the quality of care in psychiatric wards worldwide.

Methods: The Japan Adverse Drug Events (JADE) Study was a series of cohort studies at several settings. This report was from a psychiatric hospital and a psychiatric ward at tertiary care teaching hospital. A psychiatrist reviewed all medical charts, incident reports and reconciliations from pharmacy to identify suspected ADEs and MEs. ADEs are injuries that result from the use of a drug. MEs are defined as any deviation from appropriate medication use occurred at any step of the medication use process. Some MEs are associated with an ADE while some have significant potential for injuring a patient and are considered as potential ADEs. After those suspected events are collected, two psychiatrists independently evaluated some of them to estimate the kappa statistics. Adding two other physicians with experience of classification of ADEs in previous studies, all suspected events were classified as ADEs, potential ADEs, MEs or exclusions. They also rated ADEs and potential ADEs according to the severity of (potential) injury and preventability, and assessed the error stage of MEs in addition to its preventability. We used the validated methodology (Morimoto T. Qual Saf Health Care, 2004).

Results: This study included a total of 488 patients with 22733 patient-days; 201 (45 %) were male and the median (25% tile, 75% tile) of age at admission was 58 years old (37, 76). During the study period, we identified 1033 ADEs on 294 patients (66 %), and 404 MEs on 172 patients (38 %). Thus, the incidence of ADEs and MEs were 45.4 and 17.8 per 1000 patient-days, respectively. Among these 1033 ADEs, fatal or life-threatening ADEs accounted for 2%, and serious ADEs and significant ADEs accounted for 31% and 68%, respectively. 162 ADEs (16%) were associated with MEs, thus, considered as preventable; the incidence was 7.1 per 1000 patient-days.

Conclusion: ADEs and MEs were common in psychiatric inpatients, and the incidences were more frequent than those in the psychiatric setting in the U.S.

Disclosure of Interest: None Declared

Keywords: Adverse drug events, Medication Error, Psychiatry
Nurse Training Before Using Subcutaneous And Intravenous Prostanoids: An Experience Un NCKUH Taiwan
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Objectives: Continuous subcutaneous and intravenous Prostanoids are recommended for advanced pulmonary arterial hypertension (PAH) patients. The administration and management of these medications is complex for patients and their caregivers, as well as the nurses taking care of these patients. However, prior to implementing these therapies, education of the critical care nurses was identified as a priority. In our institution, National Cheng Kung University Hospital (NCKUH) in Taiwan, continuous subcutaneous and intravenous Prostanoids are initiated in an ICU setting. In an effort to prepare registered nurses in ICU to care for patients receiving continuous subcutaneous and intravenous Prostanoids, a specially designed training program was implemented.

Methods: The following strategies are used to train our nurses using continuous subcutaneous and intravenous Prostanoids:

1) holding programs and training courses about nursing care for patients receiving continuous subcutaneous and intravenous Prostanoids;
2) establishing practice standards including care of the central line, medication preparation, pump use, and troubleshooting and emergency measures;
3) producing video-CD regarding sterile technique, pump use, and catheter care;
4) easy-to-use dosage calculation formula;
5) return demonstration and quarterly knowledge/skills assessment;
6) teaching patients and their families how to use Prostanoids by themselves.

Results: Implementing the recommended measures achieved a significant improvement in nurses’ confidence and satisfaction. All nurses passed the assessment and no mistake happened during four years practice. Moreover, all patients could care themselves after education given by our nurses.

Conclusion: Continuous subcutaneous and intravenous Prostanoids using in PAH has demonstrated improvement in function class, hemodynamics, and survival, but it does require nurses having advanced knowledge and additional skill sets in order to implement the treatment safely. Completion of a training program that included lectures, return demonstration and discussion help preparing the nurses to care for patients receiving continuous subcutaneous and intravenous Prostanoids.

Disclosure of Interest: None Declared

Keywords: nurse training, Prostanoids, pulmonary arterial hypertension
Medication Safety Student Ambassador Program – A Multidisciplinary Interactive Program To Enhance Students’ Attitudes In Medication Safety  
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Objectives: Medical, Pharmacy and Nursing students have little chance to meet each other during their undergraduate training. However, medication safety involves a good teamwork among these three disciplines. In order to have an early promotion of safety culture and nurture our future leaders, we organized Medication Safety Student Ambassador Program which is a multidisciplinary interactive training program for students of the three disciplines.

Objectives
➢ To promote students’ awareness and attitudes in patient safety behaviours;
➢ To offer student an insight into the typical risks in use of medication in their disciplines;
➢ To encourage team work among medical, nursing, and pharmacy students as a practical way to improve medication safety;
➢ To promote reporting culture

Methods: The program contains 5 sessions including seminars, group discussion, simulation-based training, and guided site visits in clinical areas and in pharmacy. Students are required to submit a poster promoting medication safety, and a multidisciplinary group presentation at the end of the program. A pre and post program self-administered survey using The Attitudes to Patient Safety Questionnaire (APSQ) was performed to evaluate the students’ attitudes on patient safety. Responses to each item were rated on a Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Results were summarized as percentage of students’ responding with desired attitudes using APSQ. In addition, a standard evaluation questionnaire at the end of simulation and visit sessions was also used and the average scores (maximum 4) are presented to indicate the direction of the responses.

Results: 39 students were enrolled (16 year-4 medical students, 10 year-4 nursing student, 13 year-2/3 pharmacy students). The return rate of pre-program and post-program survey was 87% (34) and 54% (21) respectively. Proportion of students who recognized the contribution of multidisciplinary teamwork to error reduction increased from 63.4% to 97.7% after the program. There was also more students responded positively on error reporting confidence (from 47% to 65%) and for disclosure or reporting responsibility (from 61.7% to 79.4%). The students also found the simulation-based training (3.84/4) and site-visit sessions very useful (3.74/4).

Conclusion: This multi-disciplinary Medication Safety Student Ambassador Program generates significant impact in student’s patient safety perceptions, especially improving safety attitudes on teamwork, and reporting.

References:

Disclosure of Interest: None Declared

Keywords: Medication Safety, safety culture, undergraduate
Evaluating Staff End Of Life Training Needs At Chelsea And Westminster Hospital
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Objectives: Following a review of audit data and results of the ONS National Bereavement Survey (VOICES), Chelsea and Westminster Hospital commissioned Picker Europe to conduct a training needs assessment in order to develop a training programme with the aim of improving end of life care at the hospital.

Methods: The training needs assessment was conducted in four stages. A short literature review was undertaken. Focus groups with staff at the hospital identified as having most contact with patients at the end of their lives were conducted. The groups looked into areas where staff lacked confidence in delivering end of life care, or areas they could benefit from training. Interviews with bereaved relatives of patients who had recently died at Chelsea and Westminster, focused on their perceptions of the care their relative had received. An online survey, developed using the findings of the previous stages, asked a wider sample of staff questions about training needs, with an aim of quantifying findings of earlier stages.

Results: The research uncovered that the majority of families reported a very positive experience and good standards of care. Some struggled to outline any improvements. The study overall did find areas where improvements could be made. Results of the online survey were analysed against length of time in healthcare, specialty and length of time at the hospital and whether these characteristics’ impacted confidence in providing EOL care. It was found that doctors felt most confident providing EOL care and administrative staff and allied health professionals the least confident. It was also found that members of staff who had joined more recently had been given a higher level of EOL training during their induction, though this did not necessarily increase their confidence in providing care to this group.

Staff indicated that they found communication with patients and families the most challenging aspect of end of life care. Whilst this was covered to some extent in inductions, staff felt that further training was needed. Advanced care planning such as DNARs, ceilings of care and symptom management were also identified as a high priority for training.

Families and staff reported that improved consistency in recording and sharing information amongst staff would help to prevent some difficult situations. Further comments about note taking referenced the loss of the Liverpool care pathway in providing a framework for what ‘a good death’ looks like. The care quality across the hospital was found to be inconsistent and that experience was greatly improved on wards with a higher number of deaths. Staff highlighted that whilst the palliative care team provided excellent care to dying patients, they were concerned about the deskilling of other staff. It is possible that these were linked.

Staff wished for additional training from and better communication with the palliative care team.

Training of non-clinical staff (e.g. ward clerks) in end of life issues was desired, as these members of staff felt that they did not know how to approach end of life issues but were often the first point of contact for families contacting or visiting the ward.

Conclusion: Recommendations were made to focus training on the areas where staff were least confident of their skills or where families had reported a problem. This included writing and enacting advanced care plans, and communicating with families. As staff preferred reflective and experiential training, it was suggested that ongoing, in house training may provide the most benefit.

Disclosure of Interest: C. Christensen-Moore Other: Picker Institute was paid to conduct this research, V. Gaulter-Carter: None Declared, K. Adlem: None Declared

Keywords: bereaved family interviews, end of life care, training needs assessment
Making The Medical Manager: Educating Clinical Leaders About Quality Through Participation In Research
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Objectives: Despite recognition of the importance of research to clinical learning, [1 2] medical leadership training does not generally provide a first hand opportunity to experience the contribution of well-designed health services research to improving patient safety. Our objective is to involve medical administrators as partners in quality and safety research as part of their leadership training.

Methods: A collaborative partnership was established between a team of health services researchers and the Royal Australasian College of Medical Administrators (RACMA) to incorporate research experience for college trainees in a research project. Trainee medical administrators were invited to participate in the ‘Deepening out Understanding of Quality in Australia (DUQuA)’ project - a nationwide research project across 70 large public hospitals. The aims of DUQuA are to assess the relationships between quality management systems and processes and quality of care delivered to patients who present to hospitals with one of three conditions: acute myocardial infarction, stroke or hip fracture. Trainees are being supervised by qualified medical administrators holding executive positions in each hospital, and partnered with experienced researchers in order to plan the research, and collect and analyse data from quality, leadership and culture surveys; quality audit; patient chart review; and patient perceptions of safety questionnaires.

Results: Full participation in the research project meets the research requirements of the RACMA training program. Researchers are providing training webinars and instruction manuals to educate and assist trainees. Benefits to trainees include opportunities to gain a practical understanding of how quality management relates to patient outcomes in the hospital setting, insights into processes for conducting a large healthcare research project, training in research methods that can be used in designing future projects, participation and insights into the ethics application process, mentoring by a senior clinical administrator and experienced academic researchers, networking opportunities with a variety of health professionals throughout the hospital, and Continuing Professional Development (CPD) points. Benefits to the research team include increased clinical participation in the project, improved access to the hospitals, practical assistance in data collection, insights into the training and needs of future medical administrators, and the opportunity to raise the profile of research among clinicians and hospital executives.

Conclusion: Participation in the DUQuA project is providing future clinical leaders with strategically valuable expertise in the contribution of research to improving safety and quality in hospitals. They are gaining life-long skills in understanding the relationships between quality management and patient outcomes, at both hospital and department levels. This will assist them in selecting and implementing appropriate quality improvement programs and interventions in the future.

References:

Disclosure of Interest: None Declared

Keywords: clinical leadership, quality management, research training
Clinical Librarians – Building Bridge, Driving Quality, Delivering Value
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Objectives: Located in Qatar, Sidra Medical and Research Center is a new women and children’s hospital based on the North American academic medical center model of providing excellence in education, research and patient care. The aim of this study was to ascertain clinicians understandings and expectations of the clinical librarian model in order to develop a model for implementation in an academic medical center in the Middle East.

Methods: In 2014, library services at Sidra Medical and Research Center conducted a focus group with a team of inter-disciplinary healthcare professionals to gather their understanding and expectations of the role and functions of a clinical librarian. As an employer of large numbers of international staff, all of whom have experienced different levels of interaction with library services in their former positions, we saw the need to examine staff experiences with and understanding of clinical library services. Following the results of our focus group, we then took the clinical librarian model in use in other healthcare organizations around the world and contextualized it for an academic medical center following the North American medical model in the Middle East.

Results: Participants in our focus group appeared to have a very clear understanding of the role of the clinical librarian stating that "people's definition of a librarian doesn't actually fit with the level of skill that you guys have". Furthermore, participants employed the Critical Incident Technique (CIT) to recall a critical incident where the input of a clinical librarian would have or did make a significant difference to patient care. “It wasn’t the point of being right or wrong - it was a patient issue and it was the fact that it was a resource that we could have had there at hand”.

Conclusion: To date, clinical librarian research has centered on North America and Europe. To the best of our knowledge, the Sidra model is the first of its kind in the Middle Eastern region. Our small study informed the development of a clinical librarian model for implementation in a new women and children’s hospital in Qatar. Unanswered patient care questions and the evidence-practice gap are at best, missed opportunities for quality improvement. At worst, they are key factors in suboptimal patient care. Clinical librarians are a low-cost, high-value intervention, proven to positively impact patient care outcomes.(1) This poster demonstrates the Sidra clinical librarian model and its potential to positively impact the patient care outcomes of women and children in Qatar.


Disclosure of Interest: None Declared

Keywords: Clinical librarians, Evidence-based practice, quality and patient safety
The Influence Of Surgeon And Hospital Volume On Risk-Adjusted Outcomes Of Oesophago-Gastric Cancer Surgery

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Objectives: Oesophago-gastric (O-G) cancer surgery has been centralized in the NHS in order to assure all patients get optimal treatment. Accordingly, surgeon and hospital volumes have increased. The aim of this study was to assess differences in risk-adjusted outcomes between hospitals and surgeons, and to assess the influence of hospital and surgeon volume on outcome, in this new setting.

Methods: We used 4,868 cases of the O-G cancer audit data from the year 2012 to 2013 to study the outcomes 30-day, 90-day mortality and the complication anastomotic leakage. We used multivariate logistic regression models to quantify the effect of surgeon and hospital volume on outcome, adjusted for patient characteristics. We used multivariable random effects logistic regression models, including a surgeon and hospital level, to quantify the between hospital-differences and between-surgeon differences, adjusted for patient characteristics and volume. Differences in patient outcomes between surgeons and hospitals were expressed as the median odds ratio (MOR), which is the odds ratio for an outcome between two patients from two randomly chosen hospitals.

Results: Even after centralization substantial differences between hospitals and surgeon exist in outcomes after OG cancer surgery. These differences were partly explained by volume. Higher hospital volume was mainly associated with lower 30-day mortality (OR: 0.89; 95%CI: 0.82-0.96). Higher surgeon volume was mainly associated with less anastomotic leakage (OR: 0.92; 95%CI: 0.87-0.96). Hospital volume explained a part of the between-hospital variation in 30-day mortality with adjustment for patient characteristics and for surgeon volume (MOR decreased from 1.38 to 1.30), surgeon volume explained part of the between-hospital variation in anastomotic leakage with adjustment for patient characteristics and hospital volume (MOR decreased from 1.67 to 1.56).

Conclusion: High volume has a positive effect on patient outcomes. As differences in patient outcomes still can be observed, further centralization is recommended. As variation in anastomotic leakages was mainly explained by surgeon volume, anastomotic leakages can be used to monitor quality of surgeon care. While 30-day mortality was shown to be an important indicator for measuring quality of hospital care.

Disclosure of Interest: None Declared

Keywords: hospital volume, postoperative mortality, surgeon volume
Using Pressure Ulcer Simulation Scenario To Improve Nurse’s Pressure Knowledge And Outcome In The Medical Center In Taiwan

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Objectives: In the aging trend, hospitals had monitor inpatients pressure ulcers happen. If hospital not early assessment and prevention it’s happen, it will be increase infection and sepsis probability, extend the length of stay, health care costs, and other negative effect. Many literature findings pressure ulcer can prevention and treatment, and nurses believe pressure can be avoided, but they may not be able to perform correct prevention pressure ulcer behaviour. We want to explore pressure ulcer prevention and care, and according to pressure ulcer stages (1st to 4th stage) design five kinds of simulated clinical scenarios, so that each student can learn the proper use of turning aids, dressings, strengthen pressure sores progression of cognitive and pressure ulcer wound care and other measures, especially pressure ulcer prevention care implementation, thus establish preventive behaviour of caregivers pressure.

Methods: In December 2012, we collected participate training nurses at Taiwan North Medical Center quiz scores, self-knowledge and satisfied scores, and try to know the training model effectiveness and satisfaction. We use frequency and percentage describe demographic data and on training satisfied degree. We also use Pair T-test and Pearson correlation to compare quiz scores and pressure knowledge scores difference between before and after training.

Results: We collected total thirty-five female nurses, among work seniority of 3-5 years were 31.4%, 6-10 years were 40%, more than 10 years were 28.6%. We found nurses after training model have higher scores than before training, especially work seniority of 6-10 years (P <.005). We found trainees self-learning scores had positively significance correlation at training goals (r=0.51, P =.002), explain clarity (r=0.96, P <.001), clinical application (r=0.85, P <.001), appropriate aids (r=0.91, P <.001) and training satisfaction (r=0.95, P <.001). We also found trainees at stages of pressure ulcer, knowledge of pressure ulcer dressing, and dressing of practical application had positively correlation (P <.001). Finally, pressure ulcer incidence rate in 2013 from 0.08% down to in 2014 0.06%, and the third stage prevalence rate of pressure ulcer from 1.06% to 1.03%, the fourth stage prevalence rate of pressure ulcer from 0.34% to 0.09%.

Conclusion: We found pressure ulcer simulation scenario training model can enhance learning motivation and outcome, and the training model can provide clinical nursing care standards for pressure ulcer wound knowledge, implementing pressure ulcer assessment of high-risk group, more help early found pressure happen, timely provision of preventive measures, and thus to reduce the incidence of pressure sores, to improve the quality of care and better.

Disclosure of Interest: None Declared

Keywords: PRESSURE ULCER, SIMULATION SCENARIO
Development And Validation Of The Safety Attitude Questionnaire: Korean Version Revision 1 And The Application Of Variance Components Models And Empirical Bayes Method

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Objectives: Since the Korean version of the Safety Attitude Questionnaire (SAQ-K) was developed and validated, many hospitals have used it to measure safety culture of each clinical area. However, some Korean hospitals found that some of the SAQ-K items did not convey their original meanings, and traditional analysis method with SAQ-K did not detect subtle differences in safety culture across clinical areas. This study thus presents a clearer version of SAQ-K, SAQ-K revision 1 (SAQ-K-R1), and explains how to estimate SAQ scores more accurately.

Methods: With permission of the original developer of Safety Attitude Questionnaire (SAQ), a multidisciplinary team translated SAQ into the Korean language using the back-translation method and checked content validity. After the pilot test, two negatively worded items were excluded because they were frequently misunderstood once translated into Korean. Eventually, the SAQ-K-R1 was composed of 34 items in 6 domains – Teamwork Climate (TC: 5 items), Safety Climate (SC: 6), Job Satisfaction (JS: 5), Stress Recognition (SR: 4), Perceptions of Management (PM: 10), and Working Conditions (WC: 4) – and demographic information, including the respondent’s clinical area. The SAQ-K-R1 was administered in November 2013 in a large metropolitan hospital in Korea. Internal consistency was tested using Cronbach’s alpha, and construct validity was tested through confirmatory factor analysis (CFA). Variance components models were developed and likelihood-ratio (LR) tests were conducted to examine whether SAQ-K-R1 scores differed by clinical areas. When there was a difference across clinical areas, scores were calculated for each area. Since there was a difference, we applied the empirical Bayes (EB) method to obtain more accurate SAQ-K-R1 scores for each clinical area, because of the huge variability in area-level scores.

Results: A total of 1,381 completed questionnaires were returned from 72 clinical areas of the hospital and after excluding those with too many missing values especially in clinical area variables, 1,142 were analyzed. Internal consistency measured with Cronbach’s alpha was reliable for each domain: 0.84 for TC, 0.84 for SC, 0.91 for JS, 0.73 for SR, 0.93 for PM, and 0.76 for WC. The model fit indices from CFA were also good: 0.911 for goodness-of-fit index, 0.894 for adjusted goodness-of-fit index, 0.924 for normed fit index, 0.944 for comparative fit index, and 0.044 for root mean square error of approximation. From LR test of variance components models, SAQ-K-R1 scores significantly varied across clinical areas for all six domains, which justified our obtaining SAQ-K-R1 scores for each clinical area. Therefore, the EB method was applied. On a scale of 0-100, the clinical area with the largest variability in TC showed a mean score of 77.5, and its 95% confidence interval (CI) was 54.2-100.8, the range of which was up to 46.6. Once the EB method was applied, the mean changed to 67.6 and the 95% Bayesian confidence interval (equivalent of CI in EB method) was 58.0-77.2, whose range was only 19.1. A similar pattern of change in CIs was observed across all six domains, allowing observation of precise clinical area-level scores.

Conclusion: We developed and validated SAQ-K-R1 that has been significantly improved from the previous version with much more sophisticated translation that conveys the subtle meanings and nuances of the original SAQ items. The variance components model and EB method are useful to examine differences in SAQ-K-R1 scores over clinical areas, and to obtain more precise area-level scores.

Disclosure of Interest: None Declared

Keywords: Safety Culture, Safety Attitude Questionnaire, Empirical Bayes Method
How Can We Improve The Acknowledgement Of Healthcare Workers Of The Fall-Down In The Hospital?
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Objectives: The aim of this study is to reveal the situation of workers’ understanding and the effect by hospital-wide program on it for the prevention of fall-down in the hospital.

Methods: We did the causative analysis of fall-down based on the failure mode effects analysis. The categorical causes are educational or recognizable, environmental, hospital beds, disease- and drug-related. The risk priority number is higher in educational or recognizable factor among several category of the causes, even though there have been many activities reducing the happened fall down in the hospital. However, last year we performed the diverse approaches for reduction of fall down for all workers; updating the notice, educating the workers, monitoring the relevant activities, improving the facilities, etc.

Results: Among the several categories, the risk priority number of workers’ acknowledgement was markedly declined among other categories after several months (from 427 to 70). The monitor shows the increase of workers’ performance of following the prevention guideline of fall down (from 7.8 to 9.1 out of 10). The number of adverse event reports of fall down was decreased by 14% at the end of last year.

Conclusion: The hospital-wide program can improve the workers’ awareness of the prevention for fall-down.

Disclosure of Interest: None Declared

Keywords: acknowledgement, fall down, healthcare workers
The Standardized Activities For Suicide Prevention
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Objectives: It is reported that the probability of committing suicide for those who suffer from mental illness is 8 times higher than the general public. About 25~50% of these individuals re-attempt suicide more than once in their lives and 8~9% of complete it. The suicide attempt rate of inpatient is about 0.1~0.4%. This may result in emotional burdens upon the medical teams caring for them. Legal issues related to the death may also occur. During the 7-month period in our psychiatric ward we found that 34% of the accidents were related to suicide attempts. Although our medical team had tried to prevent their suicide attempt, the number of patients attempting suicide had been increasing. Therefore, we saw the need to make more systematic and specific management protocol to improve the patients’ safety.

Methods: We applied the method of Plan-Do-Check-Act (PDCA) for this project. In the first ‘Plan’ stage, we investigated the suicide attempt rate and surveyed for the satisfaction with the suicidal preventive interventions providing by staffs in admission. As a result, we received a 90% satisfaction rate. Among the unsatisfactory factors were a lack of a standardized tool for suicidal risk assessment and continuous intervention, and insufficient monitoring for suicide prevention. We thought it was necessary to utilize a suicidal risk assessment tool, share it with each other and build a management system based on the score of it. In the second ‘Do’ stage, we decided to apply Severance Suicide Scale (SSS) as a suicidal risk assessment tool to all of the patient at admission. We screened out the potential suicidal risk patients according to the score. Then we investigated the SSS applied rate from May to June, 2014. The result revealed the rates of 76% at admission and 5% at discharge. Even though it was an improved outcome compared with the previous system, the suicidal risk assessment using SSS at discharge was performed at a low rate. The results showed the need for strategies to improve the performance rate. Consequently, we developed the Critical Pathway (CP) for suicide preventive intervention including regularly checking the SSS, fulfilling the no-harm contract and frequent inspecting of patient’s environments. Through our medical information processing proceeding system, we applied to all the inpatients.

Results: In the third ‘Check’ stage, we found that the SSS performance rate was 100% at admission and 100% at discharge as well. The satisfaction rate with suicidal preventive intervention reached 100%. The most helpful intervention was counselling (42%), followed by, assessment by direct question related to suicide, ranked in the second place at 19%. No-harm contract placed third at 12%. As a result, there were no accidents related to self-injury or suicide attempt after this project.

Conclusion: The development of CP for suicide prevention uses diverse approaches based on the risk assessment. This approach considering the level of suicidal risk accounted for the decrease in the accident rate related to suicide. An increase in patient satisfaction is an additional benefit. Overall, we achieved a significant improvement in patient safety. Therefore, as the forth ‘Act’ stage, we suggest all medical personnel to utilize CP for suicide prevention.

Disclosure of Interest: None Declared

Keywords: SUICIDE PREVENTION
Continuum Of Care As New Performance Challenge: Improve Clinical Microsystem’ Performance Pursuing Complex Patient Value
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Objectives: Quality, safety and accreditation systems are making significant progress in healthcare. The outcomes remain debatable due to several factors including continuity and coordination between ambulatory and hospital care. Ethic and quality require an overall value of care specially for chronic patient flows: the performance of each unit does not guarantee the performance of all care delivery system! Why, where, when and how and for who implement corrective actions?

Methods: The research design was an observational study that, for the most part, used qualitative methods such as 1/ personal in depth interviews and self-administered clinical microsystem survey of - Oncology units (Supportive care unit and One day care unit) at Georges Pompidou Academic Hospital - Geriatric department (Acute care unit) at Ambroise Paré Academic Hospital and 2/direct observations : - New tasks definition meeting of "ASDES" Teritorial Healthcare Network members (ambulatory delivery care and hospital care)

Results: In-depth interviews have allowed to define the care continuum brakes as leadership, hierarchical support, continuous education, exchange and communication between caregiver teams, use of information systems and information technology as available community resource awareness ... The patient flow observation shows a significant existence and mind-set of coordination despite the lack of standardized exchange and communication between caregivers. However, the complexity of some patient cases needs special expectation between teams in order to increase patient value, improve care delivery performance and team experience learning.

Conclusion: New dedicated territory healthcare network tasks (in France) and quality improvement tools (as Guidelines, Standardized coordinated practices between caregivers - ambulatory and in patient care- and their appraisal) are a guarantee to track, to manage better these complex patient care continuum and improve the overall delivery performance.


Disclosure of Interest: None Declared

Keywords: clinical-microsystem, performance, continuum of care, patient value, territorial healthcare network
Which Preventable Deaths Might Not Be Managed With Rapid Response Teams

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Objectives: To discover if there is any factor that may influence the medical emergency team or Rapid Response Teams (RRTs) to avoid preventable deaths.

Methods: This is a retrospective analysis of the preventable death from the documented verdicts of the criminal court in Taiwan from 2000 to 2010. Among 686 claims, 120 were declared to be guilty, in which 66 were preventable death. Seven not fit the early resuscitation criteria as the RRTs requested, 2 neonatal deaths related with delivery and 1 forged data of vital signs were all excluded. In the fifty-six, all cases received autopsy or surgery thus the diagnosis was confirmed. The verdicts record the claims, the defences, why they are malpractices and analysis on future death prevention.

Results: The moments to apply alternative managements to prevent mortalities advised from the court were studied: 38 before the onset of the early warning signs, 10 the same level, 8 unable to predict. Factors contributing to unable to avoid preventable death were: Errors in diagnosis inclusion 15 misinterpretations of the symptoms (e.g. 3 peritonitis missed as wound pain, 4 hypoxic conscious change and 4 atypical chest pain as psychological anxiety, 2 wheezing from heart failure as bronchospasm, 1 haemolysis resulting in oliguria as hypovolemia, 1 headache from increased intracranial pressure as scalp wound pain); Nine negligent second disease (e.g. no treatment of hyperthyroidism before orthopaedic surgery); Four delayed diagnosis of the cancers resulting in the terminal stage; Twelve fail to apply the indicated physical or laboratory tests; Nine fail to act on the results of tests or serial minimal changes of monitoring; Twelve errors in treatments such as: 4 not indicated care, 5 inappropriate severity (e.g. insufficient drainage with profuse internal bleeding, 2 with the anticipated benefit from surgery not exceed the known risk, 1 having superior alternative treatment available); Nine insufficient or avoidable delayed treatments from lack of skill or knowledge (e.g. difficulty intubation); Twelve errors in administering the treatments; and Nine fail in communication.

Conclusion: Some preventable deaths occurred while the patients received resuscitation nevertheless before the early warning signs. They may come from errors in diagnosis, treatment errors, insufficient or delayed treatments. Further study among the deaths after RRTs failure is needed to disclose the contributing factors. However, necessitated early review of the clinical course from the onset of the problem may improve this outcome.


Disclosure of Interest: None Declared

Keywords: PREVENTABLE DEATH, RAPID RESPONSE TEAMS,
Objectives: The Plan-Do-Study-Act Cycle method is commonly used in healthcare improvement, however, its conduct has been shown to lack adherence against original guiding principles. (1) Attention needs to be paid to why fidelity is low. Understanding contextual factors will help future users and support and education ensure the full intended benefits of the method are being realised. The CLAHRC NWL programme has supported multiple Quality Improvement (QI) projects to use the PDSA cycle method. Over three annual rounds of QI projects, modifications were made to how education, training and support were delivered improve PDSA conduct. This novel study investigates whether these deliberate changes to features of a QI programme improves the fidelity of PDSA cycle conduct. The study addresses the research question: Did the fidelity of PDSA cycle conduct by QI projects supported by the CLAHRC NWL programme change between annual rounds of projects and, if so, why?

Methods: A mix-methods approach was taken. QI project PDSA cycle conduct was assessed against a framework outlining classifications of key principles of the PDSA cycle method including: Learning activity, Predictions, Iterative cycles, Incremental testing scale, use of data over time and documentation. (1) ANOVA and chi-square statistical tests were used to determine whether there were statistically significant changes in conduct between rounds. To explore changes in QI programme features, documental analysis of PDSA education and training materials, project reports and meeting minutes was conducted and supplemented with interviews with CLAHRC NWL programme team staff responsible for programme changes. Thematic analysis was conducted to identify prominent contextual factors influencing PDSA cycle conduct.

Results: Significant improvements in the mean number of PDSA cycles per project, quality of documentation, use of predictions, iterative nature of cycles and quantitative data use were observed. These aligned with observed and reported changes in QI projects intention to use, understanding and enactment of the PDSA cycle method. These three factors were influenced by changes made by the CLAHRC NWL programme. The findings suggest a number of positive influencing factors:

- Create buy-in by allowing discussion and debate around the methods rationale rather than just didactic training targeting understanding
- Early awareness of multiple tools and techniques of QI and staggered detailed training dependent on QI project stage
- Peer delivered examples of local healthcare QI projects using PDSA cycles successfully
- Deployment of a member of staff to facilitate the use method and act as a link between the programme and project team instead of expert arms-length coaching

Conclusion: The study demonstrates the journey of a research and improvement programme, the CLAHRC NWL, supporting the use of PDSA cycles in teams aiming to improve quality of healthcare. It shows how deliberate changes to support and education, informed by the experiences of the programme, impacted the conduct of PDSA cycles. No previous research in improvement science literature has attempted to link fidelity of method, analysis of change overtime and qualitative exploration of reasons for change. This type of research is vital to increase the scientific rigour of QI methods and help frontline line improvement teams’ use the methods to problem solve and pursue improvements in patient care


Disclosure of Interest: None Declared

Keywords: Improvement science, Learning organisation, PDSA Cycle
A Discussion On The Effect Of Improving Nursing Care For Patients On Ventilator Utilizing Empirical Method
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Objectives: This case is about a patient losing consciousness due to intracranial haemorrhage and sent to the hospital. He was on endotracheal tube with ventilator use. Weak cough reflex could not cough sputum to the endotracheal tube completely. Suction is required once every 2 hours on average. As a result, the ventilator was put on a heated humidifier in use. As there was too much sputum and the patient was not able to cough by himself, ventilator associated pneumonia (VAP) was caused. After the said patient was put on a nasogastric tube and fed, diarrhoea occurred, giving rise to red buttocks. Diarrhoea which is caused after enteral feeding by a critically ill patient is often attributed to feeding formula. But this is not true. Through this case, we attempt to discuss empirically causes that lead to VAP and red buttocks due to diarrhoea.

Methods: Period of care was from March 3, 2013 to March 15, 2013. Question 1: Would a patient under ventilator put on humidifier have a higher VAP infection rate than a patient put on artificial nose? Question 2: Could a patient under diarrhoea use zinc oxide paste to improve his incontinence associated dermatitis (IAD)? Chose Medline, PubMed and Cochrane Library for searching for information by entering ventilation associated pneumonia, mechanical ventilation, humidity, humidification, Incontinence, Skin care, Zinc oxide, Dermatitis, etc. Custom post type was set to Systematic Review, then set to Randomized Controlled Trial. These same keywords were used for searching in the above 3 databases separately. Articles which were over 5 years from now were deleted.

Results: The literature and clinical applications results show: 1. Heated humidifier can assist to humidify sputum for suction and make them more comfortable. But it is not suggested to apply it to VAP preventive strategies. 2. “Washing hands correctly” has been viewed as one of the most effective methods which reduce hospital infections. 3. During and after feeding, the patient should remain in semi-fowler’s position to avoid food being sucked in when vomiting. 4. Skin cleaning and moisture keeping can reduce the incidence of pressure sore in incontinent patients. 5. Skin protectants like zinc oxide, Sudocrem, etc., can improve skin rashes and infiltration. Sudocrem antiseptic healing cream is better than conventional zinc oxide paste. 6. Both 3M no sting film and zinc oxide can improve patients’ skin condition, and the former is better than the latter and is economically more effective. Give care according to the aforementioned empirical guide and the effect is remarkable.

Conclusion: Currently opinions on clinical treatment models are often different. Most nursing personnel only have a smattering of knowledge of related resources and nursing guidance. As empirical nursing develops, nursing care is also adjusted. In constructing their service model, nurses are required to consider patients and their family’s character and needs. With planned and integral nursing guidance, the team works together throughout the process and reaches consensus and develops a patient-centered nursing model. A medical team is a group which requires high trust. Members support each other and collaborate. Everyone contributes his talent and works for the group’s mission and common goals. While we rely on an empirical basis to give patients and their family health education, we can increase their sense of trust. Patients and their family believe more that the medical team is working hard to keep their good life quality.

Disclosure of Interest: None Declared

Keywords: Evidence-based Nursing
The Quality In Acute Stroke Care (QASC) Implementation Project: Taking Evidence-Based Practice Research Into The Real World

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Objectives:

Background: The Quality in Acute Stroke Care (QASC) Trial demonstrated that the supported implementation of clinical protocols for the management of fever, hyperglycaemia and swallowing ability (FeSS protocols) following stroke had a significant impact on patient outcomes. The trial showed a significant decrease in death and dependency by 16% (p=0.002); reduced temperatures (p=0.001) and glucose levels (p=0.02); and improved swallowing management (p=<0.001) in patients following a stroke. The trial used a multidisciplinary approach consisting of a supported, nurse-initiated, evidence-based interventions to embed these three clinical protocols into practice.

Objective: The aim of the QASC Implementation Project (QASCIP) was to implement the FeSS protocols, using the implementation strategies from the QASC Trial across all stroke services in New South Wales, Australia.

Methods: We established collaborations with government agencies (Local Health Authorities and the New South Wales Agency for Clinical Innovation), non-government agency (National Stroke Foundation) academics and clinicians. We replicated the intervention from the original QASC Trial namely barrier and enabler assessments, educational workshops, engaged local opinion leaders, used reminders and provided on-going support to the nominated site champions. We used a pre and post design study to measure protocol adherence by using the National Stroke Foundation clinical audit web-based tool. Each site audited a maximum of 40 medical records pre and 40 medical records post implementation.

Results: The QASCIP ran for 14 months. All (n=36, 100%) sites participated in the medical record audit and provided data for a total of 2144 patients (pre-implementation: n= 1062; post-implementation: n=1082). Following implementation, significantly increased proportions of patients received care according to the fever (pre: 69%; post: 78%; p=0.0031), hyperglycaemia (pre: 23%; post: 34%; p=0.0085), and swallowing (pre: 42%; post: 51%; p=0.0331) protocols.

Conclusion: We demonstrated successful translation of Class 1 Level B evidence into clinical practice across an entire Australian state within a short –time frame. Our project highlights a successful mechanism to translate research findings into the real world of clinical practice to improve patient outcomes.


