Change and Sustainability in Healthcare
Quality: the Future Challenges

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AN INNOVATIVE STRATEGY TO IMPROVE HAND HYGIENE COMPLIANCE: USE OF EVIDENCED-BASED HAND HYGIENE BUNDLED INTERVENTIONS

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Objectives: Healthcare associated infections (HAIs) pose a global patient safety concern. Despite the fact that there is an increasing trend of compliance rate in Queen Elizabeth Hospital (QEH) (from 62% in 2013 to 88% in 2014), compliance enhancement and sustaining behavioral change remained a significant challenge. Based on the studies by Pittet et al (2000), and Whitby et al (2008), hand hygiene compliance was improved by using a multimodal approach. To address this challenge, the hospital developed the one-year evidence-based hand hygiene bundle to remark its significance in infection control.

Methods: The evidence-based hand hygiene bundle recommended by World Health Organization (WHO) that was composed of five elements (WHO, 2009). It was launched in Jan 2015.
(1) Administrative leadership support
The leadership element was demonstrated on visual reminders which conveyed powerful messages to improve hand hygiene compliance.
(2) The top-down marketing and promotion team
Nursing staff from various departments engaged in the team. The team formulated strategic plan and improved compliance outcomes.
(3) Visual and audio reminder
Innovative visual reminders such as posters and table stickers were posted in six strategic areas. Clinical leaders and hospital staff participated in music video shooting to promulgate hand hygiene.
(4) Behavioral reinforcement
The “Two-week Hand Hygiene Reinforcement Program in Wards” and “Patient Hand Rub Round” were implemented to drive hand hygiene compliance.
(5) Regular audit
Audits and ongoing monitoring were essential to evaluate the hand hygiene compliance. The compliance measurement is adopted from WHO hand hygiene observation tool performed by trained hand hygiene auditors in QEH. Compliance rate was also measured in “Two-week Hand Hygiene Reinforcement Program in Wards”. The overall hand hygiene compliance rate is calculated by dividing the number of hand hygiene actions by the total number of opportunities.

Results: In the second quarter of 2015, the hand hygiene compliance rate in inpatient units was 89%. It was a steadily increasing and the overall compliance rate in 2014 and 2015 was over 80%. In the “Two-week Hand Hygiene Reinforcement Program in Wards”, the overall compliance rate had attained at 90%. Moreover, 16 nurses were awarded the “Qualified Hand Hygiene Auditors on best hand hygiene practices.

Conclusion: The evidenced-based hand hygiene bundle was implemented as an innovative strategy to improve hand hygiene compliance. It applied five elements in a synergistic manner to target such encouraging outcomes. Sustaining hand hygiene program is challenging because of involvement of behavioral change. Therefore, identifying innovative marketing strategies is crucial to remind personnel of best practice in protection of patients from HAIs in a sustainable way.


Disclosure of Interest: None Declared
FACTORS INFLUENCING THE COSTS OF LABORATORY AND RADIOLOGIC TESTS IN SURGICAL PATIENTS: RESULTS OF AN EIGHT HOSPITAL STUDY

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**Objectives:** The aim of this retrospective study was to examine laboratory as well as radiologic costs concerning surgical patients before, during and after their hospital stay as well as to identify associated risk factors. The routine use of pre and post-surgery laboratory and radiologic investigations is considered an important element of care. Differences in laboratory and radiologic costs exist between individual patients.

**Methods:** Resource use for laboratory and radiologic testing was analyzed in eight different hospitals with a random sample of 6253 patients undergoing hernia repair, appendectomy or cholecystectomy in eight medium to small sized Austrian hospitals. Potential risk factors (age, gender, number of risk factors and type of operation performed, ASA classification, hospital and complication) for laboratory costs were analyzed using regression analysis.

**Results:** The participating hospitals performed a median (Q1-Q3) of 29 (22-45) laboratory tests at a cost of 109.4 € (76.5 €-174.4 €) as well as 3 (1-6) radiologic tests per patient at a cost of 182.3 € (0 €-396.4 €) before, during and after the stay. Age (0.82 €/a; p<0.001), male gender (16.4 €; p<0.001), risk factor (17.8 €/risk factor; p<0.001), cholecystectomy (188.2 €; p<0.001), appendectomy (95.7 €; p<0.001), ASA class III (110.4 €; p<0.001), ASA class IV (556.7 €; p<0.001), 5 out of 8 departments (32.8 € - 75.6 €; p<0.001) and complication y/n (208.3 €; p<0.001) were significantly associated with laboratory costs.

Age (7.4 €/a; p<0.001), male gender (70.4 €; p<0.001), risk factor (64.4 €/risk factor; p<0.001), cholecystectomy (688.5 €; p<0.001), appendectomy (618.9 €; p<0.001), ASA class III (227.9 €; p<0.001), ASA class IV (565.6 €; p<0.001) and complication y/n (743.3 €; p<0.001) were significantly associated with radiologic costs.

**Conclusion:** Significant variability in laboratory test ordering patterns exists in the management of hernia repair in eight small to midsize hospitals. We were able to demonstrate several associated risk factors for laboratory costs in surgical patients. Most of these factors are patient specific and cannot be influenced by the physicians. However, complications add significantly to costs as well as individual prescription patterns in the participating hospitals. Processes of care could be improved and costs decreased by collaborative initiatives to adopt evidence-based best practices.

**Disclosure of Interest:** None Declared
THE CONTRIBUTION OF A FINANCIAL/ADMINISTRATIVE DECISION ON PHARMACY OPERATIONS TO IMPROVEMENT ON PATIENT EXPERIENCE

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Objectives: Patient complaints about waiting times for outpatient medication dispensing have long been an issue to be addressed at our hospital. To reduce this problem, the hospital decided to limit the amount of outpatient medications dispensed from our hospital pharmacy. The cost of this action was to forgo the revenue from outpatient medications for the improvement of the overall patient experience. This investigation was to assess the relationship between this implementation and overall patient experience.

Methods: Two indices were measured including the rate of outpatient medications dispensed from non-hospital independent prescription pharmacies and the rate of patient complaints associated with the waiting time for medication being dispensed from April 2013 to December 2015, inclusive. In addition, the following items were examined where the shift in hospital policy influenced other management concerns including: hospital revenue, operational costs, expense of medication purchases, gross margin, and employee turn-over ratio of the pharmacy department. The 32-month period, since April 2013 to December 2015, was divided into two phases, including the pre-implementation (April 2013 to July 2014) phase and the post-implementation (August 2014 to December 2015) phase, and those results were analyzed with respect to outcome by the Mann-Whitney’s U-test, Student’s t-test, and Chi-square test.

Results: The results of a Mann-Whitney’s U-test showed significant improvements on both the rate of outpatient medications dispensed from non-hospital independent prescription pharmacies (p<.0001) and the rate of patient complaints associated with the waiting time for the receipt of their medications (p<.001) between the pre-implementation phase and the post-implementation phase. The results of Student’s t-test showed the hospital revenue was not significantly different; however, operational costs, expense of medication purchases, and gross margin differed significantly (p<.001). The result of chi-square test showed a statistically significant difference for the employee turn-over ratio of the pharmacy department (P<.05).

Conclusion: The implementation to decrease the rate of outpatient department medication dispensing from our hospital pharmacy was associated with an improved overall patient experience with an indirect added benefit of increased gross profit and improved retention of hospital pharmacy staff.

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ISQUA16-3156
REDUCING NO SHOW IN OUTPATIENT CLINICS-IMPROVING EFFICIENCY AND SAVING COST
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Objectives: Patients who fail to show for their appointments in primary/secondary care often use emergency departments as sources of both primary and chronic care, driving up costs and straining hospital systems. Moreover, missed appointments compromise continuity and quality of care for both the patients who are no-show and others who would have been scheduled in those appointment slots. The average Outpatient Clinic No Show rate of our hospital is 27%, indicating a potential avenue for improving efficiency and cost saving. Our aim is to bring down this rate from 27% to 20% within next six months and further reduction to 15% within two years’ time by applying DMAIC six sigma methodology.

Methods: Outpatient Clinic is a high end services and high No show contributes toward cost of poor quality including lost opportunities, discontinuity of care, time mismanagement, and wasted efforts. Eight different Six Sigma tools were used in the project during various phases. High and low end swim-lane process mapping and SIPOC diagram were used to understand the process and its redundancies. Pre-intervention data reveals , Defects per Unit (DPU) 0.259, Defects per Million Opportunities (DPMO) 259.6, hence the current Process Sigma Level was calculated to be 2.14. The process capability analysis also showed both Cp and Cpk value of > 01, indicating a highly incapable process. Fish Bone, Pareto and X-Y Matrix were then developed for listing leading causal factors leading to No Show, which came out as communication system failure, nature of appointment: Initial vs follow-up, socio-cultural preference of walk in over appointment system and disturbed law and order situation of the area. Few targeted strategies were deployed through Outpatient Management System including introduction of electronic/SMS reminders to patients, reinvigorating the telephonic communication system, patient/ family engagement by creating awareness of impact of No Show linking it with cost of poor quality and its effect on continuity of care.

Results: Post intervention initial results are very promising and the revised Process Sigma Level has escalated to 3.08 and application of paired t-test showing a p value of 0.011 indicating statistically significant improvement in the process. Team has developed control charts and control plan for continuous monitoring of the project.

Conclusion: No Show in Outpatient Clinics is a known phenomenon with high impact on cost of quality and is caused by various multi-faceted factors in our part of the world.

Disclosure of Interest: None Declared
COST OF IN-HOSPITAL ADVERSE EVENTS IN TAIWAN: ANALYSED BY USING A NATIONAL REPORTING SYSTEM
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Objectives: The occurrence of adverse events (AE) to the patients may impose a substantial financial burden on hospitals. However, the real costs of AEs at a national basis had never been estimated in Asia countries. Our research findings had implications for policy or practice by experience sharing AE-related cost on a national basis.

Methods: This retrospective study was conducted in a 2,400-bed medical center in Taiwan. We included all reported patient safety incidents that resulted in AE to hospitalized patients in a duration of 3 years. The average medical expense, length of stay and costs for administration, management and improvement were compared with those without any AE, after cohort-matching for patient age and department for admission. We then calculated the total difference of financial costs between the groups of admissions with and without AE.

Results: During the study period, there were 246,557 admissions, of which 9,138 (3.7%) were reported to have patient safety incidents, including 1,759 (0.71%) identified as having AE. After the cohort-matching process, an AE involved an averaged financial increase of 10,820 USD, and an average increase in length of stay of 34 days. While tubing events, mostly inadvertent removals of the tube, and fall events were the most commonly reported AEs, admissions with AE related to medical care process and examinations were shown to have the highest financial cost increases. We compared real AE-related costs, and referring to the incidents declared by the Taiwan Patient Safety Reporting System, the estimated AE-related costs was over 1% of the total budget of the Taiwan National Health Insurance. The AE-related costs of each individual category of AE could also be calculated in a similar way.

Conclusion: The occurrence of adverse events to the hospitalized patients is associated with substantial financial costs and a longer length of stay. Our findings highlight the need for improved activities to reduce the occurrence of inpatients AE events. This work had important implications for policy or practice by providing AE-related costs on a national basis and a way of estimation based on a validation cohort.

Disclosure of Interest: None Declared
IS THERE A PSYCHOLOGICAL LIMIT FOR WORKLOAD IN HEALTHCARE?
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Objectives: The objective of this work is to determine cut-off values for the risk of employees in hospital care to get psychologically ill by high workload. The determination of cut-off values serves to develop early warning indicators, in order to fight work-related health risks at an early stage. The research question is as follows: How many workload in terms of psychological demands can an employee endure before the well-being declines under a psychological critical threshold?

Methods: All employees involved in caring for patients in 49 breast cancer centers in North Rhine-Westphalia (most popular German state) have been included in the study (physicians, nurses and therapists). All in all N=1050 employees participated in the survey (response rate = 51%). The Well-Being Index “WHO-5” (WHO Collaborating Centre in Mental Health, 1998) and the subscale “Psychological Demands” of the Job Content questionnaire (JCQ) (Karasek, 1985) were used to identify cut-off values for differentiating between low, moderate and high psychological health risks. The WHO-5 is a valid screening instrument for the detection of depression. A score of 25-13 is an indicator of good well-being, a score of <13 indicates poor well-being and is an indication for testing for depression under ICD-10. The JCQ serves to assess stress and workload factors at the workplace (sum score 12-48). A high value indicates a high level of psychological demands. In this study, a Pearson’s product-moment correlation was run to assess the relationship between well-being and psychological demands. In addition, a regression analysis was carried out to identify cut-off values.

Results: The Pearson's product-moment correlation exposes a weak negative correlation between the two variables (r = -.229). This correlation is statistically significant at the level p<0.01. To predict the expected WHO-5 value based on the “psychological demands” the following regression line was determined: y = 22.3 – 0.19*x. Based on the results of the linear regression, we suggest three JCQ-cut-off values indicating low, moderate and high psychological health risks caused by workload in healthcare (cut-off values: 38, 43, 48).

Conclusion: We used a regression approach to identify critical workload thresholds for health professionals. We will discuss the pros and cons of this approach as well as the limited potential to generalize our results to other nations and healthcare organizations. The identified cut-off values will help safety units in healthcare organizations to decide when to take preventive actions to reduce workload to a non-risky level. Future research should concentrate on identifying cut-off values based on different approaches to get a mixed-method based identification of the workload risk levels in healthcare.


Disclosure of Interest: None Declared
Objectives: Background: There are variations in community pharmacy practice globally; some countries have community pharmacy quality evaluation processes in place whilst others do not. To our knowledge, there is no information comparing the types and merits of different quality evaluation methods globally. The purpose of this study was to explore if and how the quality of community pharmacy services are evaluated around the world. This study is important because it identified existing and proposed methods for evaluating the quality of community pharmacy services and evaluated their respective strengths and weaknesses. Thus, it may be of use to decision makers in countries that do not currently evaluate community pharmacy service quality but are considering doing so.

Aims: The aims of this study were to: (1) identify which countries currently evaluate community pharmacy service quality; (2) describe each method of community pharmacy quality evaluation; (3) delineate the advantages and disadvantages of each community pharmacy quality evaluation method; and (4) identify possible effects of the system on practice.

Methods: Study design: This was a two-phase study involving mixed-methods. The first phase involved a brief cross-sectional survey to identify countries that do or plan to evaluate the quality of their community pharmacy services. The second phase involved semi-structured interviews with respondents from these countries.

Survey development: A short, cross-sectional survey was developed to identify which countries do or plan to evaluate the quality of their community pharmacy services. The questionnaire also gathered information concerning the type of evaluation system used or planned and respondents’ contact information so they could be included in the second phase of the study.

Phase one: The survey was e-mailed to a global network of the researchers’ colleagues and existing contacts. Further contacts will be made at global conferences in 2016 to obtain information from countries not yet represented.

Phase two: Countries that currently do or planned to evaluate the quality of their community pharmacy services were included in the second part of the study. In cases where survey respondents were not willing to participate in the interview but the researchers wanted to include their country in phase two of the study, additional respondents were sought through networking opportunities.

Interview development: Semi-structured interviews were conducted with respondents from the first phase of the study or their proposed representatives to gain an understanding of the methodologies involved in evaluating the quality of the community pharmacy services in their country. Interviews attempted to gather additional details about the methods currently used or planned, if and how the system had been evaluated, how the measures were determined and to whom the results were available.

Results: So far, results have been obtained for nine countries. Of these, three met the criteria for phase two of the study. These preliminary results indicate that many countries do not evaluate the quality of their community pharmacy services, and only some plan to evaluate them in the future. Data collection will continue over the coming months and complete findings for this study will be presented at the conference.

Conclusion: Many countries do not evaluate the quality of community pharmacy services, although some are planning to evaluate them in the future. It is important to continue to explore the methods used to evaluate community pharmacy service quality in order to and provide information for those countries looking to implement or improve the quality of their community pharmacy services.

Disclosure of Interest: None Declared
OBJECTIVES: Adverse drug reaction (ADR) is an important issue in clinical pharmacological services. A convenient and timely recording system is required to alert physicians in order to prevent potential future drug-related events. Additionally, an interactive pharmacological service inclusive of patients should be provided by a clinical pharmacologist to improve prescription safety.

METHODS: All annual recorded ADR cases in a regional hospital of northern Taiwan were included as the study population. The Naranjo scoring method was used to select high-risk repeat-ADR subgroups whose Naranjo scores were 5 or more. An obvious warning message was shown in the physician order (PO) system, and an interactive pharmacological service was provided by a clinical pharmacologist at subsequent out-patient department (OPD) visits, in-patient department (IPD) visits or emergency department (ED) visits.

RESULTS: Approximately 35,600 OPD visits, 14,000 IPD visits and 4,000 ED visits were recorded monthly in the studied hospital. The mean ADR rate was 0.3%, and 80.8% of all recorded ADR cases were classified into high-risk repeat-ADR subgroups (i.e., Naranjo score = 5 or more). All repeat-ADR events were recorded and analyzed monthly. Prior to the project, there were 6 repeat-ADR cases per quarter on average; in comparison, there was 0.1 repeat-ADR case per quarter on average after the completion of the prescription safety improvement project.

CONCLUSION: A comprehensive computerized reporting and scoring system combined with an interactive pharmacological service was effective in reducing the occurrence of repeat-ADR events. In future, similar drug-related information could be registered in the IC chip of Taiwan’s National Health Insurance (NHI) cards in order to improve the pharmacological safety of residents of Taiwan.

Disclosure of Interest: None Declared
A RISK MANAGEMENT FRAMEWORK IN INTRODUCING NEW PROCEDURES, DEVICES AND SERVICES

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Objectives: In the current healthcare environment, new devices, procedures or processes are being discovered and/or developed at a breakneck speed. It is imperative for institutions to proactively assess these new services for unforeseen risks that may belie its noble intention of improving patient care outcomes. An effective and efficient evaluation process must be implemented so as not to let new technology adversely impact our patients.

Methods: National University Hospital (NUH), Singapore has two established processes working in synergy to evaluate a new service/procedure/device prior to its integration to clinical practice.

(1) New Surgical and Interventional Practice Committee (NSIPC) evaluates the safety of new devices or surgical procedures. The committee comprises experienced clinicians from procedural departments and takes into account evidence-based literature, informed consent process, experience of the proceduralist, proof of training and regulatory requirements of the device/procedure. All performed procedures and their clinical outcomes are tracked and reviewed by the committee. Adverse events arising from the device/procedure must be reported at once to the clinical governance division and to Health Services Authority (HSA), if required. The privileging process is activated after a certain period of time when the committee deems it safe to be brought to mainstream service.

(2) New Services Reviewing Panel evaluates new services in terms of clinical quality and safety, financial viability, operational readiness including infrastructure support, manpower resources, coordination/communication workflow with internal and external partners. Hazard identification and risk assessment is done first by the clinician patient safety officer and the service owner and reassessed by the institution’s risk management officer. Senior management reviews and approves the application in its entirety. Adverse events arising from the implemented service must be reported at once to the clinical governance division. A post-implementation report after one year is submitted to the panel.

Results: Eighty-four new devices/procedures and thirty new services were reviewed since this framework was introduced in 2002 and 2010, respectively. The last few years showed a steadily increasing number of applications, due in part to the fact that a broader definition of ‘new’ started to emerge. Risk assessment has expanded to include an existing device that has been modified to a significant degree, an existing procedure that is to be performed on a new organ or by a different discipline or an existing service that is to be introduced to a new environment. The basic principle is that the additional risks should be significant enough to warrant a thorough evaluation.

We unearthed deficiencies in areas such as staff competency, patient inclusion criteria, monitoring, informed consent, environmental safety, infrastructure support and lack of supporting literature. Limitations or deficiencies found in all applications were identified and ensured that these are resolved before implementation. This can be translated to preventing risks that otherwise would have adversely impacted our patients. To date, neither an adverse event related to a new service nor a service that slipped through the approval process was reported.

Conclusion: Risk management has become a standard practice by which our institution determines the impact of a new service/device/procedure on quality of care and patient safety. Engaging stakeholders in the process fosters ownership and deeper understanding of the risks related to the new service.

Disclosure of Interest: None Declared
STRENGTHENING MEDICATION RECONCILIATION PRACTICES: A PATIENT SAFETY INITIATIVE AT A TERTIARY CARE HOSPITAL AT KARACHI PAKISTAN.

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Objectives: Medication reconciliation is a process of comparing patient’s medication orders with all the medications that the patient has been taking at home/before hospitalization. Medication reconciliation is an effective intervention to reduce medication errors and loss of information during prescribing, dispensing and during the transition of patient. An updated and accurate patient medication list reduces the chances of adverse events in the hospital. According to Joint Commission's sentinel event database more than 350 medication errors resulted in death or major injury and approximately half of those would have been avoided through effective medication reconciliation practices/process. The aim of the project was to introduce the concept of medication reconciliation after the release of 5th edition of JCIA standards for hospital and to implement the process to prevent medication errors and patient harm.

Methods: Prospective review of patient’s medical record was done for eight months i.e. from May –Dec 2015. Random medical records of patients admitted in the hospital were reviewed. Multidisciplinary team was formed that include members from PGME, QPSD, pharmacy and IT. Roles and responsibilities were shared, data collection tool was introduced and baseline data of patient medication prior to admission was collected from patient’s initial assessment and was compared with the drug list with the patient’s comorbid. The list of past medication was compared with the computerized CPOE pharmacy system. Discrepancies in the list were recorded and were shared with the relevant stakeholder on the spot, through emails and monthly open medical record reports. Moreover efforts were done to rectify the discrepancies with the prescriber on floor. To ensure the compliance various steps were taken which includes education/training of onboard staff, system improvement, reinforcement/monitoring through audits and spot checks and for sustainability process indicator was developed.

Results: Total 1130 patients’ medical records were reviewed. before the intervention that is May- June 3767 files were reviewed the overall compliance was 50%, in interventional period July –August 377 files were reviewed overall compliance rate was 70% and post intervention September –December 377 files were reviewed drastically improvement seen i.e. 89%.

Conclusion: Medication reconciliation is a complex process that involves many disciplines. With the efforts of multidisciplinary team the process was improved and sustained. This definitely enhanced patient safety. Next year plan includes working on complete list of the patient's medications which is communicated to the next provider of service when a patient is referred or transferred to another setting, service, practitioner or level of care within or outside the organization.

Disclosure of Interest: None Declared
THE HYBRID QUALITY IMPROVEMENT METHODS CAN IMPROVE AMBULANCE PREHOSPITAL ELECTROCARDIOGRAM IMPLANTATION RATE: A 5-YEAR CITY BASED MULTICENTER TRAIL

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Objectives: Application of ambulance prehospital electrocardiogram (ECG) in patients with ST-elevation myocardial infarction (STEMI) was shown to shorten ischemia to balloon time and avoid to transfer to hospitals without cardiac catheterization lab. Furthermore, ambulance prehospital ECG may improve the outcomes of these STEMI patients. However, it remained a challenging issue to increase ambulance prehospital ECG implantation rate. Therefore, the aim of this multicenter study is to investigate whether hybrid quality improvement methods can improve ambulance prehospital electrocardiogram implantation rate in a city based program.

Methods: This city based multicenter study included 3 tertiary medical centers and 6 local hospitals with cardiac catheterization equipments in Kaohsiung city, Taiwan. All patients with chest pain transferred by ambulances equipped with prehospital ECG system before and after intervention were enrolled from Jan 2011 to Jan 2016. The ECG implementation rate is defined as chest pain patients received ambulance ECG exam divided by all patients with chest pain. The hybrid quality improvement methods were used, including problem solving and task achievement quality improvement method. The key interventions include to set up Asian first ambulance prehospital mobile transmit ECG system and the innovative design of a ECG exam accessory device, which was patented in Taiwan and won golden award in Geneva invention and Seoul invention. A P-value < 0.05 was considered statistically significant.

Results: The ECG implementation rate increased from 0% in pre-interventional phase (from Jan to Dec 2011), to 0.6% in interventional phase (from Jan 2012 to Feb 2013) and further to 64.1% in post-interventional phase (from March 2013 to Jan 2016) (p<0.001). Total 63 patients with STEMI was identified in 1012 chest pain patients received ambulance ECG exam. In these STEMI patients, average door to balloon time was 52 minutes, average ischemia to balloon time was 121 minutes and in-hospital mortality was 0%.

Conclusion: This 5-year city based multicenter study demonstrates hybrid quality improvement methods can improve ambulance prehospital ECG implantation rate

References: ISQua Fellowship Number: 1000337
ISQua Membership Number: 1004405

Disclosure of Interest: None Declared
Objectives: We used to record all patients’ status at every ward unit continuously, and monitor the work load daily, monthly and yearly. It takes a lot of time to do so, and still comes out with unexpected results frequently. Thus, we set up the information based administrative daily record system. Through which, we can acquire all patients’ status from all ward units at real time, and manipulate the work load more effectively and accurately.

Methods: In order to simplify the administrative work nursing station, and to enhance the effectiveness of care management. We set the nursing supervisor, nurse and IT staff form a team planning and production system in nursing administration.
Step 1 ward logbook content requirements inventory:
Each column contains the required items, the volume of business and the calculation conditions and needs of each user permissions.
Step 2 Check each item of information crawled conditions:
Ratio function of the current provided by the hospital information system, to obtain the required information from the existing information system. Or provide fields for user-created data.
Step 3. Confirm the relevant reports that are output requirements:
Based administration desired, automated report output for real time, the managers do not need to copy or duplicate calculations to clinical operations could save time, convenient to grasp a single ward or hospital wards relevant information.

Results: Ward provided via automated traffic management, so that the original head of the daily care it takes about 30 minutes to register information, care and long production time monthly report takes ten hours, the inquiry has been able to provide immediate information, only to spend a few seconds of time, so that others improve management efficiency, more effective use of information on the management of clinical nursing care.

Conclusion: In order to streamline the workflow of the nurses, offer information for decision-making, and improve the quality of service and care provided by the nurses, major hospitals are devoted to developing an information system for the nurses. The medical history that used to be written in various kinds of charts is now recorded electronically in the computer systems, thus increasing the efficiency of care. Through good and complete information nursing administrative systems, to help control the traffic of long nurse in the ward, to assist others to enhance the role of quality management.


Disclosure of Interest: None Declared
Objectives: This study explores the effectiveness of quality and safety improvements within a large Emergency Department in the United Kingdom. The primary objective was to understand the department's capacity for improvement using an organisational resilience perspective.

Methods: Organisational resilience is thought to involve four abilities: responding, learning, monitoring and anticipating (Hollnagel, 2010). Our investigation focussed on how these abilities can be used to assess the performance outcomes associated with quality and safety improvement attempts. Over 100 hours of observational data were collected over a period of 18 months, and this was supplemented with data from 13 semi-structured interviews. The aim of the data analysis was to identify the main features of resilience using an inductive data driven process. We used a broadly interpretive approach to understand the clinical world using participants' understanding of their environment, and our own understanding of theories of organisational resilience. A resilience narrative was written for each of the themes identified, and these were reviewed by our extended research team including clinicians. For the purposes of this study we report on the “Opportunistic Responses and Learning” narrative, which encapsulated aspects of the department’s approach to improvement.

Results: In our work we found that the department actively seeks out ways to improve the quality and safety of processes, and this is part of normal functioning. However, these attempts have a limited scope for action due to hard constraints. This is because many factors seem to be outside the department’s immediate control (e.g., bed availability in the hospital). In this context, the main focus of the department’s attempts at improving quality and safety are on how to maintain performance (e.g., attempting to adhere to government targets) and avoiding burnout (over working) of staff. Our analysis discovered that many of the attempts are successful at maintaining acceptable performance levels without negative consequences for staff wellbeing. However, there is a lack of effective monitoring and learning. This means that sometimes plans fail to get implemented. There is also a limited awareness of the types of actions performed to keep processes safe on a daily basis. Reasons for successful outcomes are often not transparent and this makes a systematic approach to quality and safety improvement difficult. Many improvement attempts are successfully adapted in situ giving the impression that attempts are working as initially proposed, but the reality is often different.

Conclusion: In healthcare organisations it has been suggested that there is a culture of ‘doing’ quality improvement, with little time allocated for planning and reflection (Reed & Card, 2015). We agree. The department we studied would benefit from better monitoring of improvement attempts so that the reasons why they were successful are better understood. This would allow for a cycle of continued improvement.


Disclosure of Interest: None Declared
CONSUMER AWARENESS ON HEALTHCARE ACCREDITATION IN REPUBLIC OF KOREA
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Objectives: Healthcare accreditation is a system that certifies healthcare organizations which meet the standards of healthcare quality and patient safety that are established by government. The purpose of this study is to analyze consumers’ awareness on healthcare accreditation in Korea, and to investigate factors to be considered when they select medical facilities in the future.

Methods: For the research randomly selected 1,025 males and females aged over 19, who had used medical institution within a year, were asked following equations; the awareness on healthcare accreditation, their main factors considered for choosing hospitals, and their willingness to consider the healthcare accreditation for future selection after the thorough explanation on the accreditation.
A sample was produced based on proportional quota sampling by sex, age, region by reflecting population distribution from '2013 Medical Utilization Statistics' published by National Health Insurance. Telephone interviews, called Computer Assisted Telephone Interview (CATI), were conducted for three days starting from May 11, 2015 using Dual Random Digit Dialing (RDD). Data analysis was performed with frequent analysis, χ²-test using the SPSS ver. 21.

Results: Among the 1,025 participants, 19.9% of them (total of 204) responded that they aware about the healthcare accreditation. Furthermore, 36.3%(74) of the 204 above properly understand about the healthcare accreditation, and they get information on health accreditation through TV, radio, the Internet, and so on.
The most leading factors to be considered when choosing the hospital are doctors’ reputation (37.3%), followed by geographical accessibility (31.1%), size of hospitals (6.5%) and previous visiting experience of hospitals (6.4%) etc. After the interviewers explained about the healthcare accreditation, about 66.3% of entire participants responded that they would choose hospitals with considering healthcare accreditation in the future.

Conclusion: In the beginning of the research, the participants showed low level of awareness on healthcare accreditation. That is why doctors' reputation and geographical accessibility were main factors considered in terms of hospital selection, while majority of participants responded that they will consider healthcare accreditation as one of main factors for future hospital selection after being provided information on healthcare accreditation by the interviewers. Therefore active public relation about healthcare accreditation is required to encourage consumers to choose healthcare organization based on information of patient safety and quality of healthcare.

Disclosure of Interest: None Declared
TRIBES OR TEAMS? THE RELATIONSHIP BETWEEN INTERPROFESSIONAL COLLABORATION, EMPLOYEE ENGAGEMENT AND SUPERVISOR SUPPORT ON PATIENT SAFETY CLIMATE.

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Objectives: Teamwork and supervision models are the cornerstone of the delivery of contemporary health care. Safe and quality patient care requires a collaborative culture where health professionals feel their input is valued. We know that employee engagement (EE), supervisor support (SS) and intergroup collaboration (IPC) are important contributors to patient safety climate (PSC). What we don’t know is how they lead to PSC in combination with each other. We propose and empirically test a model that suggests the presence of a three way interaction effect between EE, IPC and SS in creating a stronger patient safety climate.

Methods: Using validated tools to measure EE, SS, IPC and PSC we collected data from an in-depth questionnaire of 316 clinical and support staff in a large teaching hospital in Australia. Responses were entered into a statistical package (SPSS) and an exploratory factor analysis conducted. Bivariate correlation between our derived variables were calculated and a hierarchical ordinary least squares analysis used to examine the interaction between our variables. This study had full ethics approval from the institution.

Results: We find strong support for the notion that patient safety climate emerges from synergies between employee engagement (EE), interprofessional collaboration (IPC) and supervisory support (SS). Our model shows that the effect of IPC with PSC is strongest when staff are highly engaged. While we expected SS to be an important predictor of PSC, our findings show that high EE has a stronger relationship to PSC. We believe this to be the first empirically based study that confirms the importance of IPC as a lead marker for improved patient safety.

Conclusion: We provide quantitative evidence relating to three of the often mentioned constructs in the typology of patient safety and how they work together to improve patient safety climate. Our findings have important implications for the development of patient safety programs that focus on developing excellent supervisors and enabling interprofessional collaboration.

Disclosure of Interest: None Declared
DAILY MORNING BRIEF, EFFECTIVE TO HANDLE THE SITUATION AND INCIDENTS AT A REGIONAL HOSPITAL

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Objectives: To show daily morning brief is effective to monitor and handle incidents and hospital situations with collaboration.

Methods: The Hospital Chief Executive was the leader, together with our General Nursing Manager, Quality managers, and Administrative Services Department. We started the meeting in 2013. There were four areas demanding attention daily: 1.) The admission, occupancy and attendance statistics, and number of ventilator, BiPAP, isolation or acupuncture cases, 2.) Our electronic nursing reports highlighted important or sensitive events cases, 3.) Through the Advance Incidents Reporting System (AIRS), complaints, or potential medico-legal cases, 4.) News concerning the hospital, and administration issues affecting the hospital. The team orchestrated early actions to concerned issues, as well as longer term measure. The progress was also monitored. All our systems (nursing, AIRS, complaints) became computerized in 2015. All information and measure taken in 2015 was collected and analyzed.

Results: Before implementation the nurses examined reports everyday, but the AIRS, complaints, medico-legal cases and administration reports were examined only once per week. Media interests issue was never examined. After implementation the daily examination of the 4 areas became systematic.

1.) Statistics: In early 2015, it allowed our nurses to manage their beds. Also we were able to distribute evenly the number of patients including those on ventilator among our wards, our nurses could locate a vacant isolation room quickly during the flu surge season. With the opening of acute surgical service in late 2015, we noted the suboptimal impact on the services early that led us to allow more admissions than planned, in order to ease the pressure on other hospitals. The information also facilitates us in planning for more service opening.

2.) Nursing reporting, AIRS and complaints system.

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<th>Action with follow-up</th>
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<td>Nursing report</td>
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<td>770</td>
<td>58</td>
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The nurses report included 6 categories such as deteriorating patients or sudden death, transfer to ICU, fall and patient injury, or requiring careful handling. The AIRS system reported incidents in 9 patient-related categories, including violent patients, mishandling of patients that may lead to harm, medication error, communication leading to adverse outcome. It also reported 14 non-patient issues such as administration issue, utilities failure, staff injury and security incidents. Examples included patients with complex medical problems as well as receiving wide media interests, or complaint requiring multiple departmental collaboration. In 58 cases, we were able to orchestrate actions and follow-up through multiple disciplines and departments.

3.) Seventy-three short and longer term quality improvement measure was initiated in 2015 (e.g. site visit, education, revision of protocols, task force formation in fall prevention). Some of the measure required also additional planning including resources (e.g. purchase of equipments).

4.) The events and incidents reported dropped from 21.6 per 1000 patient days in first quarter of 2015 to 14.8 per 1000 patient-days in the fourth quarter. The fall rate dropped from 0.61 to 0.29 per 1000 patient-days, and the medication error dropped from 0.12 to 0.06 per 1000 patient-days within the same period.
Conclusion: The daily morning brief is an effective and comprehensive means to monitor and handle the situation, with collaboration of team members. It becomes standard work for our hospital senior staff.

Disclosure of Interest: None Declared
ISQUA16-2684
CAN HOSPITAL VOLUNTEERS HELP IMPROVE PATIENT SAFETY?
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Objectives: Evidence suggests that patients can meaningfully feedback to health services about the safety of care (O’Hara et al, 2016). The PRASE (Patient Reporting and Action for a Safe Environment) intervention (Sheard et al, 2014) provides a way to systematically collect feedback from patients, and includes an iterative action planning cycle for hospital ward staff to make changes to services using this feedback. Implementation of the PRASE intervention was explored in a project funded by The Health Foundation (a UK health charity) under their Closing the Gap in Patient Safety programme. PRASE was implemented across three UK acute hospital Trusts with patient feedback collected by hospital volunteers. The paper presents findings from the parallel evaluation exploring effectiveness of the implementation. We present findings from the formative and summative evaluation phases with the following specific objectives:

i) explore the feasibility and acceptability of hospital volunteers collecting patient feedback about the safety of their care using the tools within the PRASE intervention;

ii) explore how patient feedback collected by the hospital volunteers can be used within the PRASE intervention to improve patient safety on hospital wards.

Methods: We took a multiple methods approach with data collected between July 2014 and May 2016. For the formative evaluation phase we conducted seven focus groups with hospital volunteers (n = 18), interviews with ward staff (n = 4) and voluntary services and patient experience staff (n = 4). Data was analysed using framework analysis, with findings iteratively fed back to the implementation team. In the summative evaluation phase, methods were designed to evaluate the process of wider implementation, and the impact upon patient safety outcomes. A case study approach was adopted with eight participating implementation wards, comprising interviews with ward staff, focus groups with hospital volunteers, and longitudinal measurement of routinely collected ward-level data (safety thermometer, patient experience feedback) using a time-series design. Patient safety climate was measured pre- and post-implementation.

Results: The formative evaluation found that all stakeholders supported PRASE and felt hospital volunteers were well placed to facilitate the feedback collection. However, concerns were raised about the intensive resource required to implement PRASE on a larger scale. The summative evaluation phase completes in May 2016 and summarised case study findings will be presented. Finally, reflecting more widely on the process of evaluating improvement, we will describe how literature from the field of improvement science (e.g., Davidoff et al, 2015) has facilitated our evaluation approach, and present our conclusions regarding the challenges and opportunities faced by those evaluating improvement.

Conclusion: PRASE with hospital volunteers represents a promising approach for collecting patient feedback about safety to improve services. Volunteers may have an integral role in health services in the future, therefore our findings speak to this topic more broadly. Our findings also add to the growing understanding of the role of evaluation in improvement science.


Disclosure of Interest: None Declared
LEVEL OF COMPLIANCE OF HAEMODIALYSIS CENTRES IN THE MSQH CHRONIC DIALYSIS TREATMENT ACCREDITATION PROGRAM 2013-2015
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Objectives: 1. To analyse the performance of chronic dialysis centre undergone MSQH Chronic Dialysis Treatment Accreditation
2. To identify the issues faced by dialysis centres which undergone MSQH Chronic Dialysis Treatment Accreditation
3. To compare issues between hospital-based dialysis centre and stand-alone dialysis centre

Methods: This is a retrospective study on the Dialysis Centres based on the performance of MSQH Chronic Dialysis Treatment Standards from 2013-2015. Dialysis centres are identified as dialysis centre in public hospital, dialysis centre in private hospital and standalone dialysis centre. The MSQH Chronic Dialysis Treatment Standards covers on eight aspect of the service i.e. (1) Governance, (2) Access to Care, (3) Human Resource, (4) Haemodialysis Treatment, (5) Ethical Practice & Patient and Family Rights, (6) Prevention and Control of Infection, (7) Facilities and Equipment and (8) Quality Improvement Activities.

Results: 79 dialysis centres (75 hospital based and 4 stand-alone dialysis centres) that had undergone the Hospital Accreditation program are included in this study. 61.35% (46/75) of the hospital based dialysis centres are from public hospitals while 38.6% (29/75) are private hospitals. Compliance in dialysis centre in public hospital is 95.7% (44/46) and private hospital is 89.7% (26/29) respectively.
Overall compliance for each component are Governance (94%), Access to Care (96.7%), Human Resource (92.3%), Haemodialysis Treatment (95%), Ethical Practice & Patient and Family Rights (94.3%), Prevention and Control of Infection (93%), Facilities and Equipment (91.7%) and Quality Improvement Activities (98.7%) respectively. Compliance in each component is as follow:

<table>
<thead>
<tr>
<th>Std</th>
<th>Public Hospital</th>
<th>Private Hospital</th>
<th>Stand Alone Chronic Dialysis Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std 1 : Governance</td>
<td>10%</td>
<td>99%</td>
<td>83%</td>
</tr>
<tr>
<td>Std 2 : Access to Care</td>
<td>99%</td>
<td>99%</td>
<td>92%</td>
</tr>
<tr>
<td>Std 3 : Human Resource</td>
<td>99%</td>
<td>98%</td>
<td>80%</td>
</tr>
<tr>
<td>Std 4 : Haemodialysis Treatment</td>
<td>10%</td>
<td>91%</td>
<td>94%</td>
</tr>
<tr>
<td>Std 5 : Ethical Practice &amp; Patient and Family Rights</td>
<td>97%</td>
<td>10%</td>
<td>86%</td>
</tr>
<tr>
<td>Std 6 : Prevention and Control of Infection</td>
<td>98%</td>
<td>97%</td>
<td>84%</td>
</tr>
<tr>
<td>Std 7 : Facilities and Equipment</td>
<td>90%</td>
<td>97%</td>
<td>88%</td>
</tr>
<tr>
<td>Std 8: Quality Improvement Activities</td>
<td>97%</td>
<td>3%</td>
<td>99%</td>
</tr>
</tbody>
</table>

**Conclusion:** The MSQH Chronic Dialysis Treatment Accreditation was implemented in 2013 and cover dialysis centres in both public and private hospital as well as stand-alone dialysis centre. The overall performance of dialysis centre in public hospital is better than private hospital. Although the performance of stand-alone dialysis centre scored only 50% compliance, this does not able to represent the general compliance as the number of accredited centre is very low. The area that achieved highest compliance for all hospitals is Quality Improvement Activities (98.7%), while the lowest is Facilities and Equipment (91.7%). However, the Facilities and Equipment in dialysis centre based in private hospital are far better than public hospital. This is because private hospitals give priority to patient comfort and do not have any problem spending their money for this aspect. This affects the aspect of Patient and Family Rights too where they scored 100%. While in public hospitals, most of the equipment are old and needs time to go through some processes before the equipment can be replaced or any renovation done. Treatment given in public hospital scored at 100% as it reflects the care provided by the resident nephrologist especially in specialist public hospital. The visiting nephrologist from dedicated hospital are assigned to oversee and supervise the dialysis centres in non-specialist hospitals.

**Disclosure of Interest:** None Declared
ISQUA16-3133
USING PATIENT FOCUS METHODOLOGY IN HOSPITAL ACCREDITATION AND CLINICAL AUDITING IN TAIWAN
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Objectives: To understand if hospitals introduced "Patient Focused Methodology" in the routine self clinical auditing activities, could it help the hospitals more easily get accustomed to the new on-site survey method and improve care?

Methods: Hospital accreditation in Taiwan started a new 4-year cycle since 2015. The Joint Commission of Taiwan (JCT) referred to "tracer methodology" by The Joint Commission in 2010 and developed Taiwan version of "Patient Focus Methodology (PFM)". In the last five years, JCT continuously refined the methodology. In order to let hospitals get accustomed to the new survey method, JCT recommended the hospitals to use PFM as the model of routine self clinical auditing in the hospitals. JCT provided training and consultation for the hospitals and encourage them to set up routine self clinical auditing activities. Thus hospitals could undergo clinical auditing for sub-systems or certain care processes with the help of PFM.

In the year of 2015, 36 hospitals (>100 beds) participated in the JCT hospital accreditation program and PFM was used as the main on-site survey method. In the smaller hospitals (<100 beds), PFM was not routinely used as the on-site survey method, so these smaller hospitals were not included in this study. JCT issued a questionnaire to the 36 hospitals (>100 beds) after the on-site survey.

Results: All 36 hospitals completed the feedback questionnaire after the surveys. Overall, 89.4% hospitals agreed that the adoption of PFM in surveys could improve the quality of care. 93.3% hospitals agreed that PFM could help medical professionals to develop patient-centered care. 90.4% hospitals indicated that PFM could help the hospitals to identify risks in the care processes.

Conclusion: The introduction of new survey methodology PFM is successful for the JCT accreditation program in 2015. Most participating hospitals agreed that PFM could help the hospitals to find the risks in the care processes and improve the patient-centered care. JCT recommended hospitals to adopt PFM in the routine self clinical auditing activities. It would help the hospitals get accustomed to the new survey method, and hospitals could also establish a model of continuous quality improvement with PFM in their routine auditing activities.

Disclosure of Interest: None Declared
Objectives: The Intensive Care Unit (ICU) is a place where critically ill patients are intensively observed and treated with professional care. In 2014, a preliminary investigation of 10 hospitals was conducted to assess ICU quality levels in South Korea. The results showed differences of not only structure of resources but also outcomes of treatment such as mortality and infection to name a few. Therefore, it was decided that a regular evaluation would be conducted in order to reduce the gap in quality levels and to improve the overall quality of ICUs. At the time of writing, the first quality assessment for ICUs is in process for general hospitals including tertiary hospitals.

Methods: The assessment target is the general hospitals which have ICUs for adults and children. Subjects are patients 18-years-old and over who were admitted to an ICU for more than 48 hours between Oct 2014 and Dec 2014. Indicators for the assessment results are composed in two ways: Structure of resource index; Surrogate and outcome results index. The data of ICUs’ current state of the structure for human resources and facilities was gathered from each hospital’s status and reported to the Health Insurance Review and Assessment Service (HIRA) by September 2014. Data for exploring patient results was collected from questionnaires which were distributed by HIRA. The main results were as follows: the number of beds in ICUs per a medical professional who is extensively responsible for patients in ICU, the ratio of beds to nurses in ICU, the ratio of the patients who had a prophylactic therapy for deep vein thrombosis and the rate of the re-admission to ICUs within 48 hours.

Results: The analysis is ongoing with the data of 37,577 patients at 266 hospitals. The final results will be released at the end of March 2016. The average of the beds in ICUs per a medical professional is 48.88(±34.26). The maximum value is 162.5 and minimum value is 10.27. The average of the ratio of the beds to nurses in ICU is 1.19(±0.70) with the maximum value 5 and minimum value 0.12. The other main results (the ratio of the patients who had a prophylactic therapy for deep venous thrombosis, the rate of the re-admission to ICUs within 48 hours) are being calculated.

Conclusion: Although the analysis of the study is ongoing, there was a gap among the beds in ICUs per a medical professional and the ratio of beds to nurses in ICU by the hospitals. When the final results are released in March, it will allow us to figure out an accurate status of ICUs and to let the hospitals know the results to lead to the improvement of ICU quality. Two indicators, which are the death rate and the rate of infection at ICUs are not open to the public as a monitoring indicator, however, a review will be conducted to assess the suitability to switch this information to public indicators after the evaluation is completed.

Disclosure of Interest: None Declared
Objectives: The Supreme Council of Health (SCH), Healthcare Facilities Licensing and Accreditation Program developed a National Healthcare Licensing Protocols and Accreditation Standards. These international protocols and standards are unique in that they integrate licensing and accreditation for the very first time. A pilot project was conducted to validate and obtain feedback from consumers on the proposed licensing and accreditation processes.

Methods: The Licensing and Accreditation processes were tested in a sample of seven representative healthcare facilities in Qatar between Nov. 1st and Dec. 23rd, 2015. Onsite inspections and surveys were used to evaluate program and facilities readiness for the new national healthcare facilities licensing processes in Qatar. Consumers were required to complete inspections/surveys post pilot surveys to evaluate the process of the onsite inspection and survey. SCH inspectors, surveyors and peer reviewers were also required to respond to surveys about their experiences as surveyors and inspectors on this pilot testing project. Data on compliance was collected electronically.

Results: There was a compliance rate of 69.6% to Licensing Protocols, and a 76.7% compliance to 3 star criteria, 70% to 4 star criteria and 62.5% to 5 star accreditation criteria. 100% of pilot test facilities and 60% of inspectors felt that time allocated for inspections was sufficient. 83% of pilot test facilities rated the time allocated for surveys was sufficient, whereas, only 67% of the surveyors felt the time was sufficient. Facilities rated the inspector team with 88% as 4 to 5 on a Likert scale of 5 being the strongest and 1 being the weakest. The facilities rated the surveyor team with 98% rating the team at a 4 to 5. There was a 100% rating that inspector’s comments were poor making it difficult to make a decision on licensing award. 50% of the participants identified the surveyor comments as strong and 50% as fair. 100% of the participants rated the surveyor comments as sufficient to make decisions on accreditation award.

Conclusion: Overall, the pilot test successfully reflected the readiness of the program. Seven facilities who took part in the pilot underwent licensing inspection and accreditation survey. The program was able to collect substantial information from the facilities that has assisted in improving processes. The feedback received from the pilot test facilities, inspectors, surveyors and peer reviewers was extremely valuable in preparing the program for full implementation.