Disclosure of Interest: None Declared

Keywords: implementation, stroke, translation
Validating SERVQUAL Instrument In Measuring District Health Service Quality: An Innovation In Health Care Quality Research

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Objectives: to discover new dimensions of health service quality and to validate the dimensionality of the SERVQUAL instrument in the context of District health services.

Methods: A cross-sectional survey was conducted during 2013 in the Balasore District of Orissa, India. Using purposive sampling the District was divided into central, northern and southern regions, 590 patients (200 from District hospital, 150 from 3 community health centers (1 from each region) and 240 from 12 primary health centers (4 from each region)) were interviewed. Five point Likert scale was used to measure five original SERVQUAL dimensions (22 items: 5 Tangibles, 6 Reliability, 4 Responsiveness, 3 Assurance and 4 Empathy) and six additional dimensions (10 items: 2 Corruption, 1 Mistakes, 2 Overall Quality Level, 2 Overall Quality Trend, 1 Outcome and 2 Discrimination). Factor analysis was performed using SPSS-20.

Results: Thirty-two items (22 SERVQUAL and 10 additional) were subjected to Principal Components Analysis (PCA). Sufficient coefficients >0.3 are found in the correlation matrix. The Kaiser-Meyer-Olkin value 0.9 exceeding the recommended value of 0.6 and the Barlett’s Test of Sphericity reached statistical significance p<.005, supporting the factorability of the correlation matrix. PCA revealed the presence of seven components with Eigenvalues exceeding 1, explaining 33.39%, 9.33%, 7.48%, 5.65%, 4.50%, 3.51% and 3.23% of the variance respectively. Five components are retained as a clear break was noticed in the Scree plot after the sixth component and again validated by parallel analysis as only five components with Eigenvalues was exceeding the corresponding criterion values. Varimax rotation was performed with five factor extraction. The rotated solution revealed the presence of simple structure, with five factors explaining 60.37% (60% threshold) of the variance (with factor 1, 2, 3, 4 and 5 contributing 23.14%, 12.30%, 11.94%, 7.07% 5.92% respectively). Fifteen items (E1-4, Res1-4, R3-6, and A1-3) were loaded under the factor 1 measuring behaviours (Responsiveness, Empathy, Assurance, and Reliability) of the health service provider and renamed as REAR-Behaviours quality dimension. Five items (OQL1-2, OQT1-2, O1) were loaded under the factor 2 measuring outcomes of the health service quality and named as outcome quality dimension. Seven items (T1-5, R1-2) were loaded under the factor 3 measuring tangibles and IEC (information, education and communication) and renamed as Tangible-IEC dimension as IEC making patient precisely informed about health service delivered as promised. Three items (C1-2, M1) were loaded under the factor 4 measuring negligence in the health service quality and named as boo-boo/negligence quality dimension. Two items (D1, D2) were loaded under the factor 5 measuring discrimination during health service delivery and named as discrimination quality dimension. Cronbach’s alpha for each new factor (0.93, 0.90, 0.84, 0.83 and 0.86 for factor 1, 2, 3, 4 and 5) also exceeded the recommended value 0.70, indicating that scale items in each dimension are internally consistent and reliable.

Conclusion: The factor analysis result does not support the original SERVQUAL five-factor model of Parasuraman et al. (1988), but revealed a new five-factor dimensionality namely REAR-Behaviours, outcomes, tangible-IEC, boo-boo/negligence and discrimination. These new dimensions will have policy and management implications to measure, assure and improve quality in the developing world District health services where the healthcare is not really delivered to the patient as promised, but delivered with discrimination and corruption based on patient’s socio-medical status and delivered with unreported professional malpractice.

Disclosure of Interest: None Declared

Keywords: RESEARCH INSTRUMENT
To Investigate The Applicability Of A Clinical Prognostic Tool Across Care Settings And The Influence Of Measuring Outcome At Different Time Points In The Clinical Course

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Objectives: To investigate the applicability of a clinical prognostic tool across care settings and the influence of measuring outcome at different time points in the clinical course.

Methods: Recent studies indicate that external validity problems might occur when transferring a validated clinical decision aid from one context into another. This could be due to differences in cultural-setting, patient-mix, duration of disease or time point of application. Therefore there is a need for further investigation of the applicability of such decision aids, e.g. clinical prognostic tools.

The STarT Back Tool (SBT), which is a patient questionnaire that has predictive ability by stratifying low back pain patients into low, medium or high risk of poor prognosis, was used in the study. Cohorts from chiropractic (n=416), physiotherapy (n=200), general practice (n=265) and secondary care (n=973) settings were collected from 2011 to 2013. Data describing patient status, episode duration and care setting were registered at baseline and all patients were stratified according to SBT. Prognosis regarding clinical course was determined by changes on the Roland Morris Disability Questionnaire (RMDQ) at 3, 6 and 12 months follow up. Longitudinal analysis was made.

Results: Results showed that the expected average RMDQ score over the clinical course (3 to 12 month period) differed from the chiropractic setting (median episode duration of 0 to 2 weeks) to the secondary care setting (median episode duration of 10 months). The predicted activity limitation for the secondary care setting low-risk group approximated the prediction for the high-risk group in the chiropractic setting. SBT risk subgroup, sex, age, care-setting, and episode duration were all independent prognostic factors. The only interaction that affected the prognostic ability of the SBT was very short episode duration (0-2 weeks) and only for the high-risk subgroup compared with the low risk subgroup (p<0.002).

Conclusion: The results indicate that the predictive ability of the SBT across care settings was unaffected by the care setting per se. When controlling for clinical characteristics that differed between patient populations not assessed by the stratification questionnaire, the results showed that only very short episode duration affected the SBT predictive ability. These results indicate that when interpreting the applicability of e.g. prognostic questionnaires that show different results in different settings the differences might not necessarily be because of poorer prognostic ability. It may actually be a function of non-assessed variability across care settings, in this case episode duration. Before determining whether a questionnaire is applicable, testing for confounding and potential interactions must therefore be undertaken.

Disclosure of Interest: None Declared

Keywords: Applicability, Interaction, variability
Defensive Medicine: Overview Of The Literature
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Objectives: The purpose of the study is to analyze the secondary literature on the subject of defensive medicine (MD) in order to gather information and evidence useful to identify a shared definition identify the cause, quantify the frequency and the economic impact.

Methods: We conducted a systematic review of secondary literature published internationally according to the methodology dell’ overview of reviews. Were explored major biomedical databases. In order to identify all publications that contain the term "defensive medicine" in all fields have been identified and researched, as at 14 May 2013, the following terms and free mesh joined together by specific boolean operator: "defensive medicine" [mesh] or "defensive practice" [mesh] or defensive medicine [text word ], limiting the publications to the type "review". Were considered all publications in English, Italian and Spanish. Each item included was evaluated in terms of the methodological quality by the three reviewers in a blind. The publications were analyzed to answer the following questions:
1) What is the definition of MD?
2) What are the causes of MD?
3) What is the frequency of MD?
4) What is the economic impact of MD?

Results: Were identified in total 67 reviews: 27 publications have responded to the inclusion criteria and have met at least one of the research questions. The results showed that defensive medicine has to be understood primarily as an adaptation of the medical profession to the pressure of the risk of litigation leading to behaviour motivated by fear of claims for damages from negligence in professional responsibility, the so-called malpractice, and not by the real condition of the patient health. The most documented cause is therefore the fear of not making the right diagnosis and incurring complaints for malpractice. Internationally, the maximum frequency of DM has been observed in the United States where 21% of medical practices is affected by professional behaviours related to the DM and a percentage between 83% to 93% of doctors admitted to have practiced DM during the last year of practice. As an example regarding the caesarean section rates due to DM ranged internationally from 4.8% to 12.7%.The economic impact assessment has been addressed with different methodologies in different studies. However, 34% of health care costs seemed to be generated by the DM, with an annual expenditure of $ 27 billion. It is interesting to note that these costs were widely underestimated by physicians and patients.

Conclusion: DM would seem to be a phenomenon now structured in the actual healthcare systems afflicting all the diagnostic-therapeutic with particular severity in some disciplines and wasting a huge amount of human, organizational and economic resources. In conclusion, although our findings cannot drive the implementation of direct behavioural recommendations to avoid DM for professional, this study showed how is necessary to strengthen future research efforts to face effectively DM.


Disclosure of Interest: None Declared

Keywords: defensive medicine, malpractice
PATIENT ASSESSMENT OF A PHARMACY STAR RATING MODEL

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Objectives: To describe patient feedback on the creation and use of a Pharmacy Star Rating Model, a pharmacy-specific aggregate performance score based on the Centers of Medicare and Medicaid Services Medicare Star Rating.

Methods: Moderated focus groups were conducted in Arizona and California to ascertain consumer input on the Pharmacy Star Rating Model. Patient eligibility criteria included: utilization of a chain or independent pharmacy; and presence of a chronic disease managed primarily via medication. Focus group discussions targeted: factors utilized in pharmacy selection; definition of pharmacy quality; opinions of the Pharmacy Star Rating Model; and how patient might use the model. Qualitative data classification techniques were utilized to identify themes. Additional focus groups are planned in North Carolina, Indiana, and New York.

Results: Currently, 23 patients have participated in three focus groups. The methodology for the proposed Pharmacy Star Rating Model was acceptable to participants. The desire for item-specific ratings, instead of a singular composite score, was identified. Most participants agreed the Pharmacy Star Rating Model would be useful for choosing a pharmacy. However, many participants stated the rating system would not influence their decision if they were content with their current pharmacy. The most commonly reported factor used for pharmacy selection was convenient location. Customer service and endorsements from physicians, family members, and friends also influence pharmacy selection.

Conclusion: The Pharmacy Star Rating Model was acceptable to participants, however the ability to assess individual score components is important for decision-making. The rating system may be useful for initial pharmacy selection but may not influence switching between pharmacies.

Disclosure of Interest: None Declared

Keywords: Patient Safety and Quality, Pharmacy
Effectiveness Training: Use Of Evidences As Quality Indicators Of Results In Unimed Santa Helena Hospital

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Objectives: The objective of this study is to describe the change of culture in effectiveness training analysis conducted in Unimed Santa Helena Hospital.

Methods: Measure the effectiveness of training has been a great challenge to training and development sectors in the context of demonstrating the adequate perception of the acquired learning. The study was performed at a private, tertiary, hospital in the city of São Paulo in south-eastern Brazil. Given the need of conducting a training with a focus on patient safety, we conducted a training with the intention of ensuring awareness of the multidisciplinary team in relation to adverse medication reactions and the need for notification. For this purpose, we used the strategy of business games, which according to LACRUZ (2004) originated from the war games and after 1956 was adapted as a teaching training tool under the harbinger of American Management Association in the United States. According to Rabelo, F.M; Filho E.B; Oliveira C.A.B; (1995) the best placed companies in terms of quality management, showed the most developed and measured training programs through quality indicators. From this perspective, we conducted a training which was named as Passa ou Repassa of Pharmacovigilance where the Nurses from Continuing Education, with the Pharmaceutical team, defined multiple-choice questions that would be part of the game with a focus on key points of information to be offered. In the discussion of how to measure the effectiveness of this training, it was decided that for this approach it would be used as a tool the institutional indicator of pharmacovigilance. This type of measurement has been a landmark on assessing the training, because until then the ratings were subjective and not measurable. The training was performed on site (workplace) lasting 20 minutes during the month of May 2014. The collaborators were asked to divide into teams for the competition in order to answer the questions selected by the training topic and as an incentive strategy there was a prize for the winning team.

Results: It has been noticed that from January to May 2014 there was an average of 2 notifications per month after completion of the intervention that occurred in May 2014. There was an average of 12 notifications in the period from June to November 2014, which confirmed an increase in 6 times of the average notification, which shows the positive response to the objective of the training.

Conclusion: We have concluded that with the change in methodology for measuring effectiveness of training, it was proven the reach of learning and usability of content by the trained public. The use of indicators to measure the effectiveness of training fosters genuine evidence of the result of the approach, and blocks the rework activities in repetitive training which is already of public knowledge.


Disclosure of Interest: None Declared

Keywords: Effective Training, Evidence, Quality Indicators
A SYSTEMATIC REVIEW ON DEVELOPING LEADING INDICATORS WITHIN HIGH-RISK INDUSTRIES AND REFLECTIONS ON THE TRANSFERABILITY TO A HEALTHCARE CONTEXT

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Objectives: It is commonly agreed that patient safety work must be proactive rather than reactive, in order to be effective. Hence we need to understand factors contributing to an unwanted event, in order to avoid it from happening. In order to identify such leading factors, there is a need to develop a method to systematically identify leading indicators in the field of patient safety. Such methods have been applied and used within high-risk industries, were extensive experience and knowledge has been gained. In order to investigate these method developments in high-risk industries a literature review was conducted with the following objectives:

➢ To describe the different methods used to identify and select leading indicator
➢ To outline the main leading indicators identified in high-risk industries
➢ To discuss how these methods can be applied to a healthcare context

Methods: The study was a systematic literature review. Appropriate key words were selected in accordance with the overall aim. Three search terms were used including truncations; indicator, leading and safety. The search was divided in three overall categories:
1) accredited scientific publications
2) gray literature, and
3) published company reports.

The emphasis was on industries with past experience of systematically identifying leading indicators and articles needed to focus on how these methods were developed. Only articles in English and Scandinavian languages, industries defined as high-risk and studies newer than 1995 were included in the study.

Results: The initial search resulted in a total of 1454 articles, conference papers, reports and dissertations. 117 were further investigated resulting in a total of 40 articles and 5 published company reports and 2 dissertations, which were read. 32 publications were included in the review. The results of this study show that majority of articles based the identifying of indicators on a theoretical foundation. A common feature was the use of a systematic approach. Much of the work used a step-by-step, which was generally used to present the issue, describe the process under investigation, create a model of this process including influencing factors and through fieldwork identify which factors could be leading indicators in this process. The methods used to develop these different systematic models were mainly case studies. The cases were mainly investigated by interviews and observations of the staff included in relevant processes and staff on different organizational levels of the organization. The most common found leading indicators of safety were found to include top management commitment, staff training, communication, operation procedures, staff competence, continuous improvement and employee involvement. These results are produced in order to achieve knowledge on systematically identifying leading indicators in a healthcare context. There are various reasons for why translating a method developed in high-risk industries may face challenges in healthcare, such as differences in the two sectors in terms of which processes and outputs are involved. Even though applying industrial methods or technics in healthcare is of growing interest, issues like appropriateness and practicality must also be examined.

Conclusion: The study documented that a large variety of methods were used to identify leading indicators. To progress with developing a model for leading indicators in patient safety, no approach seems obvious to translate into a healthcare context. The aim is to develop indicators which secure both high safety outcomes and that things go right.

Disclosure of Interest: None Declared

Keywords: Indicators, Leading, safety
MANAGEMENT OF MEDICAL ADVERSE EVENTS IN VIETNAM - A SITUATION ANALYSIS
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Objectives: Over the recent years medical adverse events in Vietnam have equally concerned the local community and decision makers in the health sector. The relationship between patients and doctors has worsened due to adverse public opinions and reactions to reported medical malpractices. The objective of this study is to examine the management of medical adverse events in Vietnamese hospitals in order to provide clear evidence for the Ministry of Health of Vietnam (MoH) to draft guidelines on how to handle medical adverse events. This is the first study of its kind conducted in Vietnam.

Methods: Primary data from hospitals, a qualitative survey and case studies from reported adverse events are used as a basis to explore the situation regarding medical adverse events in Vietnam. 146 in depth interviews were conducted with stakeholders, i.e. service providers, patients and their relatives, lawyers and decision makers from the MoH involved in handling medical adverse events at national, provincial and hospital level in Vietnam. The experiences and recommendations from 120 key informants related to 24 cases of medical adverse events were collected and analyzed through semi-structured interviews.

Results: No data on the number of reported medical adverse event cases in Vietnam has been published so far. According to the analysis of data from the nationwide hospital evaluation (2013), the rate of reported medical complications among all hospitalizations in 2012 and 2013 was 0.12% and 0.07% respectively, much lower than statistical data in developed countries. The compensation for the victims of medical adverse events ranges from 2 Mio VND for an asphyxiated newborn to 200 Mio VND for an adverse event during the emergency care for a victim of a traffic accident with a time for negotiation from 2 to 90 days. Despite the regulations on medical adverse events in the law on examination and treatment the existing system for dealing with medical adverse events is unworkable: There is a lack of guiding documents for handling medical adverse events; hardly any hospital purchases medical professional liability insurance for medical practitioners; there is hardly any involvement of lawyers or other third parties in resolving disputes of medical adverse events. The majority of interviewed patients or their relatives were not satisfied neither with the conclusion regarding the occurrence of medical adverse events nor with the communication on and resolution of medical adverse events at hospitals.

Conclusion: The system of handling medical adverse events in Vietnam needs to be improved. A key measure would be the development of a legal document, e.g. a circular issued by the MoH. This document would have to define criteria for the evaluation of medical adverse events and medical errors. Besides a description of responsibilities regarding reporting and analyzing medical adverse events at each level of the health system is necessary. It should also clarify the conditions for disclosure of medical information and the involvement of third parties. The issue of professional medical liability insurance for health workers has to be addressed as well as the level of compensations to victims of medical adverse events. Based on other countries’ experiences in the region the foundation of a Vietnam Medical Association to ensure patient safety is proposed. This will contribute to the development of an effective system for the management of medical adverse events at all levels in order to improve quality of healthcare services and to ensure patient safety.

Disclosure of Interest: None Declared

Keywords: adverse event, medical error, patient safety culture
IMPROVING RADIATION SAFETY PRACTICES THROUGH ONLINE RADIATION SAFETY MODULE IN A TERTIARY CARE HOSPITAL IN KARACHI, PAKISTAN

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Objectives: To create awareness regarding the Radiation Protection practices pertaining to the ionizing radiation in hospitals.

Methods: The Aga Khan University Hospital (AKUH), Karachi, Pakistan is a major healthcare provider in the country. AKUH has a wide range of ionizing radiation based diagnostic and therapeutic facilities including Radiology, Nuclear Medicine, Radiation Oncology, Cardiac Catheterization (Cath lab) setup, Blood Irradiator and Radioimmunoassay laboratory. The services are run by the qualified, trained and credentialed staff. There are around 400 radiation workers in the hospital which include Medical Physicists, Radiologists & Radiographers, Nuclear Physicians & Nuclear Medicine Technologists, Radiation Oncologists & Radiation Therapy Technicians, Cardiologists & Cath lab Technologists, Biomedical Engineers, Endoscopy (ERCP) team and Nurses & technicians working in Operating rooms where fluoroscopy is used. The radiation protection training, awareness and refreshers are regulatory requirements. AKUH offers one-day radiation protection course twice a year to meet the requirement but due to limited space and facilities we cannot accommodate more than 40 participants per course. Secondly the staff turnover and new induction also creates challenging situation and demand more than two courses per year. In the 3rd quarter of 2014 we developed an online module for basic radiation protection awareness so that not only the 400 radiation workers but all healthcare professionals can access, learn and refresh the minimum desirable radiation protection understanding. Initially a pilot was run in radiology and later in the 4th quarter the module was shared with all the radiation workers across the hospital. All new employees are now provided the access to this module so that they get oriented on the subject at an initial level rather than having to wait for the course opening. We have planned to make the module available by the end of the year 2015 at the institution’s website and will be a global learning source.

Results: The accessibility and availability of the radiation protection information for all the hospital staff increased to100% which meets regulatory needs. The need to wait for the scheduled radiation protection course has been eliminated.

Conclusion: The use of Information Technology has enabled us to spread the radiation protection awareness far and wide with great ease and has also brought a significantly improved the awareness level of the radiation workers and others at AKUH.

Disclosure of Interest: None Declared

Keywords: radiation protection
WHY DO PHYSICIANS RESIGN FROM THEIR JOBS?
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Objectives: To study various reasons of resignation of physicians working in health care organizations and to determine factors influencing it.

Methods: A cross sectional study conducted among physicians who resigned from health care organizations across Oman (86 respondents). Data were collected using a pre-tested self-administered and anonymous questionnaire sheet that included personal & administrative data and physicians rating of nine domains as possible reasons of resignation (including 42 attributes): personal and family issues, pay, opportunity for advancement, work content/conditions, autonomy, supervision, professional relationships, patient relationships and job security.

Results: More than two-thirds of resigned physicians under study (68.18%) were medical offices and 63% were male physicians. The highest percentages of resignation were reported among those working in primary health care facilities (27.63%) and internal medicine departments of hospitals (22.37%). More than one-half of resignations (57.49%) were reported among those who worked less than 5 years in their current health care facilities. The highest agreement scores for possible reasons of physicians’ resignation were reported regarding their perception that total pay is low compared to similar positions in health care organizations in other countries followed by Lack of opportunities for promotion, family instability and lack of opportunities for further studies (79.4%, 75.8%, 70.6% and 70.6% respectively). On the other hand, the lowest scores were reported regarding unsafe work environment, lack of means of transport, accommodation problems and for health reasons (40.3%, 43.3%, 43.3% and 45.1% respectively). The majority of respondents (84.21%) mentioned that the administration of the organization discussed with them reasons of resignation and more than one-half (54.39%) claimed that elimination of reasons of resignation makes them quit resigning. Meanwhile, the majority of respondents (83.62%) confirmed that they would recommend this organization to their colleagues for working.

Conclusion: The high authority of the Ministry of Health is recommended to study total pay of physicians compared to similar positions in health care organizations in other Gulf countries especially for medical officers’ category. Setting and properly implementing the appropriate policies and regulations to ensure just and fair opportunity for promotion for all medical staff and giving them the opportunity to join further studies is highly important. Future research is recommended to study in-depth family issues as a reported reason for physicians’ resignation.

Disclosure of Interest: None Declared

Keywords: physicians, reasons, resignation
HIGH PERFORMING HOSPITALS: A QUALITATIVE SYSTEMATIC REVIEW OF ASSOCIATED FACTORS AND PRACTICAL STRATEGIES FOR IMPROVEMENT

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Objectives: While some healthcare organisations perform measurably better than others, we do not understand which factors lead to better results. Studying high-performing healthcare organisations can be valuable if factors leading to or associated with high-performance can be identified and applied. Factors leading to high performance are complex. An exclusively quantitative approach may fail to identify relevant contextual factors. The objective of this study was to undertake a systematic review of the qualitative evidence identifying high performing organisations, and of the explanatory factors associated with high performance.

Methods: Following application of a search strategy for studies undertaken between 2000 and 2014, methods used to identify high performing hospitals were categorised. Thematic synthesis was used to analyse qualitative data to derive factors important for explaining success, and a ‘rich picture’ was created to provide a diagrammatical representation of how the emerging themes co-exist within a high performing organisation. Practical strategies for implementing factors associated with high performance were also elicited from individual studies.

Results: A total of 19 studies from a possible 11428 were included in the review and a range of process, output, outcome and other indicators were used to identify high performing hospital organisations. Seven themes representing factors associated with high performance (positive organisational culture, receptive and responsive senior management, effective performance monitoring, building and maintaining a proficient workforce, effective leaders across the organisation, expertise-driven practice, and interdisciplinary teamwork), and 25 relevant characteristics, emerged from the thematic synthesis. Fifty six practical strategies for achieving high performance were catalogued.

Conclusion: We have presented a set of factors associated with high performance based on analysis of qualitative evidence. The details provided within each theme demonstrate how and why organisations have achieved the highest standards of healthcare delivery to patients. Practical strategies emerging from this work are available to guide organisations in their quest for high performance. There is large variation in the type and quality of the methods used to assess high performance, which should be a focus of future research.

Disclosure of Interest: None Declared

Keywords: High performing hospitals, improvement strategies, qualitative research
EVALUATING THE RECRUITMENT STRATEGIES FOR A COMPLEX MULTIDISCIPLINARY QUALITY IMPROVEMENT PROJECT

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Objectives: Engaging participants from multidisciplinary healthcare teams is an important and challenging phase in implementing a successful quality improvement study. The study aims were to identify and evaluate the effectiveness of recruitment strategies used for a complex quality improvement project.

Methods: A retrospective analysis of secondary data consisting of field notes, emails and activities used during survey participant recruitment. Data were categorised under the professional group, associated roles, and communication strategies. Cross comparison of the strategies, episodes numbers, and profession was undertaken. The effectiveness of the strategies was evaluated using lead-time and data collected. The study setting was two wards from a large metropolitan teaching hospital in Sydney, Australia investigating the implementation of structured multidisciplinary ward rounds.

Results: The communication strategies, number of activities and lead-time necessary to engage different healthcare professionals varied considerably (Table 1).

Table 1: People and communication strategies used in the process of recruiting survey participants

<table>
<thead>
<tr>
<th>PROFESSION</th>
<th>COMMUNICATION STRATEGIES (# times each strategy performed)</th>
<th>LEAD-TIME</th>
<th>DATA COLLECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Email</td>
<td>Phone</td>
<td>Page</td>
</tr>
<tr>
<td>Allied Health</td>
<td>21</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nursing</td>
<td>5</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Medical</td>
<td>34</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>60</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

*Time taken from carrying out first strategy to conclusion of data collection. Process taken simultaneously across three professions

The recruitment process varied by profession. Allied health recruitment was made through the director who consulted with clinicians. Contact details of potential participants were then given to the researcher, who made direct contact via email. An additional clinician joined after hearing about the study from colleagues. Although the recruitment process required only two communication strategies, the number of activities was the second highest at 23. The lead-time was the shortest and the response rate of 89%. Nursing recruitment was made with the director who contacted unit managers. They suggested participants and site visits. During the site visit, the unit managers continued to provide facilitation to encourage participation. The process utilised four different communication strategies that led to 12 activities; the lowest number of the professional groups. The lead-time was two weeks longer than allied health and resulted in a response rate of 40%. Medical officers were the most resource intensive group across strategies, number of activities and time. Contact was made with the director who nominated participants. The researcher confirmed contact details with administration staff. Nominees were contacted using six different strategies, leading to 57 activities. The lead-time was 28 weeks, which was significantly longer than for other professions. The response rate was 29%.

Conclusion: Identifying and working with key contacts in each professional group facilitates successful engagement. The process of inviting survey participants can be linear or require constant adaptation. Making changes to a research plan requires motivation time and patience. Recognising and working through challenges with support ensures they are overcome.

Disclosure of Interest: None Declared

Keywords: communication strategies, engagement, multidisciplinary teams
EMERGENCE OF PERSONALIZED MEDICINE: POTENTIAL IMPACT ON HEALTHCARE QUALITY AND THE ROLE OF CLINICAL PRACTICE GUIDELINES

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Objectives: Clinical practice guidelines are expected to reduce unwarranted variations in clinical practice; variations not explained by illness, patient preference, or the dictates of evidence-based medicine (Wennberg 2004). Personalized medicine, rapidly changing the ways of clinical practice worldwide, is introducing a different type of practice variations to modern healthcare. Contrary to unwarranted variations, variations brought in personalized medicine are caused by subdividing patients by genetic as well as disease characteristics. Personalized medicine seems promising, but its potential impact on the quality of healthcare is yet to be elucidated. The aim of this study was to examine the potential impact of personalized medicine on the variations in clinical practice, and to discuss the role of clinical practice guidelines to maintain the quality of healthcare in the era of personalized medicine.

Methods: The potential impact of personalized medicine was examined from three aspects: 1) the safety of practice, 2) the quality of evidence for benefits and harms of interventions, and 3) the shared decision-making by patients and practitioners. Literature in MEDLINE was searched for a keyword “personalized medicine” with “guideline” as publication type and 2008 to 2014 for publication year.

Results: Forty-four clinical practice guidelines were identified. For the safety of practice, the number of medical errors is expected to increase; because there is evidence that the risk of medical errors tends to increase when clinicians are inexperienced and new procedures are introduced (Weingart 2000). In addition, the number of different kinds of diagnostic and therapeutic interventions to be covered by a practitioner will increase, and the workload might raise the chance of errors as well. For the quality of evidence which is the basis of clinical practice guidelines, explorative research by observational studies might become overwhelming over the high quality randomized controlled trials, as shown by the new NIH program called Precision Medicine Initiatives, because of industrial as well as public pressures to shorten the lag time from research to practice, and also because of increased uncertainty of clinical studies with small number of eligible patients of finely subdivided disease groups. For the shared decision-making, the potential impact seems to be both positive and negative; personalized medicine might be able to give patients and practitioners a more detailed profile of risks and benefits of interventions, but at the same time, the increased number of interventions featured by new biomedical technologies might strengthen the supply-sensitive driving force, disturbing the conscientious process of shared decision-making, which clinical practice guidelines are supposed to assist.

Conclusion: The emergence of personalized medicine will potentially impact on the quality of healthcare by affecting the safety of practice, the shared decision-making, and the quality of evidence on which clinical standards are based. Clinical practice guidelines, which provide practice standards to improve the safety of practice, and to assist the shared decisions made by patients and practitioners, should accommodate with personalized medicine by improving development methods as well as implementation strategies in the future.


Disclosure of Interest: None Declared

Keywords: Clinical Practice Guidelines, Personalized Medicine, Variations in Clinical Practice
IF YOU CAN’T MEASURE IT, YOU CAN’T CHANGE IT: CREATING EVIDENCE FOR THE IMPACT OF QUALITY IMPROVEMENT. DEVELOPMENT OF AN INDICATOR BASED FRAMEWORK IN 3 AFRICAN COUNTRIES

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Objectives: While there is a general consensus about quality improvement measures being an added value for health systems strengthening efforts, very little is done to document this assumption and deliver the evidence that could be useful for standardising quality approaches. This paper intends firstly to describe the process of producing a standardised and systematic method developing an indicator-based framework and a comprehensive integrated approach to quality improvement of health facilities in Kenya, Tanzania and Algeria. Secondly experiences with the implementation of this approach will be shared. The main challenge was to explore whether an approach and methodology which experienced successes in Europe, could work out similarly in various African health systems.

Methods: The paper builds upon observations made in three QI projects in Algeria—supported by EU, Kenya and Tanzania — supported by GIZ—operating along the same approach which is based on a systemic, comprehensive and evidence-based Quality Management tool for the German health system that was initially developed by the AQUA-Institute in Göttingen and formalised into the ‘European Practice Assessment’[1] which encompasses a stepwise participatory approach, including existing standards and indicators from the respective health systems and relying on scientific methods, i.a. validation thanks to the RAND/UCLA appropriateness method. Evidence collected during the development and implementation phases in all three countries was reviewed in workshops, analysed and categorised in order to determine the relevance of QI measures for HSS efforts.

Results: Comparing this standardised approach in the three countries Algeria, Kenya and Tanzania provided enough evidence to present first results: the scientifically validated indicators and set of tools allow for triangulation of quality assessment, and are systemic and inclusive, connecting all domains of the health system; they are participatory: fostering acceptance and ownership by management and staff; they generate transparency thanks to objective and repeatable evaluations reducing variation of results caused by different quality auditors; hence increasing the accuracy of the interventions based on extremely detailed results and reaching efficiency through prioritised interventions according to the Pareto principle.

Conclusion: The results obtained in all three countries were encouraging and provide the missing evidence that QI measures do contribute to HSS, but only if they are Systemic and inclusive: connecting all domains of the health system;

Participatory: acceptance and ownership by management and staff; and use scientific methods and validated indicators.

Disclosure of Interest: None Declared

Keywords: EPA, Evidence, Indicator Development
**1982**

**Reporting Intention of Medical Incidents: A Comparison among Three Hospital Systems in Taiwan**

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**Objectives:** This study aims to investigate nurses’ reporting intention of medical incidents on the basis of Theory of Planned Behaviour (TPB).

**Methods:** The design of questionnaire was based on TPB and the literature of patient safety. The researchers adopt the purposeful sampling approach. Three hospital systems in Taiwan were selected. Totally, 2,565 questionnaires were distributed and 2,151 were collected. The response rate was 81.2%.

**Results:** 53.8% participants had incidents reporting experiences. The average time of completing reporting by entering data was 21.67 minutes. Then, learning how to use the reporting system averagely took 17.9 minutes. There was no significance among three hospital systems in terms of incidents reporting intention by using ANOVA test. However, there were significantly different between variables (p<.01).

**Conclusion:** The study found that the nurses’ reporting intention of medical incidents was affected by the attitude and behaviour beliefs, self control, and the main reference groups. The internalization of value of medical incidents reporting and the formulation of its culture would contribute to the reporting of medical incidents. The willpower control of reporters played a pivotal role of reporting incidents. Especially, the unit supervisor, colleagues in the same unit, colleagues having reporting experiences, and the same event another party were important reference groups of reporting behaviour norm.

**Disclosure of Interest:** None Declared

**Keywords:** comparative study, patient safety, reporting intention
National Health Strategy Project Development: Key Stakeholder Engagement

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Objectives: Many issues facing development are complex and require engagement through partnerships with national and local players to pursue collective needs and interests. Through partnerships an organization ensures transparency, accountability, liability and a community’s continued support. Accordingly, Qatar’s Supreme Council of Health (SCH) is committed to initiate and maintain stakeholder involvement as a fundamental component of the National Health Strategy (NHS) 2011-2016. To embrace country ownership and evidence-driven approaches, the SCH invited key local stakeholders to take part in the following NHS projects:

2.1.1 National Standards for Referral and Discharge Procedures
2.1.2 Clinical Guidelines, Based on International Best Practices
2.1.4 Continuity-of-Care Process and Its Requirements

Methods: Initially, the stakeholder engagement activity began with the establishment of SCH Stakeholder Committee. Stakeholders were identified by the committee and a series of meetings were organized to raise awareness about relevant issues whilst obtaining participant feedback and evaluations about the process. Stakeholder categories/groups were established and stakeholders were then matched according to the three project components (2.1.1, 2.1.2 and 2.1.4). Listed below are some of the activities conducted in order to collect the necessary information:

- Electronic data collection instrument (“e-form”) was designed and tested
- Collection/analysis of stakeholder process evaluation
- Key components of the Request for Proposal (RFP) development were identified
- Meeting records were reviewed and validated

Results: Datasets using pre-specified criteria and characteristics were selected and collected from participants. Overall, twenty-one meetings took place. Of these meeting eighteen were face-to-face, two were web-based conferences and one correspondence was via email-only. Analysis was restricted to datasets representatives of stakeholder input. Out of 330 items analyzed 12 were selected as components of the stakeholders’ role in RFP development. In addition, another 8 activities were identified for consideration as they were recognized as promising activities. Best practice references and suggested vendor contacts were also collected. Major findings from the stakeholder feedback indicated that participants demonstrated:

- An understanding of the importance of stakeholder training, education, increased awareness and continued collaboration
- An understanding of the need for culturally appropriate, evidence-based approaches for efficient project governance, enforcement, regulation, monitoring and evaluation
- An understanding that projects should be “patient-centered”, incorporating international best practices, and include a built-in ongoing quality improvement component

Appropriate knowledge of the healthcare system, healthcare information and communication technology (ICT)

Conclusion: Stakeholder involvement ensured all program development aspects were kept in balance. Furthermore, feedback received provided the critical stakeholder insight necessary for development of RFPs. The SCH team were exposed to a different mind sets, skill sets and tool sets in regards to project management and stakeholder engagement. As is the case with many studies this study has brought to the surface other beneficial outputs such as the collection of significantly more data than that required for RFP production. The SCH reiterates its pledge to continuing the process of incorporating stakeholder input, needs and expectations and sustaining their participation for the project duration and beyond.

Disclosure of Interest: None Declared

Keywords: Healthcare System, Quality Improvement, Stakeholder Engagement
Challenges of Continuing Medical Education in Saudi Arabia’s hospitals
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Background: Health care services in Saudi Arabia are expanding rapidly. However, the country is struggling to cope with the lack of competent health professionals. Continuing Medical Education (CME) encounters some challenges that hinder learning programme from responding appropriately to professionals’ demands and needs, and to the complexity of health care.

Methods: The study used a mixed methods (qualitative and quantitative) approach. Depth, semi-structured interviews were followed up with a questionnaire (sent by email) listing all CME challenges identified by the interviews, asking participants to rank them. Sampling: Seven public hospitals were selected from different geographical areas (N=7).
• Snowball sampling targeted 33 medical education representatives from different Medical and Para medical departments (N=33).
• Purposive sampling targeted 11 medical librarians (N=11).

Results: The major CME challenges were identified and divided into five themes:
1. Health care resources
   • Poor medical library; location, space, and services provided (old textbooks, limited internet and e-journals subscription).
   • Lack of the CME budget transparency.
2. Topics of learning programme
   • Duplicated.
   • Not at the level of staff.
   • Don’t reflect staff and department needs.
3. Designing of learning programme
   • Methods of identifying needs are limited.
   • Activities are delivered using passive methods.
   • Lack of planning and designing policy.
   • Lack of formal written evaluation.
4. Staff
   • Diversity of staff’s backgrounds and educational needs.
   • Staff lacks interest to attend meetings.
   • Resistance to changing performance.
5. Decision makers
   • Lack of knowledge about needs.
   • Exerting influence over programmes.
   • Developing programme for the sake of reputation.

Discussion
• CME budget lacks transparency that may result in heavily reliance on pharmaceutical industry subsidy for CME events as well as to sponsor medical professionals’ trips. This may affect the quality of the events or cause bias.
• Staff diversity was a major challenge as they came from different training and educational backgrounds; however, learning programmes lacked needs assessment, resulting in activities that may be based on desires and wishes rather than on actual needs.

Conclusion: The study showed a strong correlation between the stakeholders’ lack of knowledge and support, and CME limitations, this primary problem as well received the highest ranking in the study.
References
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Prematurely discontinued randomized trials are frequently labelled “completed” in trial registries – a systematic review

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BACKGROUND: Trial registries such as clinicaltrials.gov typically include information about the status of a randomized controlled trial (RCT), i.e. whether it is ongoing, completed, or discontinued. Trial registries can be a useful resource for systematic reviewers who are searching for unpublished RCTs such as ongoing or often discontinued RCTs. The accuracy of trial status information in registries, however, has never been investigated.

OBJECTIVE: To examine whether trial registries accurately label discontinued RCTs as discontinued and provide reasons for RCT discontinuation, and to identify factors associated with inaccurate trial status information.

METHODS: Systematic review of published RCTs reported as discontinued and registered. We identified RCTs through systematic searches of MEDLINE and EMBASE (from 2010 to 2014) and a previous empirical study. Pairs of reviewers independently extracted data from publications and corresponding registries using pre-piloted data extraction forms. We performed multivariable regression to identify risk factors for inaccurate trial status information.

RESULTS: We included 173 discontinued RCTs that were registered in various trial registries, most frequently in clinicaltrials.gov (77%). RCTs were mostly discontinued due to slow recruitment (62%), futility (19%), or harm (17%). Of the 173 discontinued RCTs, 45% were accurately labelled as discontinued; the remaining RCTs were wrongly labelled as completed (40%), suspended (9%), ongoing (5%), or not started yet (1%). Most RCTs that were accurately labelled also provided the accurate reason for discontinuation (57/77, 74%) (Table 1). Accurate registration of trial status significantly became more frequent over time (adjusted odds ratio 1.16 per year; 95% confidence interval, 1.04 - 1.3) whereas trial features such as industry sponsorship, multiple centers, or sample size were not significantly associated with accurate trial status information.

<table>
<thead>
<tr>
<th>Table 1. Labelling of discontinued randomized trials in trial registries</th>
<th>Total n=173</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discontinued, accurate reason for discontinuation</td>
<td>57 (33%)</td>
</tr>
<tr>
<td>Discontinued, inaccurate reason for discontinuation</td>
<td>4 (2%)</td>
</tr>
<tr>
<td>Discontinued, no reason for discontinuation</td>
<td>16 (9%)</td>
</tr>
<tr>
<td>Completed</td>
<td>69 (40%)</td>
</tr>
<tr>
<td>Suspended</td>
<td>16 (9%)</td>
</tr>
<tr>
<td>On-going</td>
<td>9 (5%)</td>
</tr>
<tr>
<td>Not started yet</td>
<td>2 (1%)</td>
</tr>
</tbody>
</table>
WHAT IS THE NATURE OF ONLINE INTERNATIONAL HEALTHCARE QUALITY AND SAFETY EDUCATION AND HOW DO HEALTHCARE PROFESSIONALS PERCEIVE ITS EFFECTIVENESS?

Y. Susla¹,*
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Objectives: The current Ebola crisis, as did the avian flu crisis before it, underlines the importance of ongoing professional development, education and skills acquisition as the most sustainable means of avoiding catastrophic healthcare events in the future. This proposed study seeks to test the effectiveness of online continuing professional development (CPD)—particularly in low and middle income countries, where disease outbreak leading to pandemics is most likely to originate, and assess whether online distance delivery is the most effective tool to attain long term, effective, sustainable and professionally affirming education in a world where problems associated with healthcare quality and safety in one country today, become problems associated with healthcare quality and safety in many countries tomorrow. The objectives of this research will be to:

- Examine the fundamental principles and merits of continuing professional development education;
- Seek feedback from graduates of and participants in the ISQua CPD Fellowship Programme and participants in other online healthcare education programmes, on the effectiveness of online learning in their development of skills, acquisition of knowledge, enhancement of confidence as healthcare professionals and career progress; and
- On the basis of data collected and feedback elicited, evaluate the effectiveness of this approach.

Methods: The proposed methodological approach is a mixed method research design. The rationale for using mixed method research is that neither quantitative nor qualitative methods on their own are sufficient to investigate healthcare professionals’ perspectives on the research question, but when these methods are brought together, a more comprehensive account of the area of enquiry and a more complete account of the research problem is achieved (Haggis, Tamsin 2008). Based on the research purpose, the level of interaction, priority, timing and procedures for the qualitative and quantitative strands, it is proposed to use the Explanatory Sequential Design approach (Creswell, John W. 2011). This approach envisages two stages where collection and analysis of quantitative data takes place in the first stage, followed by the second, qualitative phase where the initial results obtained in the first stage are explored and examined in further depth. Following investigation of appropriate models to employ in this approach, the most appropriate model, and the one selected, was found to be the “New World Kirkpatrick Model (NWKM)” (Kirkpatrick, James D. 2009). This model is based on Kirkpatrick’s Four Level Evaluation Model, originally created in the 1950s. The NWKM evaluates effectiveness of learning on four levels: Reaction, Learning, Behaviour and Results and it will be used during both stages of the research. Kirkpatrick’s Four Level Evaluation Model has been used extensively for a number of years to evaluate training programmes and can be applied to traditional ways of learning and e-learning (Schreurs, J. 2008). For the purpose of this study, the effectiveness of online CPD will be measured at the levels of Reaction, Learning and Behaviour and will exclude the level of Results. This modification has been made due to the unavailability of resources to measure the degree of targeted outcomes as a result of e-learning at organisational and professional levels from the perspective of managers and executives.

Results: Study to be completed mid 2015

Conclusion: Will be determined on completion of the study and analysis of the data.

Disclosure of Interest: Y. Susla Employee of: The researcher and author is ISQua Education Manager. This study is undertaken in partial fulfilment of the requirements of a Master of Science (eLearning) which is funded by ISQua

Keywords: CPD, effectiveness, online
ENHANCING THE COMPREHENSIVE STROKE CERTIFICATION PROCESS IN PARTNERSHIP WITH PRACTICING CSC STROKE COORDINATORS

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Objectives: Background and Issues: The evolution of stroke standards of care for Comprehensive Stroke certification has allowed institutions to demonstrate the range and calibre of their stroke program. The hospital review process is an arduous experience especially for a stroke coordinator who may be relatively new in their position and certainly new to the comprehensive certification process.

Methods: Purpose: Design a comprehensive stroke center survey process that is collaborative, educational and consultative, while partnering to meet the required regulatory guidelines and metrics.

Results: Results: A survey team that includes a combination of regulatory focus proficiency and practicing clinical expertise in stroke, results in a dynamic approach to the stroke certification process. The collegial survey experience enhances the stroke program by enabling the site to remain engaged with the surveyors, assisting to maintain structural and clinical integrity.

Conclusion: Conclusion: This unique survey team design is recognized as beneficial, resulting in collaborative surveys, prompting a professional network of stroke coordinators open to sharing processes and best practices while enhancing communication and partnership between the Comprehensive Stroke leadership and certification agency.

Disclosure of Interest: C. Abrahamsen Employee of: DNVGL Healthcare, J. Mazabob: None Declared, G. Brown: None Declared

Keywords: Comprehensive stroke certification, stroke, stroke coordinators
Senior Managers’ Perspective on CBAHI Accreditation: A Qualitative Study
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Objectives: To explore senior managers’ perspectives regarding the implementation of CBAHI accreditation in Saudi Arabia

Methods: The importance of qualitative research in accreditation research were mentioned by Hinchcliff et al. (2012). They reported that in health accreditation research, qualitative data help to highlight problematic consequences of accreditation that are difficult to measure objectively as qualitative research can contribute to theoretical developments in this field by uncovering factors which drive, or fail to drive, change in quantitative indicators of performance. In this study, the qualitative components included semi-structure interviews with hospital directors, medical directors, quality directors, and nursing directors.

We conducted semi-structured interviews with 12 senior managers including hospital directors, medical directors, quality directors and nursing directors recruited from all the three hospitals. The interviews were purposively selected as senior managers were thought to have the potential to Central Board of Accreditation for Healthcare Institutions (CBAHI) accreditation. Interviews were conducted in the senior managers’ offices. Interviews were tape recorded, subsequently transcribed and then translated into English (eight interviews were conducted in Arabic). Topics discussed included reasons and challenges to join CBAHI, advantages and criticism of CBAHI and suggestions to improve it. Interviews lasted between 20 and 40 minutes and were digitally recorded and professionally transcribed.

Results: Thematic analysis of the interview data analysis falls broadly into 4 themes and 22 sub-themes representing a range of topics including reasons, challenges, benefits, and evaluations. Although the interviewees acknowledged the benefits of accreditation such as improved communication, patient satisfaction, reporting system, culture and implemented mission and vision, they also criticized accreditation for being more focus on paper work, lack of physicians involvement, no monitoring after accreditation, manpower shortage, lack of involvement, increased workload, lack of training, focusing on structure over clinical practice and it is viewed as cross-sectional. They suggested the importance of community involvement, leadership, training and culture as importance factors to improve quality of care and accreditation.

Conclusion: This study led to a need to sustain accreditation and quality of care which can serve within a sustainable accreditation. It means meeting the immediate accreditation standards, as well as establishing a basis for ongoing quality improvement in the future. The characteristics of sustainable accreditation are voluntary accreditation; unannounced surveys; review and update standards, including quality indicators; ongoing training; leadership; culture and physician involvement.

Disclosure of Interest: None Declared

Keywords: accreditation, CBAHI
The Association between CBAHI Accreditation and Infection
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Objectives: To examine the association between CBAHI accreditation and infection.

Methods: Outcome indicators measure what happens to patients after something (e.g. accreditation) is done. In addition, As CBAHI accreditation is relatively new phenomena in Saudi Arabia, therefore, there is a chance to compare quality indicators before and after accreditation in order to recognise the change effects triggered by the CBAHI. The pre-test/post-test design was used. In this design, the measurement of the infection is taken both before and after accreditation which allows the measurement of actual changes for individual cases. Comparative before-after designs produce stronger evidence that any outcomes were due to the accreditation and not to something else. Odds Ratios (OR) were used to measure the association between an exposure and outcome, and have become widely used in health reports, and have been used to examine the effect of accreditation. The OR represents the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure.

Setting: accredited public hospitals in Saudi Arabia.

Participants: three accredited public hospitals.

Results: there were statistically significances differences in all three hospitals. The results of infection were varied between the three hospitals. For example, the infection rate had increased after CBAHI accreditation in Hospital A and C, whereas in Hospital B, the infection rate had decreased.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Hospital</th>
<th>OR</th>
<th>CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection</td>
<td>A</td>
<td>1.16</td>
<td>1.05 – 1.27</td>
<td>0.0026</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>0.48</td>
<td>0.38 – 0.60</td>
<td>0.0001</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>1.60</td>
<td>1.22 – 2.10</td>
<td>0.0007</td>
</tr>
</tbody>
</table>

Conclusion: The study found no clear relationship between CBAHI and infection rate.

Disclosure of Interest: None Declared

Keywords: accreditation, Infection
Does Tumour Specific Assessment Evaluate the Quality of the Organisation of the Lung Cancer Care?

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Objectives: This project involves the evaluation of multidisciplinary lung cancer care in two hospitals in The Netherlands, coordinated by IKNL, the Netherlands Comprehensive Cancer Organisation. At present, in the Netherlands, there is a development of concentration of oncology care or formation of comprehensive cancer networks. To allow qualitative and efficient tumour specific collaboration between referring hospitals, there is a need for a mutual agreement about diagnosis, treatment and (after) care and compliance to that agreement. Is it possible to assess the quality of this organisation of cancer care specific for lung cancer by tumour specific assessments? The two hospitals referring cancer patients to each other for parts of the patient pathway are the Radboud university medical center, Nijmegen and Elkerliek Hospital, Helmond, The Netherlands. They wanted to check their (compliance to) agreements in order to ensure patient quality and safety.

Methods: For the assessment, specific quality framework and an e-tool for lung cancer was developed by IKNL, based on current guidelines, standards and care pathways. Both hospitals filled out the e-tool. An audit team was composed from peers from other hospitals. The members have experience in the assessment of the overall organisation of cancer care. Both hospitals were assessed during and 1 day visit. The framework was assessed, interviews were undertaken, patient records were analysed, resulting in an assessment report with strengths and opportunities. Based on this report, both hospitals drafted an action plan for improvement within 3 months after the peer review. Within 1 year after the action plan (April 2015) a follow-up report has to be submitted by the hospitals to show their proceedings. Meanwhile, and consultant of IKNL will assist the hospitals with their improvements by supporting them with the care pathways, service level agreements or implementation of the guidelines.

Results: The peer review was performed in December 2013. The first result is that a new framework has been developed and assessed. The effects of the tumour specific assessment in both hospital is, that the total organisation of lung cancer is assessed by the hospital itself (self-assessment) and by an audit team. Both hospitals wrote their improvement plan with SMART goals and time-lines. April 2015 will be the first year of follow-up and it is expected that the improvement points with a deadline before April 2015 are achieved. Both centres gave back, that tumour specific assessment gives a more focussed attention to the care and organisation of lung cancer. Therefore, it is more useful compared to a general assessment of oncology care. The improvement points are more specific and more in depth for lung cancer. After this pilot lung specific assessment, the content of the quality framework and the self-assessment guide was changed and a new pilot assessment has been planned.

Due to the positive results of this pilot assessment, IKNL decided to develop tumour specific quality framework for other tumour types (prostate cancer, breast cancer and colon cancer) and perform pilot assessments in other hospitals this year.

Conclusion: From this assessment it was concluded, that lung specific assessment can be used to evaluate the organisation of lung cancer care in a hospital, but also the cooperation between 2 or more hospitals. Tumour specific assessment with a quality framework can be used to improve the quality of the organisation of cancer care between hospitals and in the organisation itself.

Disclosure of Interest: None Declared

Keywords: accreditation, Cancer, organisation of care
Sustaining Improvement after the Accreditation Survey – An Innovative Life Cycle Model
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1Quality and Patient Safety, Cleveland Clinic Abu Dhabi, Abu Dhabi, United Arab Emirates, 2economics, Edinburgh Business School, Edinburgh, Scotland, United Kingdom

Objectives: This is the first study to answer the important question of whether accredited organisations maintain quality and patient safety standards over the accreditation cycle by developing and testing a life cycle explanation. Four distinct phases of the accreditation life cycle were defined based on the Joint Commission International process. Predictions concerning the time series trend of compliance during each phase were specified and tested.

Methods: Design. Interrupted time series (ITS) regression analysis of 23 quality and accreditation compliance measures.

Setting. A 150-bed multi-speciality hospital in Abu Dhabi, UAE.

Participants. Each month (over 48 months) a simple random sample of 24 % of patient records was audited, resulting in 276,000 observations collected from 12,000 patient records, drawn from a population of 50,000.

Intervention(s). The impact of hospital accreditation on the 23 quality measures was observed for 48 months, one year pre-accreditation (2009) and three years post-accreditation (2010-2012).

Main Outcome Measure(s). The Life Cycle Model was evaluated by aggregating the data for 23 quality measures to produce a composite score (YC) and fitting an ITS regression equation to the unweighted monthly mean of the series.

Results: The four phases of the life cycle exist namely, the initiation phase, the pre-survey phase, the post-accreditation slump and the stagnation phase. The Life Cycle Model explains 87 percent of the variation in quality compliance measures (R² =0.87). The ITS model not only contains three significant variables (p≤ 0.001), but the size of the coefficients indicates that the effects of these variables are substantial.

Conclusion: Although, there was a reduction in compliance immediately after the accreditation survey, the lack of subsequent fading in quality performance should be a reassurance to researchers, managers, clinicians and accreditors. At a micro level, the findings of this research demonstrate that a private hospital can use accreditation to improve quality. At a macro-level, regulatory bodies can ascertain that investment in accreditation is appropriate as a quality improvement strategy. Acceptance of the accreditation life cycle framework offers a blueprint for improving strategy on quality of healthcare. A major benefit of the concept is that stagnation and declining outcomes can be avoided by monitoring the life cycle and taking proactive initiatives at appropriate times in order to sustain performance. The Life Cycle Model also justifies the need for a continuous survey readiness programme throughout the organisation.

References: 1. Devkaran S, O’Farrell PN: The impact of hospital accreditation on clinical documentation compliance: a life cycle explanation using interrupted time series analysis

Disclosure of Interest: None Declared

Keywords: accreditation, life cycle model, sustaining improvement
Is Hospital Compliance with Accreditation Standards Associated with Quality of In-Hospital Care? A Danish Nationwide Population-Based

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Objectives: To examine the association between compliance with hospital accreditation and quality of in-hospital care. We hypothesised that patients admitted at fully accredited hospitals were more likely to have fulfilled process performance measures than patients admitted to hospitals partially accredited.

Methods: A nationwide population-based study was performed based on hospitals accredited by the 1st version of The Danish Healthcare Quality Programme for hospitals (DDKM) between 2009 and 2012. Compliance was assessed by a survey team during an on-site survey and based on their findings hospitals were either awarded fully (n=11) or partially (n=20) accredited. Subsequently, partially accredited hospitals were offered a follow-up activity by either submitting additional documentation (n=9) or having a return visit (n=11). Information on quality of in-hospital care was obtained from national clinical quality databases. Quality of in-hospital care was defined as fulfilment of process performance measures addressing hospital adherence with clinical guidelines recommendations for eight conditions (acute stroke; breast cancer; COPD; diabetes; hip fracture; heart failure; peptic and gastric ulcer). We included 55 process performance measures valid between 2009 and 2012 (between 3 to 12 measures for each condition). All clinical pathways eligible to receive at least one of these processes were identified.

An opportunity-based and all-or-none composite measure of quality of care was calculated across conditions as well as for the individual conditions. The composite measures were compared between fully accredited and partially accredited hospitals. This approach was repeated when dividing hospitals according to follow-up activity. Multilevel analyses were used taking into account the hierarchical data structure with clinical pathways nested in units and units nested in hospitals. Additional analyses was performed to secure the robustness of the results including sensitivity analyses according to eg unit size and stratified analyses of eg hospitals affiliated to universities, and hospitals formerly accredited by other accreditation programs.

Results: A total of 81 120 clinical pathways were carried out at fully accredited (n=24 915) and partially accredited hospitals (n= 56 205). According to follow-up activity 30 690 clinical pathways were carried out at hospitals having a return visit and 25 515 at hospitals having to submit additional documentation. The preliminary results for quality of in-hospital care measured by an all-or-none measure shows a trend towards no significant differences between clinical pathways carried out at fully and partially accredited hospitals (pathways at fully accredited: 33.42%; 95%CI: 32.83-34.00; pathways at partially accredited (ref) 36.58%; 95%CI: 36.18-36.98; OR: 0.86; 95%CI: 0.55-1.36). This was corroborated when dividing hospitals according to follow-up activity (pathways at return visit (ref): 38.60 %; 95%CI: 38.05-39.14; pathways at submit doc: 34.16%; 95% CI: 33.58-34.74; OR: 1.11; 96% CI: 0.67-1.84). Results for quality of in-hospital care as measured by the opportunity-based score will be ready for presentation at the conference in October including all sensitivity and stratified analyses.

Conclusion: Information of quality of in-hospital care can be obtained and compared according to hospitals compliance with accreditation standards in order to gain insight into the relation between accreditation and process performance measures of clinical care.

Disclosure of Interest: None Declared

Keywords: accreditation, Quality Improvement
The Association Between HRM, Safety and Quality: Evidence from a Longitudinal Analysis of Health Service Accreditation Program
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1Centre for Work, Organisation and Wellbeing, Griffith University, Brisbane, 2Australian Council of Healthcare Standards, 3Australian Institute of Health Innovation, Macquarie University, Sydney, Australia

Objectives: Accreditation programs are predicated on the truth that they drive improvements in safety and quality. Human resource management (HRM) is commonly included as an accreditation program standard. However, as links between HRM, safety and quality are scarce, HRM processes continued inclusion in programs remains contentious. The study objective was to investigate if healthcare organisations’ (HCOs) HRM processes influenced clinical performance.

Methods: A longitudinal analysis of accreditation data from the Australian Council of Healthcare Standards Evaluation and Quality Improvement Program. Data were drawn from three survey cohorts across 2003-2012. A HCO was included in the cohort analysis where it could be matched over at least two time periods. Composite factors for clinical performance, represented by ‘Continuity of Quality Patient Care’ and HRM were developed; each composed five items. Preliminary analyses examined: comparison of included versus excluded data for Cohort 1; examined group differences to establish nature of bias in Cohort 3 HCO drop-out rate; confirmatory factor analyses; and bivariate correlations. Main analysis was undertaken using random coefficient modelling.

Results: Cohorts 1, 2 and 3 corresponded to 327, 321 and 72 HCOs, respectively. The study sample characteristics, drawn from all Australian States and Territories, are: ownership [public 54%; private 46%]; bed size [1-49 (23%); 50-99 (25%); 100-199 (25%); 200-499 (20%); > 500 (7%)]; service type [single-site 77%; multi-site 23%]; location [major cities (55%); inner regional areas (27%); outer regional areas (14%); remote/very remote areas (5%)]. Preliminary analysis established that the sample was representative of the population from which it was drawn. Table 1 presents the results and the three main findings were: effective HRM processes significantly predicted increased clinical performance, across all three time points (B = .41, p < .001); HCO clinical performance was found to improve over time; clinical performance improvement attenuates for hospitals with more recent participation in the program, potentially indicating an instrumentation effect where assessments at time tthree resulted in more stringent performance ratings.

Table 1. Associations between HRM processes and Continuity of quality patient care

<table>
<thead>
<tr>
<th>Continuity of quality patient care</th>
<th>B</th>
<th>SEb</th>
<th>P</th>
<th>CI 95</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM processes</td>
<td>.41***</td>
<td>.04</td>
<td>&lt; .001</td>
<td>.34 to .49</td>
</tr>
<tr>
<td>Hospital size</td>
<td>.01</td>
<td>.01</td>
<td>.21</td>
<td>.01 to .02</td>
</tr>
<tr>
<td>Sector (Private reference)</td>
<td>.00</td>
<td>.02</td>
<td>.86</td>
<td>-.04 to .05</td>
</tr>
<tr>
<td>Public</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service type (Single site reference)</td>
<td>.04</td>
<td>.02</td>
<td>.09</td>
<td>-.08 to .01</td>
</tr>
<tr>
<td>Multisite</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remoteness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Cities of Australia (reference)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inner Regional Australia</td>
<td>-.05*</td>
<td>.02</td>
<td>.02</td>
<td>-.10 to -.01</td>
</tr>
<tr>
<td>Outer Regional Australia</td>
<td>-.04</td>
<td>.03</td>
<td>.18</td>
<td>-.11 to .02</td>
</tr>
<tr>
<td>Remote/Very Remote Australia</td>
<td>-.08</td>
<td>.04</td>
<td>.06</td>
<td>-.16 to .00</td>
</tr>
<tr>
<td>Time (Time 1 reference)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 2</td>
<td>.10***</td>
<td>.02</td>
<td>&lt; .001</td>
<td>-.10 to .01</td>
</tr>
<tr>
<td>Time 3</td>
<td>.19***</td>
<td>.04</td>
<td>&lt; .001</td>
<td>-.11 to .02</td>
</tr>
<tr>
<td>Time Waves (mean centred)</td>
<td>-.12**</td>
<td>.04</td>
<td>&lt; .01</td>
<td>-.16 to .00</td>
</tr>
</tbody>
</table>

*aModel also controlled for state/territory; b Robust standard error.
*p < .05, **p < .01, ***p < .001.

Conclusion: HRM processes are an important, and potentially often overlooked, element by which to improve HCOs’ clinical performance and patient care. The study provides empirical evidence for the inclusion of a HRM standard within a health service accreditation program.

Disclosure of Interest: None Declared

Keywords: accreditation, clinical performance, HRM
Professional Attitudes to Accreditation Programs and their impact on Safety and Quality: A Comparative Analysis of the Aged, Acute and Primary Care Sectors in Australia
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1Australian Institute of Health Innovation, Macquarie University, Sydney, Australia

Objectives: The study aimed to conduct a comparative analysis of stakeholder perspectives, from three different accreditation programs in Australia, of their programs relative strengths, consequences and critical elements.

Methods: A web-based questionnaire survey of healthcare organisations (HCOs), containing 56 survey questions, was administered. The five-point survey addressed seven categories of issues: program and philosophy; stakeholder perceptions; producing change; program incentives and costs; the role of surveys; the role of surveyors/ assessors; and public disclosure.

Results: In total, 489 respondents completed the survey. There were 179, 100 and 210 responses from HCOs representatives in the aged care, acute and general practice sectors, respectively. As per Table 1, respondents from the three sectors displayed: a pattern of largely consistent views for one category - program and philosophy; views that were consistent with and different to one another for three categories - producing change, and the role of surveys and surveyors/ assessors; and divergent views regarding three categories - stakeholder perceptions; program incentives and costs; and public disclosure. For all items views ranged from agreement to disagreement.

Table 1. Analysis by survey category items

<table>
<thead>
<tr>
<th>Category</th>
<th>Cross sector analysis</th>
<th>Consistent views</th>
<th>Divergent views</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program and philosophy</td>
<td>Programs promote patient/resident safety and quality care</td>
<td>Continuous improvement an important program element</td>
<td>Programs should be mandatory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Still engage in continuous improvement</td>
<td>Decision outcomes reasonable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Programs target patient/resident safety and quality</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fostered a collaborative approach</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Should be independent of government</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Education activities were valuable</td>
<td></td>
</tr>
<tr>
<td>Producing change</td>
<td>Improved patient/resident care</td>
<td>Improved processes</td>
<td>Improved management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improved patient/resident satisfaction</td>
<td>Benefits have reduced over time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Promote evidence base practices</td>
<td>Drive change:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drive change:</td>
<td>- education activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- standards</td>
<td>- survey visits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- self-assessment reports</td>
<td>- surveyor feedback</td>
</tr>
<tr>
<td>Role of surveys</td>
<td>HCO encourage staff to participate in developing the self-assessment report</td>
<td>Surveys disrupt a HCO</td>
<td>Effort required to produce a self-assessment report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HCO attempt to hide problems</td>
<td>Documentary evidence required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Survey results fair</td>
<td>Time allocated for surveys</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Short notice surveys</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Patient experiences</td>
</tr>
<tr>
<td>Role of surveyors/</td>
<td>Surveyor abilities</td>
<td>Respected</td>
<td>Contribution of surveyors to their HCO</td>
</tr>
<tr>
<td>assessors</td>
<td></td>
<td>Value educational role</td>
<td>Influence of surveyor personality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teams work together</td>
<td>Surveyor consistency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Survey team consistency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Decisions justified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Multidisciplinary survey teams</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Value of consumer surveyors</td>
</tr>
<tr>
<td>Stakeholder perceptions</td>
<td>Programs are important and well regarded by:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- healthcare professionals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- consumers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- policy makers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- insurance companies</td>
<td></td>
</tr>
</tbody>
</table>
Program incentives and costs | Financial incentives
Further investment not required
Benefits-cost analysis

Public disclosure | Publication of results
Consumer considerations
Public better informed about programs

**Conclusion:** Across and within the aged care, acute and general practice sectors health professionals display a high level of consistency regarding program ideas and philosophy. Significant variability exists in their views towards elements and implementation issues. Important difference exist; the sectors are heterogeneous and cross application of ideas and findings is potentially problematic. Accrediting agencies need continually to engage, educate and elucidate their efficacy to stakeholders.

**Disclosure of Interest:** None Declared

**Keywords:** accreditation, comparative analysis
Partnering with Consumers: The Australian Experience of the Development of a National Health Service Accreditation Standard

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Objectives: Quality and safety of healthcare are promoted by the formation of partnerships between consumers and health service providers. We know little about effective processes for the development of accreditation standards to achieve this goal. The aim of this study was to explore enablers, challenges and areas for improvement for the development of an accreditation standard evaluating consumer engagement in healthcare.

Methods: We examined the development of the Australian National Safety and Quality Health Service (NSQHS) Standard 2: Partnering with Consumers. The standard, developed between 2009 and 2011, assesses consumer partnership in three aspects of acute care service delivery: service planning, healthcare design, and measurement and evaluation of healthcare services. The consumer engagement standard was developed in tandem with eight mandatory clinical standards, and one governance standard. Our study was conducted in May and June 2014, eighteen months after the 10 NSQHS standards were first implemented.

Participants were key informants from across Australia, purposively selected from a working group tasked with developing the consumer engagement standard. An invitation to participate was extend to 12 key informants, and eight chose to participate in the study. Participants represented healthcare consumer organisations and government agencies. Four respondents took part in a focus group, and four participated in semi-structured individual interviews. A purpose-designed semi-structured interview tool was used covering the topics: evidence for consumer engagement; enablers and challenges to the development process; and areas where the process could have been improved. The focus group and interviews were audio recorded, and then transcribed. A stepwise process of general inductive analysis was used to identify themes representing participant views.

Results: Participants identified eight factors that enabled or challenged the development of the consumer engagement standard. Five factors that enabled development were: practical support for development; use of an established standards framework; an iterative and consultative development process; an evidence base supporting the standard; and characteristics and participation of a range of stakeholder groups. Participants agreed that a particular strength of the process was the breadth and depth of consultation with individual healthcare consumers and consumer organisations. Three overarching challenges to the development of the standard emerged: healthcare providers’ deficits in understanding consumer engagement; healthcare organisations finding it hard to respond to potential changes in the way they engage with consumers; and difficulties with the integration of the consumer standard and mandatory clinical standards. Participants’ suggestions further development of the standard included: streamlining and reduction of duplication; addition of health literacy as a core component; and development of supporting documentation to assist interpretation of the standard.

Conclusion: The iterative and wide-ranging process of stakeholder consultation used to develop the consumer standard reflects its ultimate aim: to partner with consumers in healthcare design, implementation and evaluation of service delivery. This approach offers a successful model for other standard developers, irrespective of sector or country setting. The interrelatedness of the enablers and challenges, and suggestions for improvement to the development process, highlight the complexity of task and implementation goal.

Disclosure of Interest: None Declared

Keywords: accreditation standards, Consumers
Evolution of Hospital Accreditation Standards – Any Positive Impact on Accredited Hospital

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1Division of Research and Development, 2Division of Hospital Accreditation, 3Deputy Executive Officer, 4Chief Executive Officer, Joint Commission of Taiwan, New Taipei City, Taiwan

Objectives: The purpose of this study is to understand the impact has been brought to Taiwan’s hospitals when introduced the Hospital Accreditation Standards Version 2011.

Methods: To understand the effectiveness of standards evolution, the anonymous questionnaire survey of accredited hospitals was conducted from 2011 to 2014, the questionnaire used multiple choice questions for investigating any positive impact and core values has achieved in accreditation.

Results: Hospital Accreditation Standards Version 2011 was simplified to 238 criteria in 2 chapters compared with the previous version with 505 criteria in 8 chapters. The features of Version 2011 are “patient-centered”, “overall performance of hospitals”, and “healthcare quality and hospital functions”. This version also has received ISQua’s IAP awards in Accreditation of Healthcare Standards. The number of accredited hospitals is 404 from 2011 to 2014. The table has shown 80% of hospital agreed Version 2011 had brought positive impacts after accreditation. In addition, 70-80% of hospitals agreed Version 2011 could achieve core values of accreditation. The accredited hospitals were satisfied with the overall accreditation in this cycle, and satisfaction rates were between 85% to 95%. There was no significant change in satisfaction (p=0.107).

Statistical Table: Hospital Feedback on Hospital Accreditation Standards Version 2011

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive Impacts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>facilitate inter-departmental coordination</td>
<td>101(84.17)</td>
<td>106(77.9)</td>
<td>88(83.8)</td>
<td>36(83.7)</td>
</tr>
<tr>
<td>assess own performance and set benchmark</td>
<td>94(78.33)</td>
<td>100(73.5)</td>
<td>90(85.7)</td>
<td>36(83.7)</td>
</tr>
<tr>
<td>reinforce practices from surveyor’s constructive feedback</td>
<td>103(85.83)</td>
<td>121(89)</td>
<td>97(92.4)</td>
<td>38(88.4)</td>
</tr>
<tr>
<td>promote quality of care and patient safety activities</td>
<td>97(80.83)</td>
<td>106(77.9)</td>
<td>85(81)</td>
<td>38(88.4)</td>
</tr>
<tr>
<td>enhance overall operations and management</td>
<td>69(57.5)</td>
<td>69(50.7)</td>
<td>55(52.4)</td>
<td>32(74.4)</td>
</tr>
<tr>
<td><strong>Core Values</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>establish a safe, effective, patient-centered healthcare environment</td>
<td>87(72.5)</td>
<td>98(72.1)</td>
<td>82(78.1)</td>
<td>36(83.7)</td>
</tr>
<tr>
<td>facilitate interprofessional teamwork to provide medical service in community</td>
<td>87(72.5)</td>
<td>99(72.8)</td>
<td>83(79)</td>
<td>34(79.1)</td>
</tr>
<tr>
<td><strong>Accredited Hospital Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>overall satisfaction with the new cycle of accreditation</td>
<td>110(91.7)</td>
<td>121(89.0)</td>
<td>90(85.7)</td>
<td>41(95.3)</td>
</tr>
</tbody>
</table>

Note: (percentage of positive response rate)

Conclusion: This study has shown the majority of accredited hospitals agree that new standards could facilitate them to provide a safe, effective, and patient-centered healthcare. Meanwhile, there was no significant change in the overall satisfaction, and the average satisfaction is 90% over the years. But these still need to be further analyzed if there are any significant differences in patient safety indicators and patient safety culture.

Disclosure of Interest: None Declared

Keywords: Accreditation Standards, Hospital Accreditation Reform, ISQua IAP
WHO IS BETTER? CORE SURVEYORS’ PERFORMANCE IN TAIWAN HOSPITAL ACCREDITATION PROGRAM.
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¹Division of Hospital Accreditation, Joint Commission of Taiwan, New Taipei City, Taiwan

Objectives: In Taiwan, there are 93.5% hospitals participating in the hospital accreditation program. The accreditation surveyors should assess and facilitate hospital to promote patient safety and medical quality. Thus, the selection of accreditation surveyors is extremely important from four professional affiliations including administrator, medical, nurse, and medical education. On the other hand, surveyors should be evaluated by hospitals in order to prove their performance. The core surveyor was defined as a senior surveyor who had more experience in accreditation and expected to participate 5 surveys in each year. The core surveyor will lead the surveyor team as a leading surveyor to facilitate the process of survey. JCT began the “core surveyor pilot program” and hired 12 core surveyors since 2010. To enhance consistency of surveyors, we regularly implemented the core surveyor program from 2011 to 2014. This study aimed to explore the core surveyor performance in hospital accreditation program and tend to discover their roles in surveyor management in the future.

Methods: This study was a longitudinal study from 2011 to 2014. We collected 167 surveyors from 830 surveys measured with a five-point Likert scale questionnaire. The questionnaires were feedback from hospitals, evaluation items including pre-survey preparation, accreditation competency, communication ability, consultation ability, attitude during survey, and teamwork. However, the hospitals didn’t know who are core surveyors and non-core surveyors. Thus surveyor performance would be objective commentary.