Disclosure of Interest: None Declared
ENHANCING SURVEYOR EDUCATION TO IMPROVE ACCREDITATION
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Objectives: Accreditation Canada on-site surveys, conducted by peer-review surveyors, provide valuable information to healthcare organizations for quality improvement, safety, risk, and client-and family-centred care. Accreditation Canada launched a certification program for surveyor education in 2011. The program goal is to support highly trained, skilled surveyors with similar knowledge and competencies to engender consistent, high quality on-site surveys.

Methods: The certification program used best practices in developing, tracking, and evaluating surveyor education, consistent with International Society for Quality in Healthcare (ISQua) standards. The certification program exams and modules are located online; and all surveyors have an account which delivers program content and displays personalized information on their progress. Certification is mandatory for all surveyors and requires successfully completing program components each year during a 4-year cycle: Orientation exam for new surveyors (year 1), continuing education modules (years 2, 3), certification exam (year 4); and then continuing education resumes until the next certification exam. The surveyor certification program was evaluated in 2014 and 2015. In 2014 evaluation was through ISQua accreditation. In 2015 the certification program had completed a full cycle and Accreditation Canada formally evaluated if the program was achieving its goals and objectives and to identify evidence-based improvements. The 2015 evaluation used a mixed methods approach with quantitative indicators (e.g. program compliance rates, time to complete modules, pass/fail rates) from the online system and qualitative data from nine teleconference focus groups with surveyors and accredited organizations. Focus group questions were derived from the program logic model and configured according to the Kirkpatrick model for evaluating professional development programs.1

Results: The results of the last Accreditation Canada survey by ISQua in 2014 of accreditation for External Evaluation Organisations and Surveyor Training Programmes both recognized the surveyor certification program as a strength for surveyor education, management and training. The results of the 2015 evaluation identified that certification was achieving its goals and objectives. Indicators data showed: compliance rates increasing yearly and approaching 100% compliance in 2014 as surveyors became familiar with the mandatory program; time to complete the modules consistently met established targets; and desired pass rates were consistently achieved for exams and modules. In focus groups surveyors reported that the certification program enhanced the quality and consistency of their surveying through successful education which balanced rigour and workload. Accredited organizations universally recognized the quality of surveys and knowledge of surveyors; but made several recommendations to increase consistency between on-site surveys.

Conclusion: The Accreditation Canada surveyor certification program is education to increase surveyor knowledge and improve consistency of accreditation surveys, thereby facilitating quality improvement through accreditation. The program was recognized for quality and success in meeting its objectives by ISQua surveyors and is being improved based on formal evaluation recommendations. Improvements to the certification program include new program content based on focus group recommendations, enhanced methods (e.g. scenario-based learning), and more effective delivery (e.g. creating a priority matrix to guide surveyors in completing certification).


Disclosure of Interest: None Declared
ONE PIECE FLOW CONCEPT APPLIED IN CASEMIX UNIT AND OUTPATIENT PHARMACY TO REDUCE WAITING TIME

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Objectives: To eliminate waste in process, such as waiting time for patient and documents by using one piece flow concept. It was urgently needed when hospital changed from fee for service to prospective payment system using INACBG grouper. Pilot project were conducted in casemix unit and outpatient pharmacy at Pelni Hospital. Casemix unit processed 77,840 out-patient’s claim documents and 11,869 in-patient’s claim documents in 2014 with average return (defect) 20% from out-patient’s claim and 16% from inpatient’s claim per month and waiting time 5 days for pending documents. Patient’s waiting time in outpatient pharmacy in 2014 was 60 mins, lead time per prescription was 30 minutes processing 550 prescription per day.

Methods: Periodical internal training and daily coaching about Lean management principles were conducted in Pelni hospital. Kaizen used as general framework in continuous improvement. One piece flow concept was introduced via interactive games to all Kaizen teams. Both units implemented the concept first on December 2014 trial phase, started by mapping their business process using Ishikawa-Mathiyas Thaib fishbone chart, identify and eliminate 8 type of waste on each process, redesign their process, redefine person in charge with their roles and responsibility using line worker approach.

Results: In casemix unit; they rearrange their workspace according to their business process, redefined work from first line worker as Costing officer, second line worker as Coder officer, third line worker as medical Verificator and fourth line worker as administrative verificator. Each of them has their own output target and error proofing methods (jidoka). Although there were significant increased in number of claim documents in 2014 to 2015; 77,840 to 251,284 outpatient claims (223%) and 11,869 to 24,476 inpatient claims (106%), their average return claim (defect) reduced 15% for outpatient claims and 11% for inpatient claims and zero document’s waiting time. In Outpatient pharmacy; the concept also applied. First line worker as prescription verificator, second line worker as runner to collect medications, third line worker as publisher to recheck patient identifications and print labels, fourth line worker as assembly officer to pack each medication correctly, fifth line worker is the production leader to maintain the flow and sixth line worker is the pharmacist delivering medication directly to patients with proper education. Although there were increased in outpatient prescription from 550 receipts per day to 800 per day in 2015 (31%), their lead time reduced 50%, patient waiting time reduced 33% and their defect also reduced 30%. All of those improvements in both unit achieved without adding human resources and only minor investment for space renovation less than 5000 USD.

Conclusion: One piece flow concept can be applied in hospital setting, mimicking line worker in manufacture industry with few adjustments. The improvements not only in better lead time, but also reducing defect in process, proven in Casemix unit and Outpatient pharmacy in Pelni Hospital.

References:

Disclosure of Interest: F. Rachmat Other: CEO of Pelni Hospital, A. Anggarani Consultant for: Lean coach in Pelni Hospital, R. Isyana Wardani Employee of: as head of central pharmacy unit in Pelni Hospital, W. Utomo Employee of: coordinator at Casemix Unit Pelni Hospital
ISQUA16-1780
APPLYING THE HIGH-FIDELITY SIMULATION-BASED TEAM TRAINING TO ENHANCE THE PATIENT SAFETY CULTURE
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Objectives: Recently, international healthcare organizations have actively promote the team training and studies show that the patient safety culture can be positively improved. We aim to disseminate the concepts of teamwork by means of simulated-based training to deliver the important patient safety policies and develop teamwork skills in order to reach excellent quality and safety.

Methods: Starting from 2011, we have introduced a trainee-oriented hybrid simulation model. By using the adverse events as the education content framework, we developed unit-customized scenarios, highly reliable evaluation tools and teaching guidelines. The scenarios contain several key patient safety issues, including patient identification, tube safety, the transfer of handover information and conflict management. Furthermore, some important hospital patient safety policies are also delivered, such as "door-to-balloon process for AMI (acute myocardial infarction) patients and the bundle management of sepsis.

The training is mission-oriented and lasts for two hours with 4 to 7 trainees in each session. In situ training is used to offer a harm-free learning environment for repetitive training as well as to ensure confidentiality and safety. Both direct observation and video-recording were done at the simulation training for the feedback to trainees in debriefing section.

Results: Three hundred and thirty-seven trainees have completed the training from June 2011 to June 2015 with 337 trainees. The training program was delivered starting from intensive care unit team, emergency team, operation team, dialysis team, obstetrics/gynecology team, and general ward team. Eleven standardized scenarios were developed.

Ninety-two percent of trainees are satisfied with the training program. Moreover, the safety attitude increased gradually after the high-fidelity simulation-based team training was applied. The “teamwork climate” and “patient safety climate” domains performance are superior to domestic peers.

Conclusion: By adopting high-fidelity simulation-based team training, it reinforced staff’s confidence in handling clinical procedures, enhancing team efficiency and building positive safety culture.

Davenport DL etc. Risk-adjusted morbidity in teaching hospitals correlates with reported levels of communication and collaboration on surgical teams but not with scale measures of teamwork climate, safety climate, or working conditions. J Am Coll Surg 2007; 205: 778–84.

Disclosure of Interest: None Declared
ISQUA16-2934
EFFECT OF INBOUND MEDICINE ON QUALITY IN HEALTH CARE AND THE ROLES OF THIRD PARTY FACILITATORS
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Objectives: Medical tourism has become a global trend. People will seek for medical services with high quality and affordable price at a global scale beyond borders. Japan becomes a candidate of such Medical tourism countries ahead of the Olympics/Paralympics games Tokyo 2020. The system with established universal health coverage, however, has been established primarily for its people, a unique population with near monolithic cultural background with a language not spoken elsewhere. Increased inbound medical care may add burden to the already near depleted resource. In order to support rapid progression of inbound medical care, a third party facilitator/assistance accreditation system has been implement by the government. Its effect on quality of health care in a JQ accredited hospital has not been addressed.

Methods: From July 2014 until June 2015, we reviewed the registration sheets to identify patients of foreign origin.

Results: Among the 48,986 newly registered, 1,938 were patients of foreign origin (4.0%) of which 286 patients (14.8%) were not able to communicate in Japanese at all. Further chart review revealed that 244 patients (12.6%) of foreign origin faced problematic episodes directly related to care within the hospital. Most were not reported to the official risk management process. Problematic scenario increased in cases of overseas address (14% to 37%), non-Japanese speakers (25% to 56%), and non-Japanese health insurance holders (21% to 45%). Problems occurred during all important process of care, including during examinations and consultations (51.2%), at registration (43.2%), and procedures (5.6%). Cultural differences and linguistic misunderstandings were the main cause of conflicts.

Aside from the above described walk-in cases, during the same period, 305 inbound consultations from various countries and regions were made to the International Medical Center of the institution, of which 61 patients were officially accepted. For these official inbound cases, linguistic and cultural support by third party government certified facilitator or by the embassy officials of the patients’ origin has been mandated. Although none of the patients or family members spoke Japanese, with significant difference and variations in cultural background including religion and dietary needs, no problematic events were reported.

Conclusion: Effect of inbound medicine has primarily been discussed in terms of economics. Its risk caused by lack of cultural understanding or miscommunication, possibility of transmitting uncommon communicable pathogens, and numerous administrative issues that may consume the already limited resource remains to be studied. Our experience suggests that appropriate third party guidance and advocate is not only convenient but may be essential. Although JQ, an ISQua accredited system, offers background for high quality medical care, effect of rapidly increase patients of foreign origin in the unique Japanese setting of universal healthcare remains unclear. Our study shows that, indeed inbound medicine is a reality at a tertiary university affiliated hospital level, with much impact than expected. The study warrants sufficient further attention to clarify the role of JQ, its benefit in the global era and its limitations.

Disclosure of Interest: None Declared
DEVELOPMENT OF A TOOLKIT TO MEASURE USER EXPERIENCES OF THE HEALTH VISITING SERVICE IN ENGLAND

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Objectives: The research aimed to develop a toolkit that can be used by health visiting service providers to measure and understand the experiences of families accessing their services, in order to inform service delivery and design, and to drive improvements in care.

Methods: An existing health visiting service user experience questionnaire was reviewed by a range of health visiting stakeholders to ensure it was up to date, nationally relevant and met the needs of providers, local government and commissioners. The survey was cognitively tested with service users to check for comprehension and accessibility. It was then piloted with two service providers in England (an NHS-based and a non-NHS local authority provider) using a three-mailing postal methodology. The pilot sampled a total of 1,200 parents who saw the health visiting team between March and May 2015. The pilot methods informed the development of a set of survey guidance documents (a ‘toolkit’) for providers to follow when implementing the survey.

Results: Survey consultation and cognitive testing resulted in some amendments to improve the questionnaire. The pilot yielded a response rate of 25% (n=299), and demonstrated that the survey was successful in providing actionable feedback on key aspects of person-centred care, including accessing the health visiting service, emotional support, information provision and communication with staff. Data quality was assessed by exploring trends and response rates for individual questions, along with drop-out rates. None of the performance-related questions had more than 90% of responses in a single answer category, demonstrating that the available response options could be used to successfully differentiate experience. Furthermore, no questions had a missing response rate of over ten percent, and there was little evidence of drop-out as people progressed through the survey.

Sampling instructions and templates, implementation guidance and analysis instructions were created alongside the pilot. These documents (along with the questionnaire) formed a new toolkit for measuring health visitor service user experience using the methodologies trialled in the pilot.

Conclusion: It is important to involve service users and stakeholders when developing service user feedback tools in healthcare settings. Stakeholder consultation and cognitive testing ensured that the existing health visiting service user experience survey was nationally relevant and accessible to service users. A pilot trialled the sampling process, and data collection and analysis techniques using a postal methodology, which informed the development of the survey implementation guidance. The new toolkit allows health visiting service providers to measure the experiences of families accessing their services using a robust survey and a tried and tested methodology. It can be implemented to provide a summary of people’s views at a given time point, to monitor performance over time, and to benchmark performance across regions, teams or provider organisations. Effectively acting upon the survey feedback will improve care delivery.

The toolkit should be used to inform service provision, taking into account family needs as well as local and national priorities.

Disclosure of Interest: None Declared
A CRITICAL APPROACH TO IMPROVE PATIENT ENGAGEMENT
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Objectives: Patient-centered care has been advocated for many years. As a majority of adverse events are involved with patients, patient engagement has become the center of a hospital's patient safety work in today's value-based healthcare environment. Researches reveal that rigorous patient engagement not only can improve care plan adherence, enhance patient satisfaction, but also can reduce healthcare cost by avoidance of adverse events. However, low health literacy or behavioral health conditions remains the critical challenges to engage patients into the care decisions and processes. Patient and caregiver education should be the top priority to engage patients. In this presentation, we report our strategies and preliminary outcomes in a hospital-wise patient engagement campaign.

Methods: We organized a cross-functional team in 2013 to work on 3 focus areas: 1) involvement of hospital volunteers and active patients. 2) patient education. 3) caregiver coaching. Five major interventions have been introduced since then, including: 1) using focus group discussion and a "preventable incident reporting system" (PIR) to collect patient safety-related opinions from hospital volunteers and active patients. 2) integrating major patient safety issues (medication safety, fall, suicide prevention, identification verification, surgical site mark, follow-up after discharge) to prepare "patient safety literatures" (PSL), including pamphlet, video, folder, flyer, cartoon, multi-media materials in plain patient language. 3) preparing bi-lingual PSL in English, Indonesian, Vietnamese for foreign care personnel. 4) providing PSL on-line, making PSL easily accessible for all hospital employees, to align care givers and patients consensus. 5) inviting volunteers and active patients to serve as patient safety committee members.

Results: 1. Eighteen proposals were discussed in patient safety committee, 10 of them initiated major quality improvement projects in hospital. Major patient complaints reduced from 6-8 cases to 1 case per year.
2. Over 90% of patients recognize the understandability of PSL. 100% of caregiver agree with the effectiveness of PSL.
3. The patient satisfaction and experience survey improved in 2 consecutive years.
4. The pressure ulcer and in-hospital fall incidences are well under Taiwan national peer data.
5. The "team work" and "patient safety" climates are superior to Taiwan national peer data.

Conclusion: The preliminary outcomes of the campaign show that active patient engagement program is highly recognized by patients and hospital employees that can improve patient satisfaction, reduce adverse events, and may lead to excellent care.


Disclosure of Interest: None Declared
AN EXPLORATION OF PATIENTS’ EXPERIENCE OF POINT-OF-CARE HEALTH INFORMATION TECHNOLOGY IN ACUTE CARE.
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Objectives: Patient experience in acute care settings is a fundamental component of health care directly contributing to patients’ overall health outcomes. The rapid introduction of health information technology (HIT), specifically the presence of point-of-care (POC) technology, is expected to impact patients’ healthcare experience by altering the nurse-patient interactions. While recognising the potential benefits of POC-HIT, there is limited research from the patients’ perspective therefore, this project explored patients’ experiences of nurses using the POC system during key clinical care activities.

Methods: Adopting a multi-methods naturalistic descriptive design, patient experience of POC-HIT technology was researched in two stages; Stage One involved two periods of observation and a subsequent semi-structured interview, Stage Two consisted of a follow-up telephone survey, using the Picker Patient Experience questionnaire with supplemental technology related questions, within two weeks of discharge. Recognising the diversity among patient populations, participants were screened for their confidence using technology to ensure heterogeneity of the sample.

Results: A total of 28 participants were recruited across three acute inpatient wards at a private teaching hospital in metropolitan Melbourne. Of the recruited participants, 24 partook in one or both stages of the research. The mean age of participants was 69 years (SD 11) with males accounting for 63% of the sample. The participant sample included 25% oncology, 13% general medical, 29% general surgical and 33% orthopaedic patients. Patients’ self-perception of their confidence using technology varied with 29% not confident, 38% somewhat confident and 33% completely confident. There were 93 nursing staff observed providing care, 11% were in charge of the shift and 89% bedside nurses. Observational data demonstrated that nurses adopted various approaches to using the POC system. Some staff directly involved the patients and explained or demonstrated how the POC system was being used to complement and enhance their care. Other staff used the POC system as an electronic documentation tool without engaging the patients in this process. Patients’ descriptions suggested that they were generally receptive to the use of technology to support clinical care, irrespective of their own confidence using technology. However, patients reported that nurse’s use of the POC could impede their communication and alienate them from the nurses care practices. Participants with higher confidence using technology were better at recognising the potential for POC use to support self-directed care, and to facilitate continuity of care and communication amongst clinicians. In contrast those participants with lower confidence using technology, saw the POC to be beneficial for the nurses’ use but expressed no desire to be involved. Participants consistently reported having had a positive experience during their acute care admission, suggesting that staff engaged and communicated well with them, yet identified that the POC system interfered with their interactions with nursing staff.

Conclusion: Recognising the influence of the nurses’ use on the POC on patients overall care experience suggests that clinicians’ should consciously adopt strategies to promote patient involvement. Patient experiences of POC technology were not found to be dependent on patients’ self-described confidence with technology. Participants recognised the benefits of POC to support clinical practice but generally desired greater engagement with the nurses’ use of the system.

Disclosure of Interest: None Declared
INTEGRATION OF HEALTH AND SOCIAL CARE IN ENGLAND REQUIRES A NEW CONCEPT OF SAFETY

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Objectives: The objective of this paper is to critically appraise the differences in safety terminology used in health and social care, and to explore where opportunities and challenges exist for greater integration of safety systems in health and social care in England to address potential challenges and solutions to these conceptual differences.

Methods: Health and social care literature, policy documents, including An Organisation with a Memory [1] and No Secrets, [2] and case studies of safety incidents in healthcare (Mid-Staffordshire NHS Foundation Trust) and social care (Winterbourne View) were analysed to identify narratives that surround safety. These were examined in light of new policy and funding structures for the integration of health and social care, particularly in relation to the Five Year Forward View [3] Better Care Fund[4] and Barker Commission[5] to determine where shared learning could originate.

Results: We identified that in healthcare, the narrative of safety is usually understood within a narrative of error management (patient safety), with risk of harm considered on a universal level. In social care, safety is conceptualised within a discourse of safeguarding, the narrative of which is often linked to deliberate harm or neglect, and where risk of harm is considered on an individual level. Efforts to deliver safe care across organisational boundaries are likely to be limited as the current integration of health and social care services does not establish a unified understanding of safety. This is likely to severely impact upon individual and organisational level learning from safety incidents that occur in both health and social care services, and that inevitably impact upon one another.

Conclusion: We propose a common discourse of care safety that cuts across the patient safety and safeguarding concepts and their associated frameworks. This single concept of care safety has the potential to foster collaboration and mutual learning between care sectors. By developing a shared understanding of safety and safeguarding, with the support of governance structures, there will be a better understanding of safety on both individual and organisational levels. For example governance structures that link safety in health and social care sectors could facilitate quality improvement initiatives to further improve communication relating to transitions in patients’ care. Care safety would also offer a common and shared understanding that focuses on harm to the individual but also draws upon the best elements in health and social care, where one is systems focused but largely retrospective and the other is prospective but individualised. This would facilitate the move towards an integrated approach to safety that can coincide with an integrated approach to the delivery of health and social care.

References:

Disclosure of Interest: None Declared
AN EXPLORATORY STUDY OF HEALTHCARE EMPLOYEE RESILIENCE IN TAIWAN: A CASE STUDY OF A TEACHING HOSPITAL IN TAIWAN

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Objectives: Employees working for hospitals in Taiwan nowadays frequently face medical legal problems and financial pressures from organizations. They have been working under high-pressure environment and need to handle emergencies. Therefore, it is important to survey and enhance their personal resilience. This study aims to examine personal resilience of those healthcare employees in Taiwan, and explores the factors which causing effects on their resilience.

Methods: An online survey with resilience scale (RS-14) and demographic questions including gender, age, marriage status, education degree, religion, department, seniority and position was conducted in a teaching hospital in Taiwan. Results were analyzed by adopting several statistical analyses such as descriptive statistics, correlations, T-test and ANOVA.

Results: There are 423 valid samples received in total. Four demographic factors, such as being a manager position, age, marriage status and seniority, were found to be significant roles on the overall resilience (p<0.05). Furthermore, all factors, except serving department, have significant effects on different dimensions of resilience. It indicates that employee resilience is not influenced by serving in tough departments such as Surgery, Obstetrics and Pediatrics.

Conclusion: This study examines the employee resilience and explores its antecedences causing by demographic factors. It fills the missing part on the research field of patient safety culture

Disclosure of Interest: None Declared
OBJECTIVES: The main objective is to identify in a working-class neighborhood, mainly with an immigrant origin, the community production of representations and actions against cancer (how is it built? by what cultural mediation, media, professional, educational? what are the resources and obstacles?) from three dimensions:
- 1. Accounts of illness trajectory by people who have been diagnosed with cancer within five years, and more broadly their path of life and health;
- 2. Accounts of care paths from the perspective of health professionals in the neighborhood and its immediate vicinity;
- 3. The relation to health, health equity, receipt of health standards, neighborhood population (parents, friends, neighbors).

The secondary objective is the contribution to an audiovisual educational database for the training of health personnel in order to show how training professionals can, under certain conditions, take into account the patients’ perspectives, including patients whose family culture is far from the medical culture.

METHODS: The methodology involved four modes of data collection and production:

1 / An ethnographic method
The ethnographic approach is essential to the achievement of the goals to meet, from an inductive approach and proximity, local residents who are or have been facing cancer within five years.

2 / Sociological interviews
Three series of comprehensive interviews were conducted:
- With people who have faced a diagnosis of cancer within five years (20 interviews with individuals recruited by overlaps);
- With all health professionals identified on the neighborhood or in its vicinity;
- With residents connected to the identified sick persons;

3 / A network analysis
Mapping of the health care will be made from:
- The inventory of social and medico-social professional in the neighborhood and close vicinity;
- Overlaps with the actors involved in the healthcare path shared by those affected by cancer.

4 / Production of audiovisual educational material
- Audio and video interviews;

The 9 researchers involved in the research team fall under five disciplines of social sciences (anthropology, sociology, political science, education science, philosophy), and also expert patient, general practitioner and oncologist.

RESULTS: We obtain a fine understanding of the effects of land/culture on the health construction in individuals and groups in deprived areas. We characterize the individual and community health skills. We determine conditions, limits and barriers of access care.

CONCLUSION: The research contributes to promote the construction of specific public health programs in neighborhoods with the participation of the inhabitants (community health); The research contributes to improve medical and para-medical education by producing educational materials built around the patient experience, particularly in working classes spheres.

DISCLOSURE OF INTEREST: None Declared
AN EXPLORATION OF NURSES’ CLINICAL WORKING TIME MANAGEMENT ON PATIENT HANOVER

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Objectives: An exploration of nurses’ clinical working time management on patient handover

Methods: This study applied narrative inquiry. Data was collected from registered nurses who have at least three months’ nursing experience and a position below assistant manager in medical or surgical wards at a teaching medical center in central of Taiwan. Data collection used nurses’ task diaries and nursing handover tape records. Qualitative data in nurses’ task diaries, including nurses’ education level, position, nurse-to-patient ratio, and time spent on nursing handover will be collected and then analyzed using SPSS. Nursing handover tape record data was analyzed using content analysis and thematic analysis. Research rigor will follow Lincoln and Guba’s standards.