Results: The performance of core surveyor was average 4.33 in 2011. After following four years, each core surveyor had average 4.51 in 2014. The core surveyor advanced on attitude during survey from 4.45 to 4.6 each item. Their communication ability also improved from 4.38 to 4.57. Then consultation ability was from 4.39 to 4.55. Most importantly, accreditation competency would advance from 4.41 to 4.57. Each evaluation item was improved during four years. The different professional affiliation also demonstrated core surveyor advancement especially in medical from 4.25 to 4.50.

Conclusion: The survey team was composed of surveyors from all over Taiwan hospitals which formed a peer group force to enhance the performance in order to move forward. Core surveyors had much better performance in hospital accreditation, and they were also better than non-core surveyors in accreditation competency, communication ability, consultation ability, and attitude during survey. In past four years, JCT has been received ISQua accreditation in “Surveyor Training Programmes” in 2013 and “International Standards for External Evaluation Organisations, 4th Edition” in 2014 and successfully achieved the standards. In the future, we will not only enhance to train core surveyors but also invite them to share their successful experience to other surveyors. Furthermore, a well-planned core surveyor training program will be our next stage of new challenge.

References:

Disclosure of Interest: None Declared

Keywords: core surveyor, hospital accreditation, performance
The Evaluation of the National Accreditation for Teaching Hospitals in 2011-2014 in Taiwan
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1Taiwan Joint Commission on Hospital Accreditation, Division Director, 2Taiwan Joint Commission on Hospital Accreditation, senior staff, 3Taiwan Joint Commission on Hospital Accreditation, Administrator, New Taipei, Taiwan

Objectives: We analyze the national accreditation for teaching hospitals in 2011~2014, and redesign the standard for the following four-year accreditation cycle.

Methods: In Taiwan, the accreditation for teaching hospital is conducted by Taiwan Joint Commission on Hospital Accreditation. Since 2011, the range of teaching hospital accreditation covers all categories of medical internship and licensed medical personnel, specialized in physician, dentistry, traditional Chinese medicine, nursing, pharmacy, medical radiation, medical technology, occupational therapy, physical therapy, clinical psychology, counselling psychology, respiratory therapy, midwifery and nutrition. The result of hospital accreditation is by the “specialty of medical staff” separately. The evaluation method of teaching hospital accreditation standard is “met / not met.” For redesigning the following cycle of accreditation standard (2015~2018), we collected the opinions of hospitals and associations, and hold lots of meetings for collecting health care professionals’ advise since 2013.

Results: For 2011~2014 this cycle accreditation, there are 124 accredited teaching hospitals, and 117 of them are accredited for residents. We found that the result of hospital accreditation (percentage of met) was at least 92%, especially 19 medical centers got as high as 99%, resulting in no clear difference for hospital expression. In addition, the hospitals of internship-accredited (72 hospitals) were much more than the hospitals of training long-term internships indeed (nearly 50 hospitals), and other 20 hospitals mostly trained short-term internship, even not trained at all. This situation also was discovered in “PGY-accredited” and “internship-accredited for non-physician medical staffs”.

Table: The specialty of medical staffs of accredited teaching hospitals in 2011~2014 (unit: No. of Hospitals)

<table>
<thead>
<tr>
<th>Accredited Hospital</th>
<th>Accredited internship</th>
<th>Accredited PGY</th>
<th>Accredited Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physician Dentist Chinese Medicine</td>
<td>Physician Dentist Chinese Medicine</td>
<td>Physician Dentist Chinese Medicine</td>
</tr>
<tr>
<td>Medical Center</td>
<td>19 19 10 19 19 11 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Hospital</td>
<td>51 30 20 56 43 26 76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District Hospital</td>
<td>2 1 2 4 6 2 22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>72 50 32 79 68 39 117</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusion: As the accredited teaching hospitals excess the need of training fields, we focus on “training quality” for modifying the following accreditation. We emphasize the difference of long-term and short-term internship, and enhance the qualifications of PGY hospital and the standard of non-physician internship for district hospital. We also strengthen the standard for the resident’s work hours and team teaching, ensuring all care is provided within the quality and patient safety. In addition, the evaluation method of standard is revised as “met / partial met /not met”. The following teaching hospital accreditation will be modified to connect with the training program and education program, fulfilling the objectives of improving quality.

Disclosure of Interest: None Declared

Keywords: teaching hospital accreditation
Quality of Healthcare Versus Human Capital – Assumptions, Challenges and Risk
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Objectives: To analyse current levels of staffing in healthcare in the Czech Republic in relation to the population. To project the anticipated number and breakdown of healthcare workers required in the future to provide a satisfactory level of healthcare.

Methods: Data analysis of statistical information on the age breakdown of physicians and healthcare staff in the state sector, staff turnover and mobility rates within the healthcare system in the Czech Republic. This is then analysed in relation to statistics and forecasts concerning demographic development.

Results: The analysis shows that in the Czech Republic longevity rates are increasing amongst the general public, but that the average age of those working in healthcare is also on the increase. Future projections show that staffing could become a serious issue.

Conclusion: The analysis shows that the Czech Republic faces serious questions as to the future provision of healthcare workers, especially given the dual impact of demographic ageing - both of patients and of healthcare workers. This represents a serious challenge for all those involved - Department of Health, educators in health and nursing, professional medical associations, local government, as well as demographers, economists and social workers. It is an issue that can only be solved through the formulation of a common framework and policy by all stakeholders in order to avoid future labour shortages in healthcare. This is particularly the case if we wish to maintain or improve quality in healthcare.


Disclosure of Interest: None Declared

Keywords: human capital, quality of healthcare
Development of a Scoring Model for the Decision Making Process of French Hospitals Accreditation
B. Lucet\textsuperscript{1,2}, E. Prin-Lombardo\textsuperscript{1}, F. Bérard\textsuperscript{1}, T. Le Ludec\textsuperscript{1}
\textsuperscript{1}Quality & Security Improvement, Haute Autorité de Santé, Saint Denis la Plaine, France

Objectives: In 2014, French Authority for Health (HAS), has designed a new model for the Hospitals accreditation based on process audit and tracer methodology. A new decision-making process has been built to objective the accreditation level.

Methods: Process audits are led in seven steps (PDCA driven):

- P1/ Definition of policy
- P2/ Internal organization, control, roles and responsibilities, resources, interface management
- D1/ Mobilization of teams for operational implementation
- D2/ Availability of resources: skills, materials, equipment
- D3/ Effectiveness of the implementation (including traceability)
- C1 / Evaluation of the efficiency of the process
- A1/ Implementation of improvement plans; communication on results

For each of these steps, a five levels maturity grid has been designed to analyse the process by taking into account the gaps highlighted by the surveyors during the audit. A number of points is awarded for each level of this grid:

- Level 1 : Undefined operating procedures = 0 point
- Level 2 : Basic performance = 1 point
- Level 3 : Defined operating procedures = 3 points
- Level 4 : Process under control = 4 points
- Level 5 : Optimized process = 5 points

Then, an overall score is computed using the formula: \[\text{score } (P1+P2+D1+D2+D3+C1+A1) \times 100]/[(\text{score level 4) } \times 7].\]This model has been tested within a lot of mock surveys driven to refine the survey process and the surveyor’s tools.

Results: The overall score leads the decision making process in two different ways wether the audited process is related to focus priority topics standards or not using the following marking scheme:

<table>
<thead>
<tr>
<th>Decision level</th>
<th>Process including focus priority topics standards</th>
<th>Process without focus priority topics standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>75% - 100%</td>
<td>60% - 100%</td>
</tr>
<tr>
<td>Recommendation</td>
<td>50% - 74%</td>
<td>40% - 59%</td>
</tr>
<tr>
<td>Reservation</td>
<td>25% - 49%</td>
<td>20% - 39%</td>
</tr>
<tr>
<td>Major reservation</td>
<td>0 – 24%</td>
<td>0 – 19%</td>
</tr>
</tbody>
</table>

Conclusion: This model aims to make reproducible and equitable decisions to reflect the level of maturity and risk management in accredited hospitals. A continuous feedback is organized to refine and to improve it.

References: Management des processus – Fascicule de documentation AFNOR FD X50-176 ; 2012
Third round of the French hospitals accreditation process : a mid-term review - B. Lucet, F. Berard, T.Le Ludec ; ISQua13-1359, Edinburgh

Disclosure of Interest: None Declared

Keywords: accreditation, decision support system, process audit
Implementation of Quality Accounts in the French HCOS Accreditation Process: An Analysis or the first Submitted Accounts
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1Quality & Security Improvement, Haute Autorité de Santé, Saint Denis la Plaine, France

Objectives: In 2014, French Authority of Health (HAS) has implemented a new model for the accreditation of health care organizations. Prior to the accreditation survey, a quality account is send to HAS by the HCO with a four steps approach for each of the major process of the hospital’s organization: an analysis of the results available; a risk based appraisal, an assessment of the room for improvement, and an involvement to drive improvement plans. The analysis of the quality account aims to design the survey template and to define customized objectives for each of the key process.

Methods: This study provides an analysis of a sample (31) of the first quality accounts received from acute HCO on a selection of “at risk” key process: drug management, infectious risk, operating room. For each of these key process, the ability of HCOs to identify risks and to select data has been appraised by the count of the number of risks and data. A relation has been established between the number of risk and the number of action plans.

Results:

<table>
<thead>
<tr>
<th></th>
<th>Infectious risk</th>
<th>Drug management</th>
<th>operating room</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risk analysis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Number of risks</td>
<td>Average : 7</td>
<td>Average : 12</td>
<td>Average : 9</td>
</tr>
<tr>
<td></td>
<td>(min = 3; max = 29)</td>
<td>(min = 4; max = 30)</td>
<td>(min = 2; max = 23)</td>
</tr>
<tr>
<td></td>
<td>Trend = 4</td>
<td>Trend = 5</td>
<td>Trend = 9</td>
</tr>
<tr>
<td>- Number of HCO with less than 10 risks</td>
<td>24 (80%)</td>
<td>12 (40%)</td>
<td>21 (71%)</td>
</tr>
<tr>
<td><strong>Result analysis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Previous accreditation results</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>- Mandatory indicators</td>
<td>Average : 8</td>
<td>Average : 8</td>
<td>Average : 5</td>
</tr>
<tr>
<td></td>
<td>(min = 5; max = 24)</td>
<td>(min = 1; max = 29)</td>
<td>(min = 0; max = 19)</td>
</tr>
<tr>
<td></td>
<td>Trend = 7</td>
<td>Trend = 2</td>
<td>Trend = 4</td>
</tr>
<tr>
<td>- National &amp; regional indicators</td>
<td>Average : 5</td>
<td>Average : 7</td>
<td>Average : 1</td>
</tr>
<tr>
<td></td>
<td>(min =0 ; max =24 )</td>
<td>(min =1 ; max = 25)</td>
<td>(min =1 ; max =7 )</td>
</tr>
<tr>
<td></td>
<td>Trend = 4</td>
<td>Trend = 3</td>
<td>Trend = 1</td>
</tr>
<tr>
<td>- Internal indicators and assessment results</td>
<td>Average : 16</td>
<td>Average :10</td>
<td>Average : 10</td>
</tr>
<tr>
<td></td>
<td>(min = 3 ; max =52 )</td>
<td>(min = 4; max =33 )</td>
<td>(min = 0; max =36 )</td>
</tr>
<tr>
<td></td>
<td>Trend = 6</td>
<td>Trend = 9</td>
<td>Trend = 7</td>
</tr>
<tr>
<td><strong>Action plans</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Number of action plans</td>
<td>Average : 12</td>
<td>Average : 12</td>
<td>Average : 8</td>
</tr>
<tr>
<td></td>
<td>(min =3 ; max =49 )</td>
<td>(min =4 ; max =33 )</td>
<td>(min =2 ; max = 21)</td>
</tr>
<tr>
<td></td>
<td>Trend =5</td>
<td>Trend = 9</td>
<td>Trend = 4</td>
</tr>
<tr>
<td>- Average number of actions per risk</td>
<td>1.7</td>
<td>1.2</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Conclusion: At this level of the analysis, we can observe a dispersion of the number of risk and data collected and presented by HCOs certainly linked to the difficulty from HCOs to select the useful and relevant data and to prioritize among potential risks; and therefore to focus energy on relevant action plans. For infectious risk, 80% of the HCOs have been able to identify less than 10 risks (71% for operating room). For drug management, only 40% of the HCOs can identify less than 10 risks; this topic was the first source of decision in the former accreditation process. This study has to be completed with a qualitative approach to assess the maturity of HCOs related to risk management. The results will have to be matched with results of accreditation surveys in order to highlight warning signals.


Disclosure of Interest: None Declared

Keywords: accreditation, quality & patient safety improvement, quality account
The Impact of Breast Imaging Unit (BIU) Certification on Women and Staff Safety
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1Surveys and Standards Development, Health Care Accreditation Council, Amman, Jordan

Objectives: To measure the impact of the BIU certification on the women safety. To measure the impact of the BIU certification on the staff safety.

Methods: To measure the effect of being HCAC certified breast image unit on the safety of women; four dimensions of women safety were identified (screening, accuracy of result and report, safe environment, and reporting) and measured through a 16 elements (standards). For the effect on staff safety; two dimensions were identified (incidents and staff health), which were measured through six elements (standards). The data gathered retrospectively from the pre certification results (initial assessment), the midpoint of working on achieving the standards requirements (mock survey) and at the time of achieving the certification requirements (final surveys) to identify whether the dimension’s elements were met or not met. Finally, deferential analysis done to measure the compliance percentage for each selected element.

Results: There was a significant progress in the compliance results percentage for all safety dimensions; from the pre certification to certification results. Women safety: for the screening dimension, it was noted that the compliance percentage changed from zero to 100%, accuracy of result and reporting from 2.5% to 92.5%, safe environment from 22% to 99%, and reporting from 70% to 80%. Staff safety: for incidents dimension, it was noted that the compliance percentage changed from 60% to 100% and from 45% to 100% for the staff health dimension.

Conclusion: Screening mammography is associated with both benefits and potential harms, therefore, it is imperative to design imaging services that meet recommended standards and have stringent quality controls. BIU certification outlines standards to guide managers and staff in breast imaging units to design and implement safe and high quality services. To achieve the main purpose of the screening program, it is important to ensure the high quality and safety of the services provided, which might be granted by implementing the BIU standards. Being a certified unit will make a significant impact on the safety of women and staff. This will be resulted from the unit compliance with the safety standards. This study might be improved by seeking feedback regarding improvement from the client and organization point of view.

Disclosure of Interest: None Declared

Keywords: Breast Imaging Unit, certification, client safety
The Performance of Hospitals Accredited Using the 3rd Edition and 4th Edition Hospital Accreditation Standards
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1Research and Development, 2Malaysian Society for Quality in Health, Kuala Lumpur, Malaysia

Objectives: This study is to see the performance achieved by hospitals accredited using the 3rd Edition and 4th Edition Hospital Accreditation Standards.

Methods: This is a retrospective study identifying hospitals assessed using the 3rd Edition and 4th Edition of Malaysian Hospital Accreditation Standards. The 3rd Edition Standards was implemented for use from 2009 to 2012. While 4th Edition standard was started in 2013 till now. Total of 188 hospital surveys has been conducted by MSQH from 2009 to 2014 using both editions. Hospitals that undergone the accreditation program in their 1st cycle were identified i.e. 40 hospital in the 3rd Edition Standards and 10 hospitals in the 4th Edition. First ten (10) hospitals for each version were selected in this study. There are 3 categories of hospital i.e. private hospital, public specialist hospital and public non-specialist hospital.

Results: In 3rd Edition Standard, there are 4 private hospitals, 3 specialist hospitals and 3 non-specialist hospitals. It was found that 90% of the hospital achieved Full Accreditation Status. All private hospitals and non-specialist hospitals involved in this study awarded with Full Accreditation status. Only 2 out of 3 specialist hospitals achieved the full certification. In 4th Edition Standards, the number of private hospitals in the study has increased to 7 and specialist hospitals are 2 and 1 for non-specialist hospitals. It was found that the number of hospital awarded with Full Accreditation was declined to only 40%. Only 28.5% (2/7) of the private hospitals managed to get the Full Accreditation status. Both the specialist hospitals achieved Full Accreditation status, while the non-specialist hospital only managed to get Partial Accreditation.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full Accreditation</td>
<td>Partial Accreditation</td>
</tr>
<tr>
<td>Private</td>
<td>40%</td>
<td>0%</td>
</tr>
<tr>
<td>Public specialist</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>Public non-specialist</td>
<td>30%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Conclusion: First 10 hospitals were compared in each standards version i.e. 3rd Edition and 4th Edition. The number of private hospital being accredited has increased from 40% to 70%. The performance of hospitals shows a decline from 90% in 3rd Edition Standard to 40% in 4th Edition Standards. Private hospital awarded with Full Accreditation shows a significant decline from 100% to 28.5%. The introduction of 4th Edition Standard in 2013 may affect the performance of hospital achieving the Full Accreditation status. The 4th Edition Standard is developed with high level of compliance compared to 3rd Edition.

Disclosure of Interest: None Declared

Keywords: performance, standards
Counting the Costs of Accreditation in Acute Care: An Activity Based Costing Approach
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Objectives: Acute care accreditation programmes are well established and have seen rapid uptake in their use, but little is known about the costs of the accreditation process. Our study evaluates the incremental costs of accreditation in six acute public hospitals in Australia and provides an estimate of the impact of these costs on the overall acute health system.

Methods: We defined the incremental costs of accreditation as those that were specific to accreditation and additional to normal business practice, and excluded those costs associated with on-going regulatory compliance. We identified activities related to accreditation and used activity based costing methods to design a survey tool. We piloted the tool and before assessing the incremental costs of accreditation in the remaining study sample. We then carried out a sensitivity analysis. A panel with extensive experience in health policy, accreditation, hospital management, and health services research, assessed the validity of the methods used and scalability of the results. Participating hospitals included teaching, large, medium and small hospitals in both rural and metropolitan areas.

Results: Accreditation costs varied from 0.03% of annual operating costs at a small rural acute hospital, to 0.60% at a metropolitan teaching hospital, averaged across the four-year accreditation cycle. Costs were 5.6 times higher during survey years compared to non-survey years. At a national level these costs translated to AUD36.83 million, equivalent to 0.1% of acute public hospital recurrent expenditure in the 2012 fiscal year.

Conclusion: This is the first time accreditation costs have been independently evaluated across a wide range of hospitals. The incremental costs of accreditation were higher, as a percentage of recurrent expenditure, for smaller hospitals than for the largest hospitals. These additional costs represent a higher administrative burden for smaller facilities that may contribute to their higher average case-mix adjusted separation costs. Assessment of costs across a range of hospital types provides important evidence to inform debate regarding the costs and value of accreditation and the role of survey costs in this process. A better understanding of the costs allows policy makers to assess alternative quality improvement strategies and their impact on a range of facilities. Our purpose designed activity based costing tool can be adapted across international accreditation systems and within the different health domains of acute, primary and aged care.

Disclosure of Interest: None Declared

Keywords: Acute care accreditation, Cost benefit analysis
Outcome on the Accreditation Process and Surveyor’s Satisfaction on MSQH Electronic Hospital Accreditation Assessment Tools (MY E-HAP) Introduced in 2013

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1Information Technology, Malaysian Society for Quality in Health (MSQH), Kuala Lumpur, Malaysia

Objectives: This study is to compare surveyor’s satisfaction rate on MSQH Electronic Hospital Accreditation Assessment Tools as a first time user and after subsequent experience.

Methods: In this study, surveyor’s feedbacks through structured questionnaires were used to collect the information. The feedback was distributed to surveyors who were involved in Hospital Accreditation Survey in 2013 and 2014. The survey consisted of four (4) closed multiple-choice questions focusing on how satisfied user with the following item:

1. Introduction MSQH My e-HAP as an online assessment and reporting tools
2. My e-HAP easy to learn and use
3. Design and user interface of My e-HAP
4. Overall satisfaction on My e-HAP

Results: In 2013, the study showed 33% of the surveyors were satisfied with introduction to MSQH e-HAP as an online assessment and reporting system and a total of 83% of surveyors were satisfied after continual use of the system in 2014. The availability of My e-HAP, particularly for facilities and surveyors to access, complete and report survey findings over the web, thereby cutting down documentation time and improved surveyors and MSQH communication According to this survey, we found surveyors with experience of using My e-HAP tended to be more positive than those who had never used one before. The result indicated 52% of the surveyors were satisfied, My e-HAP easy to learn and use as well as useful and showed an improvement to 78% in 2014. Majority of the surveyors had a positive attitude and expectation of the potential of My e-HAP to improved survey documentation and reduced the cost due to automated survey documentation, process efficiency and increased productivity. The survey also showed 62% of the surveyors were satisfied on the design of the user interface adopted in 2013. This increased to 86% in 2014. Adoption and usage of My e-HAP increased communication between surveyors and improve surveyors proficiency in using My e-HAP system. A total of 18% of surveyors for first time using the system in 2013, found the user interface were complicated and confusing due to time consuming in data entries and navigating the contents, however only 4% of surveyors were dissatisfied in 2014 analysis. The outcome of the study demonstrates both positive and negative impacts of the transition from paper-based to electronic documentation. According to the survey, in 2013 62% of surveyors were satisfied in using My e-HAP as an assessment tools in preparing survey report and increase productivity in 2013, however in 2014, this has increased to 90%.

Conclusion: The result showed that the overall level of surveyor’s satisfaction with MSQH My e-HAP is high and continues to grow. High satisfaction rates related to a number of factors, such as usability, reliability and support provided when problem occurred. Positive impacts of My e-HAP include improved communication between survey teams, surveyors spent less time in preparing the survey report and access to up-to-date survey findings and recommendations, reduced administrative and repetitive tasks were found to be some of the major benefits of My e-HAP.

Disclosure of Interest: None Declared

Keywords: My e-HAP
Navigating Towards Accreditation
S. M. Abu Yaqoub 1,*, K. K. Al-Maslamani 1, H. A. M. Ahmed 2, M. T. T. Panizales 2
1Women’s Hospital, Doha, Qatar, 2Partners HealthCare International, Boston, MA, United States

Objectives: Preparing for accreditation is not an easy chore; it entails long term planning and commitment to attain prescribed standards. Women’s Hospital challenged by its dedication to meet a high standard of training and education to its residents, decided to venture accreditation through ACGME-I. Our objectives were:

- Identify current program gaps, and restructure to meet ACGME-I standards
- Engage resident in hospital-wide committees to enhance learning and professionalism
- Involve hospital leaders and faculty in redesigning training program

Methods: Team of faculty and residents with the support of hospital executive leadership was formed with the following tasks:

Assessment
- Current program evaluation based on ACGME-I standards to identify gaps

Plan
- Devise plans to accommodate changes from current program to ACGME-I standards
- Initial application submitted and review completed
- Recommendations from review were used to further improve current program
- Seek advice from HMC Medical Education and Partners HealthCare International (PHI) leaders with accreditation experience

Implementation
- Program coordinator was hired to assist in organizing individual documents for residents and faculty
- Resident program plan was restructured to integrate ACGME-I Core competencies
- Assessment tool reviewed and redefined to improve professionalism and communication skills
- Hospital program integration with residents participation to enhance practice based learning and improvement
- Welcome program packet was created

Results: Residents training program restructured to four (4) years with clear goals and objectives to meet ACGME-I requirements. Additional training program course added such as: basic surgical care, obstetric, OSCE course, quality and outcomes research, CCITP. Residents assigned to actively participate in QPS initiatives or committees, i.e. CPG
- 360 degree assessment tool (faculty, peers, nurse, administration and patient) was implemented

Conclusion: Women’s Hospital achieved its accreditation on July 2014. Residents’ involvement in hospital wide initiatives has expanded. Monitoring of core competencies and faculty involvement has been attained. We continue to challenge ourselves with continually improving and sustaining positive efforts that has been developed.

References: ACGME-I Standards

Disclosure of Interest: None Declared

Keywords: OB GYN accreditation, ACGME-I
Analysis of the Effectiveness of Compulsory Accreditation for Long-Term Care Hospital
M. Park¹, J. Lee¹, Y. Kim¹
¹Korea institute for healthcare accreditation, Seoul, Korea, Republic Of

Objectives: The necessity of long-term care sickbeds significantly increased from the increment of aged, therefore the volume of care hospital has been markedly expanded (from 54 hospitals in 2002 to 1,232 in 2013). The compulsory accreditation has been done from 2013 for the management of inter-hospital qualification difference and for the protection of patients’ rights. And we focused on the change of the institution and employee after introduction of compulsory accreditation.

Methods: A survey through questionnaire was done for 379 institutions from 1st of August in 2013 to 31st of September in 2014. The questionnaire return rate was 39.6% (150 institutions). Questionnaire was composed of 65 questions in 8 categories. We analyzed data using SPSS (version.20).

Results: The average sickbeds of the institutions in response were 230.1. 85.3% of responders were working in administrative service and the length of their service was 50.4 months. The awareness of long-term care hospital about patients’ safety and health care quality was improved (55.7% of the responders agree with the opinion of the affirmative change of employees’ cognition and attitude about patients’ safety after accreditation investigation). The most improved portion through the preparation of accreditation investigation was about patients’ safety and health care quality (execution of hand hygiene, accurate communication between medical staff (oral prescription, P.R.N. (Pro ne nata) prescription, abbreviation control), patient identifying process, falling accident control, infection control (device cleansing and sterilization, laundry and cuisine control), in order). 81.8% of responders agreed with role of accreditation investigation to the capacity reinforcement of the employees. The ratio of dissatisfaction about the attitude of investigator was high generally. Also, the ratio of unacceptance about the general review and investigation report was 41.2%.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Portion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td>2</td>
<td>Accurate communication between medical staff (oral prescription, P.R.N. (Pro ne nata) prescription, abbreviation control)</td>
</tr>
<tr>
<td>3</td>
<td>Patient identifying process</td>
</tr>
<tr>
<td>4</td>
<td>Falling accident control</td>
</tr>
<tr>
<td>5</td>
<td>Infection control (device cleansing and sterilization, laundry and cuisine control)</td>
</tr>
<tr>
<td>6</td>
<td>Medication control (storage, preparation, dispensing)</td>
</tr>
<tr>
<td>7</td>
<td>Fire prevention and Safety</td>
</tr>
<tr>
<td>8</td>
<td>Staff safety</td>
</tr>
<tr>
<td>9</td>
<td>Quality Improvement</td>
</tr>
</tbody>
</table>

Conclusion: From the survey of the satisfaction level for the long-term care hospitals that underwent accreditation investigation, we found advancement of the capacity of the institutions to improve health care quality, and also improvement of the process and system related to patients’ safety and health care quality through accreditation investigation. It is necessary to diversify educational institution and method, and to intensify the education of investigator to reduce the burden for hospital and enhance the reliability of accreditation.

Disclosure of Interest: None Declared

Keywords: accreditation, long-term care hospital
Implementing a Long Term Care Accreditation Program

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Objectives: Firstly, to describe the key aspects needed to set up a social accreditation programme (AP) centered on long term residential care (LTRC). Secondly, to analyze the results obtained after the program implementation.

Methods: The Andalusian Agency for Health Care Quality has launched the social care accreditation programme in 2013, based on:

- a consolidated own healthcare quality model in Spain and Portugal.
- a classification of social services for the development of standards manuals, prioritizing the long term residential services (LTRS) manual.
- Definition of blocks and quality criteria in which manuals are structured.
- Establishment of a Technical Advisory Committee (TAC).
- Description of the work schedule.
- Development a LTRS manual draft.
- Online application which supports the communication among the CTA members.
- Draft standards consensus.
- Adaptation of the online application that supports the health services accreditation processes.
- Assessment tools development (requirements, schedules, routes and evaluation guidelines).

Once the AP was defined, 5 LTRS (3 residential care: 2 nursing homes and 1 adult disability care and 2 shelter homes: a rehabilitation unit care and a children’s accommodation and support service) were selected to pilot the program in order to check the suitability of its standards and refine the methodology of assessment.

Piloting process (PP) timeline and milestones planned:

- June: to conduct LTRS visits in order to present the accreditation program
- June-November: self-assessment services, development support tools and qualifications of external evaluators.
- November: evaluation visits.
- December: to prepare evaluation PP report and incorporate improvements to the draft standards.

Results: Regarding the AP:

- Structured in 5 dimensions, 11 criteria and 104 standards.
- CTA: 11 experts in quality and social services, which includes 5 face to face meetings.
- 2 different evaluation agendas according to the type of service (residence / home) to increase the efficiency of the evaluation phase.
- LTRS accreditation program published in ACSA website. In relation to the PP:
  - Self-Assessment (mean): totally completed standards (74 ) , identified by project improvements areas (IA) identified by project (23.4 ) , IA implemented (5.2 ) and self-evaluators (6.2 ) . Some of the IA identified for LTRS was the following: generation of guidelines, protocols and records (28.2 %), periodic evaluations (19.6 %) and training activities (17%).
  - Assessment: All the LTRS (5) that have experienced the AP must initiate IA to meet the compulsory standards that have not been met during the evaluation process and, therefore, to get accredited. The main improvements are related to: users rights, maintenance of facilities and / or equipment, accessibility to buildings, emergency plans, security and user safety.
  - Overall satisfaction with the accreditation process (9.1) and their usefulness to identify improvements (9.33).

Conclusion:

1) It has proved feasible to develop an LTRS accreditation program based on the ACSA model and the evaluation methodology used for healthcare services.
2) The defined standards show high sensitivity to detect different levels of quality of the services as well as an adequate specificity for identifying critical situations.
3) High satisfaction with the accreditation process.
4) IA identified for LTRS are mainly aimed at reducing the variability of professional practice and enhancing their professional training.

Disclosure of Interest: None Declared

Keywords: accreditation standards, LONG TERM CARE
Competence Development and Good Practice Demonstrated by 7,199 Healthcare Professionals Accredited

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Objectives:
1) Describe the level of competence development revealed by certified professionals.
2) Identify good practices that health professionals have proven in their certification processes.

Methods: Design: A cross-quantitative retrospective study.

Population: 9,422 skills certification processes, conducted from September 2006 to December 2013, by 7,199 professionals that belong to Andalusian Public Health System (all health disciplines are included).

Data analysis: The data have been exploited from the on-line accreditation tool type e-portfolio that supports accreditation’s process, called ME_jora P.

Ethical issues: the ethical precepts of the Declaration of Helsinki were followed. Confidentiality through the anonymous treatment and segregation of personal data and study variables was ensured.

Results: 20 competencies and 36 best practices through which accredited professionals have demonstrated their level of knowledge, skills, aptitudes and development were identified. The skills evidenced by more than 98% of certified professionals were:
- Citizens focused and respect for their rights
- Ability to diagnostic and / or therapeutic clinical decision-making
- Health education, health advice and preventive measures
- Appropriate use of available resources
- Customizing of care and attitude of continuous learning and improvement

The good practices that are most often present in professional performance were:
- Takes care of relationship with users trying to satisfy their needs and expectations
- Provides needed information to promote shared decision making with patient / family
- Makes a correct clinical assessment and interprets required diagnostic tests, establishing a diagnosis and prognosis
- Performs activities to avoid potential adverse events and increase safety in her /his professional performance

Conclusion: The analysis of the competencies and best practices that are present in professional performance provides the opportunity to identify training needs and areas for improvement. It also helps to make possible a higher quality practice and promotes the professional development by improving healthcare.

Disclosure of Interest: None Declared

Keywords: Certification, Competencies
Identifying and Mapping Stakeholders in an Organisation focused on Healthcare Accreditation

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Objectives: To identify and to describe the stakeholders of the Agency for Healthcare Quality of Andalusia - ACSA, to know which affect the organization and which the organization affects.

Methods: The study adopted a cross-sectional research design. A case study with structured interviews and a qualitative questionnaire among Andalusian Agency for Healthcare Quality Steering Committee and staff members was carried out in 2013-4 to define stakeholders’ categories and map the interest groups using five attributes: influence, importance, legitimacy, power, and urgency. After identification and categorization, stakeholders were weighted qualitatively according to the attributes of importance and influence using four possible levels. A matrix was made with the collected data relating both attributes. Furthermore, eight different types of stakeholders were identified according to attributes power, legitimacy, and urgency.

Results: The list of stakeholders identified by the Agency for Healthcare Quality of Andalusia:

CITIZENRY
(1) Citizens (2) Users of 2.0 tools

PROFESSIONALS
(3) Staff (technical personnel, surveyors, Advisory Technical Committees and experts)
(4) Governing Board
(5) Professionals of Public Health System of Andalusia
(6) Professional of Social Services in Andalusia
(7) Professional care workers

ENTERPRISES
(8) Regional health care organizations
(9) Hospitals and primary care
(10) Social Services
(11) Suppliers

SCIENTIFIC AND PROFESSIONAL GROUPS
(12) Scientific Societies
(13) OMS-OPS
(14) EFQM-ENAC-ISQua
(15) Universities

SOCIETY
(16) Communications media

PUBLIC ADMINISTRATION
(17) Regional Ministry of Health

Conclusion: Identifying and mapping stakeholders is fundamental to ensuring the success of an organization that must respond to needs and expectations, especially those of its clients. This is essential in our case, as the Agency for Healthcare Quality of Andalusia is an organization directed to the provision of services in the scope of health care.


Disclosure of Interest: None Declared

Keywords: healthcare accreditation, mapping stakeholders
System Trends and Opportunities for Improvement in Leadership Identified from National Accreditation Results

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¹Accreditation Canada, Ottawa, Canada

Objectives: Effective leadership is critical in sustaining the healthcare system in Canada and internationally. This presentation showcases national leadership findings from on-site accreditation surveys of Canadian organizations and identifies system strengths and opportunities for improvement.

Methods: Accreditation Canada analyzed national leadership accreditation results in order to highlight system trends. In 2013, 265 organizations representing approximately 1400 sites were assessed against the Leadership Standards used in the Qmentum accreditation program. The standards are based on Canadian and international best practice and help healthcare organizations identify and meet the requirements for excellence in leadership. The results of 76,567 respondents and 34,600 respondents were also analyzed, respectively, from two survey tools on patient safety culture and work life[1].

Results: Strengths in healthcare leadership included an understanding by leaders of the changing needs and health status of the communities served, and the importance of assessing and improving patient flow throughout the organization. Opportunities for improvement included that leaders should ensure that services are delivered and decisions are made according to organization values and ethics; the need to consistently conduct exit interviews to improve performance, staffing and retention; and the need for more effective management and mitigation of risk.

Related to patient safety culture, moderate results were identified for senior leadership support for safety (69% positive response) and supervisory leadership support for safety (60%). Related to work life, results indicated that senior managers were largely committed to providing a safe and healthy workplace (73%) and to providing high-quality care (73%) however scores were lower for senior management acting on staff feedback (54%) and for senior management communication of organizational goals (64%).

Conclusion: Strong effective leadership is a critical success factor for organizations. The Accreditation Canada Leadership Standards and survey tools help healthcare organizations meet the demands for excellence in leadership. These national findings can assist healthcare organizations and leaders in informing their quality improvement efforts. Leading leadership practices from organizations continue to be shared and recognized by Accreditation Canada via the leading practices database (accreditation.ca). These practices include leadership development, capacity building, and strategic planning, which have potential to bridge the leadership gaps identified.

Trends identified inform emerging safety and quality risks, and in strengthening the Accreditation Canada program including revised standards content, Required Organizational Practices (ROP) [2] and instruments. For example, for on-site surveys beginning in 2015, a new Client Flow ROP will apply in the Leadership Standards for acute care organizations with an emergency department. This new ROP promotes a systems perspective on client flow, care transitions, and emergency department overcrowding.

Accreditation Canada continues to share information on quality and safety trends based on national data collected through the accreditation process. This reporting informs decision-makers and leaders as well as contributes to improved health system performance across Canada and internationally.

References: [1] The survey tools are completed by staff and direct care providers, including support staff and leadership, and complement the information collected from the on-site survey by peer surveyors. [2]Evidence-based practices that mitigate risk and contribute to improving the quality and safety of health services.