Results: This research found that more handover time (over 30 minutes) happened when nurses back to work from holiday and cannot continue taking care of their previous patients. Nurse from previous shift had to explain each patient’s condition in detail. If patients were in complex conditions, some nurses tended to repeat reporting patient’s nursing assessment and its consequence treatments. Although ISBAR (Introduction, Situation, Background, Assessment, and Recommendation) is promoted to the nurses, some nurses would not follow the ISBAR procedure and repeat patient’s SAR and SR even after they moved on introducing another patient. Research finding also showed that junior nurses tend to focus only on patients’ current problems and what needed to follow up, and less handover the catheters the patients had and things needed to be more aware about those catheters.

Conclusion: The key findings are scheduling and nurse-patient ratio are essential factors in the quality of nurse’ handover, especially on handover time and contexts. Under time pressure, the junior nurses had limited chance to enhance their nursing competency on logical thinking and reasoning.


Disclosure of Interest: M. Hsu Other: no conflicts of interest
ISQUA16-2080
USING SEGMENTATION ANALYSIS TO UNDERSTAND UTILISATION ACROSS THE CARE CONTINUUM IN THE HIGH-RISK POPULATION
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Objectives: In health systems around the world, risk prediction models are used to identify patients at risk of an emergency admission. These high-risk patients are provided with case management in the primary care setting to prevent admissions to the acute system. However, risk models provide no information on patients’ use of care settings other than emergency inpatient care. The aim of this study is to show how segmentation analysis can take into account utilisation across multiple care setting and provide detailed insight into the high-risk population and their needs.

Methods: A dataset containing 300,000 English patients was constructed by linking primary care data (CPRD) and outpatient, elective and emergency acute care data (HES). For each patient, a range of demographic and clinical characteristics were extracted, as well as their utilisation of different care settings over 2008 to 2011, and for 2012. The 2008 to 2011 data was used to predict patients’ risk of an emergency admission in 2012. The top 5% of patients with the highest risk scores were then selected and segmented based on their utilisation of four different care settings – GP care, outpatient visits, elective inpatient admissions and emergency admissions – using a cluster analysis.

Results: Within the high-risk population, four distinct user types could be identified. The utilisation pattern of each cluster was predictive of future care use. The four clusters exhibited different combination of high and low utilisation across the care continuum: cluster 1 had high utilisation across all settings; cluster 2 has low utilisation across all settings; cluster 3 had low utilisation of emergency care but high utilisation of other settings; and cluster 4 had high utilisation of emergency care but low utilisation of other settings. Other characteristics such as age, chronic conditions count, and specific disease prevalence also varied between clusters, allowing distinct patient profiles to be created.

Conclusion: While the risk of emergency admission allows a high-risk population to be identified, it provides little information on the type of patients and their utilisation of care across the continuum. As interventions targeting the high-risk population often aim to provide pro-active and integrated care, understand patients’ use of all care settings is crucial. Segmentation analysis shows that there exist clusters of patients with distinct utilisation patterns and characteristics. To provide high quality care, interventions should be tailored to these differences.

Disclosure of Interest: None Declared
ISQUA16-2706
READMISSIONS AMONG PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE: ALL-CAUSE OR POTENTIALLY PREVENTABLE?
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Objectives: Hospital readmissions may indicate gaps in care transition from inpatient to outpatient. Addressing these gaps is important to ensure best care and control unnecessary healthcare costs. Current US Center for Medicare and Medicaid Services (CMS) readmission measures include all readmissions within a 30-day time-frame post-discharge as readmissions. Disagreement exists whether measures should include all readmissions versus an approach that focuses on potentially preventable readmissions. We undertook this study to create a useful algorithm for clinical staff that predicts risk of hospital readmission within 30 days for patients with Chronic Obstructive Pulmonary Disease (COPD) using two endpoints: a) all readmissions and b) potentially preventable readmissions using the 3M tool. The first step is to understand the extent of potentially preventable readmissions.

Methods: This retrospective study included hospital inpatients aged 18 and older discharged from Mayo Clinic Rochester, Minnesota, USA from January 1st, 2013 to June 30th, 2015 with a principal diagnosis of COPD (ICD-9-CM codes 491.21, 491.22, 491.8, 491.9, 492.8, 493.20, 493.21, 493.22, 496) or a principal diagnosis of respiratory failure (codes 518.81, 518.82, 518.84, 799.1) and a secondary diagnosis of COPD (491.21, 491.22, 493.21, 493.22) (n=978 admissions/743 patients). Readmissions were defined as inpatient stays at our institution starting within 30 days of initial hospitalization. Potentially preventable readmissions were based on 3M proprietary software for which we had a research license. Planned readmissions were identified based on an algorithm published by CMS. Data was censored at date of readmission for planned readmissions. Each admission was treated as a unique event within the model (i.e. model did not take into account patient could have multiple admissions).

Results: Of the 978 hospital episodes, there were 172 which included an inpatient readmission within 30 days, 151 readmissions were classified as potentially preventable by the 3M algorithm. These potentially preventable readmissions were further sub-classified with 60 having continuation of care, 15 related to ambulatory care sensitive conditions, 41 medical readmissions that could have had complications from initial stay, 1 surgical readmission that could have been to address a complication from initial stay, 3 readmissions for mental health conditions, 1 readmission for substance abuse issues and 30 other readmissions for a chronic problem that may be related to initial care. Among the readmissions deemed as unlikely to be preventable, 2 were excluded due to major malignancies, 1 was excluded due to transplant, 1 was excluded due to likely being a planned readmission, 4 were deemed to be clinically related but not preventable and the other 18 were deemed as clinically unrelated.

Conclusion: A large portion (88%) of readmissions after COPD hospitalization was identified as potentially preventable. Most of the non-preventable readmissions were classified as clinically unrelated to the initial COPD hospitalization. Only one readmission was classified by 3M as “likely planned”, this stay was also classified as planned by CMS. Although small, the percent of non-PPR could influence prediction models.


Disclosure of Interest: None Declared
Objectives: The aim of this study is to identify the presence of out-of-pocket expenditure among patients of the National Health Security (Jaminan Kesehatan Nasional/JKN) program in hospitals in Indonesia

Methods: Face-to-face interview using a structured questionnaire to 1644 respondents who were treated in 55 hospitals in five tariff regions. Analyses are grouped by regions, types of hospital, types of health service, and types of JKN membership.

Results: Approximately 19.5% of respondents paid out-of-pocket when they received health treatments in hospitals. The percentage is higher for inpatient (20.7%) compared to outpatient (18.5%). The average payment shows that out-of-pocket expenditure for inpatient (2.1 million IDR) is seven times higher than outpatient (300 thousand IDR). Out-of-pocket payment mostly occurred in private hospitals (30.7%) followed by state-owned enterprise hospitals (22.6%) and military/police hospitals (21.7%). Around one-fifth of out-of-pocket payments also occurred in type C hospitals, highest among other hospital types. The ratio between out-of-pocket payment and household expenditure for outpatient care is 7.7%, compared to 63.4% for inpatient care. The logistic regression shows that Regional Tariff 1, Regional Tariff 2 and Regional Tariff 3 are significant towards the existence of cost sharing among JKN patients in hospitals. On the other hand, type of service (outpatient/inpatient), sex, type of hospital (ownership), Regional Tariff 4 dan Regional Tariff 5 are insignificantly increases/decreases the possibility of cost sharing.

Conclusion: Out-of-pocket payment is prohibited under the JKN law. However, this study shows that such payment still occurred. Stakeholders such as BPJS Kesehatan (as a payer) must increase their role to improve the financial protection of its members. Law enforcement may become an alternative solution to discipline hospitals that violated the law by imposing additional payment to JKN members.

References: Ou-of-pocket Survey of BPJS' patients 2015 report

Disclosure of Interest: None Declared
Objectives: To improve maternal health is one of WHO Millennium Development Goals (MDGs) implemented by international community in 2000. The target is to reduce the global maternal mortality. The advanced maternal age, diabetes, hypertension, smoke, low social economic status, and high birth weight, these are high risk factors of birth-related injury events. Unfortunately, the current understanding of the association of institutions with injury hazard is considerably limited. A program called “Birth-related Injury with No-fault Lability Events Compensation Program” has implemented since 2012 by Joint Commission of Taiwan (JCT). The program contains obstetric and gynecological institutions who providing delivery services. Those institutions should be accredited and conform standard, then they could assist patients or family to apply compensation. When there’s a birth-related injury happened, the patients and their family were suffering by burden in physical and mental. In this program, the institutions should try to reconcile with patients and their family, the government will provide compensation to patients up to 2 million NTD depended on the level of injured.

The program is a pilot study of medical injury compensation for further policy established. The government expects this program could improve physician-patient relationship, reach social cooperation and justice, and develop a well-structure health care system. Therefore, this study aimed to explore the institution that may assist patients to apply compensation and encourage enrollment of more institutions.

Methods: This study was a longitudinal study from 2012 to 2015. We collected 307 medical institutions including 157 hospitals and 150 clinics. They have to submit their data in every 3 months, the data including number of neonate, delivery method, and injury analysis. The program also collected information as following: whether the institutions acquire compensation, accredited level, number of neonate and the districts of institutions. Chi-square test and Independent t-test were applied to identify that institutions characteristics in apply the welfare program or not. SAS version 9.3 was used for data analysis.

Results: There were 60 hospitals and 40 clinics applied compensation from the program. Those institutions who had applied compensation, their average number of delivery were 1132 neonate every year; for those who had not applied, the average delivery number was 450 neonates every year. Those had delivered more neonates (t= -7.03, p<0.0001) had significantly likely to assist patients apply compensation. Then the hospitals (=4.15, p=0.0417) had significantly more assist patients compared to clinics. However, there was non-significant in different areas in apply compensation.

Conclusion: This study had founded: the hospitals, delivery more neonates’ institution would more likely to assist patients apply compensation. They may have more experiences in high risk pregnancy, and informative regarding health welfare policies.

Joint Commission of Taiwan will assist medical institutions to improve in the future. In addition, we will invite who was better in medical quality and share their experience to other medical providers. Most importantly, the program encouraged more medical institutions to assist patients and their family, to reduce medical disputes or lawsuits. The success of birth-related injury with no-fault lability events compensation program would be a benchmarking. The welfare program could spread to every division, to protect patients, medical staffs, and medical institutions.


Disclosure of Interest: None Declared
WHETHER THE NATIONWIDE REGIONAL COOPERATION PROJECT IN QUALITY IMPROVEMENT REALLY IMPROVE THE QUALITY OF CARE? AN EVALUATION IN TAIWAN

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Objectives: Comparison with advanced countries, quality indicator in Taiwan used in 1990s. In the beginning, only few hospitals adopted quality indicators to assess quality of care. After 2000, a lot of professional associations and government agencies set several voluntary and mandatory quality indicator projects for different purposes. However, the level of quality improvement was varied among hospitals. Therefore, the Taiwan Ministry of Health and Welfare initiated a cooperation project to create a platform to enhance the regional cooperation. A total of 367 hospitals were participated in this project, the Taiwan island was divided into 19 regions, the medical centers were playing the role as consultant of their region, to help other member hospitals (i.e. regional and community hospitals) to improve their quality of care. The purpose of this study were to evaluate the implementation status, and collect the suggestions for the future.

Methods: An online questionnaire was developed to investigate the opinions on project implementation, consultation model, data collection and so on. All participant hospitals were invited to fulfill the questionnaire, a total of 278 valid questionnaires were returned, yielding a response rate of 75.74 %. Furthermore, three stakeholders focus group meeting were held to collect the information about the use and management of grant fund, the benefits of clinical units, the influences on quality improvement, and suggestions for the future. A total of 25 hospital representatives from different accreditation level hospitals participated the focus group meeting.

Results: In summary, the results showed that the definition of quality indicators clarification and building the process of data collection of quality indicators were the most common consultations provided by medical centers. 73.74% of respondent hospitals agreed with this cooperation projects, however the integration of IT systems among leading medical center and their members was the major challenge should be addressed today. In terms of the influences on quality improvement, this project facilitated executive managers paid more attentions on the data collection and validation, and increasing physician participation in quality improvement activities. In addition, the staffs of quality management center of medical centers can obtain a lot of sense of accomplishment, besides their routine jobs. From the perspectives of member hospitals representatives, they felt the quality improvement climate was improved, and many quality improvement activities were initiated; some hospitals set up a specific responsibility unit for quality improvement, and built up a IT system to collect the information. The communication across unites became better, the professionalism of staff was improved, and more physicians were willing to participate in quality improvement activities. However, except for the issue of IT systems integration, there were some challenges existed, such as work loading were increasing, use and management of grant fund in public hospitals was limited because the regulations, which cannot provide sufficient incentives for the staffs.

Conclusion: The cooperation project can enhance the interactions, and reduce the gap of quality of care among different size hospitals. The community hospitals gain the most advantages from this model, especially in improving the professionalism. However, the burden of medical center is huge, reducing the number of member hospital within the region, and sufficient financial support are recommended for future implementation.

Disclosure of Interest: None Declared
Objectives: Although formally part of the Kingdom of Denmark, the Faroese Islands enjoy extensive autonomy as home ruled. Quality Management (QM) within hospital care of the Faroese Islands was at the very beginning in last quarter of 2013, meaning that QM initiatives such as national level clinical databases, clinical guidelines and standards, pathways, patient satisfaction surveys, accreditation, reporting of adverse events, and large-scale improvement programmes were not yet implemented in the Faroese Islands.

The purpose of this study is to investigate the patient safety culture in the National Hospital of the Faroe Islands (NHFI) prior to implementation of quality management initiatives.

Methods: A cross-sectional study design was applied. The Danish version of the Safety Attitude Questionnaire (SAQ-DK) (1) was distributed electronically to 557 staff members from five medical centers of the hospital, and one administrative unit. SAQ-DK has six cultural dimensions for teamwork climate (6 items), safety climate (7 items), job satisfaction (5 items), stress recognition (4 items), working conditions (4 items), and perceptions of management (5 items). The later composite was applied at the three management levels of NHFI.

The proportion of respondents with positive attitudes (individual mean scale ≥75) score and mean scale scores were described (range 0-100). Comparison between medical specialties, and between clinical leaders and frontline staff was made using ANOVA and Chi2-test respectively.

Results: The response rate was 65.8% (N=367). 76 questionnaires originated from the surgical center, 93 from the psychiatric center, 34 from the diagnostic center, 110 from the medical center, 40 from the acute care center, and 14 from the administrative units directly under the top management.

The number of participants varied from four in the smallest out-patient setting to 31 in largest bed unit, six of the 28 units had five respondents.

Job satisfaction was rated most favorable (%>positive; 71.1%), and the perceived culture of the top management least favorable (%>positive; 12.8%).

Safety climate was the dimension with the greatest variability, that is %>positive ranged from 0-100, across the 28 units. Of the five medical specialties, the staff diagnostic center representing the laboratory and the X-ray unit perceived the culture most favorable for all cultural dimensions.

More leaders than frontline staff had positive attitudes towards teamwork and safety climate, and working conditions respectively. Also, the leaders perceived these dimensions more positive than the frontline staff, p<0.05. Among three management levels, the unit management was perceived most favorable and the top management least favorable.

Conclusion: The management group of NHFI is recommended to raise awareness of their role in supporting a safe and caring environment for patients and staff. Moreover, patient safety culture might benefit from implementation of systematic quality improvement initiatives and methods, as seen in the diagnostic center, thus it is recommended to emphasize QM and educate the clinical leaders to lead this work. Finally, following the development in patient safety culture over time is recommend.


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Objectives: To illustrate how hospital-wide initiatives focused on optimizing hospital capacity and throughput are sustainable in a large, urban academic medical center.

Methods: The Mount Sinai Hospital (MSH), an 1,171 bed urban Academic Medical Center, operates consistently at 92-98% bed capacity. In January 2014, MSH launched an interdisciplinary Throughput Committee to evaluate current state and identify opportunities to improve patient flow and bed capacity management. A successful pilot program focused on discharging patients before noon (DBN) within the Department of Cardiology was leveraged as a starting point. The Committee initially focused in the Emergency Department (ED) and Department of Medicine, and quickly expanded to address surgical and other specialty services, intensive care units (ICUs) and inter-hospital transfers. A surge plan was developed as a blue-print to guide clinical and administrative decision-making to facilitate daily patient throughput and manage overcrowding during periods of high hospital and/or ED census. The plan describes actions to be taken based upon defined capacity criteria to ensure patient care is not compromised during times of hospital overcrowding. A scorecard was developed and is distributed weekly to key stakeholders, and includes process metrics that measure patient flow efficiencies and guide performance improvement efforts. Metrics include: service area and unit percentages of discharge before noon and median discharge times; average bed turnaround time from the ED, ICUs, post-anesthesia care unit (PACU) and outside hospital transfers; and environmental services and internal transport task turnaround times. Metric targets are assessed bi-annually and reset based on prior performance. Service Area and unit workgroups meet routinely to review scorecard data and to identify and implement performance improvement opportunities. Systemic issues are brought back to the Committee to address, such as; timely placement of discharge orders in the electronic health record, external transportation delays, meal delivery times, and wheelchair availability. Additionally, the workgroups identify opportunities to improve communication within their local teams, which enables more efficient patient flow. Two monthly awards are given to units with the highest percentage and greatest improvement of DBN. Acknowledgment and celebration of improvement are integral to the initiative.

Results: From 2014 to 2015 hospital discharges increased 1.7%. During the first year of the program, hospital-wide DBN increased 45%, from 11% in 2014 to 16% in 2015. Overall, 20 of 39 units exceeded their 2015 targets with the Medicine units increasing 111% and the Oncology units increasing 167%. Median discharge time decreased 39 minutes from 15:30 to 14:51. Timely ICU bed availability improved, as the average bed request to bed occupied time from ICUs to inpatient units decreased 17% from 15.4 hours to 12.8 hours. Capacity to accommodate inter-hospital transfer patients increased 15%. We also experienced an 8% improvement in PACU clinically ready to PACU out time, from 2.5 hours to 2.3 hours, which has improved upstream operating room efficiency.

Conclusion: MSH’s data-centric, multipronged approach to addressing hospital capacity constraints and patient flow efficiency has proven to be very effective. Discharged patients are getting home earlier in the day and admitted patients are getting to the right level of care sooner. Implementing both systemic and local solutions fostered multidisciplinary team building and collaboration. Organizational silos have begun to break down and fragmented operations are becoming integrated into comprehensive and reliable processes.

Disclosure of Interest: None Declared
MEASURING HEALTH LITERACY IN HOSPITAL PATIENTS – HOW DO FOUR COMMONLY USED INSTRUMENTS MEASURE UP?

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Objectives: There is currently a lack of comparative data on health literacy instruments - particularly which instruments provide the most robust data. Most instruments directly test an individual’s reading and numeracy ability without considering contextual factors that influence health decisions. Based on contemporary understandings of health literacy, the Health Literacy Questionnaire (HLQ) and the European Health Literacy Survey (HLS-EU) aim to address limitations of earlier instruments. The objective of this study was to compare the psychometric properties of Test of Functional Health Literacy in Adults (TOFHLA), the Newest Vital Sign (NVS), the HLS-EU and the HLQ in a group of hospital patients.

Methods: The TOFHLA (2 scales), NVS (1 scale), HLS-EU (3 scales) and HLQ (9 scales) were administered to randomly selected attendees at an outpatient clinic at a large Melbourne metropolitan hospital. Internal consistency (Cronbach α and Composite Reliability scores CR) and floor and ceiling effects within scales, and discriminate and convergent validity (Spearman’s r) and concurrent validity between scales were examined. The ability of each tool to detect differences across demographic subgroups was examined using means and effect size (mean difference/pooled standard deviation).

Results: 59 individuals (59%) agreed to participate. Mean age was 59 years and 58% were female. The HLQ, HLS-EU, TOFHLA and NVS demonstrated acceptable internal consistency (α 0.75 to 0.9, CR 0.75 – 0.94). The HLS-EU demonstrated an excess item to α ratio in all scales (α=0.9 in scales with 15 to 16 items) suggesting item redundancy. There was moderate correlation between the TOFHLA and NVS (r=0.6). Some HLQ and HLS-EU scales showed moderate correlation (r=0.62 to 0.65), but both were weakly related to TOFHLA and NVS. With the exception of the NVS, all scales showed some ceiling effect (range 17% – 68%). The TOFHLA showed the largest ceiling effect, with over 62% of individuals scoring in the top 15% of each scale range. Moderate to large effect sizes were shown across some demographic variables, with TOFHLA tending to show largest differences. Some HLQ, HLS-EU and TOFHLA scales were related to health promoting behaviours (physical activity, smoking, ED attendance), but not NVS.

Conclusion: This study found that the TOFHLA was the most efficient of 4 instruments at detecting differences in sociodemographic variables. However, the TOFHLA measures only one dimension of the health literacy construct, has modest reliability (inadequate for individual diagnostic purposes), demonstrated large ceiling effects, and may systematically biased by cognitive decline related to ageing. The HLS-EU and HLQ, offer a multidimensional insight into the links between health literacy and relevant sociodemographic variables. However, we found the HLS-EU to be unnecessarily long, with three scales that appear to measure very similar elements of health literacy. We found little to no relationship between the functional measures of reading and numeracy ability (TOFHLA and NVS) and an individual’s self-reported ease in finding, understanding and using health information (HLS-EU and HLQ). If we assume that these scales measure health literacy, then the relationship between functional health literacy and critical health literacy (encompassing all the other social, cultural, skills and confidence-related health literacy constructs) are clearly different.

Disclosure of Interest: None Declared
STRUCTURING STRATEGIC COLLABORATION: LESSONS FROM A LONGITUDINAL SOCIAL NETWORK ANALYSIS OF A TRANSLATIONAL RESEARCH NETWORK

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**Objectives:** In 2011 a translational research network (TRN) designed to foster and sustain collaboration between university researchers and hospital clinicians was established to deliver better care to cancer patients. Over the next four years of its operation we collected data on members’ collaborative ties with other members, and recorded the personal impacts and outcomes directly ascribed to the network. Social network analysis revealed the changing network structure of research partnerships and the key players facilitating this cross-sectoral collaboration.

**Methods:** Members of the TRN were invited to complete an on-line, whole network survey in March 2012, April 2013 and May 2015. The surveys asked respondents to select the name of TRN members with whom they had collaborated either formally or informally. For each member nominated, they were asked to say whether they had known this person before joining the TRN. The two latter surveys asked respondents to identify personal impacts and outcomes attributable to their TRN membership. We interviewed the TRN Manager, Director and governing body members in May 2012 to examine their perceptions of their role in the network.

**Results:** Over four years, the TRN grew in size from 68 to 244 members. Relationships within and across the TRN became more collaborative and interactive, with 1,658 collaborative ties between members and over 40% of ties with people unknown to participants before they joined the TRN. The network retained its focus on the original goals of the TRN and fostered collaboration between researchers, clinicians, managers and consumers. Examples of practice change brought about through the TRN were given by 77% of respondents in the 2015 survey. This wealth of longitudinal data provides lessons for those running a TRN. TRNs can become large and unfocussed if many new people join in an unstructured way. New members that join through the personal invitation of key members allow a manageable and strategic growth in numbers. TRN staff such as the Director, Manager, operational staff and other key players can facilitate introductions of members from different areas to one another thereby solving a major barrier to strategic collaboration. Their knowledge of the wider research and clinical community allows them to target people to link up rather than a broader scattergun approach. These key players also have a significant role in facilitating access to resources. This has two implications for those managing TRNs: (1) people recruited to network manager roles should be good communicators and be active in making personal connections with members. (2) Orientation to the organisations and familiarisation with the context in which they are working are important for them to have that overarching strategic role; time should be invested in this. Once the introductions have been made, collaborations appear to flourish as seen by the number of non-TRN funded partnerships members have initiated with other members. The key players in the network need to share the role so that all the brokerage activity is not being done by a single actor. If this solo actor leaves the TRN, it is likely to disrupt the function of the network, fragment groups, or at the least slow the formation of new ties.

**Conclusion:** The structure of the TRN with its active central actors and brokers has been able to foster strategic collaboration on implementation initiatives that result in practice change.

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SELECTING THE OPTIMAL TOOL TO ASSESS FALL RISK IN CHILDREN
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Objectives: Preventing fall-related injury is an important patient safety issue. There is lack of consensus regarding the optimal tool to assess fall risk in children. The purpose of the study was to compare two tools for assessing fall risk in children hospitalized in acute hospitals in proportion of "high risk" patients, accuracy, reliability and nurses' satisfaction.

Methods: Following a literature review, two tools were identified: "I'M SAFE" and "Little Schmidy". These were translated into Hebrew and pilot-tested in three acute hospitals owned by Clalit Health Services, the largest healthcare provider organization in Israel – Carmel Lady Davis Medical Center, Schneider's Children Medical Center in Israel and Soroka University Medical Center. The two tools were used for 626 children over the age of 2 years, admitted during June-December 2014. In order to identify inter-rater agreement, assessment of both tools was repeated by an additional nurse for 50 children. Nurses' satisfaction with the two tools was evaluated for 37 nurses who participated in the pilot testing.

Results: The study included 626 children (mean age: 10 ± 5 years, 51% male). For "I'M SAFE" (IS), 23% were classified as "high risk", as compared with 6% for "Little Schmidy" (LS) (p<0.001). IS scores were miscalculated in 3% (0.1% significant errors related to misclassification as low/high risk) vs. 1.2% total errors and 0% significant errors for LS (p=0.029 for total errors and 0.002 for significant errors). Inter-observer agreement was 88% for IS and 92% for LS (p=0.741). Cohen's Kappa for reliability was 0.63 for IS and 0.56 for LS, indicating moderate reliability for both. Overall nurses' satisfaction was somewhat higher for IS (Median score on a 1-5 Likert scale: 4.0 for IS and 3.6 for LS). Of the parameters assessed satisfaction (comfortable, clear, rapidly-filled, adjusted for the child’s age, adjusted for the child's situation), the only difference noted was regarding the rapidity of filling the tool (median score 4.0 for IS vs. 3.0 for LS, p=0.01). Thirty-two percent preferred IS, 44% preferred LS, and 24% had no preference.

Conclusion: "I'M SAFE" was found to be slightly more reliable, more rapidly-filled, identified a higher percentage of children as "high risk", and had overall higher nurses' satisfaction than "Little Schmidy". "Little Schmidy" was associated with higher calculation accuracy and higher preference by nurses. Since the tool was developed for implementation within an electronic medical record, calculating errors were of lesser importance, therefore "I'M SAFE" was selected and implemented into the electronic medical records in 10 hospitals owned by Clalit Health Services.

Disclosure of Interest: None Declared
THE USE OF 3% HYPER TONIC SALINE (HTS) IN THE EMERGENCY DEPARTMENT (ED) PEDIATRIC PATIENTS WITH SEVERE BLUNT TRAUMATIC HEAD INJURY

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Objectives: The study aim to investigate the association of the Glasgow Coma Scale and the Length of stay in pediatric patients who presented with severe traumatic head injury and resuscitated with 3% HTS in the ED.

Methods: Cross-sectional Study, conducted at Aga Khan University Hospital, a level 1 trauma center from 2008 to 2013. Data was collected using convenient sampling technique. The sample size of the study was calculated by using prevalence of traumatic brain injury for children age 2-16 years from prior study (PakNEDs, AKU data) i.e.12%. With 95% level of confidence.

Results: Based on pilot, out of 199 we had used 3% HTS in 80 (40.2%) patients. 60 (74 %) were male with average age 5 years, average LOS of this group were found to be 5.6 Hours in ED with initial GCS 2-15, (average 10.83) & Average LOS at the time of discharged from ED/ inpatients wards were 4.46 days with GCS 14. Most frequent surgical interventions in this group was craniotomy i-e 35%, seizure was found in 6 % of patients.

Conclusion: Based on retrospective analysis, if these results would be confirmed in a prospective, randomized case control study, the 3% HTS may become the agent of choice for the management of severe blunt traumatic head injury. This will help in disseminating the findings in the health care centers across Pakistan in the emergency management of the pediatric traumatic brain injuries.

Disclosure of Interest: None Declared
ISQUA16-2285
POSTOPERATIVE ADVERSE EVENTS INCONSISTENTLY IMPROVED BY THE WORLD HEALTH ORGANIZATION SURGICAL SAFETY CHECKLIST; A SYSTEMATIC LITERATURE REVIEW OF 25 STUDIES.

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Objectives: The World Health Organisation Surgical Safety Checklist (SSC) has been widely implemented in an effort to decrease surgical adverse events.

Methods: This systematic literature review examined the effects of the SSC on postoperative outcomes. The review included 25 studies; two randomised controlled trials, 13 prospective and ten retrospective cohort trials. A meta-analysis was not conducted as combining observational studies of heterogeneous quality may be highly biased.

Results: The quality of the studies was largely suboptimal; only four studies had a concurrent control group, many studies were underpowered to examine specific postoperative outcomes and teamwork training initiatives were often combined with the implementation of the checklist, confounding the results. The effects of the checklist were largely inconsistent. Postoperative complications were examined in 20 studies; complication rates significantly decreased in ten and increased in one. Eighteen studies examined postoperative mortality. Rates significantly decreased in four and increased in one. Postoperative mortality rates were not significantly decreased in any studies in developed nations, whereas they were significantly decreased in 75% of studies conducted in developing nations.

Conclusion: The checklist may be associated with a decrease in surgical adverse events and this effect seems to be greater in developing nations. With the observed incongruence between specific postoperative outcomes and the overall poor study designs, it is likely that many of the positive changes associated with the use of the checklist were due to temporal changes, confounding factors and publication bias.

Disclosure of Interest: None Declared
Objectives: To analyse the variation in the rate of adverse events (AEs) between acute hospitals in the Portuguese National Health Service. In addition, we explore the extent to which some patients and hospital characteristics influence the differences in the rates of AEs.

Methods: This work was based on a retrospective cohort study and was carried out at 17 acute hospitals that are representative of the Portuguese National Health Service. 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 around 180,000 hospital admissions between 01 January 2012 and 31 December 2012 were analysed. The ICD codes for main and secondary diagnoses were collected from all patients. Based on that we estimated the Charlston Comorbidity Index (CCI) for each patient/hospital sample. Hospitals characteristics were also considered. Binary logistic regression models were used to identify potential association of some patient characteristics (e.g. age, sex, medical Vs surgical DRG code, urgent Vs elective admission, Charlston Comorbidity Index) and hospital characteristics (e.g. existence of AEs report system, accreditation status, electronic prescribing drug system, University Vs non University hospitals, and size of hospitals based on the number of admissions per year). All tests were performed for a level of statistical significance of 0.05.

Results: The main findings were: i) global incidence rate was 12.5% (varying from 19.6% and 6.7%); ii) around 39% were considered preventable; iii) more than a half (66.4%) of all AEs were related to healthcare-acquired infection (HAI) and surgical procedures; iv) most of AEs (67.4%) resulted in no physical impairment or disability nor minimal impairment, the latter being resolved during admission or within one month from discharge; vi) 12.5% resulted in death; vi) Patient characteristics such sex (Female 11.1%; Male 14.4%, p=0.001); age (> 65 years 16.4%; < 65 years 8.5%, p < 0.001); Elective Vs Urgent (8.6% Vs 14.6% respectively, p < 0.001); medical Vs surgical DRG code (13.4% Vs 11.7%, p = .112); were associated with differences in the rate of AEs. ICC score seems to influence the difference in the rates of AEs, with a mean in the group with AE 6,05 Vs group with no AE 3,75, p < 0.001. vii) The presence of reporting AEs system (yes, 13.2% Vs no, 7.1, p=0.001); Accredited Vs non accredited (13.7% Vs 11.2, < 0.001); electronic prescribing drug system (yes, 13.2% Vs no, 11.8%, p=0.177); University Vs non University hospitals (15.9% Vs 10.9%, p=.001); dimension of hospitals (small 12.9%; medium 9.3% and large 14.3%, p<0.001);

Conclusion: This study shows that some patients and hospitals characteristics are associated with the occurrence of different rates of AEs. These results give us important insights that can help to investigate areas for improvement in reducing and avoiding AEs in the Portuguese NHS acute hospitals. To formulate tailor-made interventions of improvement is necessary to understand the patient conditions and hospital characteristics that influence the variation of AEs rate. This knowledge will be also important to facilitate the implementation and to maximize the effectiveness of those interventions.

Disclosure of Interest: None Declared
USE OF MUCOLYTIC AGENTS FOR CYSTIC FIBROSIS (CF) IN A TERTIARY CENTRE, IN TWO COHORTS BEFORE AND AFTER THE IMPLEMENTATION OF AN ANNUAL REVIEW PROCESS.

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Objectives: To evaluate current use of inhaled mucolytic agents in paediatric patients with Cystic Fibrosis (CF) and to assess the impact of an Annual Review process introduced in 2013. The Annual Review is a clinical, multidisciplinary assessment of progress over the preceding year. The patient's Consultant Paediatric Respiratory Physician discusses results of the review with the patient and their family and makes recommendations about ongoing management. A summary of the review and recommendations is sent to the family.

This retrospective review provides important information about the impact of the Annual Review strategy in optimising management of CF. US and European guidelines recommend inhaled Dornase Alpha and Hypertonic Saline for all patients >6yrs with CF. The Australian National Registry publishes data on Dornase Alpha only and there is a paucity of data for those <6yrs.

Methods: 2 cohorts were evaluated, before and after the introduction of the Annual Review process, over 12month periods; July 2011-June 2012(2012 cohort) and July 2014-June2015(2015 cohort). n=250 CF patients in the 2015 cohort and n=259 CF patients in the 2012 cohort were evaluated. All patients with CF in our centre were included, with no exclusion criteria. Data were collected from internal databases and medical records. Mucolytic agents used included Dornase Alpha(DA), Hypertonic Saline(HS) and Mannitol. Age was calculated at the end of the relevant time period (June 30 2012 or 2015). Adherence and duration of treatment were not measured. p values were calculated using the Chi squared test.

Results: The cohorts were comparable in baseline characteristics; ages 0.25-19.67yrs (median 9.46yrs) and 0.08-20.91yrs (median 9.67yrs) with M:F ratio of 1.17:1 and 1.21:1 in 2015 and 2012 respectively. There were similar rates of bronchiectasis(55.93% vs 53.78%) and chronic pseudomonas(16.26% vs 18.4%) in 2015 and 2012 respectively. Lung function was also similar; most patients had best FEV1 >90%(52.66% in 2015 and 57.95% in 2012). There were slightly higher rates of CF-Related Diabetes (CFRD) in 2015; 9.6% compared to 7.7% in 2012. Mucolytic use was significantly higher in 2015 than 2012; 78.4% vs 41.7% respectively. DA use was also higher in 2015 vs 2012 (74% vs 31.27%), particularly in patients >6yrs; (82.87% vs 34.81%). Of those not on DA, more had previously trialled it in 2015 (12.3%) than 2012 (3.93%). Bronchiectasis did not correlate with likelihood of DA use in 2012 (p=0.2), but did in 2015 (p=0.03). In patients <6yrs mucolytic use in 2015 vs 2012 was 53.62% vs 25.64% overall; 50.72 vs 23.08% used DA and 10.14% vs 3.85% used HS. Overall, 24.8% used HS in 2015 and 16.22% in 2012. Only 1.6% and 0.77% used inhaled Mannitol in 2015 and 2012 respectively.

DA was most commonly prescribed in patients with bronchiectasis (p=<0.0001, 2015 & 2012) and chronic pseudomonas (p=<0.02 2015; p=<0.01 2012). Other correlates with DA use included CFRD (p=0.05 2015; p=0.02 2012), pancreatic insufficiency (p=<0.01 2015 & 2012) and ≥1 hospital admission for respiratory deterioration (p=<0.01 2015; p=0.02 2012). Moderate or severe impairment in lung function (FEV1 <70%) did not have a strong correlation with use of DA (p=0.06 2015; p=0.2 2012).

Conclusion: Mucolytic agents were used significantly more frequently in 2014-2015 compared with 2011-2012. This is in part attributed to an Annual Review process introduced in this centre in 2013. The Annual Review provides an opportunity to identify gaps in management and allows goals to be set and discussed with patients and their parents.

Disclosure of Interest: None Declared
**ISQUA16-2583**

**SELECTION, IMPLEMENTATION AND MONITORING OF SAFE CLINICAL PRACTICES IN HEALTHCARE ORGANISATIONS FROM DIFFERENT EU COUNTRIES**

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**Objectives:** The Joint Action “The European Union Network for Patient Safety and Quality of Care” (PaSQ) was launched in April 2012, gathering most Member States (MS) and the main European stakeholders to exchange good practices and experiences in the field of quality of care, including patient safety and patient involvement. One of the core objectives of PaSQ has been the selection, implementation and monitoring of safe clinical practice in healthcare organisations (HCOs) of the participating MS. This work has been performed within one of the seven work packages, namely work package 5 on “Patient Safety Initiatives Implementation”, led by the German Agency for Quality in Medicine with the European Hospital and Healthcare Federation (HOPE) as co-leader.

**Methods:** Four safe clinical practices were selected: medication reconciliation; WHO surgical safety checklist; hand hygiene and paediatric early warning scores. These were identified through a literature review and selected based on five criteria: demonstrated effectiveness in clinical trials; transferability to different healthcare systems and healthcare contexts or clinical specialties; feasibility of implementation within PaSQ; existing available implementation tools; enablement of patient involvement. 220 HCOs from 18 EU countries took part in the implementation of selected safe clinical practices. HCOs involved represented hospitals, primary care centres and nursing homes. HCOs could take part in more than one safe clinical practice. In total, 106 HCOs were involved in medication reconciliation, 86 in the surgical safety checklist, 81 in multimodal intervention to increase hand hygiene compliance and 35 in the paediatric early warning scores. Progress has been monitored and assessed through the administration of a baseline questionnaire in September 2013 and an end line questionnaire in September 2014. Each HCO appointed one coordinator, who completed these questionnaires.

**Results:** When comparing situations at baseline and end line, the level of use of these practices increased during the one-year timeframe by 21% for surgical safety checklist and by 16% for hand hygiene. For medicine reconciliation and paediatric early warning scores, PaSQ represented an opportunity for HCOs to start working on these practices and major developments have been observed. For medication reconciliation, the percentage of use rose from 30% at baseline to 78% at end line. For paediatric early warning scores, this percentage rose from 7%, to 67%. This means an increase of 48% for medication reconciliation and 60% for paediatric early warning scores in one-year time. When asked about the impact of the safe clinical practices, most HCO coordinators strongly agreed that implementation of surgical safety checklist, hand hygiene and medication reconciliation had a positive impact on organisational culture, process quality and patient outcomes. For the paediatric early warning scores practice, the majority of respondents agreed that the implementation had a positive impact on organisational culture and process quality whereas, when asked about the impact on patient outcomes, they stated this was not applicable at that time.

**Conclusion:** Selecting, implementing and monitoring four safe clinical practices within HCOs of 18 different EU countries in the context of a Joint Action on patient safety and quality of care led to an increase of the level of use of these practices. Furthermore, a positive impact of the implementation of these safe clinical practices on organizational culture, process quality and patient outcomes was reported. HCOs can benefit from sharing knowledge, experiences and tools about safe clinical practices with other EU MS.

**References:** www.pasq.eu

**Disclosure of Interest:** None Declared
ISQUA16-3055
INTEGRATION OF HOSPITAL DATA FOR RESILIENCE ENGINEERING
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Objectives: This paper describes an empirical test of Resilience Engineering [1] via the integration of multiple hospital data sources. The aim of the project is to develop a statistically valid model of organisational performance at the unit level in healthcare to inform quality monitoring and improvement, based on our model of organisational unit performance informed by resilience engineering. The ultimate objective is to assist decision-making, by providing a major, validated resource for better prediction of safety and quality outcomes.

Methods: In common with other public service organisations, hospitals have multiple goals (e.g. patient safety, clinical effectiveness, patient experience) and produce data on a multitude of outcome variables to monitor the quality of the care they deliver. The large amount of data produced makes analysis and interpretation difficult and new approaches are needed to harness the power of these data for measuring and subsequently improving care quality. [2,3] Resilience Engineering in healthcare is concerned with how health care systems adjust functioning “prior to, during, or following […] changes, disturbances, and opportunities […] and thereby sustain required operations […]”. [4] Thus outcomes are assumed to emerge from interactions between demand (e.g. patient numbers, acuity, targets, standards), capacity (e.g. staffing level, skill mix, equipment availability), and in situ adaptations to meet the demands (e.g. space reconfigurations, staff role re-assignments).

In this project, data from a range of sources across the acute medicine directorate in a large University teaching hospital are being identified, collected and linked in a single dataset (of around n= 60,000 patient episodes of care) to test this overarching model. Initial scoping work in which we have modelled some of these relationships has shown that this approach is feasible and has promise.

Procedures involve: data cleaning, transforming and standardising where necessary; workshops with key informants are held quarterly to guide the study and enable access to the required data sources; and statistical analysis include multilevel modelling, structural equation modelling (SEM), path analysis and time series regression analysis.

Results: Results show that outcomes to not derive direct from demand on services; rather, they emerge for a complex interaction between demand, capacity and (formal and informal) adjustments that the system makes to align goals with system conditions.

Conclusion: Discussion will focus on the need to capture configuration (variable process) data as well as basic demand and capacity data in order to make better decisions on improving safety and quality. The way data are used at present in healthcare does not allow insight into the performance of the system as a whole. A better understanding of the relationships between these sets of variables is needed to directly inform quality improvement efforts.


Disclosure of Interest: None Declared
Objectives: Experience based co-design is a theoretically informed, cyclical quality improvement process that aims to capture, understand and enhance the patient experience. The role of observation is considered a key component to contextualise the patient experience which focusses on functional and relational aspects of care delivery. However, it has been reported as being underused as a method to collect valuable data to explore what happens in practice. The observation work has been usually led by healthcare researchers or clinical staff. They are required to place themselves in the shoes of a patient and imagine they are new to the area. However, in the conceptual spirit of EBCD, it is argued that a patient representative could gather this data. Therefore, can patients bring a useful perspective when conducting observations in the clinical setting in order to understand and improve the patient experience?

Methods: A qualitative study was conducted to explore the experience on staff, researchers and patients conducting observations within a cardiology service within an acute NHS Foundation Trust, in West Yorkshire, England. A qualitative approach was adopted in order to explore the experiences of participants using the specific methodology of Interpretative Phenomenological Analysis (IPA). In-depth face to face interviews were conducted with the six participants who had conducted observation activities as part of the EBCD project. The interviews were digitally recorded having sort informed written consent previously from the participant. Transcripts were anonymised and transcribed verbatim.

Results: To be made available early summer 2016.

Conclusion: Patient involvement within service improvement work may provide invaluable insights to the day to day business of healthcare delivery. It is anticipated that using patient representatives may be a sustainable method to routinely gather patient experience data. Patient representatives with the right education support and skills to conduct observations may be best placed to observe the local culture and experience.


Disclosure of Interest: None Declared
Objective: Despite chronic political instability, the World Health Report 2010, dedicated to universal coverage, tells a success story about health system in Lebanon. It points out major achievements as results of sound policies and professional work. It states « a series of reform has been implemented by the Ministry of Health to improve quality, equity and efficiency ».

Lebanon has sustained a regional leader for quality, safety and accreditation in healthcare. The accreditation system was launched since 1985. Till 2015, Hospital standards have been upgraded 4 times and new standards are being developed and implemented for the long term stay hospitals, private medical laboratories, blood banks radiology centers and primary care systems. After 30 years, the accreditation impact could be easily noticed on quality of services, patient safety, healthcare performance, capacity building and human capital.

To make it an obligatory, the MOH established and implemented the pay for performance (P4P) program, through it linked the payments to a basket of performance indicators, out which the accreditation rank is a major element in it. This program has been vital and drove around 95% of public and private hospitals to improve their performance. After this successful history, the MOH in collaboration with the syndicate of hospitals aim at:
- Improving the national accreditation system to be in compliant with ISQua standards
- Foster the healthcare continuum of care
- Have an appropriate patient flow.

This paper explains the main components of the Lebanese Accreditation system, its failures and successes, its opportunities for improvement, and its validity to be replicated in regional healthcare systems.

Methods: - interviews with stake holders: MOH officials, National Accreditation Committee members, Syndicate of Hospitals, hospitals managers and staff, surveyors, auditing bodies, and educators.-focused interviews-Review of the data base of survey reports by a selection of the auditing bodies-Both qualitative and quantitative techniques will be used.

Results:
Most of the information are ready; however, some updates regarding the current situation, challenges, and future of the accreditation system will incur some interviews and document analysis. This will be ready by August 2015.

Conclusion: Accreditation has a positive impact on the Lebanese Healthcare system: implementation of quality management systems, increased quality and safety awareness, improved management commitment, improved documentation structures, better qualifications of healthcare managers. *Lebanese accreditation system needs upgrades in standards, methodology, training of healthcare facility staff, and certification of surveyors* Lebanese experience could be replicated to countries of the region

References:
-ISQua Standards
-Lebanese MOH website - published accreditation standards and methodology
-GATES Assessment Report for Technical Committee on Lebanese Accreditation System
-ISQua Standards-Lebanese MOH website - published accreditation standards and methodology-GATES Assessment Report for Technical Committee on Lebanese Accreditation System

Disclosure of Interest: None Declared
ISQUA16-1830
ENHANCEMENT PROGRAM FOR ACUTE PAIN MANAGEMENT
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Objectives: Pain is a pivotal factor in effective management. Pain is a mixture of physiological and psychological components and thus, providing rapid pain relief for pain is paramount. Hence, accurate assessment, timely pharmacological treatment and non-pharmacological interventions should be implemented. Pain management is also essential in postoperative care, which can inhibit patients from fast recovery and thus is vital to well educate patients about the basis of pain management, with elaboration on self pain report for further reinforcement. The enhancement program aims to enhance nursing staffs’ competence and confidence in pain assessment and management through internal and external forces, namely self-learning and training sessions. With better patients’ inculcation, we hope to raise the awareness for pain for patients.

Objectives
1. To better equip staff and develop suitable framework and systematic workflow for pain management
2. To empower patient and/or family members through better education

Methods: The pain management program consists of three stages, namely Preparation, Execution and Evaluation.

Preparation
1. Invite and initiate the acute pain management committee with representatives of anesthetist, senior ward surgeon, senior nursing staff from surgical, orthopedic and operation theatre, physiotherapist and two Advanced Practice Nurses (APN)
2. Develop and organize nursing guide through literary research and organization
3. Design pain rulers for later distribution for standardization of pain score assessment
4. Assemble and develop the educational booklet and visual aid kit for a standardized approach of pre and post operative pain management education
5. Prepare pre- and post-program questionnaires for nurses and post-program evaluation form for patients

Execution
1. Complete the “Introduction on Pain Management” e-learning course as commencement of the program
2. Conduct the staff education program on acute pain management and workshop on the utilization of pain management devices (epidural and PCA), with the completion and collection of post-program questionnaire
3. Distribute education kit including the pain ruler and nursing guides to participants of the program
4. Complete the ward education board on post-operative pain management

Evaluation
1. Distribute and complete of post-program questionnaire for nurses and evaluation form for patients
2. Analyze and discuss the data collected
3. Evaluate the overall effectiveness of the program with further elaboration of possible improvements

Results: The program was piloted in two general surgical wards and one orthopedic ward from December 2015 to January 2016. Over 85% of the staff agreed that there is adequate guidance in pain assessment and management. 54% agreed that pain ruler is useful in educating patients. 90% agreed that booklets and desk calendar style education booklets are helpful as standardized approach of pre and post-operative education. 78% felt confident in managing patient’s pain after program.

For patient’ evaluation, over 95% agreed that materials provided before operation is helpful. 94% reported that pain assessment method provided made it easier for evaluation. Over 88% agreed that the desk calendar style education booklets strengthened their knowledge on pain control. 92% agreed that the technique of protecting wound can promote the recovery after surgery. A majority agreed that information provided e.g. the effect and side effect of pain medication, relaxation method is useful and educational for them.

Conclusion: This program is helpful to staff as well as patients to gain knowledge and confidence to manage post-operative pain. And the eventual target of this program is to establish a self-sufficient platform for better comprehension of pain.