Disclosure of Interest: None Declared

Keywords: leadership, national accreditation results, patient safety culture and work life
A Critical Tool to Enhance Effective Governance
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Objectives: The links between effective governance and excellence in patient care quality are well established. As Baker and his colleagues conclude in their review of research on healthcare governance, the responsibilities and actions of a board are a major factor in organizational performance.[1] The Qmentum accreditation program offers a unique tool, the Governance Functioning Tool (GFT), which boards use to evaluate their functioning and identify areas for improvement. In 2014, Accreditation Canada validated the GFT. The data obtained from this validation point to strengths and challenges for Canadian governing bodies.

Methods: Client data from 2013 were used to complete the validation, including 1,874 individual respondents from members of governing bodies in 174 organizations. Factor analysis was used to test for construct validity.

Results: The 37-item GFT has good construct and discriminant validity, and accurately assesses four areas of board functioning: membership and structure; roles and responsibilities; meetings and decision-making processes; and evaluation processes. Overall, boards function well in the four areas covered by the GFT. Scores indicated that governing boards performed best (defined as 60% or more positive responses) in the area of clearly defined roles and responsibilities, specifically related to confidentiality, conflicts of interest, and roles of sub-committees. Decision making processes were also strengths, suggesting that meeting frequency permits timely decisions, that board members have good relationships with committees, and that group dynamics enable constructive discussions. The area of evaluation processes scored the lowest (less than 50% positive responses). There is room for boards to improve education and professional development, regular evaluation of individual and board performance, and on-going quality improvement. This corroborates a growing body of research suggesting that healthcare governing bodies need to strengthen how they monitor and evaluate organizational performance, especially related to quality and safety. The GFT adds to this finding that boards also need to develop better measures of their own performance, so that it too can be improved. Looking beyond Canada, research in the US also highlights three similar aspects of board performance identified in high performing medical centres: board member education and development, use of performance measures to guide policy improvements, and board self-assessment processes.2

Conclusion: Used together with the Governance Standards, and as part of an effective accreditation process, results from the GFT will continue to assist health care governing boards to inform their quality improvement efforts. Trends in the data identify opportunities for boards and organizations. The results from the validation will help Accreditation Canada to enhance the GFT and Governance Standards; improvements will focus on stronger benchmarking and greater content linkages between the GFT and Governance Standards.


Disclosure of Interest: None Declared

Keywords: Canada, healthcare governance, quality improvement
Enhancing an Internal Approach to Quality: The Accreditation Canada Experience

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Objectives: Accreditation Canada has a strong internal quality improvement plan that involves a Quality Council, indicators (Board of Directors, Leadership and team-level), annual Lean initiatives, and measuring and acting on feedback (from client organizations, staff and surveyors). The approach is being revisited in 2015 with a particular focus on revamping how client feedback is collected.

Methods: As quality improvement structures and processes are requirements of Accreditation Canada’s accreditation program, it is essential that it demonstrates its own commitment to quality. Accreditation Canada has had a quality structure and plan for a number of years. This includes a Quality Council which has representation from all levels of the organization, including the President and CEO. From the Board to the team level, indicators are collected and analyzed to identify opportunities for improvement. Lean/Six Sigma training has been received by selected staff and at least two Lean initiatives are conducted annually.

Accreditation Canada is committed to collecting and acting on feedback from client organizations, staff and surveyors. Traditionally, client feedback has formally been collected through an annual online survey that asks organizations that had an on-site survey in the previous year what their opinions are on a variety of topics including: program elements, educational offerings, survey experience, service and overall satisfaction. This approach was identified as problematic due to the length of the survey (100 questions), feedback received is not timely and all clients are not given an opportunity to provide feedback on an annual basis.

Results: In order to revamp the feedback management system, a multi-pronged review was conducted including discussions with national best practice leaders in other industries, including a national airline and a city transportation service. As a result, Accreditation Canada will revise its feedback measurement system. To measure service, best practice indicates that the SERVQUAL framework is best (Parasuraman et al., 1985), which is designed to measure whether or not services meet clients’ expectations based on set dimensions. An additional question will be added to the SERVQUAL survey, the Net Promoter Score, which enables an organization to measure client loyalty and growth (Keiningham et al., 2007). A survey of approximately 17 questions will be distributed annually to all clients. In addition, feedback on products will be collected on an as needed basis, shortly after a change is made, which will give a better understanding of the impact of the change.

Organizations will be also encouraged to provide feedback on an ongoing basis through feedback received by client account managers (Accreditation Specialists), captured through customer relationship management software.

Conclusion: In 2015, Accreditation Canada will revise its feedback measurement system. Feedback will now be able to be trended on an ongoing basis. The system will be implemented and evaluated to ensure that it meets its goals: receiving timely, trended feedback that can then be actioned to improve clients’ experiences with the Accreditation Canada program and services provided.


Disclosure of Interest: None Declared

Keywords: client feedback, organization, Quality Improvement
A Nationwide Randomised Controlled Trial Evaluating the Effect of Unannounced Periodic Hospital Surveys

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¹Danish Center for Healthcare Improvements, Aalborg University, Aalborg, ²The Danish Institute for Quality and Accreditation in Healthcare, Aarhus, Denmark

Objectives: To evaluate the effect of announced versus unannounced periodic hospital surveys based on an abbreviated set of the national accreditation standards and performance indicators from The Danish Health Care Quality Programme version 2 (DDKM version 2).

Methods: This cluster-randomised, controlled trial (RCT) is the first sub-project of the nationwide research project “Unannounced surveys in public hospitals” designed by the Danish Institute for Quality and Accreditation in Healthcare (IKA S) and the Danish Center for Healthcare Improvements (DCHI). Twenty-three hospitals (77%) (3 university hospitals, 5 psychiatric hospitals, and 15 general hospitals) agreed to participate in this trial and to be randomised to one of the trial clusters. Eleven hospitals received announced surveys (control group) and 12 hospitals received unannounced surveys (intervention group). We hypothesise that hospitals receiving unannounced surveys will be rated as less successful than hospitals receiving announced surveys, defined as less compliance with accreditation standards. Nine experienced and educated surveyors were responsible for conducting the surveys according to an abbreviated version of DDKM version 2. The outcome is the surveyors’ assessment of the hospitals’ level of compliance with accreditation standards and indicators. Compliance with accreditation standards was analysed using contingency tables and random-intercept logistic regression analysis.

Results: Assessment of the compliance with implementation of clinical guidelines was highly overrepresented in this study, why results from this data sample are presented [1]. Based on 19 hospital surveys, 12552 compliance ratings were applicable for data analysis, table 1.

Table 1 Compliance with implementation of clinical guidelines

<table>
<thead>
<tr>
<th></th>
<th>Not impl.</th>
<th>Impl. with major deviations</th>
<th>Impl. with minor deviations</th>
<th>Consistent impl.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unannounced surveys</td>
<td>91</td>
<td>108</td>
<td>77</td>
<td>6424</td>
<td>6700</td>
</tr>
<tr>
<td>(%)</td>
<td>1.43%</td>
<td>1.59%</td>
<td>1.14%</td>
<td>95.85%</td>
<td>100%</td>
</tr>
<tr>
<td>Announced surveys</td>
<td>58</td>
<td>80</td>
<td>70</td>
<td>5644</td>
<td>5852</td>
</tr>
<tr>
<td>(%)</td>
<td>0.96%</td>
<td>1.32%</td>
<td>1.21%</td>
<td>96.15%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>149</td>
<td>188</td>
<td>147</td>
<td>12068</td>
<td>12552</td>
</tr>
</tbody>
</table>

Abbreviation: impl.=implemented

The risk of observing non-compliance with the implementation of clinical guidelines during unannounced surveys compared to announced surveys was insignificant (OR = 1.105, 95%CI 0.594-2.055; p=0.752). Analysis of eight patient safety critical standards requiring full compliance to gain accreditation revealed no significant difference between unannounced and announced periodic hospital surveys (OR=1.880, 95%CI 0.770-4.590; p=0.165).

footnote:

[1] Other survey assessments include: Firstly, the accessibility to clinical guidelines, secondly, quality monitoring of the hospital structure, processes and treatment, and thirdly, the internal assessment of the monitored quality leading to quality improvement initiatives.

Conclusion: This cluster-randomised, controlled trial demonstrated that unannounced periodic hospital surveys did not rate the implementation of clinical guidelines as less successful compared to announced, periodic hospital surveys.

Disclosure of Interest: None Declared

Keywords: accreditation, cluster-randomised controlled trial, unannounced survey
Development and Validation of Prescribing Quality Indicators for Patients with Chronic Kidney Disease
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Objectives: There is currently no indicator set to assess the quality of prescribing for chronic kidney disease (CKD). Therefore, the aims of this study are (1) to develop a set of prescribing quality indicators (PQIs) for CKD care which are evidence-based and accepted by experts in the field and (2) to test the feasibility and operational validity of the indicators in a primary care group.

Methods: The PQIs were developed using the RAND/UCLA Appropriateness Method (RAM). First an initial list was developed from national and international guidelines, followed by a three-round structured process in which a group of experts from relevant disciplines assessed the list of PQIs on (1) correct reflection of the guideline, (2) definitions and (3) possible health gain for the patient. Feasibility of the selected indicators was assessed using data from Dutch primary care, namely the Groningen Initiative to Analyze Type 2 diabetes Treatment (GIANTT) database. GIANTT is a large database of >20,000 patients with type 2 diabetes, including >3850 patients with CKD stage 3 to 5. Operational validity was established if there were 96 patients or more eligible for calculation 1.

Results: An initial list of 22 PQIs was assessed by 12 experts. In the first round, seven indicators scored insufficiently on health gain for the patient, two indicators scored low on definitions specified in the indicator and 1 indicator scored insufficiently on both correct reflection of the guidelines and definitions. These insufficiencies were resolved during the consensus meeting between the experts. During this meeting, ten indicators were changed, two new indicators were added, 4 indicators remained the same and 8 indicators were rejected, leaving a final list of 16 indicators for assessment in the third round. In this round all indicators scored sufficiently and were accepted for further testing. All 16 indicators were feasible to measure in the primary care database. The number of eligible patients, however, ranged from 0 to >3200 patients. Furthermore, results show there is room for improvement in the prescribing quality in this population.

Conclusion: We developed a set of 16 PQIs to measure the quality of prescribing for patients with CKD which had sufficient content and face validity. They also showed technical feasibility but four PQIs showed problems with low numbers of eligible patients in a primary care database of diabetes patients with CKD. Therefore, 12 PQI were considered valid to be used in a primary care group. Future validations will be conducted in a secondary care database.


Disclosure of Interest: None Declared

Keywords: Chronic Kidney disease, Prescribing quality indicators
What do we really know about Accreditation, Quality, Safety and Dental Services? A Multi-Faceted Approach to review the Literature
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1Centre for Healthcare Resilience and Implementation Science, Australian Institute of Health Innovation, Macquarie University, 2Quality & Process Improvement, Royal Far West, 3Centre for Health Systems and Safety Research, Australian Institute of Health Innovation, Macquarie University, Sydney, Australia

Objectives: The study’s purpose was to design and undertake a multi-faceted literature review to provide understanding of accreditation, quality and safety of dental services.

Methods: Three contrasting approaches were used to identify and compare research literature. First, an interrogation of accreditation systematic reviews was completed. Second, a cross sectional analysis of accreditation, quality and safety in the leading dental journals was performed. Third, in-depth analysis of a leading quality and safety journal was undertaken.

Results: The three findings were combined in a matrix to form a comprehensive view of the literature (Table 1). The comparison reveals the dental sector is not widely represented in the quality and safety literature. Visibility of quality and safety in dental literature is also limited.

Table 1. Comparison of findings from the three literature searches

<table>
<thead>
<tr>
<th>Component</th>
<th>Literature search approaches</th>
<th>Cross comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study form</td>
<td>Existing accreditation systematic review analysis</td>
<td>Cross-section of dental literature</td>
</tr>
<tr>
<td>Type</td>
<td>Review</td>
<td>Cross-section</td>
</tr>
<tr>
<td>Method</td>
<td>Database and internet search for accreditation systematic reviews (MEDLINE, EMBASE Cochrane Library, Google Scholar) Keywords: systematic review, accreditation, health. Search returned 92 papers from 17023. Each article was reviewed. Only comparative reviews were included</td>
<td>Dental journals (n=144) identified and ranked by ISI impact factor. All research articles across 2013 and 2014 examined by two-pass thematic coding</td>
</tr>
<tr>
<td>Results</td>
<td>n=9 Dental practice or dental accreditation was not found to be represented in any systematic reviews of accreditation</td>
<td>n=2926 The major focus (91%) on three themes: innovation and development in materials, physiological/biological responses and evaluation of techniques and methods. Quality and safety accounts for &lt;1% of papers in top 10 dental journals</td>
</tr>
<tr>
<td>Outcomes</td>
<td>No empirical research studies conducted focusing on dental accreditation</td>
<td>Dental research literature focuses on practice methods and advances in materials</td>
</tr>
</tbody>
</table>

Conclusion: Globally, the dental field is devoid of empirical research investigating dental accreditation programs and there is a dearth of studies explicitly examining quality and safety issues. Similarly, there are few studies within the broader quality and safety literature covering dental services. These gaps demonstrates the dental sector’s need to demonstrate increased transparency and accountability for quality and safety of patient care.

Disclosure of Interest: None Declared

Keywords: Accreditation, Dental services, Literature
Sinking Our Teeth In: A Mixed Methods Framework to Examine the Barriers and Incentives for Participation in Dental Accreditation Programs
B. St Clair 1, 2,*, D. Greenfield 1, A. Georgiou 3
1Centre for Healthcare Resilience and Implementation Science, Australian Institute of Health Innovation, Macquarie University, 2Quality and Process Improvement, Royal Far West, 3Centre for Health Systems and Safety Research, Australian Institute of Health Innovation, Macquarie University, Sydney, Australia

Objectives: The dental sector requires quality, safety and accreditation research. This gap presents an opportunity to examine dental accreditation. The purpose of this project is to develop and present a framework for mixed-methods investigations of barriers and incentives for dentistry participation in an accreditation program.

Methods: A three phased approach was used to design an evidence based research framework. The approach consisted of: literature searches; expert group review; and key informant evaluation. Literature searched explored current research methodologies and their uses, existing research frameworks and use of incentives. An expert group, consisting of safety and quality academics, reviewed the theories and applications. Key informants, professionals with safety, quality and dental expertise, evaluated the proposed implementation process and practical implications for the sector. Information and views were collated and an iterative analysis approach was used to create the framework.

Results: The study reviewed 170 papers and reports. Information was collated into a framework (Table 1) and presented to the expert group, which meet 10 times over 12 months. There were nine key informants who evaluated and advised on implementation considerations. Key implementation challenges emphasised were the ability to demonstrate value of the research to the sector and a need to combine interview and survey responses with ethnographic observations.

Table 1: The TEETH research framework

<table>
<thead>
<tr>
<th>STAGE</th>
<th>RESEARCH ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical Position</td>
<td>- · Literature review</td>
</tr>
<tr>
<td></td>
<td>- · Development of the theoretical platform</td>
</tr>
<tr>
<td>Explore</td>
<td>- · Qualitative studies – Interviews, case study, ethnographic observations and survey</td>
</tr>
<tr>
<td>Elucidation</td>
<td>- · Compilation of outcomes</td>
</tr>
<tr>
<td></td>
<td>- · Development of quantitative experiment</td>
</tr>
<tr>
<td>Trial</td>
<td>- · Quantitative study – Discrete choice experiment</td>
</tr>
<tr>
<td>Highlight</td>
<td>- · Comparison of data against the theoretical position</td>
</tr>
<tr>
<td></td>
<td>- · Publish results</td>
</tr>
</tbody>
</table>

The TEETH framework consists of five stages that have been designed to provide a sequential pathway. Stage 1 develops the theoretical position from which the project proceeds. It consists of literature review and selection of an evidence-based theory against which the study results will be examined. The second stage explores the research questions through a triangulated series of qualitative studies. This provides a methodology incorporating verbal and visual observations. Stage 3 draws together the study findings and sets a new baseline from which to develop an experimental study. Stage 4 is used to undertake an experiment which provides a quantitative evaluation. The final stage, stage 5, draws together the results from the previous stages and compares the results against the theoretical position. The challenge of creating a value proposition for the sector is achieved through the engagement of the industry peak bodies and providing evidence on the incentives structures which are more highly favoured.

Conclusion: The TEETH framework provides a systematic structure for undertaking quality, safety and accreditation research within the dental context. The framework can be used and adapted to suit the dental practice and professional contexts in any country. Gaining an understanding of the barriers and enablers of dental stakeholder’s participation in an accreditation program can assist practitioners and policy makers in effective program and incentive design.

Disclosure of Interest: None Declared

Keywords: Dental accreditation, Mixed Methods
An Analysis of the US States' Laws Regarding Advance Directives
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Objectives: Advance Directive (AD)-related laws were enacted early in the Western countries. Some Asian countries including Japan and Korea are currently moving towards legalizing AD. In view of this, it is important to investigate and analyze these prior laws. All states in the United States have developed AD-related laws that include Living Will (LW) and/or Durable Power of Attorney for Health Care (DPAHC) since 1970’s. This study aimed to 1) analyze the contents of AD-related laws in all 50 states and 1 district, and 2) consider potential issues for policy-making and legalization of AD in other countries.

Methods: Each State Government website and database, including Westlaw International and LexisNexis, were searched to extract relevant laws. Total of 31 points, that were thought to be important legally and ethically when considering legalization of AD, were analyzed, including AD’s contents, legal power, validity conditions, applicability, health care provider’s and/or DPAHC attorney’s immunity, requirement for DPAHC and the individuals who may be authorized with power of attorney when the patient has no appointed DPAHC attorney.

Results: The major points analyzed are as shown in table 1. Table 1 Status of US states laws

<table>
<thead>
<tr>
<th>Key points in legislation</th>
<th>Number of states (district) with legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Specified form of document</td>
<td></td>
</tr>
<tr>
<td>LW</td>
<td>7</td>
</tr>
<tr>
<td>DPAHC</td>
<td>1</td>
</tr>
<tr>
<td>Both LW and DPAHC</td>
<td>3</td>
</tr>
<tr>
<td>2 DPAHC</td>
<td>49</td>
</tr>
<tr>
<td>LW</td>
<td>48</td>
</tr>
<tr>
<td>3 AD regarding life sustaining treatment</td>
<td></td>
</tr>
<tr>
<td>Withdrawal and/or withholding</td>
<td>51</td>
</tr>
<tr>
<td>Provision</td>
<td>40</td>
</tr>
<tr>
<td>4 Health care provider’s and/or DPAHC attorney’s immunity</td>
<td>51</td>
</tr>
<tr>
<td>5 Refusal of health care provider to comply</td>
<td>48</td>
</tr>
<tr>
<td>6 Family Consent to treatment</td>
<td>26</td>
</tr>
<tr>
<td>7 Not authorizing and/or not composing Mercy killing, euthanasia, physician assisted dying, suicide and murder</td>
<td>41</td>
</tr>
</tbody>
</table>

1 Excluding Louisiana and Montana
2 Excluding Massachusetts, New York and Michigan
3 Excluding Michigan, New Mexico and North Carolina

Three issues were identified; many states allowed any competent adults who were not a health care provider for the patient to be DPAHC attorney while some did not specify the authority of DPAHC attorney or provided legal forms for documentation; some states permitted family to consent to treatment when the patient had not appointed DPAHC attorney; many states had a comprehensive provision of immunity that included how to deal with noncompliance by the health care providers.

Conclusion: The US laws appear not to be fully resistant against the misuse of DPAHC without, for example, the authority by the court in Arizona to remove an attorney when required. The automatic rights of the family members to consent to treatment also require careful consideration. Decision-making with patients with dementia is a global problem. The law is required to consider patients without capacity and involvement of family in end of life care decisions. When enacting AD-related laws in the future, law and policy makers should also discuss DPAHC, family consent to treatment and immunity from patient-centered perspective.

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Keywords: Advance Directive, end of life, US state law
External Assessment for Clinicians: An Integrated Alternative Value Proposition

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**Objectives:** The seven Irish post graduate medical and dental training bodies are collaborating in conjunction with Medical Validation Ireland in the development of an integrated online assessment system which produces a quality scorecard and live key performance indicators (KPIs) at both individual and organisational level. There were two main objectives:

1. To develop a framework and set of credit descriptors which allow for benchmarking against an internationally recognised standard
2. To extract from the developed framework a set of meaningful KPIs which could be used by an individual, as part of an appraisal process and/or in a strategic organisational setting

**Methods:** A mixed method study design was employed. This included a comprehensive review of best practice in the area of qualifications and training pathways as well as an in-depth analysis of the pivotal components involved within doctors’ domains of practice. These methods were used to extract appropriate measurable components from those currently used by the Irish training bodies and internationally.

**Results:** The online interactive system developed identified six key areas critical to the performance of a Consultant Clinician. They are as follows:

1. Qualifications and Training Pathway
2. Portfolio of Experience including Committee Involvement and Quality Improvement Activities
3. Professional Attributes - Colleague 360° feedback
4. Continued Medical Education and Professional Development
5. Teaching and Training Activities
6. Research and Enquiry Activities

The assessment of the data entered into these categories, is assessed through the use of credit descriptors to give a numeric output. This is carried out independently by two specialty specific Clinician assessors and moderated where necessary by a Lead Clinician. The resulting score card can be viewed at an individual level recognising those above expectations, meeting expectations and below expectations. Additional potential of the score card is to provide a further dimension to an organisation’s appraisal process. The score card can then be used to identify meaningful KPIs. The numeric conversion of the credit descriptors allows for metrics to be generated at sectional, departmental and organisational levels. This work identified a number of advantages to such a system, uniformity of output for all participants, standardisation of processes to help integrate and coordinate activities internally (e.g. Quality Improvement and Research) and externally the potential of interfacing with regulatory systems. This work has also shown that metrics and KPIs are ongoing and therefore the generating system needs to be continually active.

**Conclusion:** The development of this framework has proven to be both an interesting and insightful exercise. As with many such studies further questions have arisen. The use of reflective practise with regard to Continued Medical Education would enhance the framework and provide some addition KPIs. Inclusion of patient feedback will complement the existing Professional Attributes and provide an increased insight for the Clinician. Finally can this system be used as a pre-selection tool for those that may need to be considered for Competence Assessment or could an enhanced system replace the need for such an assessment? As we endeavour to strive towards better patient care, the need for more integrated, easily used systems that provide informative and current metrics is ever increasing.

**Disclosure of Interest:** None Declared

**Keywords:** External Assessment, Quality Indicators
Development of a Benchmark Tool for Comprehensive Cancer Centres: Results from a Pilot Exercise
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Objectives: The BenchCan project is an international benchmarking project (BenchCan) with the aim to develop a format for the benchmarking of comprehensive cancer care and yield best practice examples across the EU in a way that contributes to improving the quality of interdisciplinary patient treatment. The Joint Commission\textsuperscript{1} identifies benchmarking as “a systematic, data-driven process of continuous improvement that involves internally and/or externally comparing performance to identify, achieve, and sustain good practice”. This paper will describe the development and the results of a pilot at 6 cancer centers.

Methods: The 13 step benchmarking process according to Van Lent et.al. was used.\textsuperscript{2} A framework based on the European Foundation of Quality Management (EFQM) model and the Institute of Medicine (IOM) domains of quality was developed to structure the indicators. Indicators were primarily derived from a literature search and secondary form expert opinion. Stakeholders of the BenchCan project (experts from cancer centers) were asked to provide feedback to facilitate a structured discussion to reach consensus on the final set. A pre-pilot was performed in which the indicators were tested at three pilot sites. Centers were asked to provide administrative data and a site visit was performed to grasp the context and to clarify additional questions; lastly a discussion was organized about the definitions and usefulness of the indicators.

Results: Based on the discussion with the experts and representatives from pilot sites indicators were added and removed. The updated list contains 81 qualitative and 141 quantitative/financial indicators. Most changes were made in clarifying the definitions of the indicators. Centers however reported the data in the same way which enables comparison. The different sites show strengths and weaknesses in different domains. Based on the pre-pilot big differences between pilot sites are expected in length of stay and staff turnover rates. The degree of patient centred care is also likely to differ, as is the registration and evaluation of adverse events. Another expected difference can be found in the domain of Resources such as the use of state of the art techniques, equipment, and IT. The pre-pilot also showed that not all institutes have the same financial means or freedom to make changes. Final results will be available after the completion of the data collection in July.

Conclusion: A benchmarking tool for Comprehensive Cancer Care has been developed that will become available in an open format. Meaningful comparisons appeared in domains like Partnerships and Resources and patient centered care. Not one center is the best in all domains, but all have their strengths and weaknesses, which means that centers can actually learn from each other. Reliability and validity of the tool are ensured by the pilot of the indicators at 6 cancer centers. The pre-pilot showed that the sites all reported data in the same way (reliability) and all provided the type of data that was required (validity). Apart from center benchmarking a pathway benchmark is under development as well as a consumer experience questionnaire.

References:

Disclosure of Interest: None Declared

Keywords: benchmarking, comprehensive cancer care
The Application of Relative Cost-Effectiveness Measure (CI) for Acute Stroke Quality Assessment

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Objectives: Health Insurance Review and Assessment Service (HIRA) started assessing the quality of acute stroke treatment in 2007. Since then, the assessment continued, and reached 6th in 2014. Although the quality of care improved through assessment, medical cost has been continuously increasing. In response, HIRA began adoption of Costliness Index (CI) measure in 2011 (4th). Definition of CI indicates how high the medical cost is relatively in consideration of diagnosis related group (DRG). This study aims to analyze the effect of CI adoption by comparing medical cost per case, before and after the implementation.

Methods: We analyzed medical cost per case from 2008 to 2013 (3 years before and after of CI adoption). We used inpatient data from all tertiary hospitals, who were admitted with the diagnosis of acute stroke. All materials used for this study came from HIRA benefit claims data. The CI value was produced after risk-adjustment using RDRG for age and severity.

Results: Medical cost per case rose every year, but the increase rate started to curve after the application of relative CI in 2011. Average annual increase rate of 3 years before and after the CI adoption fell from 4.27% to 1.81%(Table).

Table. Annual trends of cost

<table>
<thead>
<tr>
<th>Variables</th>
<th>before CI adoption</th>
<th>after CI adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td>the cost per case (million KRW)</td>
<td>5.27</td>
<td>5.52</td>
</tr>
<tr>
<td></td>
<td>(100.0%)</td>
<td>(104.7%)</td>
</tr>
<tr>
<td>average annual increase rate</td>
<td>(4.27%)</td>
<td>(1.81%)</td>
</tr>
</tbody>
</table>

Conclusion: After applying the relative cost-effectiveness measure, we were able to confirm the effect of high quality-low cost in performance of acute stroke. The CI indicator can be utilized in other areas. For example, it could be used as an exclusion criteria in Pay for Performance (P4P) program, when an incentive-qualified institution has significantly negative CI value.


Disclosure of Interest: None Declared

Keywords: cost-effectiveness
Management and Improvement of Gastric Cancer Clinical Indicator Evaluation in National Health Insurance

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Objectives: Health Insurance Review & Assessment Service (HIRA) began Gastric Cancer Clinical Indicator Evaluation in July 2014 in order to better assess the cost effectiveness of gastric cancer treatment and its process, including medical records and duration of hospitalization, and also to improve the quality and effectiveness of standardized treatment. In 2013, prior to the Evaluation, National Cancer Center (NCC) conducted a preliminary evaluation to identify weak points, and has made efforts to improve such areas.

Methods: The 2013 preliminary evaluation examined 15 process indicators and identified the following 7 process indicators that rated below 90 points:

[Indicator 3] Record Rate of Diagnostic Esophagogastroduodenoscopy Prior to Resection
[Indicator 5] Record Rate of ECOG assessment
[Indicator 6] Adjuvant Chemotherapy Oncologist’s Cancer Stage Record Rate
[Indicator 7] Treatment Adherence Rate of Endoscopic Dissection or Resection
[Indicator 14] Rate of Performance of Recommended Adjuvant Chemotherapy Treatment Within 8 weeks After Resection (Stage Ⅱ ~ Ⅲ)
[Indicator 15] Rate of Recommended Adjuvant Chemotherapy Treatment
[Indicator 16] Rate of Flow Sheet Use

Based on the results of the preliminary evaluation, NCC has thoroughly examined 7 indicators and made progress in the following ways:

1. Created Clinical Data Warehouse (CDW) in accordance with the HIRA criteria.
2. Standardized the medical record formatting; the new format can suitably be used for EMR data collection in the future, improving the effectiveness of monitoring for the annual evaluation.
3. Held seminars three times that were designed to raise the awareness of the importance of the evaluation among the medical staffs.
4. Provided feedback via email, in-person consultation, and seminar every 2 months.

By comparing the result of the 2013 preliminary evaluation with the first official evaluation of HIRA from July to December 2014, we assessed the effectiveness of our efforts for improvement in the 7 items that rated below 90 points.

Results: In January 2015, CDW initially collected data from 356 patients for the second half of the evaluation period in 2014. Among them, 72 patients who received diagnosis prior to July 1, or patients whose KCD (Korean Standard Classification of Disease) code names were not compatible with C16 were excluded. After then, CDW selected 256 patients for process evaluation, 28 patients for result evaluation. For the 256 patients selected for process evaluation, the average point of the 7 items has increased by 50.7 points, from 47.4 to 98.1.

Table 1. Result of improvement effort in items that rated below 90 points

<table>
<thead>
<tr>
<th>Process Indicator</th>
<th>Preliminary evaluation</th>
<th>First HIRA evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator 3</td>
<td>13.9</td>
<td>98.4</td>
</tr>
<tr>
<td>Indicator 5</td>
<td>87.5</td>
<td>98</td>
</tr>
<tr>
<td>Indicator 6</td>
<td>87.5</td>
<td>100</td>
</tr>
<tr>
<td>Indicator 7</td>
<td>80.6</td>
<td>100</td>
</tr>
<tr>
<td>Indicator 14</td>
<td>25</td>
<td>95.1</td>
</tr>
<tr>
<td>Indicator 15</td>
<td>37.5</td>
<td>95.3</td>
</tr>
<tr>
<td>Indicator 16</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Average</td>
<td>47.4</td>
<td>98.1</td>
</tr>
</tbody>
</table>

Conclusion: As a result of our effort for improvement, all indicators that initially had low score improved to a satisfactory level. Further improvement efforts will be made to ensure the consistent and proper use of the standardized medical record format and to develop a computerized database that can collect EMR data.

Disclosure of Interest: None Declared

Keywords: Gastric Cancer Clinical Indicator Evaluation
How Accreditation Can Become a Better Tool to Improve Quality in Lebanon

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¹MOUNT LEBANON HOSPITAL, Hazmieh, ²Syndicate of Hospitals, ³Arab Hospitals Federation, Beirut, Lebanon

Objectives: The report would highlight the major incentives to promote quality and the challenges that regulators in Lebanon face.

Methods: Interviews with the stakeholders and we would build. Survey questionnaire and score card comprising the different criteria to be investigated.

Results: Major key points to address are:
- Ethics and rule of law
- Poor government and providers account
- Accountability

Conclusion: Authorities can establish incentives to providers and stakeholders in order to increase their accountability and motivation to improve quality. The overall trust in the system can be enhanced with more planning and visibility about the future of the process.

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Disclosure of Interest: None Declared

Keywords: accreditation, regulations, quality, governance
The impact of accreditation on quality of care: A cross-sectional study in Saudi Arabia
Mohammed Almasabi, Hui Yang, Shane Thomas, Accreditation, Regulation and External Evaluation

Introduction: In 2005, the Central Board for Accreditation of Healthcare Institutions (CBAHI) was launched in Saudi Arabia in order to improve the quality of care. By 2010, the first hospital was accredited by CBAHI, followed by many hospitals in following years. The aim of this study is to examine the impact of CBAHI on quality of care.

Study Objectives: The aim of this study was to examine the impact of accreditation on quality of care

Methods: A cross-sectional study was conducted in three accredited public hospitals in Saudi Arabia. The data were collected from a survey of 669 respondents and open-ended question.

Results: The Pearson correlation indicated a positive correlation between quality processes and quality outcomes and between quality processes and accreditation outcomes. The results of the open-ended question included; accreditation was too focus on paperwork, no monitoring programs after the completion of the accreditation process, manpower shortages during the process, a lack of staff involvement, lack of training after accreditation.

Conclusion(s): Although accreditation is a tool for quality improvement, there is room for improvement.
The association between accreditation and quality indicators
Mohammed Almasabi, Hui Yang, Shane Thomas, Accreditation, Regulation and External Evaluation

Introduction: Accreditation is one of the most important tools for quality improvement in healthcare organisations. It is a means by which health services are assessed externally to determine whether they comply with international standards. Saudi Arabia has only recently implemented accreditation processes to improve healthcare programs. In 2005, the Central Board for Accreditation of Healthcare Institutions (CBAHI) was established following the recommendations of the Council of Health Services (Saudi Arabia). The CBAHI was formed to develop and implement quality standards in all health organisations in Saudi Arabia to improve health services. Although accreditation has been used in many countries to review and improve quality of care, there is a lack of evidence to show whether accreditation programs are effective.

Study Objectives: The aim of this study was to examine the effect of accreditation on quality indicators.

Methods: Outcome indicators measure what happens to patients after something (e.g. accreditation) is done. As CBAHI accreditation is relatively new phenomena in Saudi Arabia, therefore, there is a chance to compare quality indicators before and after accreditation in order to recognise the change effects triggered by the CBAHI. The pre-test/post-test design was used. In this design, the measurement of mortality, infection and the length of stay were taken both before and after accreditation. Comparative before-after designs produce stronger evidence that any outcomes were due to the accreditation and not to something else. The data were collected from three accredited public hospitals.

Results: There was no relationship between accreditation and the three quality indicators.

Conclusion(s): Quality indicators should be incorporative in accreditation process.
Do Demographic Characteristics Affect How Staff Perceive Quality of Care? A Cross Sectional Study in Saudi Arabia
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Objectives: To examine how staff perceive quality of care is affected by demographic characteristics.

Methods: A cross-sectional study was conducted in three public hospitals in Saudi Arabia. Data were undertaken from a survey of 669 staff. Demographic characteristics were gender, age, nationality, qualification, profession, experience and employment level. Quality of care variables were leadership, strategic planning, patient focus, measurement, training, operation focus, professional participation staff involvement and quality results. Independent sample t-test and ANOVA test were conducted.

Results: The study found that quality of care variables were most significantly affected by a person’s gender, nationality and profession. Female and non-Saudi staff were more likely to recognise quality of care than male and Saudi staff.

Conclusion: Demographic variables should be taken into consideration when studying quality of care in Saudi hospitals. There is a need for a strategy to improve the understanding and knowledge of quality of care amongst Saudi healthcare personnel, improve the skills of current employees, and raise the quality of health professionals.

Disclosure of Interest: None Declared

Keywords: quality care
Enhancing Medical Record Documentation By Physicians: A Study in a Teaching Medical City in Saudi Arabia

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Objectives: Clinical documentation (CD) is the core of every patient encounter. Clinical documentation improvement (CDI) programs are vital to any healthcare facility. The aim of this work was to identify the elements for CDI in the Medicine Department at King Saud University Medical City (KSUMC) in Riyadh, Saudi Arabia over four years (2011 – 2014), to measure and analyze the documentation compliance rate of the physicians, and to identify strategies to enhance clinical documentation by physicians.

Methods: The PDCA model, a continuous quality improvement (CQI) tool, was used to enhance the CD process. PDCA Steps: (i) Plan: a process of open record review and CD auditing in the medicine department was conducted as a part of a CQI plan in preparation for international accreditation of KSUMC. Medical records were screened by a dedicated quality coordinator to perform a gap analysis in order to identify the critical elements and areas for CDI. The selection was based on the elements of medical records with physician documentation compliance rates less than 75%. A CD audit tool adapted based on these prioritized elements was used for subsequent auditing. (ii) Do: interventions were in the form of regular educational sessions conducted for the interns and residents on CD and relevant forms and policies, on-the-spot training by QMD facilitators at the points of care, development of the medication reconciliation physician order, coordination with the pharmacy department to reject any medication order with unapproved abbreviation, physicians and nurses regularly checked completeness of forms before sending to pharmacy and printed instructions for physicians. (iii) Check: Re-auditing was done to check the improvement in CD compliance and stickers were put for the non-completed forms. Regular auditing of the medical records was conducted biannually for a total number of 300 records per year. (iv) Act: Re-auditing was repeated after 48 hours to check if forms with stickers were completed. Several indicators were identified to monitor and evaluate the process over time.