Disclosure of Interest: None Declared
NURSES’ ROLES AND RESPONSIBILITIES IN HEALTHCARE QUALITY – MEASURING THE IMPACT OF SPECIALTY EDUCATION

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**Objectives:** Registered nurses’ responsibilities for high quality healthcare extend beyond the provision of safe and evidence-based direct patient care to incorporate broader organisational quality and safety system responsibilities. Postgraduate education is an ideal professional development opportunity for nurses to accelerate acquisition of, and consolidate the knowledge, skills and attributes required, to deliver quality healthcare and to clarify roles and responsibilities. Currently, there is no way of knowing whether postgraduate nursing students achieve these outcomes. The aim of this paper is to describe the process used to develop a conceptual model of nurses’ responsibilities in healthcare quality and then validate a new instrument to measure nurses’ perceptions of their responsibilities in the quality domains of the conceptual model.

**Methods:** We employed a three-stage narrative approach to review the literature and conceptualise the model. Stage 1 comprised a review of: national and international government frameworks; strategies and policies for quality and safety in healthcare; health professionals’ safety and quality curricula; and expected competencies and professional nursing peak body performance standards. In Stage 2, peer-reviewed literature about quality domains was examined. The first and second stages informed development of a conceptual model for nurses’ responsibilities in healthcare quality. Stage 3 involved a review of psychometrically validated instruments to inform the constructs or elements that make up each domain within the model and create an instrument to measure nurses’ competencies in all the quality domains of the conceptual model. A ninety-six item instrument, with 4-point Likert scale response options, was developed. The instrument was piloted with postgraduate critical care nursing students in 2014 (n = 138, 65% response rate, using census sampling) to establish reliability and validity, and inform scale development using exploratory factor analysis.

**Results:** The conceptual model comprises seven domains of quality: 1) Management of the environment; 2) Promotion of safety; 3) Evidence-based practice; 4) Medical and technical competence; 5) Person-centered care; 6) Positive intra/interpersonal relationships and behaviours; and, 7) Clinical leadership and governance. Item-total correlations were above .454 for all but one item and Cronbach’s alpha for each domain subscale were excellent (.811 to .958). To achieve a more parsimonious tool, using decision rules we reduced the number of items to 55. Exploratory factor analysis with orthogonal varimax rotation was used to optimise the factor structure. The resulting 10 component solution accounted for 78% of the variance. Statistical evidence and content relevance were considered in labelling seven conceptually meaningful factors: 1) Organisational governance; 2) Clinical leadership; 3) Evidence-based practice; 4) Person-centered care; 5) Positive intra/interpersonal relationships/behaviours; 6) Medical/Technical knowledge; and 7) Promotion of safety. The factors reflected and further defined the conceptual basis of the conceptual model and measurement instrument.

**Conclusion:** We developed a conceptual model of nurses’ responsibilities in healthcare quality. The model may be useful in research designed to answer a broad range of research questions about nurses’ responsibilities in healthcare quality. Psychometric testing of the instrument indicated preliminary evidence for instrument validity and reliability. The instrument shows promise as a means to assess nurses’ ownership of safety and quality related healthcare responsibilities.

**Disclosure of Interest:** None Declared
MEDICATION ADMINISTRATION E-LEARNING FOR NURSES: TOWARDS A BETTER EDUCATIONAL PARADIGM

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Objectives: Nurses’ competency to calculate medications correctly and in a timely manner is essential for patient safety. Privileging process for nurses authorized to transcribe, prepare and administrate medications at Clalit hospitals include training and tests. Basic medication training for novice nurses include online medication management tutorial and drag calculation course. Training and assessments are conducted via learning management system (LMS) that deliver online courses while managing learners and keeping track of their progress and performance across all types of training activities. Recently, we updated the medication calculation online course and created an online course that uses a lot of learning interactions that are considered to better the learning process and knowledge retain. After completion of training and test we ask the learners to answer a questionnaire that examines satisfaction and perceived impact of the course on skills and quality of care.

Objectives
To maintain standard basic medication training system for novice nurses
To evaluate the perceived impact of medication calculation tutorial on calculation skills of nurses.
To assess learners’ satisfaction from the online course.

Methods: Data related to learners progress and performance was obtained from LMS. Upon completion of medication calculation course, nurses were asked to fill an online survey. The survey contains 11-questions (5-point Likert scale) designed to evaluate the effectiveness of e learning achieving specified course objectives and goals and their satisfaction when considering the learning potential of the course. The mean, standard deviation, and percentage agreements were tabulated.

Results: During 2015, 428 learners studied the medication management and calculation courses. 266 (62.15%) graduated nursing school less than 5 years before studying the course. 131 (30.61%) senior nurses studied the course because of various reasons like relocation to another hospital or department. 14% of nurses had a RN license and 86% had a RN license and a university degree. 14% graduated a professional retraining nursing school. 90.89% of nurses passed the test mean test score was 93.2 (max=100) (±9.04). New nurses estimated that the online course was less helpful for passing the test than senior nurses (3.33 and 3.3 respectively), no significant statistical difference was found. Novice nurses also estimated that the course has aided in practice less than senior nurses (2.5 and 2.75 respectively). The overall satisfaction rate was 4.1 (±1.2) and satisfaction from learning experience was 4.03 (±1.1). Data from 2016 upgraded course will be analyzed and presented.

Conclusion: Our study suggests that senior nurses tend to benefit from e learning more that novice nurses, but the difference is not statistically different. There was no significant difference in overall satisfaction and learning experience between novice and senior nurses. Age and seniority in nursing do not explain the difference, but there is also no correlation between age and seniority in nursing, because 14% of nurses had a professional retraining, hence older than some new nurses. The gap between novice and senior nurses may be explained by the fact that new nurses have retained their knowledge from nursing school. Perceived impact of online course on test results and practice was moderate to low and our decision to upgrade the course is evident. Further investigation and comparison to upgraded online course will be discussed.

Disclosure of Interest: None Declared
DEVELOPING EMERGING LEADERS THROUGH NEW ZEALAND’S NATIONAL PATIENT SAFETY CAMPAIGN
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Objectives: The final phase of the NZ Health Quality & Safety Commission’s three-year national patient safety campaign, *Open for better care*, focused on clinical leadership for quality and safety. One component was the delivery of national workshops for emerging clinical leaders. The objectives of the workshops were to define key leadership attributes and provide attendees with the tools and techniques to drive quality improvements and lead change within complex systems.

Methods: District health boards were encouraged to nominate emerging leaders across clinical professions, ensuring inclusion of primary care and aged care. Places were made available for 30 to 40 emerging leaders per workshop, with a total of 7 regional workshops delivered across New Zealand. ‘Emerging’ was defined by the nominating district health board.

Results: More than 200 emerging clinical leaders took part in these workshops. Feedback from participants has not only contributed to the Commission’s understanding of the opportunities campaigns offer for individuals to grow their leadership skills, but has also provided insights into what motivates this cohort of leaders to consider or take a leadership role in quality and safety. It has also identified some of the barriers and enablers to developing a health workforce motivated to champion a culture that places quality and safety as a priority.

Conclusion: The demand for these workshops shows there is a need and a genuine interest in exploring clinical leadership in the context of quality and safety. Health districts with smaller populations in particular had a higher level of interest in participating. These workshops have led to the development of a network of emerging clinical leaders and identified future learning opportunities.

Disclosure of Interest: None Declared
OBJECTIVES: As a result of the degenerative process of dementia, this disease particularly affects the nutrition and hydration of the elderly, with 90% of them being prone to significant weight loss. Nursing assistants are responsible for feeding older adults with dementia, but they do not possess the knowledge and skills to perform such task. This knowledge deficit results in poor practice, inadequate assistance, and poor attitude toward feeding. These conditions could lead to weight loss and malnutrition among older adults with dementia. The aim of this study is to develop an evidence-based protocol for the management of feeding difficulties among residents with dementia and the overall goal is to maintain social interaction with cultural consideration, ensure adequate oral intake and preserve dignity & quality of life among the older adults with dementia.

METHODS: A quasi-experimental study will be conducted in four RCHEs through the convenience sampling method. 120 nursing assistants will be recruited to participate in this study. The training includes two sessions that will be carried out in the RCHEs.

Each training session will run for an hour and a half. The first session is a lecture with group discussion. The second session will focus on supervised and guided skill practice based on the proposed protocol. The intervener will demonstrate how to perform the assessment and identify the types of feeding difficulties among the residents with dementia. On the basis of their knowledge of the types of feeding difficulties, the nursing assistants will select and correctly mark the appropriate interventions for the individual residents with dementia. Meanwhile, the intervener will monitor the progress and evaluate the care outcomes of the residents with dementia. A Nutritionist will demonstrate how to measure food/energy intake and mark in resident’s record correctly.

RESULTS: Based on the objectives set for the study, several expected outcomes would be measured. The primary outcomes are knowledge, attitude and behaviour among nursing assistants on managing feeding difficulties. The secondary outcomes are the food intake, body weight (BW), and BMI of the residents with dementia.

CONCLUSION: In conclusion, inadequate training and insufficient time for feeding residents with dementia has been recognized as barriers for nutritional care in residential care homes. An educational programme with evidence-based protocol provides a guide for nursing assistant in managing feeding difficulties effectively.


DISCLOSURE OF INTEREST: None Declared
OBJECTIVES: Radical gastrectomy with regional lymphadenectomy is the mainstay of curative treatment strategy for gastric cancer. Gastrectomy can be physically and psychologically stressful for patients with gastric cancer. It is hypothesized that appropriate education before gastrectomy can benefit patients. Traditionally, information was given verbally by nurse in charge. Currently, we investigate the effects of an educational video for patients with gastric cancer on knowledge recall, satisfaction, anxiety and postoperative outcomes.

METHODS: This study was a surgeon-blinded, randomized controlled trial, performed at the Department of Gastrointestinal Surgery, West China Hospital, Sichuan University in Sichuan Province, China. One hundred sixty eligible patients undergoing elective gastrectomy were randomized in a 1:1 ratio to either a study group or a control group. The study group was provided an 18-minute educational video, which outlined preoperative, operative and postoperative expectations for patients undergoing elective gastrectomy. The control group was given information verbally by nurse in charge. All patients completed a questionnaire measuring recall of information received immediately after education. Standard discharge criteria was employed for all patients. Then all patients completed a survey about satisfaction and anxiety at discharge, which were measured with a VAS scale (a 10-point scale). Demographics and postoperative outcomes data were recorded.

RESULTS: Both groups were similar in age, sex, tumor type and characteristics of the initial physical examination. The study group answered 92.4% of the knowledge questions correctly, whereas the control group answered only 63.7% correctly (P=0.027). The study group scored their satisfaction with a mean VAS of 9.62 whereas the control group had a mean of 7.97 (P=0.012). Patients in the study group reported less anxiety about the admission to the hospital (8.22±0.74 vs 7.67 ± 0.83; p=0.042) and the surgical experience (6.73±1.04 vs 5.38 ± 0.76; p=0.038). Five (6.25%) patients in the study group and 11 (13.75%) in the control group reported adverse events, such as pneumonia and deep vein thrombosis, with a statistically significant difference between two groups (P=0.032).

CONCLUSION: Implementation of a perioperative educational video in patients undergoing elective gastrectomy can improve their retained knowledge, enhance satisfaction, relieve anxiety and improve postoperative outcomes.

DISCLOSURE OF INTEREST: W. Zhang Other: The authors declare that we have no conflicts of interest to this work. We declare that we do not have any commercial or associative interest that represents a conflict of interest in connection with the work submitted., J. Yang Other: The authors declare that we have no conflicts of interest to this work. We declare that we do not have any commercial or associative interest that represents a conflict of interest in connection with the work submitted., K. Li Other: The authors declare that we have no conflicts of interest to this work. We declare that we do not have any commercial or associative interest that represents a conflict of interest in connection with the work submitted.
Objectives: The Good Governance Institute (GGI) in partnership with Barking, Havering and Redbridge University Hospital NHS Trust (BHRUT) have developed and implemented the Patient Safety Summit (PSS), an innovative and blame-free method of sharing and disseminating learning and reflection around patient safety incidents.

Methods: In BHRUT the PSS was implemented in recognition of, and to address, the fact that the trust did not have an effective way of identifying and sharing learning from serious incidents. In particular, a blame-free forum that encouraged clinical participation needed developing.

Each week, for one hour, a core membership made up of the leadership from each clinical division, as well as any other staff who are interested and have availability, attend a meeting facilitated by the Medical Director and Chief Nurse to discuss up to two select serious incidents (SI). Patients are also encouraged, when relevant, to attend and at BHR Hospitals we now have a patient attend each meeting. The learning from this meeting is then disseminated through a weekly newsletter to all staff, as well as via thematic reviews and a number of in-depth events. The PSS is open for any staff member to attend.

Results: In the six months since the patient safety summit has been established there has been a significant and positive change in incident reporting. In particular, data obtained from BHRUT’s patient safety and risk management system demonstrates that, despite the number of SIs being reported at the trust remaining constant (at a mean of 15 per month between May and December 2015), the number of SI reports that have breached external deadlines has fallen from 11 in May 2015 to 0 in the months to December 2015. We would suggest that this is indicative of a change in culture towards SI reporting as well as improved processes to enable reporting and delivering SI reports to deadline.

Qualitative evaluation of the patient safety summit reveals high rates of positive opinion especially around its approach to increasing awareness and learning from SIs. Evaluation from attendees is a ‘safe’ arena for staff to share experiences and lessons learned.

Conclusion: The Patient Safety Summit represents best practice with regards to the sharing and learning from incidents, both serious and otherwise. There are key lessons from our experience of implementing the process that we feel it would be useful and important to share. In particular, the significant impact that Patient Safety Summit can have on Serious Incident reporting.

Disclosure of Interest: None Declared
UNDERSTANDING THE ‘BLACK BOX’ OF SHARED DECISION MAKING
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Objectives: Despite extensive work to embed shared decision making (SDM) in routine clinical practice, implementation and uptake by both clinicians and patients is variable. Questionnaire and interview approaches provide little insight into what actually happens during healthcare consultations, as patient and clinician accounts often differ. This ethnographic study explores SDM within the ‘black box’ of the consultation and the extent to which clinicians and patients (and potentially others) engage in decision making.

Methods: This was an ethnographic study involving video-recording of 202 patient-clinician interactions (69% female, mean age 53 years, sd 17 years), and interviews with 11 clinicians (five general practitioners and six secondary care consultants) and 50 patients. Secondary care decisions included upper and lower limb joint replacement, birth after previous caesarean section and menorrhagia. Deductive coding of a purposive sample of 40 videos, (selected for clinical setting, patient age, gender and ethnicity), was informed by the MAGIC model 1 of SDM and OPTION-12 observation measure, which provided the framework for identifying key elements of SDM within consultations. Coding was further enriched by analysis of verbal and non-verbal behaviours, and the initiation, sequence, frequency and chronology of behaviours considered important to SDM. Video transcripts, researcher field notes and interview data were analysed thematically. Coded data and emergent themes were discussed during full team data clinics. Findings from all data sources were triangulated.

Results: Our mixed-methods approach to data collection and analysis highlights issues that are argued to contribute to difficulties in measuring SDM, and facilitates understanding of these limitations. Previously uncaptured elements of SDM interactions are also illuminated. For example, SDM behaviours are observable in both the clinician and patient, can be initiated by either and are delivered interactionally. These behaviours often did not occur in a linear manner as suggested by existing models of SDM, nor did they occur singularly. Video data emphasize the importance of the relational aspects of the patient/professional encounter, and this is supported in the accounts of both patients and clinicians. Patients in particular associate this with their sense of feeling involved in decision making.

Conclusion: Existing observational measures primarily focus on clinician behaviour, thus providing an incomplete picture. Our inductive analyses show that the patient’s behaviour is central to SDM, indicating that future observational measures of SDM should incorporate the patient’s role and behaviour. The importance and function of the relational interaction is also highlighted. Regardless of who ultimately makes the clinical/management decision, patients value a mutually respectful and reciprocal interaction with their clinician when making decisions about their treatment and care. This further suggests that measuring behaviours alone, and independent of the interaction, is insufficient.


Disclosure of Interest: None Declared
Objectives: The objectives of this research project were to a) explore women’s experiences and understandings of disordered eating, especially bulimic behaviours (bingeing and purging), and b) clarify the implications these perceptions have for help-seeking, treatment, and recovery. These objectives were formulated in recognition of the complex, multi-determined, and heterogeneous nature of disordered eating, and the fact that treatments are not successful in many cases, with eating disorders often having a chronic course.

Methods: This research resulted from recognition that anorexia is more often focused upon in eating disorder research and clinical practice, and consequently there has been less attention to experiences of bulimia, despite it being statistically more common than anorexia. The study involved semi-structured interviews, according to a pre-defined interview schedule, with 15 women engaging in bulimic behaviours. In 2013, women responded to Australian-based advertisements that directed them to an online survey and were invited for interview if their responses on standardised measures of eating pathology were in the clinical range. Women participating had varying relationships with health services, from some who had never been diagnosed with an eating disorder, to others who had been involved with treatment and support regimes for over a decade. Transcribed interviews were analysed thematically [1], following inductive data coding and comparison techniques within and across interviews.

Results: Participants described eating disorders as something that took over their lives. The progressively time-intensive and isolating nature of bulimic behaviours not only reduced their physical health, but limited their relationships with others, and their ability to work or study. As such, and despite their perceptions that there were benefits to be gained from disordered eating (emotional coping, control, moral superiority, weight maintenance), participants wanted to recover. At the same time, women who had been through treatment were typically critical of their experiences, often suggesting that while helpful initially, ultimately they experienced relapse.

Drawing on other qualitative work looking at patient experiences of treatment for eating disorders, the findings of this research, and especially the exemplar case of one participant, Grace, will be used to argue the importance of person-centred care: that when care does not take into account the needs of patients it may potential exacerbate the eating disorder. The results reveal that: a) care providers often apply a one-size-fits-all model rather than attending to the unique constellation of behaviours, experiences and causes that make up the person with the eating disorder, b) in-patient treatment practices tend to involve monitoring how much food patients eat and calories ingested, subjecting them to regular weigh-ins; activities that are characteristic of eating disorders, and c) as out-patients, conversations held with health professionals regarding treatment and recovery may actually reinforce women’s sense that their problem is all-encompassing and the only consequential aspect of their lives.

Conclusion: Results suggest treatment of eating disorders may in some ways be counterproductive, reinforcing the importance of many disordered behaviours, and emphasising the centrally significant role the disorder occupies in women’s lives. Without person-centred care that recognises these issues and supports the wider needs of individual patients, women may find recovery difficult; returning to the comfort and familiarity of the eating disorder that they most wish to leave behind.


Disclosure of Interest: None Declared
TAKING THE CHANGES AND LESSONS FROM THE PARTNERSHIP FOR HIV-FREE SURVIVAL TO SCALE IN NORTHERN UGANDA

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Objectives: All too often improvement work on a small scale yields many innovations, good changes and practices. These practices work well in one area but are not adopted by others, and yet if they were, they could lead to large-scale improvement in systems and processes and ultimately, patient outcomes. With this in mind, in January 2016, the USAID ASSIST Project began to systematically spread the lessons learnt from 22 Partnership for HIV-Free Survival (PHFS) demonstration phase sites to 117 health facilities which provide PMTCT services in Northern Uganda. The PHFS Initiative is a part of a global effort to eliminate new HIV infections among children and keep their mothers on ARVs, focusing on the post-natal pathway of continuum of care. The PHFS initiative was first implemented in 22 demonstration sites in 6 districts in eastern and south western Uganda using the collaborative improvement model. This contributed to improvement in the retention of mother-baby pairs in care monthly (from 2.9% in April 2013 to 92% by August 2015) and the number of exposed babies testing positive at 18 months dropped to less than 3%. To contribute to meeting Uganda’s target of reducing MTCT to less than 5%, a critical mass of health facilities need to collectively make improvements in the quality of care provided for mother-baby pairs in care.

Methods: A detailed spread plan was developed that addressed details on key lessons to be spread, indicators that would be used to measure the spread, the mode of spread, individuals to lead the efforts, resources and communication plan. Improving data quality, retention of mother-baby pairs in care, provision of a standard package of care at routine visits, and improvement in the special visits were prioritized for spread. The spread is being sequenced in 4 waves over a period of six months with a maximum 2-3 coaching visits in each wave. The sites in each wave were purposively selected based on the volume of clients and health facility level. A coaching team consisting of coaches from the initial demonstration phase sites, regional and district coaches worked to support health facilities with improvement work and implement changes from the PHFS change packages. On monthly basis a set of 5 indicators are measured in the spread sites, and a log of what changes teams selected is kept.

Results: Baseline performance of wave 1 sites as of January 2016 showed gaps in the retention of mother-baby (MB) pairs, HIV-exposed infants discharged from the PMTCT program alive at 18 months and HIV-positive and HIV-exposed infants receiving a final rapid test at 18 months. All the 25 sites in wave 1 (25/25) prioritized improving retention of MB pairs in care; 56% (14/25) of these sites selected pairing of mother-baby cards and giving same appointment dates as PHFS changes they would use to improve retention of MB pairs within their facility. Initial feedback from the facility teams implementing these changes reflect a positive embrace of change packages to enable the facilities to reach the level of well-performing facilities within the region.

Conclusion: By focusing on practical things which improvement teams can do, the spread and adoption of changes and good practices can enable more teams to improve their system of care for HIV-positive mothers and their babies. Spread work on a large scale needs to be systematic, with a robust method of quickly scaling up proven practices.

Disclosure of Interest: None Declared
Review of Health Information Infrastructure in Supported Accommodation Settings: Providing an Integrated Model of Disability Health Informatics for People with I/DD

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Objectives: In Australia most people with an intellectual or developmental disability (I/DD) live in private residences, followed by supported accommodation (e.g. a home for up to 7 people). If residents’ health information is not easily accessible, is poorly integrated within or between different services, or is not adequately completed, implemented or reviewed, the safety and quality of residential support can be jeopardised. We aimed to examine evidence related to the current information infrastructure for people with I/DD living in supported accommodation in Australia, and considered the impact upon implementation of the Australian personal electronic health record ‘My Health Record’ (MyHR).

Methods: We conducted an integrative review on documentation in supported accommodation in Australia and identified key information requirements for ‘health information’ relating to individuals in supported accommodation. We searched (i) databases (PsychInfo, CINAHL, Web of Science Pubmed and Medline) and key journals for peer-reviewed literature; (ii) grey literature, including Australian legislation and policy documents, and reports from disability organisations, for information related to ‘documentation’ in supported accommodation. We extracted relevant data from each source and reviewed case studies from Australian Disability Death Review Reports for links to the use of information and documentation requirements; and contacted disability organisations, provider, and advocacy groups and key academics in the field of I/DD to verify our findings.

Results: We identified 25 sources from peer-reviewed literature, and 161 sources in the grey-literature including legislation, policy and related documents on a national/state level (n=13) and on provider level (n=133), and reports from disability authorities and policy documents (n=14). Documentation was addressed either directly (n=54, e.g. research question, major topic or relevant document itself; peer-reviewed n=10, grey literature n=44), or indirectly (n=133, e.g. coincidental finding or policy outcome; peer-reviewed n=16, grey literature n=117). Based on the synthesised evidence we built a model depicting the current fragmented information infrastructure in residential care settings. The documentation requirements for residential care settings for people with I/DD are increasing in number and complexity, and variable quality of documents can contribute to problems with safety and quality of care for these individuals. We found differences between the requirements outlined in national/state legislation and policy, and the type of documents and their reported use supported accommodation. Our review found that people with I/DD have health information stored in paper or electronic form in and outside of their residence. An array of different health professionals across a large number of siloed sites and disciplines e.g. primary care, allied health services, and hospital settings store health information about people with I/DD. Without any information exchange between these sites and services, health information infrastructure becomes fragmented which jeopardises the quality and safety of health service provision.

Conclusion: The fragmented information infrastructure of documentation in supported accommodation for people with I/DD is problematic and indicates the need for a new integrated and person-centred model of ‘disability health informatics’ to ensure safe, continuous and quality care for these people. This model could also inform the development and implementation of new, better integrated health information technologies (e.g. MyHR) providing summarised health information for populations with I/DD. Effective use of MyHR across service providers might prove beneficial in integrating information across separate service sites and disciplines.

Disclosure of Interest: None Declared
BIG DATA EXPLORATION FOR DRUGS AND CANCER RISK: ONLINE TOOL FOR MASSIVE OBSERVATIONAL STUDIES WITH CONTROLS

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Objectives: The health care observational data which is also now known as big data is leveraging day by day. To utilize it in an effective way for generating health outcomes of interest specifically for pharmacoepidemiology, we need to develop a system which could be efficient and cost effective to do online explorations with different parameters.

Methods: We designed a generic methodology based upon existing statistical and Evidence Based Medicine (EBM) level 3 research study designs method for pharmacoepidemiology studies. We used Taiwan Bureau National Health Insurance (BNHI) claim database one million cohort sample population from 1998 – 2011 year. The basic phases involved in this study were to create the database, develop back-end and front-end and then validate those results. This system is a web-based online which contains five steps: Define cohort, define outcome, and define intervention criteria and covariate assessment selections and final outcomes. It leads to the researcher to follow steps with different assumptions so, the research would not lost what and where they should select the parameters with different assumptions to explore big data for pharmacoepidemiology. (Visit at: http://10.1.2.125/)

Results: This online analytical tool has capability to massively explore and visualize big data for long term use drugs and cancers through OMOSC system which will help to do mass online studies for long term use drugs and cancer risk. It would help to direct the health care professionals with lack of datamining skills to lead the study. The constructed online system would generate automatically case and controls by utilizing large databases for long term drug exposures and cancer risk. The results are shown in odds ratio (OR) and if selected some confounding factors then could also get adjusted odds ratio (AOR) for risk estimation with 95% Confidence Intervals (CI). We used SAS statistical software on the same dataset to validate the OMOSC system results. It could help to do massive online studies which will saves time and cost effective.

Conclusion: The OMOSC system will be capable for drugs and cancer risk evaluation on a societal scale which is a big challenge that is approachable, achievable, and has implications towards those developing or using medications. Since the clinical trials are impossible to conduct due to cultural, cost, ethical, political or social obstacles. Therefore, this kind of research model would play an important role in health care industry by providing an excellent opportunity for solving the technological, informatics, and organizational issues towards other broad domains of drugs evaluation by utilizing large-scale databases.


Disclosure of Interest: None Declared
Objectives: To provide automated procedure to be followed for risk assessment and thrombo prophylaxis for patients at risk in Max Healthcare.

Venous Thrombo -embolism (VTE) is a potentially preventable complication in every hospitalized patient. The spectrum varies from asymptomatic DVT (deep vein thrombosis) to sudden unexplained death due to Pulmonary Embolism (PE). Long-term Sequelae include chronically swollen leg and venous ulcers which are difficult to manage, and entail considerable costs to the patient as well as the society. Timely risk assessment and appropriate use of prophylaxis to prevent VTE in those at risk is a critical safety practice in MHC.

Methods: **Input** changes: VTE risk assessment module in Electronic health Record.
- **Process** Change – From manual DVT prophylaxis to automated VTE risk assessment & prophylaxis.
- Auto generated reminders to clinicians within 48 hrs of admissions.
- Clinicians thought process change for accepting new automated system.
- Organizational culture change for electronic VTE risk assessment.
- Monthly data review with top management.
- **Output** Change: Increase in Compliance to DVT prophylaxis.

**Risk Stratification In Computerized Patient Records System (CPRS)**
All adult patients admitted to hospital will be presumed to be at increased risk for VTE. All patients admitted to the hospital will undergo a risk screening, by the Resident Doctor/ Consultant.
An ‘Electronic Alert’ system for institution of VTE prophylaxis on admission, as these have been shown to significantly increase compliance. An electronic pop-up would appear in the CPRS system which mandates that the clinician has to order VTE prophylaxis for every adult patient (or justify in writing why it is not required, or not being given).

**Results:**

<table>
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<th>PARAMETERS</th>
<th>APR'15</th>
<th>MAY'15</th>
<th>June '15</th>
<th>July'15</th>
<th>Aug'15</th>
<th>Sept'15</th>
<th>Oct'15</th>
<th>Nov'15</th>
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<tr>
<td>% Compliance to DVT Prophylaxis</td>
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<td>38.00%</td>
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<tr>
<td>% Compliance to VTE Risk assessment Notes in CPRS</td>
<td>7.00%</td>
<td>23.00%</td>
<td>27.41%</td>
<td>41.00%</td>
<td>37.04%</td>
<td>68.00%</td>
<td>74.00%</td>
<td>87.3%</td>
<td>91%</td>
</tr>
</tbody>
</table>

**Conclusion:** Timely risk assessment and appropriate use of prophylaxis to prevent VTE in those at risk is a critical safety practice in MHC. Prevention of Long-term sequelae include chronically swollen leg and venous ulcers which were difficult to manage, and entailed considerable costs to the patient as well as the society.

70 % of the patients admitted in Max Super speciality hospital now are being assessed for VTE risk within 48hrs of admission as against 7 % as per documentation at the beginning of the project. Thus exponentially decreasing the chances of Preventable DVT.

Long-term sequelae include chronically swollen leg and venous ulcers which are difficult to manage, and entail considerable costs to the patient as well as the society. Timely risk assessment and appropriate use of prophylaxis to prevent VTE in those at risk, is a critical safety practice in MHC.

**Disclosure of Interest:** None Declared
Objectives: Cardiovascular diseases are the main causes of death and a major contributor to chronic disease in Norway and other industrialized countries. Crucial unanswered questions include: how many individuals suffer a heart attack per year, whether survival is better for women than for men, or in large versus small hospitals.

The usefulness of hospital data for monitoring trends in CVD has been shown in several studies. “FS-systemet” is a system for retrieving data from the patient administrative systems (PAS). “FS-systemet” has been successfully used in Norway since 1995.

Methods: In 2010 data was collected from all somatic hospitals comprising admissions and day surgery for the 16-year-period 1994-2009 on patients with cardiovascular diseases and diabetes mellitus. Patients are uniquely identified at a national level even if they were transferred between or among hospitals for the same disease. The quality control, performed in 2002 (1), revealed that more than 99% of the data on date and time of admission, main diagnosis and index diagnosis, was correct as compared to the patients’ medical records.

The following data (FS-data) was retrieved from each relevant hospital stay, including day hospital visits: hospital, department, ward, date of admission, discharge and procedures, diagnostic codes, and procedures.

The FS-data from the hospitals was linked with:
- Statistics Norway’s databases: Sociodemographic information and Population Register
- The Medical Birth Registry of Norway
- The Norwegian Cancer Registry
- COhort of NORway (CONOR). CONOR is a collection of data from several regional health surveys

Results: Linked data was collected for 1.32 million patients with cardiovascular diseases and diabetes mellitus (2). More than 4.7 million hospitalizations with cardiovascular diseases and diabetes mellitus were collected.

The Norwegian Patient Register delivered in 2015 data collected from all somatic hospitals comprising admissions and day surgery for the 7-year-period 2008-2014 on patients with cardiovascular diseases and diabetes mellitus.

In the course of 2016 FS-data from the period 1994-2009 will be structured to match the model of data generated by The Norwegian Patient Register for the period 2008-2014. CVDNOR dataset will then be complete for the period 1994-2014 (21-year-period).

The FS-data from CVDNOR study will be compared with the data collected by The Norwegian Patient Register for the year 2009.

Conclusion: To answer the question how many individuals suffer a heart attack per year and make reliable comparisons between institutions and the quality of care delivered it is necessary to apply a universal data collection method in all including institutions. “FS-systemet” meets this requirement.

The Norwegian Patient Register has patient identifiable data only from 01.01.2008. “FS-systemet” allows legal and technical collection of identifiable data in Norway from 1994 (as long electronic data exist) until now!

National health registries in Norway have a need to supplement their datasets with patient data from the hospitals. The following model for data collection comprised of two sources could effectively fulfill their need:
- Data collected by “FS-systemet” for the period 1994-2009 and
- Data collected by The Norwegian Patient Register for the period 2009-now


Disclosure of Interest: None Declared
**Objectives:** The transition from traditional paper-based health care to a fully integrated electronic medical record (iEMR) creates significant disruption to usual care and raises legitimate concerns about potential harm to patients. We recently rolled out Australia’s largest iEMR in a leading tertiary adult hospital. This was implemented with a big bang approach in which all components of the digital stack except medication ordering were rolled out. We hypothesised that the digital disruption might increase risk of errors in care, and that a surveillance could identify adverse events and facilitate rapid responses aimed at minimising patient harm.

**Methods:** Patient safety and quality standards were engineered into the digital stack prior to commissioning, using clinical specifications developed by hospital safety and quality teams. The pre- and post-Go live adverse event trends were analysed as an interrupted time series comparing the two weeks post go live for the same time period the previous year.

**Results:** Compared to the same 2 week period the prior year, there was no statistically significant difference in hospital activity. There was no increase in RRT calls or cardiac arrests. While an iEMR-related increase in adverse events that were not monitored is possible, clinically significant safety concerns did not become apparent, despite the heightened ascertainment bias resulting from the more intense surveillance processes implemented post-Go live.

**Conclusion:** Despite the potential for widespread disruption to care delivery with the big bang rollout of an iEMR in a major tertiary hospital, no significant increase was seen in the rates of adverse events following iEMR implementation. Embedding safety alerts into the digital stack rollout at go-live contributed to these favourable outcomes.

**Disclosure of Interest:** None Declared
FRENCH WEBSITE FOR PUBLIC REPORTING ON QUALITY IN HOSPITALS: NEWS INDICATORS AND NEW DESIGN
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Objectives: Strengthen the contribution to a transparent and democratic health system by informing the user and empowering him/her to be an actor in his/her healthcare.
Use public disclosure as a lever to improve the quality in hospitals.

Methods: The French National Authority for Health (HAS) is responsible for both the accreditation procedure and development and implementation of quality indicators for hospitals.
In 2012, French law provided HAS with the mission to coordinate the development of appropriate information on the quality of care in hospitals and to carry out public disclosure. To realize this mission, HAS launched in 2013 a website which aims to provide official information, in a centralized location, containing reliable and updated data in a readable and educational format.
Several choices guided the development of this website:
· Data: to present quality data (quality indicators and accreditation criteria) and activity data of hospitals. Both data types are considered relevant to guide the user.
· Methodology: the website offers an official alternative to hospital rankings regularly published in the French press. These charts are very popular with the general public but are based on a methodology which could be criticized; therefore, only scientifically validated data aggregations are shown on the website.
· Ergonomics: the website benefits from a user-centered design. Data visualization is used to render highly visual, dynamic, and cognitive representations of information.

The project benefited from a partnership between HAS and French Ministry of Health. HAS carried out the project in consultation with both healthcare professionals and users representatives. It is now the public diffusion mechanism on quality of care for all French hospitals.

Results: Since its launch, “Scope Santé” has evolved. A new version of the site has been published at the beginning of 2016 by taking into account users tests. The interface and the navigation have been simplified and the results are now easier to understand by the general public. Patient organizations have approved the improvements. The information presented on the website corresponds to 500 quality and activity parameters collected from more than 4,000 hospital structures.
The results are presented with letters "from A to E" and with colors ranging from green to red.
Its main features are:
· a geolocalised mapping of hospitals;
· a multiple-criteria search function
· a hospital ranking by quality criteria with a valid methodology.
· a hospital's comparison on 3 levels:
  - a national benchmarking,
  - a regional benchmarking between nearby hospitals,
  - a custom benchmarking that allows the user to compare the hospitals of its choice.
In 2015, the annually traffic was around 400,000 visitors.

Conclusion: The presentation of the results of quality indicators in an educational and interactive form is a mean to meet the expectations of the health-care consumer and enable the citizen to participate in public debate. The patient voice will be integrated in November 2016 on “Scope santé”, with the publication of a user's experience and satisfaction score, based on a validated questionnaire on line.
In 2016, HAS is creating a patient’s community on the social network about “Scope santé” and more generally about quality in hospitals.
This new version of scope santé is another step towards the democratization of information and the patient’s empowerment.

Disclosure of Interest: None Declared
Objectives: To determine if children with non-IMCI presenting complaints are screened for IMCI to the same extent as children with any IMCI-related complaints

Methods: The Integrated Management of Childhood Illness (IMCI) clinical algorithm was designed by WHO and UNICEF for primary care settings in low and middle income economies to address the major disease burden caused by diarrhea, pneumonia, febrile illness (including malaria), and malnutrition and ensures compliance to the immunization protocols. Whilst a myriad of factors have been demonstrated to impact optimal adherence to the patient screening, diagnosis, treatment and counseling guidelines including the lack of competent providers and support systems, few studies have examined patient level factors that may influence guideline adherence. The patient’s presenting complaint has been hypothesized to be one of the key determinants of guideline adherence based on qualitative studies, though it has not been examined by rigorous quantitative analyses. We performed a cross-sectional analysis of data obtained from direct observations of patient assessment, disease management and caregiver counseling during pediatric outpatient visits from various outpatient facilities selected by systematic random sampling in 33 provinces in Afghanistan. The clinical observations were conducted by trained survey teams by randomly selecting children presenting in outpatient clinics in 2012. We investigated the relationship between the patient’s presenting complaints (characterized as IMCI or non-IMCI symptoms) and adherence to the IMCI clinical guidelines for patient screening, using a 10 point assessment index score.

Results: The final sample included 3,350 outpatient visits for children aged 2 months to 5 years from 691 facilities. Only 4.3% of the selected sample had no IMCI-related presenting complaints. The mean assessment index for all visits was 4.67 (SD 2.42). Visits involving any IMCI-related complaint were associated with a 1.01 point higher mean assessment index than visits with no IMCI-related complaints (95% CI, 0.52 to 1.51; p<0.001). After adjusting for relevant covariates including patient age, caretaker gender, provider type, provider gender, provider IMCI training status and IMCI clinical guideline availability, which were reported to be key predictors of quality of patient care in previous studies, children presenting with IMCI-related complaints received better quality of screening, based on the higher mean assessment index (by 0.75 points; 95% CI, 0.28 to 1.23; p<0.001).

Conclusion: Children who present with only non-IMCI complaints are at higher risk of not being screened for the common IMCI conditions which cause the major disease burden in developing countries. This highlights an important patient-related factor that should be addressed in guideline dissemination and training to ensure that all children are appropriately assessed for major causes of childhood morbidity and mortality to prevent missed opportunities when patients access care from primary care facilities, especially in post-conflict settings where access is limited due to security constraints and other factors.

Disclosure of Interest: None Declared
Objectives: To develop a Disease Management Program in Kazakhstan, focusing on hypertension, diabetes and chronic heart failure. Seven polyclinics in Pavlodar and Petropavlovsk implemented multiple elements of the Chronic Care Model. A national set of quality indicators was developed for these conditions, and a standard flowsheet was adopted which reminded providers of key best practices to monitor at each visit. Other algorithms for diagnosis and treatment of these conditions were also developed. A patient registry was created using MS-EXCEL, allowing teams to enter data from the flowsheet at each visit and obtain instant profiles on all quality indicators for each care team within each clinic. Participants also used the registry to implement a standard process for recalling patients to the clinic, if they were overdue for any tests or services. Participants also implemented patient segmentation, where patients in poorer health are identified and offered more intensive follow-up. Lastly, participants learned techniques for self-management support, which included supporting patients to develop brief action plans on improving health lifestyle.

Methods: Polyclinics participated in a year-long Breakthrough-Series Collaborative with four learning sessions and coaching visits, during which intensive training on the above change ideas took place. Participants also mapped out existing clinic processes and then worked to streamline and standardize these processes, and shift tasks to the most appropriate person. In particular, teams aimed to shift tasks from specialists to therapists (primary care physicians) and strengthen the role of allied health professionals. Steering committees were established at both the national and oblast level, which helped identify barriers to implementation and strategies for improvement. A national committee of clinical experts was also established, which provided clinical input into indicator selection and design of flowsheets and algorithms.

Results: The following changes occurred from June to October, 2015. The proportion of hypertension patients with blood pressure under control (<140/90) improved substantially, from 24% to 56% (n=409). The proportion of diabetes patients having the following tests done in the past year increased as follows: LDL cholesterol (from 57% to 85%); eye exam (26% to 71%); foot exam (67% to 71%); albumin-creatinine ratio (11% to 49%; n=436). However, outcomes like percent of patients with good control of long-term blood sugar (A1c<7) and blood pressure (< 140/90) were unchanged (56% and 57% respectively). The proportion of patients with LDL under control (<2.5) decreased from 30% to 17%, likely because more testing led to more untreated cases being detected. The percent of CHF patients with a previous echocardiogram increased from 90% to 99% (n=158). Almost all patients had a self-management goal documented, and 223 providers received basic self-management training.

Conclusion: Implementing the chronic care model was associated with major improvements in process measures and hypertension control. Outcome indicators for diabetes did not improve in the short-term, but teams should look for a longer-term improvement with continued implementation of the Program. Barriers were noted, such as lack of access to statins, and policy changes may be needed to achieve progress. The high use of self-management goals was encouraging, and future efforts should aim to increase staff capacity for self-management support and verify skills. Next steps will be to spread this initiative to other sites in Kazakhstan in future years and to ensure that incentives and other programs such as accreditation are aligned so as to support the Disease Management Program.

Disclosure of Interest: None Declared
Objectives: To broaden the set of available quality of primary health care measurement tools available from surveys and other data sources in South Africa and other developing countries.

Methods: As this is a methodological paper, we provide an overview of the contribution and shortcomings of client feedback (or satisfaction) surveys through reference to data analysis from the General Household Surveys (GHSs) and the WHO Study on Global Ageing and Adult Health (SAGE). The data analysis uses multivariate and bivariate methods. We then move to describing various other innovative measurement approaches that potentially allow for more accurate and nuanced measurement of quality of health care. These include enhanced client feedback surveys, observation of health staff, health staff knowledge vignettes, the standardised (simulated) patient approach, explicit consideration of population health and clinic benchmarking and peer review.

Results: Our results clearly indicate that client feedback surveys suffer from socio-economic status (SES) reporting bias. Controlling for the reporting bias of poorer users of primary health care facilities increases reported complaints and dissatisfaction among these users.

Conclusion: A variety of alternative measurement approaches are available to control for and compensate for socio-economic reporting bias in client feedback surveys. Accurate, reliable real-time facility data on quality of health care services has an important role in facilitating learning and improvement within these facilities, but also at a higher level. Ultimately, this data should be used to not only encourage performance, but also identify pockets of under- and over-performance which will allow for the identification of the factors that facilitate this. Accurate data on quality and performance at PHC facility level has an essential role in encouraging transparency and public accountability. By moving this data to publically accessible platforms it can enable informed choices by clients and eventually allow for greater competition between facilities.

Disclosure of Interest: None Declared
ISQUA16-2298

A LONGITUDINAL STUDY USING QUALITY IMPROVEMENT METHODS TO REDUCE ANTENATAL CLINIC WAITING TIMES IN SIX HEALTHCARE FACILITIES IN LAGOS STATE, NIGERIA

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Objectives: Can quality improvement methods reduce the total time a client spends on an antenatal clinic (ANC) visit in healthcare facilities in Lagos state?
This study assessed the total time a client spends in ANC before and after introducing quality improvement interventions to reduce waiting times at the participating facilities.
In spite of the positive impact of ANC on maternal and newborn outcomes coverage in Nigeria is not optimal (1). In addition, studies in Nigeria have shown that women are less satisfied with care when they spend too long in the ANC (2). Thus, interventions that reduce waiting time may improve patients’ perception of the service, their compliance and outcomes.

Methods: A prospective longitudinal study was conducted among hospitals in Lagos state participating in the Nigeria Healthcare Quality Improvement Initiative (NHQI). 6 health facilities comprising 2 private hospitals and 4 public hospitals identified reducing the total time spent in ANC as a priority area to apply quality improvement methods. Quality improvement (QI) teams from these facilities received a 2 day training on the Model for Improvement and bi monthly mentoring visits during the period of the study. Each facility team conducted a baseline estimate of the total time spent in ANC, generated change ideas and used Plan-Do-Study-Act cycles to drive change for a period of 8 weeks. Each QI team decided to test one or more change ideas based on identified bottlenecks. The ideas were to stagger the clinic into 2 batches, adhere to a fixed start time for the clinic, retrieve clients’ case notes the night before the clinic, introduce incentives for the first client to arrive or create a cluster for all the ANC service points. The outcome measure was total time spent in ANC defined as the difference between the time in and time out documented by the patient. Data was collected weekly by hospital QI team members and analysed using Microsoft Excel®. The percentage change from baseline to the end of the study and median time spent at ANC over the study period was calculated. Change in time spent in public compared to private facilities was also calculated.

Results: In all 6 facilities, the time spent in ANC by each client reduced after the intervention. In 3 facilities, the reduction exceeded 2 hours. Percentage reduction in time spent ranged from 32-80%. There was no difference in reduction from baseline in public compared to private facilities. 67% of facilities met or exceeded their target time. The 3 hospitals with the largest reductions in time spent had adhered to a fixed start time for ANC as one of their change ideas. In one hospital, there was a significant reduction in time spent in ANC once the QI team began to chart the time spent, even before any change idea was introduced (Hawthorne effect).

Conclusion: Introducing QI methods can reduce the total time each client spends at the antenatal clinic. Our findings suggest that adhering to a fixed start time for the antenatal clinic may be the most effective intervention. Recording the time spent in ANC in itself could contribute to reducing the total time spent. Further studies are needed to quantify the impact on patient satisfaction.


Disclosure of Interest: None Declared
ISQUA16-1670
CORRELATION BETWEEN EMERGENCY DEPARTMENT STAFF BURNOUT AND PATIENT SAFETY CULTURE IN TAIWAN
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Objectives: Studies have shown that more and more people experience burnout. Burnout is closely related to quality of care and patient safety. From a national survey, 51.8% of emergency department (ED) staff in Taiwan experience burnout. The aim of this study is to explore the correlation between the ED staff burnout and patient safety culture in Taiwanese hospitals.

Methods: A cross-sectional study was conducted. Data was collected from 61 emergency departments and 3,123 ED staffs in Taiwanese hospitals, using the Taiwan Patient Safety Culture Survey (TPSCS). The survey evaluates eight dimensions of TPSCS, including: teamwork climate, safety climate, job satisfaction, perception of management, working condition, stress recognition, burnout, and work-life balance.

The TPSCS data scores were correlated with ED staff burnout using Pearson correlation analysis. The level of statistical significance was set at p < .05.

Results: The results show that ED staff burnout has negative impact on teamwork climate ($\gamma = -.481$, p<.000), safety climate ($\gamma = -.517$, p<.000), job satisfaction ($\gamma = -.403$, p<.001), perception of management ($\gamma = -.260$, p<.043), working condition ($\gamma = -.359$, p<.004), and work-life balance ($\gamma = -.529$, p<.000).

However, stress recognition was significant positive correlated with burnout ($\gamma = .520$, p<.000).

Conclusion: The results of this study support that the ED staff burnout affects teamwork climate, safety climate, job satisfaction, and work-life balance.

High staff burnout may lead to shortages in medical care human resources, quality of care, and affect patient safety. Therefore, burnout is an important public health issue in Taiwan.

Disclosure of Interest: None Declared
Objectives:
The objective is to test a method for identifying leading indicators for things going right in a complex process within healthcare. We tested on the process of early detection of sepsis in a Danish hospital.

Methods: Safety is more than adverse events and investigating things that go wrong. It is an important aspect of safety to understanding factors that contribute to things going right. These factors can be used as indicators for healthcare processes, making them a tool for managing the given process and ensuring things go right. In this study, we argue that it is more relevant to understand how complex processes work in an everyday context and therefore investigate which factors have an impact on the process going right. Often there is a difference between how work was designed to function, work-as-imagined (WAI) and how work is actually performed, work-as-done (WAD). WAD assumes that we in our everyday work cope with a large number of factors affecting the process and we work under highly varying condition. We conducted a case study, investigating the early detection of sepsis in a Danish hospital. This process was visualized through the Functional Resonance Analysis Method (FRAM), a method developed to identify central functions and analyze performance variability in complex systems. The data was collected through field observations, semi structured interviews and document analysis. Observations consisted of 65 hours of observations over a 2 month period with informal interviews with staff. The semi-structured interviews were conducted with focus groups with relevant staff.