Results: The identified elements in the medical records with low compliance in CD in the medicine department included six elements; (1) medication reconciliation form,(2)documentation of the length of stay (LOS),(3)initiation of the care plan/discharge plan upon admission, (4) use of approved medication abbreviations, (5) counter signatures for physician notes/orders, and (6) risks documented in the surgery/procedure informed consent form. The medication reconciliation compliance rate was lowest in 2012 (28%), LOS was lowest in 2012 (15%), care plan/discharge plan was lowest in 2011 (23%), approved medication abbreviations was lowest in 2012 (26%) ,(5) co-signatures for physician notes were lowest in 2011 for interns’ notes (25%) and in 2013 for history and physical examination form (14%), and risks in the consent form were lowest in 2011 (50%). All the six elements revealed noted improvement in 2014 after continuous implementation of the mentioned interventions over 4 years with resulting compliance rates of 50-80%.

Conclusion: The PDCA model is a useful tool for developing a valid and reliable process to enhance the care process including inter-disciplinary communication through CD. Regular training and auditing for physician CD compliance is a cornerstone for a successful CDI program.


Disclosure of Interest: None Declared

Keywords: clinical documentation, communication, medical records
Proposal of a Medication System Assessment Tool in Brazilian Hospitals
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Objectives: To describe the construction and validation process of a tool to assess the medication system in hospitals, based on the Brazilian Patient Safety Program.

Methods: A methodological research was undertaken between March and December 2014. To define the construct, the “Safety protocol for medication prescription, use and administration” was considered as the theoretical framework, which is part of the National Patient Safety Program. The program has been in force in Brazil since 2014, under the coordination of the Ministry of Health and the National Health Surveillance Agency, in partnership with the Oswaldo Cruz Foundation and the Hospital Foundation of the State of Minas Gerais. The protocol is subdivided in three main activity areas (prescription, distribution and administration) and is aimed at promoting safe practices in medication use (1). To validate the contents, the Delphi Technique was used, with a 90% agreement level among the panel members. To verify the internal consistency, the calculation base was Cronbach’s Alpha coefficient and the limit set as ideal was a result of 0.75 or higher.

Results: The protocol was exhaustively read and an assessment instrument was constructed, considering the areas prescription (106 items), distribution (34 items) and administration (54 items). Next, it was forwarded for validation by a group of experts. In the first round of the Delphi Technique participated 40 panel members with an educational background in nursing, medicine, pharmacy, biomedicine, dentistry, physical therapy and nutrition. The mean length of their experience in the medication system was 16.3 years and the activity areas were related to care, management, teaching, service assessment, research, health public policy. Among the 194 items forwarded for assessment, only 16, from the prescription area, did not reach 90% of agreement. Then, the suggestions received were analyzed and four items were grouped in two and the remainder was simply rewritten, which means that 14 items were submitted to the second round of the Delphi Technique. Thirty-six panel members participated in this phase and two items were excluded because they did not reach the established agreement level. Hence, the final instrument included 190 items, 102 for the prescription area, 34 for distribution and 54 for administration. The Cronbach’s Alpha result corresponded to 0.97 and the results of the prescription, distribution and administration areas were equal to 0.96, 0.80 and 0.94, respectively.

Conclusion: This study provides initial evidence on the validity of a medication system assessment tool focused on the Brazilian reality, in view of the country’s continental dimensions, in which regions, States and health institutions have different realities and limited resources. The assessment tool can contribute to the identification of weaknesses in the medication system processes, underlying the appropriate management of care and helping with the institutions’ strategic decisions concerning the search for and maintenance of quality and patient safety.


Disclosure of Interest: None Declared

Keywords: Medication Safety, Validation
The Blood Exposure Accidents in the Algerian Health System: An Attempt to Approach the Public Sector
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\textsuperscript{1}Management, \textsuperscript{2}Economics, Constantine 2 University -Abdelhamid Mehri-, Constantine, Algeria

Objectives: According to a study by The National Institute of Public Health, more Than 58.1\% of medical, paramedic and professional staff is reached by Blood Exposure Accidents in the Algerian public health care system. This important proportion drove us, naturally, to raise the question about what are the main causes fuelling the persistence of this phenomenon?, which decrease at the same time, safety and quality of the public healthcare system services.

Methods: To achieve the objective. Our approach was based, first, on giving a holistic view about the importance of the Blood Exposure Accidents in the Algerian public health system, using the statistics data, produced by the relevant institutions such as the National Institute of Public Health, the occupational medicine services and the public health directions. Secondly, we tried to identify the main causes and mechanisms that prevailing the occurrence of the Blood Exposure Accidents in the public healthcare environment. For this, we built our analysis on the data and conclusions reached in the collaborative project, which gathered The National Institute of Public Health and the World Health Organisation (WHO) on the subject of the medical waste disposal risks.

Results: After researches, we found that the main causes of the Blood Exposure Accidents are divided into two main groups namely:
1. Material problems:
   - A Considerable lack in terms of means of eliminating medical sharps waste. Only 1/3 of the public health structures provided with recuperation containers of infectious sharp medical waste and solely 43\% of those containers are comply with the WHO standards.
   - Failure to respect the color-coding of waste bags in ¾ of health structures, reflecting the importance of the lack of training among staff, And causing more than 11\% of Blood exposure accidents.
   - Availability of the protection equipment for the staff assigned to waste: only 34, 3\% of the staff use protective masks, 61, 4\% has impervious gloves and 51, 4\% has protective boots.
   - 50\% of public health structures have local storage of medical waste and only 7\% of them are comply with the standards
2. Staff training and Prevention:
   - The proportion of trained responsible of waste management in the different public structures are in the order of : 88,90\% in University Medical Centers, 38,50\% in specialized hospitals, 33,30\% in polyclinics and 29,20\% in public health establishments of proximity.
   - More than 72\% of the medical paramedic and professional staff ignore the disposal process of the medical waste management, and only 27, 6\% of them know the correspondence of the color code with the typology of the medical waste disposal.
   - Only 46\% of public health structures practice early sorting of their medical waste.
   - In terms of prevention, 38\% of the staff are not vaccinated and not aware of the need of the vaccination against the Hepatitis B.
   - Only 39, 9\% are aware of the need for protective equipment against the medical waste risks.

Conclusion: In future steps that must be enterprise to decrease the level of accidents of blood exposure, priority should be given to:
1. Staff Training activities: Medical Waste Management, Awareness against risks, protocol of good practices, Compliance with regulations.
2. The material environment: invest in the improvement of waste management facilities and provide health structures with protective equipment, which ensures a better safety for medical staff and patients and guarantee a better public health care quality.

Disclosure of Interest: None Declared

Keywords: Blood Exposure Accidents, Public health care system, Safety management
Utilizing the Future of Nursing: Leading Change, Advancing Health Report as a Framework to Transform Nursing in Qatar and Provide Quality Care that is Accessible to All
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Objectives: INTRODUCTION: The Institute of Medicine (IOM) released a report in October 2010, The Future of Nursing: Leading Change, Advancing Health. The report is a thorough examination of the nursing profession. The recommendations offered in the report focus on the critical intersection between the health needs of diverse, changing patient populations across the lifespan and the actions of the nursing workforce. In order for healthcare systems to care for the complex needs of patients and families, the nursing workforce must become agile and work collaboratively with educators, medical colleagues and legislators. Nursing has been called to action by the Future of Nursing: Leading Change, Advancing Health report and nursing leadership must prepare to meet the challenge by implementing change. [KN1] Developing a nursing department and nursing culture within a Greenfield hospital site is a rare opportunity. With the intention of developing a robust nursing culture, The Future of Nursing: Leading Change, Advancing Health Report has been utilized as framework to transform the nursing profession in Qatar in order to impact patient outcomes.

OBJECTIVE: The aim was to critically review The Future of Nursing: Leading Change, Advancing Health Report and its impact on the nursing workforce in a developing country. In addition, discuss the IOM’s findings regarding the future state of the nursing workforce, review actions that have been implemented in the author’s current organization, and recommend evidence-based measures to address current organizational gaps in meeting the IOM’s recommendation, and finally discuss the economic feasibility of implementing these recommendations in a developing country.

Methods: The following databases were searched: Cochrane/EPOC resources (DARE, CENTRAL, and the EPOC Specialized Register), PubMed, CINAL Plus, CAB Health, Virginia Henderson International Nursing Library, the Joanna Briggs Institute database, The British Library, international theses databases, as well as generic search engines.

SELECTION CRITERIA: Randomized control trials, controlled clinical trials, controlled before and after studies and interrupted time series analyses of interventions relating to The Future of Nursing: Leading Change, Advancing Health Report, nursing workforce planning in a developing country, and improved health outcomes.

Results: There were 5276 studies that were potentially relevant to the review. Following a detailed examination of each study, 12 were included in the review. There is strong evidence that supports using the IOM report as a blueprint to transform the nursing workforce in the United States; however, there is no evidence that demonstrates the utilization of this report in a developing country.

Conclusion: The healthcare environment is complex and ever changing. The IOM report, The Future of Nursing: Leading Change, Advancing Health provides a framework for change within the nursing profession and provides a framework for the transformation of nursing in a developing country. This report discusses the challenges for nursing leaders and supplies recommendations for change. Healthcare organizations must adopt evidence-based actions to address any gaps in meeting the IOM’s recommendations. Nursing leaders are tasked with the challenge to implement innovative ways to advance the future of nursing and provide quality and safe care for patients and families.

Disclosure of Interest: None Declared

Keywords: Nursing in Qatar, Quality of care, The Future of Nursing: Leading Change, Advancing Health Report
Providing Technical Assistance to Address the Quality and Safety of a National HIV Prevention Program in Uganda: The Experience of the USAID ASSIST Project

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Objectives: In November 2012, an external quality assessment led by the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) identified quality gaps in the voluntary medical male circumcision (VMMC) program in Uganda. The USAID Applying Science to Strengthen and Improve Systems (USAID ASSIST) Project was requested to provide technical support to Ministry of Health (MOH), implementing partners, and health units to address the quality and safety gaps identified. This is a description of steps that were taken to begin the process, how tools were developed and used to assess the level of quality, and how health units were supported to address the identified gaps and the results that were achieved.

Methods: Stakeholders including MoH, implementing partners and health unit representatives were identified and convened several meetings to get feedback on the improvement plan and agree on the number and selection of pilot sites. Working with MoH, we aligned WHO quality assessment tools to other MoH guidelines and policies and also developed standardised tools for collecting client-level information and reporting. A team composed of the stakeholders conducted a baseline assessment. Improvement teams, comprised of frontline health workers, were established and supported through monthly onsite coaching to test changes to address the gaps. Teams were also convened in peer-to-peer learning sessions to promote inter-team learning. Improvement was measured using indicators of compliance with quality standards and client-level improvement indicators. Changes that led to improvement were documented, compiled and packaged into a guide and shared with all teams.

Results: A standardised client form, theatre register, client card, and monthly summary form have been approved by MoH and are in use at all VMMC sites. Indicators to track the quality of program have been adopted by all implementing partners and MoH. Sites that score poor (less than 50%) in any of the standards have reduced from 87% (February 2013) to 0% (November 2014). The proportion of clients that return to the clinic within 48 hours for review after circumcision has improved from 18% (January 2013) to 92% (November 2014). For the past 16 months, the rate of adverse events has been maintained below 1% across all sites, down from as high as 9% at some sites before the improvement work.

Conclusion: It is possible to turn around for the better, the quality of a national HIV prevention program. However, this requires involvement of key stakeholders from inception through implementation and use of improvement teams to spearhead the improvement work.

Disclosure of Interest: None Declared

Keywords: HIV free, quality & patient safety improvement, Voluntary Medical Male Circumcision
Lived Meaning of Patient Satisfaction in the Medical Encounters: An Existential-Phenomenological Study on Chinese Patients
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Objectives: This research is concerned with the low patient satisfaction and unacceptable service quality on the Chinese mainland. The main objective is to develop a deep understanding of the experiential meaning of patient satisfaction in the medical encounters from the perspective of lay people. The study provides new insights into exploring effective ways to improve patient satisfaction as well as identifying valid parameters of service quality in health care.

Methods: Situated in the Existential-Phenomenological tradition, this inductive research collected empirical data through interviews during the summer of 2014. The participants were asked to recall the medical encounters in as much detail as possible and describe the satisfactory or unsatisfactory experiences. All the participants were originally from China and permanently or temporarily living in Finland (mainly Helsinki area). They had received medical treatments from Finnish health care institutes and Chinese ones in the past three years. This study assumed that patients obtain stronger insights into what is satisfactory or dissatisfactory service by comparing more contrastable experiences. Primary content analysis was conducted to identify the meaningful data units and excavate the major themes of satisfactory service experience perceived by these Chinese participants.

Results: Four major experiential themes of the meaning of patient satisfaction for Chinese participants were discovered. The first one is the perception of being cured radically, which means that simply treating symptoms, e.g. pain relief using pain killers, does not necessarily lead to patient satisfaction and only the effective treatments that deal with the source of the disease will make Chinese patients happy and satisfied. The second one is the experience of reassurance, loaded with a sense of security, certainty and clarity, which can be facilitated by thorough examinations, detailed explanations, good preparations and clear instructions. The third one is the perception of human-centricity, which means that mere disease-centered standardized care without any psychological support or emotional connections may result in feelings of dissatisfaction. The final theme is the experience “co-working”, which reflects that a sense of activeness, empowerment and cooperation will increase patient satisfaction.

Conclusion: This study shows patient satisfaction in the medical encounters as being a complex and multi-dimensional construct. Four uncovered themes can be interpreted and synthesized as the four dimensions of patient satisfaction: physical, psychological, social and existential, fitting to the framework of “Quality of Life”. This study adds depth and details, in a cultural sense, to existing literatures on patient satisfaction. Yin and Yang medicine philosophy of dealing with the disease from the root or source, the Confucius ideology of beneficence-based ancient Chinese medical ethics and the philosophy of family collectivism largely influence Chinese people in experiencing and assessing health services. This recently-conducted study also adds sophistication to the meaning of patient satisfaction in a temporal sense. The theme of “co-working” reflects a notion of post-modernism in health care that medical practitioners are losing the unchallengeable status as patients have increased motivations and intentions to challenge their doctors’ authorities and resist medical dominance. Future research is advised to select a population from a wider range of social demographic backgrounds and clinical specialties, facilitating comparisons between different cohorts of Chinese and providing a more comprehensive insight into patient satisfaction in medical encounters with Chinese patients.

Disclosure of Interest: None Declared

Keywords: Existential Phenomenology, Patient Experience, Patient Satisfaction
Patient Safety Climate Perception in Brazilian Hospitals: Pilot Test

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Objectives: Almost one of each ten patients is injured while receiving health care and of these, many suffer disabling injuries or death every year. Understanding that quality health care is a crucial aspect in achieving Universal Health Coverage, and comprehending the negative impact of the failures in patient safety globally, and the influence that safety climate has on the adoption of safer actions and decisions, and being aware of the lack of studies on this topic in the context of developing countries, this study aimed to analyze patient safety climate in Brazilian hospitals.

Methods: This is a quantitative, cross-sectional Survey, and for data collection it was used the transcultural adaptation for Brazil of the Safety Attitudes Questionnaire (SAQ) - Short Form 2006. The pilot study took place in two general hospitals in the state of São Paulo, one public and the other private, both certified in the category of Excellence, by the National Accreditation Organization (ONA, per its acronym in Portuguese), and by the Accreditation Canada International (ACI). The study population included doctors, nurses, nursing technicians and nursing assistants, physiotherapists, pharmacists and nutritionists, which had been working in these hospitals for at least six months, with a working schedule of at least 20 hours per week. A total of 50 professionals, 25 in each hospital, that followed these inclusion criteria and which accepted to participate in the study composed the final sample. Data were collected during the months of November and December 2014.

Results: Most professionals, 72% (36), were female, a total of 22% (11) worked in intensive care units, followed by 16% (8) who worked at internal medicine wards. The nursing assistants and nursing technicians were the most frequent category featuring a total of 40% (20) of the professionals who participated in the survey, followed by nurses with 32% (16) and doctors with 14% (7). Most professionals, 64% (32), worked with adult patients. We found that 28% (14) of the professionals had been working in their occupations for between 3 and 4 years, 20% (10) for 5 to 10 years and 22% (11) for 11 to 20 years. A total of 66% (33) of the professionals presented a positive patient safety attitude. When analyzing the different dimensions 96% (46) of the professionals had a positive attitude with respect to Job Satisfaction, 72% (36) to Teamwork Climate, and also 72% (36) to Safety Climate, 34% (17) to Stress Recognition, 54% (27) to Unit Management Perception, 44% (22) to Hospital Management Perception and 60% (30) to Working Conditions.

Conclusion: There was a pronounced variability between dimensions, and Teamwork Climate, Safety Climate and Job Satisfaction were the ones with highest scores. Patient safety climate in Brazilian hospitals surveyed is not fully developed and there is still a lot of opportunities for improvement.


Disclosure of Interest: None Declared

Keywords: Organizational Culture, Patient Safety, Quality of Health Care
Integrating Quality and Safety Metrics for Primary Care in Afghanistan Employing Facility and Community Scorecards

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Objectives: To measure the effectiveness of integrating metrics for quality and patient safety through facility and community scorecards

Methods: Balanced score cards (BSC) are widely used in healthcare to provide comprehensive measures of organizational performance. In Afghanistan, clinical and managerial standards from the basic package of services were designed to develop a multi-domain performance assessment. Employing stratified random sampling, up to 25 primary health centers were selected in 34 provinces and assessments on quality of care were conducted in 6930 patients and their caretakers by trained survey teams, followed by health provider interviews. Community scorecards (CSC) have also become popular social audit and accountability tools using participatory methods to provide quantitative feedback on patient and community perceptions on quality, adequacy and efficiency of public services. Primary care facilities in 3 provinces were selected to launch the CSC to integrate quality and safety metrics, and subsequent joint scoring of performance by providers and citizens and develop action plans for improvement.

Results: Results from the BSC evaluation indicated high scores for patient satisfaction and perceived quality of care index (Median score; 75.3). In two of the provinces where the CSC was also launched, to enhance citizen engagement in performance of primary care facilities, median scores were much higher (Nangarhar, 80.6, Takar 78.7), for patient satisfaction and perceived quality of care than the national scores. Indices for performance included; facility cleanliness (78+/−21.6), provider courtesy (87.5+/−18.4), patient counselling on disease (73.2+/−22.1), patient counselling on treatment (74.5+/−21.4), cost of visit (77.5+/−23.1), privacy (85.5+/−20.2), consultation time (74+/−21.1), service hours (77.5+/−21), waiting time (65.9+/−26.7), availability of medicines (72.4+/−24.5), and overall satisfaction with the visit (80.2+/−18.5). Scores from the CSC, were low (<5 points on a scale of 1-10) for facility capacity including power and water supply, availability of waiting rooms, physical infrastructure, adequacy of patient beds, access to specialists including dentists, physiotherapists etc, availability of 24h services, patient volume and quality of medicines. However all aspects of health provider technical competency, availability, courteousness etc were scored full points (>9 points). Facilitated interface meetings between health providers, health councils and citizens resulted in the prioritization of action plans for quality improvement, ensuring elements for structural quality, eventually resulting in improved utilization of care, quality of services and trust of health providers.

Conclusion: In fragile contexts like Afghanistan the delivery of quality health care is challenged by a myriad of cultural and contextual factors. Engaging patients and communities in the design and delivery of care and subsequently in monitoring the performance of the primary care systems by complimenting the more sophisticated independent BSC audits with social accountability tools like the CSC can enhance health care quality and equitable service delivery and promote state building and trust. Aside from ensuring informed patients and communities, mitigating unrealistic demands on the health system, the CSC process fostered shared governance and resource generation for management of primary care facilities. However access to specialist providers and physical amenities emerge as critical determinants to patient satisfaction.

Disclosure of Interest: None Declared

Keywords: Balanced Scorecard, Community scorecard, Integrated measures for Quality
Physicians’ and Other Health Care Providers’ Satisfaction with the Clinical Laboratory Service of Nekemte Referral Hospital, Western Ethiopia
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Objectives: Objective was to assess Physicians’ and other health care providers’ satisfaction with the service provided by the clinical laboratory at Nekemte Referral Hospital, Western Ethiopia to build on limited existing information on the level of satisfaction of health care providers on clinical laboratory services in the study area.

Methods: A Hospital based cross sectional study was conducted from March to April 2014 at Nekemte Referral Hospital. The data was collected from randomly selected 105 health professionals. The collected data was analyses using SPSS version 20 statically software. Bivariate and multivariate logistic regression analyses were used to assess the association between treatment outcomes and predictor variables.

Results: The overall satisfaction for all professional on clinical laboratory services was 62.86% while professional specific level of satisfaction was 51.2% for nurses, 65.0% for physicians, 75.0% for Health officer and 85.7% for midwifery. Lack of adequacy of laboratory of materials valuable, absence of a timely report of critical values, lack of getting urgent results on time, and inadequacy of test menu on laboratory request format were areas mentioned as sources of dissatisfaction.

Conclusion: The overall degree of customers’ satisfaction with laboratory services was good. But the study showed wide room for improvement. In addition to taking intervention, root causes of dissatisfaction need to be investigated and means of improving the satisfaction level should be designed and implemented

References:
1. BMC Health Serv Res
4. Arch Pathol Lab Med

Disclosure of Interest: None Declared

Keywords: Quality assurance, Health care provider, Clinical laboratory services
Implementation of the Accreditation Approach in Tunisia: How to Reduce Resistance to Change
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Objectives: In Tunisia, the health sector has benefited from the independence from a series of reforms. There was a real improvement of the system at a macroeconomic level responding to many health problems in the country and improving significantly many health population indicators. However, it has not reached the expected levels in efficiency, quality and safety of care. Like the developed countries, Tunisia creates its accreditation body “INASanté” with a main task to support the health system in the search for best practices and efficient use of resources through knowledge mobilization which will be the best way to soften the resistance to change of the professionals which is a normal reaction from people who have become accustomed to a certain way of doing things. The purpose of this study is to present the communication plan established by INASanté among relevant health stakeholders in order to improve intrinsic motivation to change and engage them in a constructive partnership reflection.

Methods: The actions planned of the instance are inconceivable without the cooperation of all involved stakeholders, in a spirit of cooperation and a consensus of building for a transverse and global approach of the quality. A series actions had been taken based on discussion, dialogue and closeness. The minutes of the organized meetings with partnership and the data sheets of the various communications activities realized were the information sources of this descriptive cross-sectional study.

Results: The following services were assured during these last two years:

- 4 think tank meetings were organized allowing collaboration and scientific and technical independence.
- Commitment of the professional ordinal councils.
- 26 meetings with scientific healthcare societies and professionals associations and signature of 22 commitments among the 26.
- Visit of 72% of private clinics in the country.
- 24 Interregional meeting with primary care professional.
- Participation to several national and international events.

The striking effects of INASanté’s approach were:

- Uncertainty less present upon the independent nature of the instance.
- Structure recognized as stakeholder ar partnership in the health field.
- Scientific reference reputation becoming increasingly more pronounced.

Conclusion: The adopted approach permits the reduction of resistance forces that are considered as a risk both for implementation of INASanté and for its development. The key message is: positioning INASanté as an ally and an expert référent and not as a health operator competitor. The best predictor of change is trust and confidence.

Disclosure of Interest: None Declared

Keywords: communication and awareness
Creation of a National Instance of Accreditation/Evaluation in Health Care A Challenge for Tunisia

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Objectives: Since its independency, the health care sector in Tunisia beneficite of several reforms focused on demographic growth control policy, primary care, hospitals, health information system and the health insurance. The ministry of health is committed since the revolution, in a policy of continuous improvement of the quality of health services through the initiation of national projects as the national discussion on health and the creation of an instance of accreditation “INASanté”. The latter aims to support the health sector searching the best practices and the efficient use of resources by establishing:

- The accreditation of the health services;
- Health technology assessment;
- The promotion of clinical guidelines and the evaluation of the professional practices.

The objective of this study is to explain the strategic approach adopted by INASanté for its institutional development so that it becomes operational and can respond effectively to the tasks assigned to it.

Methods: INASanté’s ultimate goal is to be positioned in the Tunisian health scene as an independent body responsible for accreditation and assessment, developing tools, instruments and procedures in accordance with international norms and standards (ISQua).

For the purpose, a logical framework was built by the establishment team. Its components were:

1. organizational mechanisms, administrative and legal,
2. technical and scientific organization,
3. funding resources and,
4. marketing strategy

The data are collected through the established documents and records inside INASanté.

Results: The start up began in May 2013 with the development of the following activities:
1. Strategic business planning
2. Organizational structure and Staff Regulations
3. Cost accreditation study
4. SWOT analysis
5. International cooperation
6. Marketing approach: INASanté ethical charter, flyer, quality glossary
7. Preparation of a draft law establishing the instance and identifying its
8. Development of partnerships
9. Development of methodological tools and information materials to the INASanté’s collaborators

Conclusion: Starting from an interactional systems approach based on effective consultation of all stakeholders and actors, INASanté wants to be a guarantor of the recognition of the quality and safety of care and a platform for health professionals throughout the success and constraints faced by other similar organizations in the accreditation and assessment proceeding.

Disclosure of Interest: None Declared

Keywords: Tunisia challenge
Improving Antibiotic Prophylaxis Compliance in Cardia Anesthesia Practice in Preventing Surgical Site Infection

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Objectives: The main objective was to analyze the causes of noncompliance particularly to antibiotic prophylaxis administration and action plan was developed to see whether a solution can be reached to solve the problem of non-compliance.

Methods: Prospective and retrospective reviews of anaesthesia sheets were conducted to all post CABG patients. Analysis of data and the specific surgical cases in which non-compliance had occurred was discussed in the infection prevention committee. A model of cause root analysis was followed in order to reach the clue to the main problem. Meeting was arranged in the anaesthesia department including all the members of the department to raise the attention of the problem.

Results: CT Anaesthesia Department changed their practice of starting the antibiotic infusion at the time of insertion of the central line after insertion of the intravenous cannula and the arterial line insertion. The importance of the issue was reinforced to all the members and follow up of the result to be revaluated after 3 month to be compared with the previous quarter.

After the intervention, initial results showed marked improvement in the time compliance and the next quarter analysis of data showed improved percentage of overall compliance from 67.58% in the 3rd Quarter 2013 to 100% in the 3rd Quarter 2014 after a year of implementation. Although there was a dropped to 92.35%, we are still working on the issue to consistently achieve a 100% compliance.

Conclusion: The importance of the antibiotic prophylaxis in cardiac surgical patients is a corner stone for the success of the surgical procedure playing an important role in preventing morbidity and mortality. According to the protocols and guidelines set by the infection prevention committee, the antibiotic must be given within one hour before the skin incision in cardiac surgical patients. When the data is analyzed in the infection prevention committee we found that the timing compliance had a downward trend reached 68.57%. This required interference and change of practice in a way that is not affecting the antibiotic prophylaxis policy. The time of the infusion was given after central line insertion in order to minimize the time gap to be less than one hour. Continuous monitoring of the data is being done to keep track of the compliance.

This outcome about the markedly improvement of antibiotic prophylaxis compliance in CABG surgery aims to reduce surgical site infection. One modifiable factor that can be improved is the element of appropriate use of antibiotic prophylaxis. As a result, there was a marked reduction of surgical site infection events from 21 in 2013 to 9 cases in 2014. Although antibiotic prophylaxis is only one of the strategic measures in preventing surgical site infection, an increase in compliance will augment the reduction in the development of surgical site infection considering that majority of patients undergoing are having co-morbidities like diabetes. Ownership of the process, teamwork, willingness to recognize and act to the problem is one of the keys in improvement. As we reach the target of 100% compliance, we continue to plan, analyze and improve to sustain the compliance. Thus, we believe that we need to continue giving the best quality care in our patient hence promoting patient safety.

References: HMC Policy CL 7197 Antimicrobial Prescribing

Disclosure of Interest: None Declared

Keywords: Antibiotic prophylaxis, Antibiotic timing, CT Anaesthesia
Measuring the Public Hospitals Performance in Algeria: The Case of Abdelhamid Boudjemaa at Constantine

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Objectives: As part of our study on the possibility of adapting the methods of measurement and quality assurance in hospitals, which aims to develop a control manual and accreditation of hospitals in Algeria. In this part, we tried to check whether we could measure the quality of care Algerian public hospitals using performance indicators (structure, process and results).

Methods: In our study, we tried to measure the performance of a public reference hospital in Constantine: -el Bir hospital, for a period of 3 years. Using a quantitative approach based on the hospital database, we have Compare those data to international standards of hospital care performance namely: structure, acts, procedures, and results.

Results:
1. Structures indicators:
   - The number of beds per doctor did not exceed 2.91 beds in 2011, This standard was better as compared to 2013 where the rate by as much as 1.35 beds, While an estimated rate applicable worldwide by 4 beds.
   - The number of beds to the nurses did not exceed 1.39 beds for the year 2011 at the latest, fell to 0.83 beds in 2013, while the proportion is applicable universally to two beds per nurse.
   - The number of beds to the pharmacist, ranging between 57.5 and 67 beds per pharmacist, is less than the applicable global average ratio of 100 beds.

2. Indicators of activity and processes:
   - Average length of stay ranging between 4.64 and 5.84 days, is less than the number applied universally, which is 7 days, but the length of stay in each interest alone completely different.
   - Bed occupancy rate did not exceed 57.14%, while the figure was universally accepted 80%. This reflects the lack of access to run about 50% of the potential of the family during the year.
   - As for the bed turnover rate and access to a 42.56 time, a maximum of 2012, while the number of universally applicable is 65 times.

3. Indicators Results:
   - The overall mortality rate, which ranged between 0.58% minimum in 2011, 0.74% maximum in 2013, which he continues to rise, almost at a steady pace, though they are less than the world average, which is 3%.
   - Mortality rate after surgery was equivalent to 0% in 2011, there were no deaths, and then rose to 1.1%, and this goes beyond the global standard and set at 1%, but decreased to 0.65% in 2013.
   - The maternal mortality rate is a fixed 0%, while the infant mortality rate ranges from 0.4% in 2011 and 0.93% in 2013, and despite this rise, but did not exceed the global average of 2%.

Conclusion: According to achieved results, we found that the method of performance indicators is able to reflect a general overview about the level of services provided by the hospital, which is quite satisfactory. Nevertheless, for the partial results of the various medical services, that express a disparity and deficiencies in terms of resource allocation, we found that this method does not perceive those disparities and deficiencies. That is why we think that this method is unable to give a representative picture of the performance of each medical service.

Disclosure of Interest: None Declared

Keywords: performance, Public Hospital, Quality Assurance
Quality of Care: One of the Key Challenges of Universal Health Coverage in Bangladesh
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Objectives: Universal health coverage has been proposed as a potential umbrella goal for health in the next round of global development priorities. In order to improve the health of the population, we need to simultaneously ensure that the care provided is of sufficiently high quality, an issue that has garnered far less concrete attention. Quality has always been a key component of health services and like many other health systems, health sector in Bangladesh is committed to provide quality healthcare to its citizens. After adoption of this Health Care Financing Strategy (2012-2032) in Bangladesh - the roadmap to achieve the Universal Health Coverage (UHC)- the issue of quality has become more important as UHC requires optimizing the resource use and expanding coverage which necessitates that the process of quality improvement should be based on practical and sound strategy so that the best possible outcomes are achieved. This Strategic Plan on Quality Improvement sets the basis for a focused and coordinated framework for implementing quality improvement activities. It will equally significant to the decision makers and to the health providers as it is designed to guide their actions accordingly.

Methods: The strategic plan has been developed through a collaborative and participatory process. Based on the available and updated literatures, documents and discourses, and taking the experiences in executing quality in health services of Bangladesh into active consideration, a draft document was prepared. A core committee comprising the main stakeholders worked on a draft documents. Finally the strategy has validated by holding a national workshop.

Results: The Strategic Planning document of Quality of Care for Universal Health Coverage contains eight strategic objectives and 39 immediate objectives in its conceptual framework. Under the framework a comprehensive implementation plan, organization framework has developed with monitoring & evaluation tools and pay 4 performance system.

Conclusion: We believe we are at a critical inflection point for health service delivery. With recent progress toward MDG, policymakers have increasingly realized that the next set of battles will be won through strong health care systems & to manage NCDs, which should be best possible care. Finally, prioritizing quality would require tackling one of the biggest challenges of all: resistance to change. Quality improvement requires that providers and policymakers identify their own weaknesses and address them directly. Few health care organizations are used to engaging in this kind of self-assessment, and most are generally not rewarded for acknowledging deficiencies. Indeed, in countries that rely heavily on international donors for support of health care services, donors have primarily focused on metrics of access (e.g., the number of pills dispensed), not on metrics of improvement (e.g., numbers of errors averted). In such countries, funders can play a key role: by supporting robust quality assessments and rewarding improvement, they can align incentives to encourage providers to pay sufficient attention to quality and strive to provide care that improves health outcomes.

References:

Disclosure of Interest: None Declared

Keywords: Quality Improvement, Strategy, Universal Health Coverage
Evaluation of Using Mailing List to Change Parents Behaviour towards Rational Use of Medicine
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Objectives: To evaluate parent’s behavior about rational use of medicine in children before and after joining mailing list.

Methods: We provided internet-based questionnaire before and after joining ‘Sehat’ mailing list, which is the biggest public health and healthy parenting oriented mailing list in Indonesia with more than 20.000-registered user (most of them are parents). Included in the questionnaire were knowledge about patient’s right, irrational prescribing, antibiotics demand, and quality of healthcare consultation. Parents who are registered as an active users are requested to answer this questionnaire at the time they registered, and similar questions were asked 6-12 months later.

Results: There were 197 parent responders with average age of 30 years old (22-44), with 96% of them are female. From the questionnaire results, significant changes were observed in specific topics (before vs after joining mailing list): Giving anti-diarrhea to children with gastroenteritis (49,7% vs 0,5%), giving oral rehydration solution to children with diarrhea (8% vs 94,4%), giving antitussive for children with common cold (74,5% vs 0%), using antipyretic without temperature measurement (39% vs 0%), using antibiotics as self-medication to cure fever (87,8% vs 0,5%), using antibiotics to treat common cold in children (29,4% vs 0%), child home treatment for common cold without medical consultation (4% vs 47,7%). Discussion with doctors about diagnosis and treatment plan (19,8% vs 92,4%), finding information about drugs before giving to child (19,2% vs 96,9%), patient’s autonomy (5% vs 49,7%). Less than 10 minutes average duration when visiting doctors (69,5% vs 14,7%).

Conclusion: Education through mailing list has given significant improvement on parent’s behavior about rational use of medicine and patients’ rights. Other than knowledge sharing, peer pressure seems to have a positive effect on accelerating knowledge implementation. This kind of education should be continued for patient safety.

Disclosure of Interest: None Declared

Keywords: patient rights, rational use of medicine
Survey of Antibiotics for Purchase without a Prescription in Jakarta, Indonesia
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1Pediatric, University of Indonesia, Jakarta, Indonesia

Objectives: Aim of this study is to know the behaviour of pharmacies in Jakarta in selling antibiotics without a prescription.

Methods: This study was held on December 2013-January 2014. The survey was rolled with simulated client method (SCM) system. We randomly chose 100 pharmacies, out of 1162 that has been registered in Jakarta. Sample calculation was based on proportion formula with 95% Confident Interval and 10% Effect Size. Three female doctors have been trained to be simulated clients, with two major questions to the pharmacist: ‘Can I buy antibiotics without a prescription for my 2 years old son with cough and runny nose’ and ‘what antibiotics do you suggest for common cold?’

Results: In total, we surveyed 100 pharmacies around Jakarta. 85 Pharmacies (85%) allowed antibiotics purchase without a prescription, with all of them also suggested a choice of antibiotics. 68 pharmacies suggested to buy Amoxicillin or Amoxicillin clavulanate, 14 pharmacies suggested to buy Cephalosporin (Cefixime or Cefadroxil), and 3 pharmacies suggested to buy Chloramphenicol. Reasons for not selling antibiotics without a prescription from other pharmacies were: afraid of adverse events, avoiding medical errors, diagnosis uncertainty, and understand that it is against the law. Two Pharmacies suggested to buy other drugs such as multivitamins, and only 5 pharmacies gave an advice to see doctor before taking antibiotics.

Conclusion: Inappropriate use of antibiotics is still a major problem in developing countries, including Indonesia. Practice of selling antibiotics without a prescription is still very high in Jakarta, Indonesia, even after a specific law has been implemented.

Disclosure of Interest: None Declared

Keywords: antibiotics, prescription
An Overview of Nepalese Health Care Executives
T. P. Lamsal

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Objectives: Health services management study was started privately in 2001 within Nepal where still Nepalese health care regulatory body hasn’t defined this filed as an independent discipline so the system of licensing and accreditation for health care managers aren’t exist. The purpose of this article is to explore the current situation and alert for urgent need to improve and develop the infrastructure of health services management/administration field in Nepal.

Methods: This study is based on systematic critical assessment literature and data sources. A review of historical documents and interviews with selected officials among health care management/administration professionals performed. A combination of desk reviews has also been done related to policies, strategies and plans among the professionals.

Results: Until more than 500 Nepalese health care executive has been graduated. Such academic course isn’t taught publicly in Nepal. Informal training course are organized occasionally by government for their own officials. Privately started this academic course isn’t recognized by regulatory bodies so that Nepalese health care managers are deprived of licensing and accreditation process within health care system. The professionalism of Nepalese health care executives are endanger in terms of not securing their rights and responsibilities by the concerned stakeholder within healthcare system in Nepal.

Conclusion: Nepalese government doesn’t recognize the hospital management as separate and independent filed under health services. It may be due to lack of strong advocacy either forming professionals bodies e.g. society/association or regulatory body e.g. council. Health services management function are almost done by doctors or surgeons so professional monopoly or syndicate is present which leads unemployment & brain drain among the healthcare executives in Nepal. Nepalese graduated healthcare managers aren’t allowed to do government jobs because the job recruiting constitutional organization so called Public Service Commission hasn’t still defined the course. Most of the health services managers doing their job privately rest are on aborded & few are practicing their own business. Human resources for health strategic plan 2011-2015 by Nepal health sector support programme mentioned that health managers are acute shortage in Nepal but here we never seen any coordinated fashion activities between various related stakeholders such as colleges, university, Nepal Health Professional Council and Ministry of Health Population of Nepal for not only the betterment of the Nepalese healthcare executives but also whole Nepalese health care system.

References:
3. www.Ukessays.com-Challenges_Hospital_Management_In_Nepal_Health_And_Social_Care_Essay
4. Prof. Er. S.K.Karki Welcome message for healthcare seminar on May 22 2013

Disclosure of Interest: T. Lamsal Speaker bureau of: Central Bureau of Statistic, Other: National Open College

Keywords: Health care management, Healthcare Executive, Nepal
Ethical Dilemma to Approach Terminally Dying Cancer Patients: Do No Harm

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Objectives: With the Hippocrates ‘Oath of Medicine, medical ethics has cast considerable light on do no harm since the 1960s. Although the approach to terminally ill cancer patients varies and is usually around medical ethics that involves physical, spiritual, social, and economic contexts, do no harm embarks on the momentous era of patient-centered care. However, do no harm is frequently challenged by the expectation of curative intent. Therefore, decision making toward terminal illness becomes a dilemma for patients, families, and health care providers and many health policies develop guidelines to deal with end of life. To assess the clinical and economic implications for terminal cancer patients, we compare the cost and effectiveness in four hospitalized settings, hospice, ICU, nursing, and general setting for dying cancer patients.

Methods: Costs are estimated directly included hospitalizations, laboratory tests, imaging studies, clinical procedures, and medications, whereas, effectiveness is other than monetary measures, in this study, it is referred to length of hospitalization. We conducted medical review retrospectively. All cancer patients who died in hospital or at home within 3 days after discharge during August 2000 through February 2012 were included. We further classified these into four categories: ward, hospice, ICU, and nursing home.

Results: There were totally 6624 patients consisting of 1589 (24.0%), 3308 (50.0%), 1499 (22.6%), and 228 (3.4%) in the categories of ward, hospice, ICU, and nursing home, respectively. The mean hospitalization duration to death, i.e., effectiveness, and mean costs per day were 11.7 days and $227 in US dollar for ward, 10.2 days and $132 for hospice, 13.0 days and $555 for ICU, and 10.5 days and $190 for nursing home (p=0.467 for hospitalization duration and p<0.001 for total costs and daily costs).

Conclusion: The potential reduction in cost can be achieved by hospice palliative care for terminally ill patients. The results demonstrate no matter what palliative care in hospice or curative intent in ICU, the lengths of end-of-life were similar. That is, there is no survival benefit among practices but exists significant differences in costs. For clinical and economic reasons, the efforts to curb medical costs without wasting medical resources have resulted in increased emphasis on palliative care rather than active treatment. However, no matter what medical practice is, any decision should be centered on patient’s safety.

Disclosure of Interest: None Declared

Keywords: Ethics
Treatment of Patients with Terminal Cancer Who Do Not Wish For Cardiopulmonary Resuscitation: Current Situations with Withholding Medical Interventions in Japan

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Objectives: Background

Some patients with cancer express to their treating medical team their advance wishes for not receiving cardiopulmonary resuscitation (CPR) in case of cardiopulmonary arrest. A theoretical possibility exists that other medical interventions are being withheld from this group of patients in reality.

Aims
To investigate the likelihood of some medical interventions being carried out for patients (with 6-month prognosis) who are not for CPR in case of acute deterioration.

Methods: 20% of the general hospitals funded or managed by members of the Japan Medical Association (n=1357) and all of university hospitals (n=60). Anonymous self-administered questionnaire survey was carried out between 9th and 28th of February 2013.

Results: Overall response rate was 22.4%. (277 general hospitals (20.4%) and 20 university hospitals (33.3%)

Table 1: Medical interventions likely to be carried out in certain situations for patients with DNR order

<table>
<thead>
<tr>
<th>Medical Intervention</th>
<th>General Hospital (n=277)</th>
<th>University Hospital (n=20)</th>
<th>Combined (n=317)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac arrest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest compression</td>
<td>Yes 73 (27.9)</td>
<td>4 (21.1)</td>
<td>82 (27.6)</td>
</tr>
<tr>
<td></td>
<td>No 189 (72.1)</td>
<td>15 (78.9)</td>
<td>215 (72.4)</td>
</tr>
<tr>
<td>Defibrillation</td>
<td>Yes 46 (17.6)</td>
<td>5 (26.3)</td>
<td>53 (17.9)</td>
</tr>
<tr>
<td></td>
<td>No 215 (82.4)</td>
<td>14 (73.7)</td>
<td>243 (82.1)</td>
</tr>
<tr>
<td>Inotropic support in case of severe hypotension</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiating inotropic support</td>
<td>Yes 159 (60.5)</td>
<td>13 (68.4)</td>
<td>183 (61.4)</td>
</tr>
<tr>
<td></td>
<td>No 104 (39.5)</td>
<td>6 (31.6)</td>
<td>115 (38.6)</td>
</tr>
<tr>
<td>Escalating inotropic support</td>
<td>Yes 150 (57.3)</td>
<td>13 (68.4)</td>
<td>174 (58.6)</td>
</tr>
<tr>
<td></td>
<td>No 112 (42.7)</td>
<td>6 (31.6)</td>
<td>123 (41.4)</td>
</tr>
<tr>
<td>Maintaining inotropic support</td>
<td>Yes 178 (67.9)</td>
<td>14 (73.7)</td>
<td>203 (68.4)</td>
</tr>
<tr>
<td></td>
<td>No 84 (32.1)</td>
<td>5 (26.3)</td>
<td>94 (31.6)</td>
</tr>
<tr>
<td>Ventilatory support in case of respiratory deterioration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intubation</td>
<td>Yes 44 (16.9)</td>
<td>4 (21.1)</td>
<td>52 (17.6)</td>
</tr>
<tr>
<td></td>
<td>No 217 (83.1)</td>
<td>15 (78.9)</td>
<td>244 (82.4)</td>
</tr>
<tr>
<td>Mechanical ventilation</td>
<td>Yes 36 (13.8)</td>
<td>4 (21.1)</td>
<td>42 (14.2)</td>
</tr>
<tr>
<td></td>
<td>No 225 (86.2)</td>
<td>15 (78.9)</td>
<td>254 (85.8)</td>
</tr>
<tr>
<td>Escalating ventilator support</td>
<td>Yes 62 (23.9)</td>
<td>4 (21.1)</td>
<td>72 (24.5)</td>
</tr>
<tr>
<td></td>
<td>No 197 (76.1)</td>
<td>15 (78.9)</td>
<td>222 (75.5)</td>
</tr>
<tr>
<td>Maintaining original ventilator setting</td>
<td>Yes 110 (42.8)</td>
<td>12 (63.2)</td>
<td>131 (44.9)</td>
</tr>
<tr>
<td></td>
<td>No 147 (57.2)</td>
<td>7 (36.8)</td>
<td>161 (55.1)</td>
</tr>
<tr>
<td>Electrolyte imbalance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiating intravenous fluids</td>
<td>Yes 236 (90.1)</td>
<td>17 (89.5)</td>
<td>266 (89.6)</td>
</tr>
<tr>
<td></td>
<td>No 26 (9.9)</td>
<td>2 (10.5)</td>
<td>31 (10.4)</td>
</tr>
<tr>
<td>Altering fluids (Proactive treatment)</td>
<td>Yes 169 (65.0)</td>
<td>14 (73.7)</td>
<td>192 (65.1)</td>
</tr>
<tr>
<td></td>
<td>No 91 (35.0)</td>
<td>5 (26.3)</td>
<td>103 (34.9)</td>
</tr>
<tr>
<td>Maintaining fluids (same volume and type)</td>
<td>Yes 228 (88.0)</td>
<td>17 (89.5)</td>
<td>259 (88.1)</td>
</tr>
<tr>
<td></td>
<td>No 31 (12.0)</td>
<td>2 (10.5)</td>
<td>35 (11.9)</td>
</tr>
<tr>
<td>Rise in CRP</td>
<td>Start antibiotics</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Investigate the cause</td>
<td></td>
<td>225</td>
<td>37</td>
</tr>
<tr>
<td>Treating symptoms (e.g.</td>
<td></td>
<td>(85.9)</td>
<td>(14.1)</td>
</tr>
</tbody>
</table>

| Bone marrow failure      |                   | 148  | 114  | 108 | 152  | 115 | 146  | 173 | 124  |
| Blood transfusion        |                   | (56.5)| (43.5)| (41.5)| (58.5)| (44.1)| (55.9)| (58.2)| (43.4)| (56.6)| (44.9)| (55.1)|
| Other blood products     |                   | (56.5)| (43.5)| (41.5)| (58.5)| (44.1)| (55.9)| (58.2)| (41.8)| (44.9)| (55.1)|
| EPO/GCSF                 |                   | (56.5)| (43.5)| (41.5)| (58.5)| (44.1)| (55.9)| (58.2)| (41.8)| (44.9)| (55.1)|

| When no longer able to eat |                   | 248  | 15   | 140 | 122  | 146 | 254  | 173 | 124  |
| Fluids via peripheral venous catheter | | (94.3)| (5.7)| (53.4)| (46.6)| (55.9)| (94.3)| (58.2)| (41.8)| (44.9)| (55.1)|
| Nutrition via central venous catheter | | (94.3)| (5.7)| (53.4)| (46.6)| (55.9)| (94.3)| (58.2)| (41.8)| (44.9)| (55.1)|
| Feeding via nasogastric tube | | (94.3)| (5.7)| (53.4)| (46.6)| (55.9)| (94.3)| (58.2)| (41.8)| (44.9)| (55.1)|

| Where no response was given the number was excluded from analysis. |

**Conclusion:** This study revealed that some medical interventions were likely not to be carried out with patients with DNR order. It highlights the limit of DNR order in expressing advance wishes of the patients around end of life care and the danger of it being interpreted as a permission to withhold other medical interventions that may be appropriate.

**Disclosure of Interest:** S. Maeda Grant / Research support from: Japan Medical Association Research Institute, E. Kamishiraki: None Declared, M. Baba: None Declared

**Keywords:** DNR, Treatment of patients with terminal cancer
Acute Coronary Syndrome Accuracy Rate in the Emergency Care in a Brazilian Hospital
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Objectives: It’s estimated that 400 000 people per year in Brazil visit an emergency room with acute chest pain and they have the diagnosis of acute myocardial infarction. The objective of this study is evaluating the acute coronary syndrome accuracy rate in the early identification of ischemic cardiovascular disease in the emergency department of a large private hospital in São Paulo.

Methods: It’s a descriptive/retrospective study from January to December 2014. The acute coronary syndrome accuracy rate was obtained by the total of patient’s screened-related complaint / patients with acute coronary syndrome x 100.

Results: The total of patient’s screened-related complaint was 289 and the accuracy rate was 65.66%. The main factor that influenced the incorrect triage was the atypical symptoms reported in the first contact.

Conclusion: We believe screening accuracy rate conducted by nurses demonstrates safety for patients with typical symptoms, however, due to diversity of atypical symptoms, the early identification requires more assertiveness in the triage methodology.

Disclosure of Interest: None Declared

Keywords: acute coronary syndromes, emergency department
Active Detection of Tuberculosis among People Living with HIV/AIDS: A Real Practice of Continuous Quality Improvement

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1Clinical Team, Christian Social Service Commission (CSSC), HIV/AIDS Care and Treatment Programme, Mwanza, 2HIV Care and Treatment Clinic, Geita District Council, Geita, Tanzania, United Republic of Tanzania

Objectives: Reports from National Tuberculosis and Leprosy Programme in 2012 and 2013, shows that TB case detection in HIV clients rate has remained to be less than 50% for 2 years. The main objective was to apply principles of continuous quality improvement in detecting TB infection among HIV patients.

Methods: In 2013 and 2014, Christian Social Services Commission as the HIV/AIDS Care and Treatment Partner assisted the CQI team of one district hospital of Geita region to use cause effect analysis for detecting TB cases among HIV clients. The team used quality indicators for screening of Tuberculosis among HIV patients by TB screening Tool (TSQ) for signs and symptoms of TB). The Technical designed register for TB was used to follow up suspect for X-ray films, Sputum Smear for Acid Fast and Gene Expert® Confirmation of those found with TB features in X-ray film.

Results: There was an increase in TB screening from 63.7% in 2011, 88.5% in 2012, 99.5% in 2013 and 99.9% in 2014. Appropriate screening assisted in detecting 78 cases out of 2578 clients in 2011, 121 cases from 3084 clients. In 2012, 261 cases from 3313 clients in 2013 and 106 cases from 2470 clients in 2014.

During implementation of the programme from 2011 to 2014, 230 clients screened positive for TB by TSQ and sputum smear, or found positive by X-ray, and started anti-TB immediately. In 2011, 22 individuals had a negative smear and a positive X-ray while 251 were negative by both smear and X-ray. In 2012 X-ray positive were 93 TB cases were 13 (13.9%), X-ray negative with negative smear were 348. In 2013 X-ray positive were 22 TB cases were 14 (63.6%) and X-ray negative with negative smear were 567, in 2014 positive X-ray positive were 53, TB cases were 21 out of 53 (39.6%). However after introducing Gene Expert® Confirmation in 2014, for doubtful negative results, 15 out of 348 (4.3%) with negative X-ray and negative smear were found to have TB to predict detecting > 50% of cases by the end of 2015.

Conclusion: Application of principles of quality indicators for TB screening and x-ray film follow up were useful in TB case finding. Active advocacy of facility level leadership and commitment of health care workers supported quality improvement principles.

Disclosure of Interest: None Declared

Keywords: Tuberculosis detection, Quality Improvement, Tanzania
Improving Knowledge of Health Care Workers Regarding Infectious Control Policies and Practices to Provide Safe and Quality care to the Patients
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1Aga Khan Hospital for Women, Garden, Aga Khan University Hospital, 2Aga Khan University Hospital, Aga Khan Hospital for Women, Garden, Karachi, Pakistan

Objectives: Infection Prevention and Control is an important part of every health care provider’s role! Good hospital hygiene is an integral and important component of a strategy for preventing health care associated infection in hospitals. During the audits of 1 st and 2 nd Quarter 2014, it was observed that knowledge & practices of Health care workers (HCW) were less than 90%. (Benchmark) so we had conducted pre-test of all HCW of our hospital which showed that the compliance was 63% which was far below the benchmark. This project has been designed to improve knowledge and best practice of HCW by education and training. To improve the knowledge and practices of HCW regarding infection control policies & practices from 63 % to 85% by December 2014 to provide Safe and Quality Care to the Patients

Methods: The quality project was initiated from January 2014 to December, 2014. Knowledge and Practices regarding infection control policies were assessed by pre & post-test quiz and audit tools, we had conducted three workshops and celebrated Infection control week to enhance knowledge and practices. The basic quality improvement tool that was employed for this project was Deming’s PDSA cycle.

Results: Our intervention had a large impact on improving knowledge of health care workers to the infection control policies and thereby improving the overall practices of the health care workers. Results of our intervention were shown in table 1.

<table>
<thead>
<tr>
<th>Results</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre test</td>
<td>62%</td>
</tr>
<tr>
<td>Post Test</td>
<td>85%</td>
</tr>
</tbody>
</table>

Conclusion: Hospital acquired infection is one of the challenge of international safety goal. Education and training of all HCW were done through multiple workshops on Infection control practices and IC week celebration, posters of the hand hygiene and standard precautions were displayed in different areas of hospital. To maintain the sustainability monthly audits will be done to keep HCW compliance and periodic continuing education programs will reinforce HCW for infection prevention.

Disclosure of Interest: None Declared

Keywords: Health care worker- HCW, Infection control- IC, Plan do study act- PDSA
Improving Physician Compliance to WHO Guidelines for Better Health of Pediatric Population a Project of Quality Care!
A. Sohaila \textsuperscript{1,*}, N. Mohammad \textsuperscript{1}, R. Meghani \textsuperscript{1}, S. Mohammad \textsuperscript{1}
\textsuperscript{1}Aga Khan Hospital for Women, Garden, Aga Khan University Hospital, Karachi, Pakistan

Objectives: WHO recommend some guidelines to improve the general health of all children, particularly in low and middle income countries. These guidelines include iron supplemental & deworming on a regular basis and EPI vaccination. The data that we gathered demonstrated that our patients despite having multiple visits to health care providers, but unfortunately they are not getting proper guidance and prescription to improve the general health of the Pediatric population as per WHO guidelines. Considering the above mentioned background, we picked up these recommendations as our guideline for our Pediatric quality projects. To improve physician compliance from baseline to 30\% for *WHO recommendations for better health of the general paediatric population.

Methods: The quality project was initiated from Jan, 2014 to August, 2014. A survey questionnaire was developed to check compliance for WHO guidelines. A prospective study was conducted for 3 months. The basic quality improvement tool that was employed for this project was Juran’s continuous quality improvement methodology.

Results: Our intervention had a large impact on improving compliance of physicians to the WHO guidelines and thereby improving the overall general health of the paediatric population. Results of our intervention were shown in table 1.

<table>
<thead>
<tr>
<th></th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Prescribed</td>
<td>66.3</td>
</tr>
<tr>
<td>Anthelminthic Prescribed</td>
<td>57</td>
</tr>
<tr>
<td>Unimmunized</td>
<td>4</td>
</tr>
</tbody>
</table>

Conclusion: Iron deficiency anaemia is one of the common nutritional deficiencies in the world. Posters were displayed in OPD area which increased parents’ awareness, parental counselling regarding importance of iron supplementation is necessary, policy generated to keep physician compliance for WHO recommendations for better health of paediatric population, periodic continuing medical education programs will reinforce doctors the WHO guidelines.

Disclosure of Interest: None Declared

Keywords: WHO- World Health Organization
Perceived Quality of Free Delivery Care among Poor Women in Gujarat, India: A Community Based Survey
S. L. Saiyed 1,*, K. S. Vora 1
1MATIND, Indian Institute of Public Health Gandhinagar, Ahmedabad, India

Objectives: Government of Indian state of Gujarat introduced a public private partnership called the Chiranjeevi Yojana (CY) in 2005 to improve access to institutional delivery care for poor women. Till date about 1 million deliveries have been conducted under CY and this study determines perceived quality of free delivery care and examines the differences between public sector facilities and accredited private sector facilities.

Methods: The community based survey was conducted in three districts of Indian state of Gujarat. Trained data collectors used pretested questionnaire in vernacular language between 7th to 10th days of delivery. Overall surveyed mothers were 3858 in the prospective study, out of which 671 mothers who did not deliver in institutions were excluded. Excluded mothers also included those who delivered in non-accredited private facility (832), those who delivered in accredited private facility but paid for delivery (672) and those who had C-section (67). Analytic sample was 1616 mothers. Statistical analysis included Pearson correlation tests (r>0.6) and Chi square test. The significance level was considered as p<0.05. Statistical software used was IBM SPSS version 20.

Results: Study findings show that overall quality of care was perceived to be good in both public sector and accredited private sector including the behaviour of staff during labour. When free delivery care was compared between two sectors, private sector was perceived to have better quality of care. This difference was statistically significant for quality of care indicators, such as mothers allowed to eat/change positions, application of pressure on abdomen and weighing of baby. Basic infrastructure was better in the private sector than in public sector. Counselling of mothers regarding postnatal care and baby care was also significantly better in private sector.

Conclusion: The study findings suggest that quality of care is better in accredited private sector than the public facilities for free delivery care. Study highlights the need for engaging private sector to improve access to basic care such as delivery care for poor women. Although CY has been evaluated for level of uptake and financial protection, this is the only study using primary data that has evaluated the quality of care. As quality of care is an important aspect of health system, it is essential to incorporate quality of care indicators in routine monitoring of schemes such as CY. Quality assurance programmes in Gujarat also need to address the issues in the public sector. Future research should include qualitative study of all stakeholders including providers and mothers to understand the drivers of quality delivery care.

Disclosure of Interest: None Declared

Keywords: Maternal Health, Public private partnership, Quality of care
Weakening Health Systems: The Disharmonizing Influence of Multiple Quality Improvement Models
S. Sax¹,*, M. Marx²
¹Institute Public Health, ²Evaplan Consulting, University of Heidelberg, Heidelberg, Germany

Objectives: To identify linkages between implementation of quality management mechanisms and health system strengthening in developing countries. To explore literature and grey literature and documents for examples of both positive and negative influences of quality management mechanisms on health systems in developing countries.

Methods: Literature review and document review of grey literature and documents using key words: quality management mechanisms, developing countries, quality models, harmonization and quality management innovation.

Results: Results are in an early stage but will be finalized before the conference. Results to date indicate an increasing number and variety of models or approaches being promoted by national and supra-national actors in developing countries. Often several different ‘models’ are promoted in competition with each other and each ‘model’ is promoted as ‘best practice’, but without clarity in the differences between the models. There is little reporting of negative experiences with different models in the literature, grey literature reports more negative examples. The literature is weak in reporting on health system effects of promoting different approaches, some grey literature includes case studies and other information on this linkage.

Conclusion: The use of multiple models and promotion of different models may destabilize the health system in developing countries, weakening governance and demotivating health service providers and policy makers. Whether these are actually new models is questioned by some, these innovations have been called a ‘pseudo-innovations’ by one author. We will present results from the literature review and case study examples from several developing countries to explore this linkage between implementation of quality management models and health system strengthening. Early conclusions are that the use of multiple models may lead to dis-harmonization and health system weakening.


Disclosure of Interest: None Declared

Keywords: best practice, health system strengthening, improvement models
Establishing an Effective Fire Prevention and Response System
J. Shin 1,*, M. Kim 1, Y. Kim 1, J. Kim 1
1QA team, Seoul National University Hospital, Seoul, Korea, Republic Of

Objectives: The need to reinforce disaster response systems was issued in 2014, Korea with a series of incidents such as the sinking of the Sewol Ferry and a fire at long-term care hospital. Many people including medical staff, patients, patient’s guardians and visitors are concentrated in the hospital. This makes it all the more important to prevent disasters at institutions like hospitals and establish a proper response system in the case of such disasters. Our goal is to raise awareness of the importance of fire prevention among patients, their guardians and medical staff for their own safety and to establish a proper fire prevention and response system.

Methods: Many activities to prevent fires and establish a proper response system proceeded from April to October, 2014 at Seoul National University Hospital. Details of these activities are as follows.

First, fire safety training on all staff was carried out on how to use a fire extinguisher and how to evacuate in case of a fire. In addition, the role of medical staff and methods of evacuation in fire were emphasized during the quality assurance training for treatment parts.

Second, fire evacuation scenarios for each department were built based on condition of patients, location and structure of ward. Simulations were then carried out for each scenario and a report submitted to the department of construction to receive feedback on areas that need improvement.

Third, a task force for fire safety management was composed. The team consists of quality assurance team, department of construction, head nurses of general ward, intensive care unit, operation room and emergency room and managers of major laboratory. The task force discussed the current status of fire response systems and measures for further improvement.

Fourth, to prepare for evacuation of patients that require constant monitoring of vital signs or a connection to life support devices, a support team was formed. The support team consists of physicians. Simulation was carried out and a broadcasting system that summons the support team was established and shared with all medical staff.

Fifth, patients were categorized into grades A, B and C depending on whether they can evacuate on their own or whether they require connection to a supporting device. Based on this categorization, an EMR (electronic medical record) was established in order to identify and locate patients who need immediate help from the support team arriving at the site of fire (grade A patients).

Lastly, an information and guide sheet on things to keep in mind regarding evacuations in case of fire was drafted, handed out and posted in various places within the hospital for easy consultation.

Results: These activities were carried out for 7 months and led to positive improvement in awareness of response methods in case of fire and a willingness to participate. Several self-evaluations including interviews with staff verified that the staff had a better understanding of various evacuation scenarios, their simulation and their role in an evacuation. The rate of completion for fire safety training among physicians, which had traditionally been low, also saw an increase.

Conclusion: Our fire prevention and response system was established properly and effectively. In order to maintain safety of hospital staff, patients, and visitors, we’ll keep going on these activities and perfectly complement our system.

Disclosure of Interest: None Declared

Keywords: Fire prevention, Fire response system
Cath Lab Operational Efficiency Increase through Process Improvement
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Objectives: Beyond the crisis of small hospitals even in large hospitals is time to seek a breakthrough in deficit management. To enhance the efficiency as a way to cope with the loss management by improving the process in order to increase the revenue of cath lab began the activity of increasing the operational efficiency.

Methods: Considering the efficiency, we changed the professor’s outpatient department schedule and cath lab schedule. We have designated a representative to administer the treatment materials. We increased the operational efficiency by changing the existing practice during the procedure. We changed the procedure timing of the other departments’ patient.

Results: Cath lab occupancy rate after the improvement activities has increased 15 percent. Business overload was reduced, internal customer job satisfaction increased, overtime time has been reduced.

Conclusion: Change of patient allocation method to the laboratory schedule adjustment and Rescheduling of professor’s, change of business forms has become an effective way to operate the cath lab efficiently.

Disclosure of Interest: None Declared

Keywords: Efficiency
Total Quality Management Obstacles and Contributors in Developing Countries, A Down to Earth, River Nile Explanatory Model
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Objectives: There is lack of attention and enthusiasm for the abundant literature and the complex jargon of total quality management in developing countries. The objective of this paper is to see whether locally familiar natural landmarks can be used to simplify the literature, attract attention and illustrate basic TQM concepts.

Methods: The River Nile valley was selected as a simulation model. The four pre-requisites for TQM were represented by the source lakes, the Niles junction and the extended course. Lake Victoria, the main Nile origin, symbolizes creation of services where there is none. Lake Tana, is the Blue Nile source which boosts the White Nile flow represents maximizing productivity of existing services. The two Niles confluence smooth water mixture is used to symbolize harmonizing primary and secondary care services. The long course of the Nile can emphasize accessibility to so many people in so many places. The six cataracts along the Nile course represent potential obstacles. For TQM in an ascending fashion. The sixth cataract symbolizes inherent resistance to change. The fifth cataract symbolises lack of government officials commitment. The fourth cataract represents denial of defects by local units' managers. The third cataract represents over-exaggeration of costs needed to finance TQM by the non-initiate. The second cataract refers to staff frustration. The first cataract simulates single handedness of some pioneers who are not good team players. The White Nile flow has no seasonal variations symbolizing importance of maintaining constancy of functions. The Blue Nile is extremely vibrant during the rainy season, hence utilized to produce hydroelectric power. It symbolizes utilizing the vigour of pioneers to induce the concept. During the peak flow season, attention is paid to the river height monitoring station to raise the alarm of oncoming flood disasters. This emphasizes that you cannot handle what you cannot measure. The Atbarawi River is essentially seasonal. This refers to the seasonal influx of expatriates from the Gulf States during the holiday seasons which should be utilized maximally to train local staff and provide role models. All in all, the lesson from the extended Nile course is that there should be no U-turn despite many hurdles or repeated long curvatures. Nile water is eventually delivered to the Mediterranean. The Nile flow is sea-centered and quality service must be patient centered. High dams represent the role of health care gate keepers to control flow volumes per need. There are two major inherent problems along the Nile valley. First the notorious hydroplants slowing down the White Nile flow. These are represented by the beuacratic procedures in government offices halting many valid improvement processes. The second is the presence of desert creeping to surround one third of the Nile course representing a wastage of usable water resources which can be used for land irrigation and thereby de-desertation. This symbolizes the importance of resource utilization from visible wastages.

Results: The natural course of the river Nile across North Africa is an excellent familiar visible model with scenic and emotional attachment over 6 countries. It can be used as a exemplary non-intimidating simplification model to illustrate and promote TQM cause.

Conclusion: Creation of similar locally familiar and attractive models should be adopted in developing countries for TQM campaigns to enhance public awareness, evade resistance and recruit acceptance.

Disclosure of Interest: None Declared

Keywords: Developing world quality hurdles
Perspective and Outcomes of HIV Care among Elderly Patients in Nigeria
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Objectives: Nigeria carries the second highest burden of HIV in the world, 3.4 million people living with HIV. 58% of are women; 40% of all eligible (640,000) receive Antiretroviral treatment 1. 11.4% of Nigerians are over 50 years 2. Late diagnosis and poorer outcomes for elderly PLHIV in developing countries is known 3,4 despite the ‘greying’ of the HIV epidemic 3,4,5. The HIV disease burden among the elderly PLHIV in Nigeria has not known. The objective of the study was to determine the morbidity of HIV among elderly, understand the mortality trends among the over 50’s living with HIV in Nigeria.

Methods: This analysis of the spectrum® modelling data from January to December 2013. Spectrum models are projections from service data. We assessed the proportion of elderly PLHIV receiving ART, estimated the mortality and determined the distribution by CD4 count. Simple proportions were calculated using Excel®. In order to validate these findings, a multisite audit of HIV in the elderly is ongoing at health facilities supported by the Global Fund in Nigeria. The same parameters described in our spectrum analysis will be collected and analysis to validate the findings of the modelling done. The data will be available by January 2014.

Results: The results revealed that 8% of the PLHIV aged 15 years and above were elderly. 51% of were male, 7% of all new HIV diagnoses elderly. 18% of all PLHIV on ART were elderly. Out of these patients who were over 50 years taking ARVs, two thirds (2/3) of these patients had CD4 counts less than 50 cells/mm³, they made up 14% of all patients on ART with CD4 <50 cells/mm³. Patients over 50 years accounted for almost a quarter (24%) of all AIDS related deaths. (Results of the review of the program audit will be available before the conference)

Conclusion: These results suggest that elderly PLHIV in Nigeria have more advanced HIV disease (CD4 count <50 cells/mm³); are prone to dying from AIDS related causes (24% of all AIDS deaths); and the majority are male. These findings are comparable to other countries in sub-Saharan Africa, apart from the sex distribution 6,7. Research is required to explain the excess deaths and rapid progression to advanced disease among elderly patients on ART in Nigeria (as in other sub-Saharan African countries 7).

World Health Organization; IMPACT OF AIDS ON OLDER PEOPLE IN AFRICA: Zimbabwe Case Study. 2002

Disclosure of Interest: None Declared

Keywords: Elderly, HIV, Modelling
HMC Women’s Hospital Gestational Diabetes Care Improvement Project
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3Chief of Obstetrics, 4Obstetric Director, Diabetes in Pregnancy, Brigham and Women’s Hospital , Boston,
United States

Objectives: The rapidly growing burden of obesity-related “lifestyle” diseases such as diabetes pose a
challenge to health systems. Pregnancy represents an opportunity to identify and treat diabetes,
potentially improving outcomes for both mother and child. The goal of this project was to implement an
evidenced based care protocol in an attempt to decrease admissions for gestational diabetes mellitus
(GDM) management and to increase the use of outpatient clinics for this care.

Methods: This project focused on clinical quality improvement at the population level, using the Women’s
Hospital GDM initiative as a case study. At Women’s, 23% of pregnant patients have either primary or
pregnancy induced diabetes. A protocol which focused on outpatient management, collaborative practice
with obstetrics and endocrinology and use of oral hypoglycaemic was implemented. Women’s Hospital’s
commitment to developing innovative models that take account of the changing needs of the population
as well as evidence-based best practices resulted in the successful implementation of this collaborative.

Results: A substantial decrease in GDM patient admissions of 90% was achieved in one year as a result of
this initiative. In addition, the number of patients visiting the outpatient clinic grew from 200 to 700. We
will describe how we assessed the opportunities for clinical quality improvement, identified solutions and
addressed challenges to implementation.

Conclusion: By implementing an evidence based protocol for GDM management, hospital admissions for
diabetes management decreased markedly thus improving bed availability for other patients requiring
hospitalization. The total impact of this quality improvement initiative will be discussed.

Disclosure of Interest: None Declared

Keywords: Gestational Diabetes, Outpatient Management System, Pregnancy
Implementing a Learning Cycle by Integrating the Recruitment Criteria, the Training Program and the Quality Improvement Plan
S. S. Bounouh 1,*

1 Ambulance Service, Hamad Medical Corporation, Doha, Qatar

Objectives:
Background: In the early days of 999 communications in the State of Qatar, dispatchers worked without a protocol to dispatch the support needed or assign the necessary resources to the variety of calls coming into Hamad Medical Corporation Ambulance Service (HMC-AS) Communication Center. There were no key questions to narrow and focus calls or pre-arrival instructions to help the caller until the needed help arrived, such as cardiopulmonary resuscitation (CPR) instructions. Without sufficient information, we risked sending the wrong emergency vehicles and the caller was left without the benefit of life-saving instructions while waiting for an ambulance.

Objectives: To recruit the right employees with the required skills and create a solid learning process which will ensure that highest standards of service is being delivered at any given time both for patients’ and employees’ safety.

Methods: Adjustment of the organizational structure of the HMC-AS Communications Center by integrating the three main founding elements of success: the recruitment criteria; the training plan; and the quality improvement system which creates a learning cycle that makes the system adaptable to change for the best taking in consideration individual and system performance.

Results: By making quality an integral part of our system—providing daily constructive feedback, remedial action plans, and individual performance management, we have achieved the prestigious (JCI) accreditation and HMC-AS Communication Center was nominated the 185th Accredited Center of Excellence by the International Academies of Emergency Dispatch (IAED) board of trustees.

Conclusion: The learning cycle comprises integration and enhancement of the three components:

- Recruitment criteria. Creating a screening package which ensures that all candidates for AS Medical Dispatcher (ASMD) position demonstrate efficiency in 3 main competencies: basic computer skills with acceptable typing speed; comprehensive English test; and basic topography knowledge of the State of Qatar.
- Training program. Certifying local Emergency Dispatch Instructors through the IAEMD. EDI in turn teach the ASMD staff the dispatch processes and actions (coordination and prioritization) and also certify them as EMDs.
- Quality Improvement plan. Providing standards that are measurable, consistent, achievable, and part of the foundation of the HMC-AS. By changing to a quality-focused environment, the HMC-AS Communications Center recognizes the value of delivering the best possible care to the customer. This is achieved by using quality improvement techniques and active administration support. Quality Reviewers staff are certified and assigned to work regular full-time. Five percent of all emergency calls are being reviewed daily including auditing of cardiac arrests and high acuity cases.

Lessons Learned Integration of the recruitment, training, and quality methods, strengthens the system and creates a safe and efficient learning cycle which allows quick identification of issues and risks. This, in perspective, places an automatic problem solving and prevention cycle geared toward enhancement of excellent services both for patients’ and employees’ safety specifically for an emergency setting.

References: [http://www.emergencydispatch.org/](http://www.emergencydispatch.org/)

Disclosure of Interest: None Declared

Keywords: Quality Assurance, Recruitment Criteria, Training plan
A Project of Reducing the Frequency of Improper Posture in the Working Environments of Nurses
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Objectives: Lack of work environment design may cause improper posture in employees, and even lead to long term cumulative musculoskeletal injuries. From a survey in 2013, we found that within a day there was a total of 15 nurses in the working environment of our unit had improper posture, with the accumulation of 1769 times, and the average of 117.9 times/person. We found that the main cause of improper posture included: the lack of staff knowledge; lack of appropriate assistive devices; setting, size and height of equipment did not meet the needs of the workers; lack of overall environment planning and lack of regular checklist monitoring.

The objectives of this article were to reduce the frequency of improper posture of nurses during work, thereby to increase job satisfaction.

Methods: Several interventions were included, such as staff in-service education and training, slogans posted, purchase of assistive devices, use of human factors engineering concepts to redesign materials and equipment placement, and development of checklist monitoring etc.

Results: After intervention, the frequency of improper posture of nurses in the working environment reduced from 1769 times to 488 times, with an average reduction of 117.9 times to 32.5 times/person. The overall job satisfaction in the working environment was improved from 45.8% to 87.5%.

Conclusion: This project was effective in reducing the frequency of improper posture of nurses in the working environment, and improving the overall job satisfaction. Hopefully we may extend this project to related units, to create a high efficient work environment.


Disclosure of Interest: None Declared

Keywords: Ergonomics, Improper Posture, Working Environment
The Impact and Improvement of the Workplace Incivility on the Spouse’s Well-Being
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Objectives: This study examined the negative spill over-crossover model among dual-earning couples. A sample of 367 couples participated in the study.

Methods: Structural equation modelling analysis

Results: A sample of 367 couples participated in the study. Structural equation modelling analysis showed that workplace incivility of one partner was predicted to spill over to his/her emotional exhaustion, that is, increased work-family conflict. Consequently, individual work-family conflict was predicted to influence one’s partner well-being through the perceptions of partner’s stress transmission from work to family Domain. Additionally, we tested the competitive model, increased the path of direct spill over effect (the impact of one’s workplace incivility on his/her work family conflict directly) and the path of direct crossover effect (the impact of one’s work family conflict on his/her partner’s well-being directly), and this model is also model-fit well.

Conclusion: That is, this study showed that: 1. workplace incivility indirectly spill over to work-family conflict through one’s own emotional exhaustion; 2. work-family conflict indirectly crossover to spouse’s well-being through one’s perception of his/her partner’s workplace stress transmission; and 3. the direct spill over, between individual’s workplace incivility and work-family conflict, and the direct crossover, between individual’s work-family conflict and his/her partner’s well-being, were both existed significantly. According to research results in this study, we proposed conclusions and suggestions for future research.

References:

Disclosure of Interest: None Declared

Keywords: spill over-crossover model, well-being, workplace incivility
The Improvement Project to Make Safe Workplace – Kitchen in Hospital

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Objectives: It has been reported that many injuries occur in kitchens (burns, fire dangers, cuts from machines or knives, slipping, musculoskeletal injuries, exposure to irritant chemical materials etc.). However the importance of maintaining kitchen as a safe workplace has been underestimated compared to other places in hospital. Kitchen is one of dangerous work places and the safety of kitchen may affect the quality of meals to provide to patients. Therefore we made activities to enhance the safety of kitchen of our hospital.

Methods: First of all, we observed the entire working process in our kitchen and interviewed with workers. Also focus group interview was implemented with core workers. Based on the information collected from the observation and interview, we developed our own risk assessment sheet modifying the sheets of Korea Risk Assessment System (KRAS) and the Korean Dietetic Association. Using that sheet, we assessed the risk of the kitchen. The result scores regarded as follows: ≤3 point-recommended maintenance management, 4 point-recommended improvement action, ≥6 point-recommended immediate improvement action. We prioritized the order of improvement based on the scores. And we made the counterplans and implemented them during 6 months. After 6 months, we reassessed the risk using same worksheet.

Results: We identified total 134 hazards in overall working process in the kitchen. Eighteen of them were found to need improvement action. We implemented various improvement activities and there were included not only hardware but software; repair & complementation of facilities, supplement of utensils & worktables, changes of working methods, attachments of warning signs, worker educations etc.. The result of reassessment, the number of hazards needed improvement was decreased from 18 to 3. The workers were very satisfied our activities because they thought that they became safe and were more concerned.

Conclusion: We implemented the risk assessment and the activities to improve the risk of kitchen. Those activities were contributed not only to reduce the risk of the kitchen, but to enhance employee satisfaction. We plan to assess periodically and to make effort to improve it.

Disclosure of Interest: None Declared

Keywords: safe workplace
A Review of UK Food Safety Information Provision for Chemotherapy Patients and Associated Caregivers
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Objectives: Chemotherapy patients have an increased risk of foodborne illnesses as a result of immunosuppression, and are reported to have a five-times greater risk of listeriosis. To enable chemotherapy patients/carers to minimise risk of illness by implementation of risk-reducing behaviours is essential. Provision of food safety information prior to and during treatment is needed to raise awareness of the potential risks relating to foodborne illness by informing patients/carers of control measures and responsibilities of reducing critical risk factors. The aim of this study was to review food-related information available to chemotherapy patients/carers in the UK and evaluate the inclusion of risk-reducing food-safety behaviours.

Methods: Food-related information available to chemotherapy patients/carers in the UK were collected from health care providers including UK NHS trusts. Sources were reviewed and analysed using a content analysis approach. Findings were summarized according to key topics critical to food safety and listeriosis, (e.g. refrigeration practices, cross-contamination, consumption of at-risk food products).

Results: Overall, food-related information for cancer patients was obtained from 42 of 141 NHS chemotherapy providers and three cancer charities. Although 64% explained why patients are at an increased risk of developing infection during treatment, many failed to highlight the importance of food safety to prevent infection. Recommendations to ensure thorough cooking were most frequently included, although 42% recommended the avoidance of raw meat, poultry and fish, only 9% recommended the use of a thermometer to achieve a core temperature of 75°C. Practices relating to avoiding listeriosis were particularly lacking.

Conclusion: Although information is available, considerable gaps exist and information provided varies greatly between sources. There is a need to establish the potential impact of such food-related information sources on cancer patients/carers food safety knowledge, attitudes towards reducing the risks of foodborne disease during chemotherapy treatment and implementation of risk-reducing food safety practices in the home during chemotherapy. Such data will inform the development of food safety education interventions targeting patients/carers.

Disclosure of Interest: None Declared

Keywords: Chemotherapy, Food safety, Listeriosis
Utilisation and Temporal Trends for Elective Orthopaedic Surgery in Ireland

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Objectives: The requirement for standardisation of surgical practice is increasingly relevant as changing demographics and the increasing prevalence of both obesity and chronic disease place additional strain on publicly-funded healthcare systems. These factors contribute to lengthy waiting lists for outpatient review and elective surgery. This work aimed to establish trends in utilisation of elective orthopaedic services within the publicly-funded healthcare system in Ireland and, in doing so, to examine the appropriateness and potential impact of introducing national clinical referral thresholds.

Methods: The Hospital In-Patient Enquiry (HIPE) system was employed to assess activity levels and temporal trends in relation to the procedures under review, and the budget impact of each on the public healthcare system was established. Overall activity levels, day case rates, and hospital length of stay were analysed. A comprehensive review of the literature was conducted during March 2014 and, following collection and analysis of the data, inputs from an expert advisory group were used to inform the final referral threshold criteria.

Results: Between 2005 and 2012, the number of knee and shoulder arthroscopies performed annually increased by 39.2% and 164%, respectively; the number of hip arthroplasties performed annually remained relatively stable, while the number of knee arthroscopies decreased by 8.7%. Increases in day-case rates for both knee and shoulder arthroscopy were noted, as were significant reductions in average length of stay for those having both knee and hip arthroplasty. There is evidence of persistent variation in relation to length of stay and day case rate at local level however (Table 1). The current estimated costs of elective hip arthroplasty (annual national cost €37.3 million, average weighted cost per case of €11,403), knee arthroplasty (€25.6 million, €11,925), shoulder arthroscopy (€2.9 million, €3,701) and knee arthroscopy (€10.3 million, €2,457) were calculated. Referral thresholds were developed for each of the procedures under review.

Table: Activity data for selected elective orthopaedic procedures (2012)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>No. Carried Out (Hospital Range)</th>
<th>% Day Cases (Hospital Range)</th>
<th>ALOS (Hospital Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knee Arthroscopy</td>
<td>4,229 (1-398)</td>
<td>81.3 (0-100)</td>
<td>1.4 (1-3.3)</td>
</tr>
<tr>
<td>Knee Arthroplasty</td>
<td>2,149 (3-469)</td>
<td>0 (0)</td>
<td>6.4 (3.5-20.8)</td>
</tr>
<tr>
<td>Hip Arthroplasty</td>
<td>3,274 (2-605)</td>
<td>0 (0)</td>
<td>6.9 (4.9-20.8)</td>
</tr>
<tr>
<td>Shoulder Arthroscopy</td>
<td>794 (1-192)</td>
<td>30.7 (0-100)</td>
<td>1.5 (1-8)</td>
</tr>
</tbody>
</table>

Key: ALOS – average length of stay.

Conclusion: Significant efficiencies have been achieved in the provision of elective orthopaedic surgical services in Ireland. Deficiencies remain to be addressed however, with a need in particular for analysis of the factors contributing to variation at local hospital level. Development of the referral thresholds should help to ensure that the right patients receive referral and treatment at the right time, and to avoid unnecessary interventions, particularly in those who are unlikely to derive additional benefit from surgery over conservative management.

Disclosure of Interest: None Declared

Keywords: elective surgery, health technology assessment, referral thresholds
Socio-Economic Status and Child-Raising Factors Affecting Child-Rearing Mothers’
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Objectives: In Japan, as in the West, socioeconomic related health disparities are problematic. A favourable socioeconomic status (SES) is important for establishing a “sense of coherence” (SOC), one fact of mental well-being that contributes to physical health. In mothers who have children, SOC is especially important as it influences not only the health of the mother, but also the health of involved children. For example, stress from child rearing can lead to child abuse. Few studies have investigated adult women with children regarding SES and SOC. Therefore, the aim of our research was to quantitatively investigate SES child-raising factors and its relationship to SOC in mothers with children.

Methods: An anonymous, self-administered questionnaire was sent via mail to 2464 mothers with one to three-year-old children living in B ward in A city, which is located in a western Japan urban area in October 2011. The questionnaire asked about socioeconomic factors (including household income, educational background, economic allowance, and social class identification), mother’s SOC, health status of children, social support in child rearing, and demographics (marriage status, age, etc.). Statistical differences were investigated with the non-paired T-test, one-way ANOVA, and Turkey’s multiple comparison tests.

Results: Out of 2464 questionnaires sent, 1175 were returned (participation rate of 47.9%) and 1073 met inclusion criteria for the study. Lower education was associated with lower SOC, with mothers graduating only from junior high or high school having lower SOC compared to those who graduated from college. Mothers reported an annual personal income of less than 1-million yen and unemployed housewives had lower SOC than did mothers who earned 3- to 5-million yen, with SOC also positively correlated with annual household income.

Child-health related factors showed no difference. There was no difference for the mothers with disabilities, but SOC is correlated with age. Turkey’s multiple comparison tests suggest that mothers’ educational background, annual income and household income still have significance after adjusting for child-raising factors.

Conclusion: Because child health related factors showed no significant relation with SOC scores, children’s health status may not directly affect the SOC of child-rearing mothers. On the other hand, mothers’ educational background and household income during the child-raising period have a strong effect on SOC.

Disclosure of Interest: None Declared

Keywords: Child-rearing, Mothers’ SOC (sense of coherence), Socio-economic Status
Mind Yourself: The Impact of Self-Management Ability on Compliance of Primary and Secondary Cancer Prevention Behaviour
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Objectives: Self-management ability (SMA) generally refers to overarching notions of how people become aware of their surroundings, including health-related knowledge and resources and how to use them. Initially, SMA was mainly employed in chronic disease management, but its application has expanded to health promotion and disease prevention. This study examines the influence of SMA on primary and secondary cancer prevention (PCP and SCP) behaviour and looks for any differences between PCP and SCP.

Methods: With consent of the developer, we used the Personal Competence of Health Care (PCHC) scale developed for the general public in Korea to measure SMA. PCHC included 25 items in 7 domains and each item was measured using a 5-point Likert scale. Also, questions about PCP, SCP behaviour compliance, and demographic information (age, gender, annual income, marital status) were added. PCP compliance was measured with the Korean National Cancer Center’s cancer prevention guidelines, the major components of which are healthy eating, avoiding carcinogens, preventing infections, and weight control. SCP was addressed with a question asking about cancer screening tests. The survey questionnaire was administered by telephone interview to 2,700 people aged 30-69 who resided in 18 cities and counties chosen with a stratified sampling method in Gangwon province in Korea in February 2014. With PCP and SCP behaviours as dependent variables, we conducted multiple logistic regression analyses with SMA domain scores and demographic information as independent variables.

Results: After excluding questionnaires with too many missing values, 2,540 were analyzed. Among the 7 PCHC domains, 4 showed overly low internal consistency, and therefore we ultimately used 3 domains: self-esteem (esteem, one’s overall emotional evaluation of one’s own worth, 4 items), health literacy (literacy, one’s ability to obtain, understand and use healthcare information to make appropriate health decisions, 5 items), and self-efficacy (efficacy, the extent of one’s belief in one’s own ability to reach goals, 4 items). Cronbach’s alphas were 0.725, 0.675, and 0.653, respectively. The multiple logistic regression results showed that women performed both PCP and SCP behaviours significantly more often than men (odds ratio (OR): 2.86 and 2.45), and the older the respondent, the more likely the respondent was to conduct both PCP and SCP behaviours. Annual income did not play an important role in cancer prevention behaviour. Two of the SMA domains significantly influenced PCP behaviour: ORs for esteem and efficacy were 2.30 and 1.68, respectively. For SCP behaviour, only esteem and literacy were statistically significant; their ORs were 1.26 and 1.76, respectively.

Conclusion: SMA plays an important role in PCP and SCP behaviours, as does demographics. Also, the patterns of how SMA affects prevention behaviours differed between primary and secondary prevention. To better develop cancer prevention programs, policy makers should take into account the SMA profiles of the target population to improve the effectiveness of such programs. The results of this study also strongly suggest that a more sophisticated instrument measuring SMA tailored to the Korean population should be developed and validated for future studies.

Disclosure of Interest: None Declared

Keywords: Self-management ability, Cancer prevention
“Cooking Oil Reduction Plan” of Staff Canteen in Landseed Hospital
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Objectives: High-fat diet is considered as the major factor that causes obesity, cardiovascular, diabetes, high blood pressure and other chronic diseases. It is advised by Ministry of Health and Welfare that the intake of food oil and fat should be 30% out of total calories and should also be controlled at 25% as a more ideal ratio. However, according to a survey, the food oil and fat Taiwanese people really take has reached 34% of total calories. We therefore carry out Cooking Oil Reduction Plan at central kitchen of our hospital for everyone to enjoy the original flavours of food with less grease and more tasty.

Methods: According to “Guideline for Daily Diet” published by Ministry of Health and Welfare, 3-7 teaspoons of fat should be taken by people on daily basis. After gathering statistics of total meal consumption of Landseed Hospital and referring to the guideline, 45 cans of cooking oil per month or 3 teaspoons per meal for each person is set to use at our kitchen.
2. The following reduction plan was implemented to achieve the goals above:
2.1. The knowledge of low-fat diet and on-job trainings are enhanced for our chefs.
2.2. Dietitians have redesigned the menu and the proportion of fried food has been lowered to 30% and below per week.
2.3. Cooking oil is collected twice a day and arranged by the designated personnel.

Results:
1. Comparing to the year of 2012, a total of 364 cans or 6,552 liters of cooking oil used by Staff Canteen in Landseed Hospital in 2014 was reduced, which indicates that 24% of overall cooking oil consumption has been decreased.
2. A decrease of 6,552 liters of cooking oil consumption per year can reduce an intake of 58,968,000 calories and lower the incidence and prevalence of obesity among staff of our hospital.
3. Cost-Benefit: a cost of NT$283,920 was saved in 2013 at current cooking oil price of NT$780 per can with a volume of 18kg.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL CONSUMPTION OF COOKING OIL</th>
<th>Number of person</th>
<th>Oil per meal/person</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>693 cans</td>
<td>582134 person</td>
<td>21.4c.c</td>
</tr>
<tr>
<td>2013</td>
<td>555 cans</td>
<td>607716 person</td>
<td>16.4c.c</td>
</tr>
<tr>
<td>2014</td>
<td>571 cans</td>
<td>646117 person</td>
<td>15.9c.c</td>
</tr>
</tbody>
</table>

Conclusion: The “three-high diet” with high-calorie, high-fat and high-salt intakes is the dietary habit that patients with chronic diseases should avoid. By promoting the knowledge; adjusting menu and management methods as well as implementing “Cooking Oil Reduction Plan for staff’s meal”, the excess intake of fat can be avoided while the cost of food ingredients is also reduced for a better quality of meals and services.

Disclosure of Interest: None Declared

Keywords: Chronic diseases, Cooking Oil Reduction Plan, Health Promotion
To Raise the Rate of Definite Diagnosis on Screening of Oral Cancer, Colorectal Cancer and Breast Cancer Abnormalities

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Objectives: From literature reviews, we found that we can reduce cancer mortality by screening of (positive) cancer abnormal finding through definite diagnosis can help detect cancer or pre-cancer stage; and that the rate of definite diagnosis on screening of oral cancer, colorectal cancer and breast cancer abnormalities can be raised through a multidisciplinary collaboration model and service procedure integration.

Methods: Through an analysis on undiagnosed causes in 2013, we found the following hindrances: the public was not fully aware of the diseases, the hospitals were unable to contact the patients, patients described they did not have the time, patients refused to perform definite diagnosis after seeking medical advice, patients failed to conduct definite diagnosis at the appointed hospital, etc. These had resulted in the rate of definite diagnosis of abnormal diseases to be lower. Hence, the following improvement measures were proposed by the study from June to August, 2014:

1. Establish a multidisciplinary integrated team to amend the operating procedures.
2. Strengthen health education advocacy and increase public awareness of the diseases: To enhance health education on pre- and post-screening operations.
3. Establish diversification services and enhance the convenience of definite diagnosis: Every unit should set up a single-window service to enhance telephone contact operation, send hospital visit letters or SMS reminders to notify the patients.
4. Provide incentives for patients seeking medical advice and enhance definite diagnostic willingness: To provide patients with discount registration service.
5. Establish common standard service procedures and a cross-unit teamwork model: perform multiparty (screening side, tracking side, the physician side, patient side) improvement on the integrated procedures and staff educational training, set up standardized operating procedures and release health education leaflets, etc.

Results:
1. A respective improvement from 63.11% to 91.03% before and after performing definite diagnosis of oral cancer abnormalities.
2. A respective improvement from 54.26% to 66.67% before and after performing definite diagnosis of colorectal cancer abnormalities.
3. A respective improvement from 88.54% to 92.31% before and after performing definite diagnosis of breast cancer abnormalities.

Conclusion:
1. The application of customized case tracking practice and teamwork, and the strengthening of definite diagnostic awareness of the diseases have confirmed to improve the rate of definite diagnosis of abnormality diseases effectively, thereby achieving the objective of early detection and early treatment.
2. After analyzing the data from the screening unit and the tracking status, a tracking and integrated process was done by the team through cooperative discussions and meetings, and different operating procedures were then developed to cope with different diseases sources and different units. Finally, the rate of definite diagnosis of abnormality diseases were carried out continuously through tracking and reviewing, and timely amending the countermeasures.

Disclosure of Interest: None Declared

Keywords: breast cancer, Colorectal Cancer, Oral cancer
The Good Effect of Venlafaxine on the Breast Cancer

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Objectives: Post-mastectomy pain syndrome and the hot flashes after adjuvant chemotherapy or hormonal therapy are two common complications in breast cancer patients. According to the recent literatures venlafaxine related, venlafaxine not only reduces pain and hot flashes of these breast cancer patients, but also improves their life-quality. Thus, we researched English literatures on the Pubmed, Google Scholar and Ovid Medline to approve the above good effect of venlafaxine on these patients. A review of medical English literatures to explore the clinical feasibility of venlafaxine on reducing the pain after radical mastectomy and the hot flashes after adjuvant chemotherapy or hormonal therapy.

Methods: Researching the English literatures related venlafaxine on the breast cancer to evaluate/analyses the effect of venlafaxine in reducing post-mastectomy pain syndrome and the hot flashes after adjuvant chemotherapy or hormonal therapy.

Results: After a review of medical English literatures, venlafaxine was used to reduce hot flashes in menopausal women in the past and it was approved to be a good effect on reducing hot flashes post adjuvant chemotherapy or hormonal therapy in recent years. Besides, it was also approved to improve post-mastectomy pain syndrome. Therefore, it is confirmed that venlafaxine is helpful to improve post-mastectomy pain syndrome and hot flashes after adjuvant chemotherapy or hormonal therapy.

Conclusion: In breast cancer patients, radical mastectomy plus adjuvant chemotherapy or hormonal therapy could decrease recurrence and prolong survival time. The past research reported that almost half of breast cancer survivors still suffered pain for 2-3 years after radical mastectomy. Besides, their life-quality also decreased and became poorer if combined with adjuvant hormonal therapy or chemotherapy. Thus, venlafaxine may be a good choice for post-mastectomy pain syndrome and the hot flashes after adjuvant chemotherapy or hormonal therapy in breast cancer patients.

References:

Disclosure of Interest: None Declared

Keywords: breast cancer. Venlafaxine
Improving Operational Efficiency at Primary Healthcare through Implementation of the Integrated Chronic Disease Management Model
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Objectives: To determine whether the implementation of the Integrated Chronic Disease management model will improve the operational efficiency at health facilities?

Methods: A quasi experimental study was conducted at baseline (pre-implementation); 6 months, 12 months and 24 months post implementation. One hundred patients attending the implementing facilities were surveyed from point of entry to departure irrespective of diagnostic condition at the four different points. A data collection tool was designed to track the patients flow through the facility. This was attached to the patients file. All watches were synchronized. At each point the service provider completed time of entry and departure. At the exit, the data collection tool was retrieved and placed in a box. The data from completed forms were double blind entered into a database. The data was analysed for median times for all diagnostic conditions and specifically for chronic conditions. Segmental regression analysis was conducted to determine statistical significance

Results: Reducing operational inefficiency-Patient waiting times
The median total time spent by patients across all diagnostic conditions has decreased both from the baseline in December 2011 and the intermediate measure in May 2012 at eight facilities (20%). Fourteen facilities (35%) have shown a decrease in the median total time spent by patients across all diagnostic conditions from the baseline in December 2011.

Median Total time spent by Chronic Patients
The total median time that chronic patients spent at the facilities in January 2013 decreased from both the baseline in December 2011 and intermediate measurement in May 2012 at 17 (43%) of the facilities. Fifty percent of the facilities have shown a decrease greater than 30% in the total time spent by chronic patients from the baseline in December 2011 and a decrease greater than 35% in the total time spent by chronic patients between May 2012 and January 2013. Further analysis is currently being conducted and will be available at the conference

Conclusion: Despite every effort to take cognisance of and address potential barriers, the implementation of the ICDM was dependent on the leadership capabilities of the operational managers. Cross messages from the various programme managers and the reluctance of the designated HIV/AIDS nurses that initiated and managed only HIV/AIDS patients created some organisational resistance. Systemic challenges inherent in the health system negatively impacted on the smooth implementation of the ICDM model. For example, although the facilities were prepared and commenced with implementing various activities of the model, the lack of adequate essential equipment required at the facility posed a major challenge.

References: Womack J, Jones D. Lean Thinking: banish waste and create wealth in your corporation:, New York; Simon and Schuster; 1996.
Mahomed,OH, Asmall,S and Freeman,M. An Integrated Chronic Disease Management Model – A diagonal approach to health system strengthening in South Africa, Journal for Healthcare for Poor and underserved, November 2014

Disclosure of Interest: None Declared

Keywords: integrated chronic disease, operational efficiency
Gestational Diabetes Mellitus Integrated Care Clinic: A Journey
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Objectives: Establish a clinic that will optimize care of diabetic pregnant women at WH, and reduce the obstetric complications, i.e. stillbirth, macrosomia, Erb's palsy, caesarean delivery, gestational hypertension and pre-eclampsia. Reduce the lifetime complications of GDM i.e. development of maternal Type 2 diabetes and maternal metabolic syndrome, childhood diabetes & neurological sequelae.

Methods: Inquiry:
A team was formed, data gathered for analysis supporting the need to establish the clinic,
1) Admitted GDM patients for blood sugar stabilization
2) Number of diabetic mother seen by: Endocrinologist, Dietician, Diabetic educator

Project Proposal:
Meetings on data presentation and project proposal were conducted with multidisciplinary care team, Hospital Administrators and Partners HealthCare International. Series of Interviews were conducted on Patients and Physicians. Business plan and guidelines were developed and approved.

Implementation: Lectures on program plan, and education were conducted for Physicians and Nurses. Orientation was provided to PHC about GDM Clinic and diabetic care. Educational materials were developed to meet the needs of WH patients. Clinical guidelines were developed and implemented. Community outreach program was conducted. Clinic structure was set up, and DME’s were procured.

Results: Results will be provided during the presentation.

1. Conclusion: The program is still in progress with the following benefits on patients and family: Decrease admission rate.
2. Regular follow-up care, improving compliance to insulin management.
3. Proper education and counselling using developed educational materials.
4. Integrated care from Obstetrician, Endocrinologist, Diabetic Educator, Nurses and Dieticians in a single visit.
5. Easy access to GDM integrated clinic by appointment, walk-in or hotline.
6. Non-Qataris were referred to Qatar Diabetic Association to get glucometer and accessories to improve proper blood glucose monitoring.
7. Sub-store items like needles, alcohol swabs etc. are provided from GDM clinic.

Disclosure of Interest: None Declared

Keywords: Diabetes care management, Diabetes Clinic
Reducing Sepsis Mortality by Multidisciplinary Team Involvement Strategies
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Objectives: Reducing sepsis mortality rate by 50% through strategies involving the multidisciplinary team in adult sepsis protocol.

Methods: Strategies were applied between the months of April and December/14, in a private, tertiary hospital in the city of São Paulo, south-eastern Brazil, as follows: daily visit of Protocol sector in areas, with approach of nurses regarding the sepsis protocol; use of the Sepsis Protocol validity board in the ICU bed; use of coloured sticker on the shift map to differentiate patients passing through the sepsis protocol at the clinic or surgery; monthly feedback to the areas through a sector sheet and analysis with medical and nursing coordination; bi-monthly presentation of results related to sepsis protocol by the own sector; implementation of electronic devices to sepsis protocol; game of errors to identify major weaknesses in filling out the protocol; development of laboratory tests package in electronic patient charts; presentation of results to the multidisciplinary team about the detection of patients with eligibility criteria, through a coffee break and the delivery of a detection certificate to the multidisciplinary team in the effort of sepsis protocol; use of the term "lives saved" in order to highlight the positive results for patients who were discharged; awareness campaign during the ‘sepsis week’, by delivering cards containing the main steps in the fight against sepsis, pens with the slogan "sepsis protocol, I’m good at it" and stickers for the dressing room lockers of the operating room and obstetric center with the main steps in combating sepsis; protocols workshop with simulation of sepsis cases.

Results: The Sepsis Mortality rate passed from 19% in April to 8% in December, so we have noticed a decreasing in mortality from sepsis by 58% after the implementation of such strategies.

Conclusion: We have concluded that strategies for involvement of the multidisciplinary team in sepsis protocol has contributed to achieving the objective of this study, once we have reduced sepsis mortality by more than 50% and teams are responsible for this results and feeling part of the process.

References: Latin American Sepsis Institute

Disclosure of Interest: None Declared

Keywords: Multidisciplinary Teams, Sepsis Mortality
Service Level Management as a Facilitator in Communication between the Laboratory and the Procedures and Support Center of UNIMED Paulistana

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Objectives: The objective of this study is to demonstrate the use of the Service Level Management - (SLA), signed between a clinical laboratory and an Emergency Care unit, as a tool to improve the interaction between both processes, reducing noncompliance such as the collection delay, results releases and also exam redo.

Methods: The Service Level Management - SLA, a form of contract that allows the formalization of needs and expectations of clients and the conditions of services performance by the hired company. This study was performed in a private Emergency Care, primary, in São Paulo, south-eastern Brazil. Thus, the methodology adopted was of regular meetings between the laboratory and emergency care staff, intermediated by the Quality Office and guided by issues raised from the notification of noncompliance. These occurred in the first semester of 2014. At these meetings, the requirements to be complied by both parties regarding the collection of samples were discussed, as well as the identification and release of results. Above all, it was also discusses the times when the results should be released. Thus, the SLA was described with the definition of criteria, deadlines and quality established for each step of the process having started its operation on June 1, 2014.

Results: It is increasingly common to hire third companies so that the contracting institution is able to devote to its main activity and is becoming more common for the contractor and the hired company to sign with each other an SLA, because it is known that this brings efficiency to recruitment. As evidence of aggregate efficiency to the process, we demonstrate the number of non-conformities open for emergency care to the laboratory on the first and second semester of 2014. In the amount of non-conformities opened before the SLA closure, ie, in the first semester of 2014, we found 124 open notifications. From these, 68 (54%) were related to the Exams Redo due to the lack of practice to perform the activity, or the lack of definition on which professional should perform the collection. Concerning the Report Delivery Delay there were 35 (28%), and related to Collection Delays there were 21 (17%). Assessing the data from the second semester of 2014 and totalling the abovementioned reasons, we saw only 6 open notifications, and from these, 2 (33.3%) were related to redo, and the other for different reasons. So we noticed a significant decrease in the number of open notifications.

Conclusion: We have concluded that the SLA developed with the assistance of the Quality Office, has promoted the strengthening of the relationship between emergency care and the laboratory, which now meet the expected requirements, the deadlines to be followed and, above all, to assess the service jointly, besides reaching a more efficient process with greater satisfaction from internal and external client.

References:
2. Santos. GHC; Vimieiro. JV; Rodrigues. MIA; VI Congresso Consad de Gestão Pública – Acordo do Nível de Serviço e Eficiência Administrativa. 2013.

Disclosure of Interest: None Declared

Keywords: Laboratory, Service Level Management
PATIENT SAFETY FRIENDLY HOSPITAL INITIATIVE: INITIAL STEP TOWARDS ESTABLISHING A NATIONAL PATIENT SAFETY PROGRAM IN QATAR

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Objectives: To perform a baseline assessment of hospitals in Qatar to determine the level of compliance with WHO’s Patient Safety Friendly Hospital Initiative (PSFHI) standards and to identify areas for improvement. This initiative is considered as an initial step in the development of Qatar’s comprehensive patient safety program.

Introduction: The PSFHI is a mechanism to determine the level of patient safety in hospitals. It can be used to initiate and implement a special patient safety program or to evaluate a program already in place. In 2014, the Supreme Council of Health (SCH) partnered with the World Health Organization Regional Office for the Eastern Mediterranean (WHO/EMRO) to implement the PSFHI in selected hospitals in Qatar. The primary reference in the assessment process was the PSFHI assessment manual which consists of a comprehensive set of 140 patient safety standards, each of which is defined as either critical (compulsory), core or developmental. The patient safety standards are further organized into five domains: Leadership and Management Measures, Patient and Public Involvement Measures, Safe Evidence based Clinical Practice Measures, Safe Environment Measures, and Lifelong Learning Measures.

Methods: A team comprised of WHO/EMRO consultants and SCH quality specialists conducted the assessment. This was carried out through field visits in September and October 2014. The assessment was based on four major evaluation tools:
- Document review: 143 documents from each hospital were reviewed. These documents were requested by the assessment team prior to their hospital visit.
- Interviews: with managerial and clinical staff as well as patients and/or patient representatives.
- Tracers for various sites like Intensive Care Unit (ICU), Laboratory, Radiology, Pharmacy, etc.
- Observation and visit to the Emergency Department, Blood Bank, Surgical Wards, Outpatient Clinics, Kitchen, Central Sterilization Unit, Neonatology Unit, Waste Storage, etc.

Results: The baseline assessment results showed that the participating hospitals complied with 65.75% of the total 140 standards among all the domains of the PSFHI. The average compliance with critical standards of the participating hospitals in Qatar was approximately 96% showing a close result for the target of 100%. Among the five domains, the highest overall score was for the Safe Environment domain with an average of 84.50% compliance. This was followed by the Safe Evidence based Clinical Practices domain and the Leadership and Management domain with the overall average scores of 69.50% & 66.25% respectively. Finally, the Patient and Public Involvement and Lifelong Learning domain scored the lowest with overall average of 46.00% and 52.85% respectively, and are therefore areas which require improvement.

Conclusion: There is a strong commitment to patient safety from participating hospitals’ leadership and patient safety teams. Following on from the PSFHI assessment, the hospitals are now aiming to achieve the full critical, core and developmental criteria and attaining an enhanced level of patient safety. The identified gaps from this assessment enable the SCH to identify patient safety priorities that should be included in a comprehensive national patient safety program. In particular, the domains of Patient and Public Involvement and Lifelong Learning need more attention to improve health-care quality. This initial stage of assessment was considered successful and will be followed by the roll-out of the PSFHI to all Qatar hospitals. In addition, this evaluation can be used by participating hospitals for internal benchmarking and to make further improvements over time.

Disclosure of Interest: None Declared

Keywords: Assessment, Friendly Hospital, Patient Safety
Responsive Regulation For Improving Quality And Overall Performance In Health Systems: The Case of Qatar

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Objectives: Responsive regulation in health systems uses a hierarchy of tools to evoke compliance, starting with a soft approach followed by harder instruments of regulation depending on the context and circumstances. This study describes the process of applying responsive regulation to: 1. Design a framework for linking performance to reimbursement for public, private, and semi-governmental hospitals and primary healthcare centers (PHCs) in the State of Qatar and 2. Identify and pilot standardized indicators for mandatory reporting.

Methods: A multi-step approach was used extending from December 2012 to March 2014. This includes:

1) Document review,
2) Review of peer-reviewed and grey literature,
3) Semi-structured interviews with key stakeholders from the Supreme Council of Health (SCH) as a regulatory body, and healthcare providers,
4) Surveys of the stakeholders and healthcare providers,
5) Applying the Modified Delphi technique to select indicators for inclusion in HSPAs, and
6) Developing a Procedures Manual for measuring indicators, capacity building and pilot testing of indicators in 12 public, private, and semi-governmental hospitals and PHCs.

Results: Out of around 5,000 indicators reviewed from local and international sources, 34 indicators were piloted in hospitals and 25 KPIs in PHCs. After which, consensus across the health system was reached on 25 indicators based on their validity, feasibility, and reliability. Both the SCH and providers endorsed a regulatory framework that starts with persuasion (e.g., education and recognition). Repeated failure to comply with standards for reporting indicators leads to harder strategies of regulation. Pilot testing showed improvements to the Health Information Technology systems for collecting timely and accurate data. Several challenges to reporting indicators were identified including lack of ICD coding, under-reporting, and shortage of staff. Detailed results will be presented.

Conclusion: Responsive regulation has the potential to drive improvements in quality of care and performance in a pluralistic health system. Findings present implications for countries from the Eastern Mediterranean Region (EMR) and beyond for designing schemes for improving quality, monitoring health system performance, linking performance with reimbursement and accreditation, and public reporting. Key elements for applying responsive regulation included: leadership commitment and shared ownership with providers, dialogue-based approaches, effective guides and technical support across the health system.

Disclosure of Interest: None Declared

Keywords: Health Systems, Improving Quality, Monitoring Performance