Results: The data collected was analyzed and used to create visual models of the process. We developed two models of the process, one illustrating WAI and a second illustrating WAD. WAI was based on guidelines and interviewing people working with guidelines far from the frontline. The model of WAD was based on observations and interviews. The two models have differences, this implies that there are aspects of WAD that are not represented in guidelines. The WAD model enabled us to focus on aspects of the process, like time, preconditions, resources and control mechanism, affecting how the process varies under different conditions. The application of FRAM gave us an understanding of complexity and how staff was able to ensure positive outcomes for patients.

Preliminary analysis of the process showed factors with impact on whether the process is successful. They are presented here, categorized in four important aspects of the process.

<table>
<thead>
<tr>
<th>Time</th>
<th>Resources</th>
<th>Preconditions</th>
<th>Control</th>
</tr>
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<tbody>
<tr>
<td>Interruptions affected time before detection</td>
<td>Clinical judgement of nurses</td>
<td>Receiving nurse alert to symptoms reported by referring doctor</td>
<td>Checklist – especially in younger nurses</td>
</tr>
<tr>
<td>Time consuming factors present in the process – blood sampling, urine samples etc.</td>
<td>Level of experience – nurses &amp; doctors</td>
<td>Observant and alert during first contact with the patient</td>
<td></td>
</tr>
<tr>
<td>Other responsibilities during reception affected time consumption</td>
<td>Relationship with doctors</td>
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The functions in the WAD model which showed high variability are investigated further, to examine whether they are factors, which are decisive for a successful detection of sepsis.

Conclusion: The analysis is still ongoing; therefore, the presented results are preliminary. The final conclusions will be available in mid-February, and presented at the conference. The study will propose factors for success in this process. We wish to align these factors, with staff members and propose that they can be applied as indicators for managing the process, to produce positive outcomes.

Disclosure of Interest: None Declared
Objectives: To determine if a multidisciplinary Respiratory Recovery Clinical Pathway can improve quality of care and reduce overall hospital length of stay (LOS).

Methods: This quality improvement study took place in a 1,170-bed, urban academic medical center. A Respiratory Recovery Clinical Pathway (RRP) was developed to standardize care and reduce overall hospital LOS for long term mechanically ventilated patients. The RRP was implemented in 5 adult intensive care units (ICUs) and includes the following interventions: a progressive mobility program; daily sedation breaks and spontaneous breathing trials; weaning protocol; structured family meetings with the care team; timely tracheostomy and feeding tube placement; and early discharge planning to recovery care centers. In addition to the RRP's interventions, clinical and administrative oversight and systems were established to monitor compliance, communicate progress, and address complex cases. The study uses a retrospective cohort design comparing the primary outcome measure of overall hospital LOS for pre-and post-intervention periods, 2014 (n= 284) and 2015 (n=291) respectively. Median overall hospital LOS was compared between 2014 and 2015 using the Kruskal-Wallis test. A linear regression model with log LOS as an outcome was utilized to adjust for individual patient characteristics.

Results: Implementation of a RRP in adult ICUs contributed to a reduction in median overall hospital LOS. Expansion of the RRP to other patient care areas and hospitals within our health care system will be pursued and further study will be conducted to determine success factors and other related outcomes.

Conclusion: Implementation of a RRP in adult ICUs contributed to a reduction in median overall hospital LOS. Expansion of the RRP to other patient care areas and hospitals within our health care system will be pursued and further study will be conducted to determine success factors and other related outcomes.

Disclosure of Interest: None Declared
TEAM TRAINING IN THE PERIOPERATIVE ARENA: A METHODOLOGY FOR IMPLEMENTATION AND AUDITING BEHAVIOUR

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Objectives: Preventable medical errors in the operating room are most often due to ineffective communication and suboptimal team dynamics. TeamSTEPPS (TS) is a government funded, evidence-based, structured program that provides tools and education to improve teamwork in medicine. We implemented TS in the operating room and merged the program with our Surgical Safety Checklist (SSC). An audit plan was created with a series of lectures and real-time coaching to see whether there was an improvement in qualitative team behavior.

Methods: We launched TS in the perioperative setting in a tertiary academic medical center with repeated educational campaigns and administrative support. Audits were performed in the operating room to collect both quantitative and qualitative information on time out (brief) and debrief conversations, using a standardized audit tool. The qualitative data captured the desired behaviors dictated by TS methodology. Real-time feedback and coaching were performed during live audits of these observations.

Results: Over a six month period, an equal number of time outs and debriefs for a total number of 1610 audits were performed. Performance was sustained at desired levels or improved for all qualitative metrics. A comparison between the first and last month’s observations of the time out time out showed an increase in compliance of performing introductions [11 to 99% (p<0.001)], discussion of case complexity [32 – 75%(p<0.001)], dialogue about status of resources [22-87%(p<0.001)], active engagement [44-83% (p<0.001)], and use of the check back [84 to 100% (p<0.001)]. The same comparison for debrief observations showed an increase in performance in discussion about improvement opportunities [59-94% (p<0.001)], active engagement of team members [9-90% (p<0.001)], and use of the “check back” [56-99(p<0.001)]. A linear regression analysis showed improved performance in most audit elements over time as well. For the time out, improvement was seen for introductions (p=0.027), discussion about the patient’s medical status (p=0.025) and the status status of resources (p=0.019), and performance of a check back (p=0.025). Linear regression analysis showed improvement over time for discussing improvement opportunities (p=0.031), active engagement of team members during the conversation (p=0.047), and use of the check back (p=0.027). Finally, the absolute number of wrong site/side/person surgery counts and unintentionally retained foreign body counts decreased after TS implementation as well.

Conclusion: Using the TS training program, we were able to show improvements in the quality of our time out and debrief conversations. We recognize leadership support and repeated reinforcement as two of the primary factors by which we achieved this success.

Disclosure of Interest: None Declared
EVALUATION OF PATIENT SAFETY WALK ROUND FROM THE PARTICIPANTS’ PERSPECTIVE

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Objectives: Patient Safety Walk Round (PSWR) generally refers to regular visits by senior executives who communicate with frontline staff on safety issues in hospital and has increasingly been adopted as an effective intervention to improve safety in healthcare organizations. PSWR is found effective in terms of promotion of safety culture, identification of factors contributing to errors and fostering intervention / improvement initiatives. Yet, little was known about the participants’ (staff being interviewed during walk round) perspective, which is one of the crucial components in the successful implementation of PSWR. This study aims to evaluate the PSWR from the participants’ perspective and explore potential areas for improvement.

Methods: A questionnaire was devised to collect participant’s comments on three dimensions, including the Coordination and Administration of PSWR, Validity and Relevancy of PSWR, and the Perception of Hospital-wide Patient Safety Culture. Questions regarding personal preference of PSWR including walk round frequency were also included. All staff (excluding the walk round team) participated in the PSWR during April 2014 to December 2015 would be included in the evaluation survey.

Results: The evaluation survey was conducted in January 2016, 2 months after the completion of PSWR. As a result, a total of 65 questionnaires were distributed and 44 of them were returned, giving an overall response rate of 66%. Out of the returned questionnaires, 73%, 11% and 16% were from nursing staff, allied health professionals and supporting staff respectively. Average rating to the PSWR was 87.7 out of 100, with the scoring on specific dimension was shown below:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Positive Feedback</th>
<th>Neutral</th>
<th>Negative Feedback</th>
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<tbody>
<tr>
<td>Coordination / Administration of PSWR</td>
<td>96.8%</td>
<td>3.2%</td>
<td>0%</td>
</tr>
<tr>
<td>Validity and Relevancy of PSWR</td>
<td>97.7%</td>
<td>0%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Perception of Patient Safety Culture</td>
<td>95%</td>
<td>3%</td>
<td>2%</td>
</tr>
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</table>

It was found that a majority (84%) of recommendations were addressed in a month’s time and Annual visit was the most desirable walk round frequency. Most respondents indicated that PSWR was most helpful in improving the work environment and resource management. Some respondents suggested that training in communication skills and personnel management on patient safety issues would be beneficial.

Conclusion: Success of PSWR is highly dependent on the active participation of staff and their perception on the exercise. It was therefore essential to understand their perceived value towards PSWR. The results reflected participants was comfortable for open discussion and they were willing to give suggestions. The results also shed light on potential improvement areas, particularly in promoting safety culture and providing learning opportunities to issues concerned.

Disclosure of Interest: None Declared
Objectives: Clostridium difficile infection (CDI) remains the predominant cause of healthcare-associated gastrointestinal infection. After the CDI peak in North America and Europe in 2007 the government in England introduced mandatory measures to improve CDI rates. However, in the US such government imposed mandatory reduction plans have only just been proposed in 2015. Different epidemiological profiles are also reported in CDI studies from each country; however they have not been analysed comparatively in the national populations to date.

Methods: A cross-sectional study was performed using administrative data to examine epidemiological profiles and rates of CDI in England and the US. National de-identified inpatient discharges from the most recent full year of data available (2012) were used to examine CDI incidence from the National Inpatient Sample in the US and Hospital Episode Statistics in England using ICD9-CM (008.45) and ICD10 (A04.7) respectively. CDI rates were calculated per 100,000 non-obstetric discharges. Age, sex and Elixhauser comorbidity profiles were also examined.

Results: The US had a higher rate of CDI compared to England: 1,118.8/100,000 vs. 77.2/100,000 discharges, respectively (p<0.001). CDI age profiles differed between both countries (p<0.001); in England, patients ≥75years constitute a larger proportion of CDI cases, whilst those aged 25-70 constitute more cases in the US (p<0.001). The proportion of CDI patients with comorbidities consistently coded in both countries was greater in the US compared to England apart from dementia, which was greater in England (9.63% vs. 1.25%, p<0.0001). Overall adjusted odds of CDI in females compared to males was elevated in both England (OR1.26 95%CI [1.21,1.31] p<0.001) and the US (OR1.20 95%CI [1.18,1.22] p<0.001).

Conclusion: The 2012 CDI rate within the US was much higher than in England. Age and co-morbidity profiles also differed between CDI patients in both countries. The reasons for this are likely multi-factorial but may reflect national health policy, such as the UK’s recent improvements in infection control strategy to combat CDI.

Disclosure of Interest: None Declared
DEVELOPING AN INSTRUMENT TO MEASURE THE REPORTING QUALITY OF THE QUALITY IMPROVEMENT (QI) SIX SIGMA PROJECTS IN HEALTHCARE

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Objectives: Six Sigma (SS) has been broadly adopted in the healthcare sector, and many articles have been published; however, the quality of those articles vary a lot, decreasing their value for use as evidence of SS effectiveness. This study aimed to develop a tool to measure the quality of published SS articles, and provide clues to strengthen the evidence of such SS project articles would have provided.

Methods: I) Developing the instrument: We developed an instrument based on a well validated tool, Appraisal of Guidelines for Research and Evaluation version 2 to evaluate the SS articles: (AGREE II-SS). The AGREE II instrument, which evaluates clinical practice guideline quality, was used as a basis of developing our tool because it has the same logical structure of assessing quality for evaluating SS project effectiveness. II) Scoring SS articles with AGREE II-SS instrument: We searched major biomedical databases for peer-reviewed SS articles from 1990 to 2015 using terms containing “Six Sigma”. Three reviewers independently assessed each article using the instrument with 24 total assessment questions to assess 6 quality domains and 2 additional final assessment items with a 7-point Likert scale (1=Disagree Strongly to 7=Agree Strongly). The domain and total AGREE II-SS scores from each of the reviewers were compiled and averaged following the scoring rubric suggested by the original AGREE II tool.

Results: A total of 985 articles were initially searched, 44 of which met the inclusion criteria of our study: academic journal article, peer-reviewed and so forth. From the 1-7 score system, the average composite score of all domains was 4.7 out of seven (95% CI: 4.4-5.1). Specifically, Domain 1 which evaluated how well the SS article described the project’s Scope and Purpose consistently scored well—5.7 out of 7 (95% CI: 5.5-5.9). This may be a direct result of a SS project requirement that all projects develop a project charter that details each project’s objectives. Additionally, Domain 2 which assessed how well the project involved stakeholders and Domain 4 which assessed how well the journal presented the information fared well with average scores of 4.8 (95% CI: 4.4-5.1) and 4.9 (95% CI: 4.6-5.2) respectively.

On the other hand, Domain 6 (Editorial Independence) scored the lowest with an average score 2.9 (95% CI: 2.5-3.3), Domain 3 (Rigor of Journal Development) and Domain 4 (Applicability of the Projects) which assessed how well the journals were developed and how well the SS project was designed and explained scored poorly as well, with scores 3.9 (95% CI: 3.5-4.2) and 3.4 (95% CI: 3.0-3.8) respectively the high variation and poor average scores from these two Domains indicate that SS project articles may not be capable of providing enough details about the SS projects to be cited by readers interested in replicating the article’s claimed successes.

Conclusion: Literature shows that SS is being used across many functional areas within healthcare and more and more projects are being reported in biomedical journals. If SS articles provide robust details in the methods and results sections, it would be beneficial to organizations that may suffer similar problems. Thus, quality of reporting of SS projects should be controlled to promote its effectiveness. Although standards for QI projects such as SQUIRE exists, a SS specific instrument that is tailored to effectively publish its unique way of measuring processes, identifying root causes, implementing solutions, and presenting the post intervention outcomes is needed. AGREE-II-SS is expected to completely serve such role - as a guide and as an evaluations tool.

Disclosure of Interest: None Declared
Objectives: Effective, reliable, and user-friendly methods to estimate the burden of adverse events (AEs) in hospital patients are necessary. To meet these demands the Institute of Healthcare Improvement launched the Global Trigger Tool (GTT) in 2003. The tool is used to identify trigger words in the patients’ medical record that indicate an AE. At discharge physicians in Norway review the record and write a summary of the hospital stay, including relevant medical diagnosis and complications coded with the International Classification of Diseases – 10th version (ICD-10). The ICD-10 codes are routinely transferred to the Norwegian Patient Registry (NPR) for use in official health statistics. The accuracy and completeness of the ICD-10 coded data regarding complication coding has been questioned. Reliability and validity is of significant importance when using such data in various epidemiological studies, in particular for patient safety and quality improvement trials. We aim to investigate if findings from the GTT are corresponding with ICD-10 complication codes in the medical records. Our nil hypothesis is that there is no significant discrepancy between reported AEs utilising the ICD-10 codes and those found with a positive GTT.

Methods: Using an explorative design we randomized patients from a larger study cohort (n = 13,033) to include a selection of 700 surgical in-hospital patients from two Norwegian hospitals, one 1100 bed university hospitals and one 300 bed regional hospital. The patients were prospectively recruited to the larger study from November 2012 to March 2015. Two GTT teams will separately use standard GTT-method following guidelines from the Institute for Healthcare Improvement to identify and categorise the 55 triggers in these patients’ journals. Both teams have nurses who are well familiar with the GTT-method and do this on a regular basis. One team have a senior anaesthesiologist, the other a surgeon, both new to the GTT-method. The two teams are supported by physicians working with the GTT-method. In phase two, a third team, who are blinded to the GTT-teams, will investigate if it is possible to verify the surgical complication ICD-10 codes to actual information in the electronic patient journals (EPJs) as documented by physicians, nurses, radiologists, physiotherapists, dieticians, and biochemists, throughout the total hospital stay. The ICD-10 team include two nurses and one senior anaesthesiologist. Descriptive statistics includes frequencies, means and standard deviations and will be reported for both GTT and ICD-10 code verifications. Sensitivity and specificity will be estimated and reported with 95% confidence intervals (CI). The study is registered in ClinicalTrials.gov, identifier: NCT01872195.

Results: A total of 700 patient medical records are included, 87.4% from Haukeland University Hospital and 12.6% from Førde Central Hospital. Since this study is ongoing, no results are available yet.

Conclusion: This study may help in validating the use of GTT versus medical record verified ICD-10 codes for AEs in epidemiological studies using the same codes as an outcome measure.

Disclosure of Interest: None Declared
AN INVESTIGATION INTO VARIATION IN THE VOLUME AND REPEAT TEST PATTERNS OF HOSPITAL PATHOLOGY REQUESTING

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Objectives: To examine and identify areas of variation in hospital pathology test requesting patterns and repeat test rates across hospitals, using Diagnosis-Related Groups (DRGs) as a case-mix control.

Methods: The study was conducted across four hospitals (two metropolitan general hospitals [Hospital A and Hospital E], one regional [Hospital F] and one rural hospital [Hospital D]) serviced by one pathology laboratory service. The retrospective data analysis study utilised linked data from the Laboratory Information System, Patient Administration System and Emergency Department Information System for the years 2008 to 2012. To examine the number of tests requested per patient day, a Poisson modelling approach was adopted with adjustment for hospital, DRG, year, age and gender. Data analyses were conducted using SPSS and SAS.

Results: The top ten ranked DRGs with the highest pathology test utilisation across all four hospitals, were Tracheostomy-related (A06B [Rank 1] and A06A [Rank 3]), Rehabilitation (Z60A [Rank 2] and Z60B [Rank 9]), Haemodialysis (L61Z [Rank 4]), Bowel procedures (G02A [Rank 5]), Chest Pain (F74Z [Rank 6]), Respiratory infections (E62A [Rank 7]), Septicaemia (T60A [Rank 8]) and Chronic Obstructive Airways Disease (E65B [Rank 10]). Test volumes for the hospitals were adjusted for DRG, age and gender. The comparisons across hospitals showed a range in the mean rate of tests per patient day from 3.0 (Hospital A) to 3.4 (Hospital E) in 2008. The adjusted rate across all the hospitals also revealed a general increase of pathology requests across time from 2008 to 2012. The adjusted rate was also higher in 2012 when compared to 2011 for Hospitals A, D and F but not for E. The time interval between repeat tests was examined for all Electrolytes, Urea and Creatinine (EUC) tests that had a repeat order. Existing guidelines recommend that the minimum repeat test interval for EUC tests should be 12 or 24 hours.2 The cumulative proportion of repeat tests for all EUCs requested within 12 hours ranged from around 5% (of all EUC tests) at Hospital D and F to 7% at Hospital A and 8% at Hospital E. When the cumulative proportions of repeat test rates within 12 hours were considered for patients classified within the Chest Pain DRG, the variation across hospitals ranged from 3% at Hospital D to 7% at Hospital A.

Conclusion: Improvements in pathology requesting are dependent on the availability of quality information about the type of pathology requesting carried out. This information should identify variation between locations across time and account for differences in patient characteristics. Adjusting for case mix can facilitate analyses that: i) pinpoint variations in test request volumes; ii) explore issues related to the appropriateness of test repeat requests; and iii) evaluate compliance with evidence-based guidelines and/or best practice recommendations.


Disclosure of Interest: None Declared
APPLICATION OF CARE BUNDLE INTERVENTION TO REDUCE INVASIVE CATHETER-ASSOCIATED INFECTION IN HIGH RISK UNITS: A PILOT STUDY IN MULTI-CENTER OF TAIWAN (2013-2014)


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Objectives: Ventilator-associated pneumonia (VAP) and catheter-associated urinary tract infections (CAUTI) are common healthcare-associated problems, especially for patients in high-risk units. The application of care bundles to reduce infection rate has successfully become an important measure in many countries. This project was conducted in 11 hospitals, including medical centers, regional hospitals and district hospitals, located in different areas of Taiwan. In 23 high-risk units, such as adults ICUs, respiratory care center, respiratory care ward were incorporated to implement care bundle intervention in order to reduce invasive catheter-associated infections, for which were built on evidence-based infection control measures.

Methods: Prospectively, this study was divided into pre-intervention stage, that was from January 2013 to July 2013 and post-intervention stage, from August 2013 to October 2014. The infection density of VAP and CAUTI were gathered for hospitals participated in this study. The domestic recommendation and guides and the standard operation procedures on the prevention of infections associated with invasive device insertions would be provided.

Results: The infection density of VAP in the pre-intervention and post-intervention period was 1.9‰ vs. 1.5‰ (-21.1%, P<0.01), IRR (95%CI) 0.80 (0.68-0.94) and the compliance rate was 95.2% in insertion checklist but 87.7% only in daily care evaluation. The infection density of CAUTI was 3.9‰ vs. 2.8‰ (-28.2%, P<0.001), IRR (95%CI) 0.70 (0.63-0.78) before and after intervention and the compliance rate was 94.9% in insertion checklist and 97.19% in daily care evaluation.

Conclusion: The feasibility for the implementation of VAP or CAUTI bundles in the healthcare system plays an important role for the quality and policy of infection control. The final outcome of this study will determine the quality of decisions and implementation of the care bundle policy. Together with the fact that the size of individual hospital and participating units were different, the proposed components of care bundles should be complemented with step-by-step working handbooks and standard operating procedures. The supply of clear and non-contradictory guidelines and operational plans for clinical practitioners as hand-on references will ensure the validity of care bundle implementation.

Disclosure of Interest: None Declared
EVALUATION OF A CONTACT FREE MONITORING TECHNOLOGY FOR SCREENING OF MODERATE AND SEVERE SLEEP APNEA PATIENTS

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Objectives: Obstructive Sleep Apnea (OSA) is a prevalent condition and often under-diagnosed. Undiagnosed OSA may be associated with increased morbidity and mortality. Moderate-to-severe OSA is associated with increased risk of perioperative complications and poorer hospital outcomes. A study in the UK showed that 38% of pre-operative patients in a surgical unit had moderate-severe sleep apnea and more than 60% of them were not diagnosed by the surgeons or anesthesiologists 1. The purpose of this study was to evaluate the performance of a contact-free sensing technology for its capability and accuracy to recognize patients with moderate and severe sleep apnea conditions, compared to the gold-standard polysomnography (PSG).

Methods: Patients referred to the sleep laboratory for suspected OSA and healthy volunteers studied at their home environment, were monitored by the contact free technology (EarlySense) as well as by full over-night Polysomnography (EEG, EOG, EMG, thorax and abdomen respiratory inductive Plethysmographs, nasal cannula and pulse oximetry) device as gold standard, for presence of moderate or severe obstructive sleep apnea. All PSG recordings were analyzed by a sleep expert to score apnea and hypopnea, and calculate the Apnea Hypopnea Index (AHI), number of respiratory events per hour of sleep. Analysis of the contact free technology signals were compared to reference, and accuracy was calculated. We then analyzed signals collected from 1760 patients hospitalized in a typical Med./Surg. floor using the validated algorithms to estimate number of OSA patients during hospitalization.

Results: A total of 108 subjects, 61 patients referred to sleep lab and 47 healthy volunteers studied at home, were studied. Overall, 74 men and 34 women with age ranged 18-72 (avg. 43.8) were included. Severe OSA (AHI≥ 30) was detected in 12, and moderate condition (15≤AHI<30) in 11 subjects according to the PSG. The contact free device detected the severe apnea condition with sensitivity of 100% and Positive Predictive Value (PPV) of 60%. The sensitivity and PPV of the device to detect moderate OSA were 75% and 85%, respectively. Finally, Analysis of the signals collected from 1760 patients with average age above 50 years, monitored by the contact free technology for a total of 5429 nights, showed that 550 patients (31.2%) had AHI≥ 15, consistent with moderate/severe OSA.

Conclusion: The results of the present study shows high sensitivity and PPV of the contact-free monitoring technology, which can be seamlessly used to evaluate patients for OSA in their natural sleep surrounding as a sensitive screening tool to detect moderate and severe OSA. The percentage of the hospitalized patients that were found to have moderate-to-severe OSA closely resembles the percentage found in literature 1. Thus we believe that this contact free system can be used to screen hospitalized patients in general and surgical wards, in order to minimize adverse safety conditions.


Antimicrobial Prescribing in an Australian Rural Hospital Emergency Department

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Objectives: Implementing effective strategies to improve antimicrobial prescribing is often challenging in rural hospitals. This study aimed to evaluate and understand antibiotic prescribing practices in a rural hospital emergency department.

Study Setting: A rural 85-bed hospital in Australia with no onsite Infectious Diseases physician or dedicated Antimicrobial stewardship pharmacist. The study site relies heavily on a locum medical workforce to staff its emergency department.

Methods: Mixed method study.
Quantitative component- Prospective longitudinal observational method was used to audit 200 antibiotic prescriptions in the emergency department. Antibiotics were assessed for appropriateness against national antibiotic guidelines with the support of an external Infectious Disease physician and an expert Antimicrobial stewardship pharmacist. Logistic regression analysis was used to identify the influence of different variables (gender, type of doctor, choice of antibiotic, indication) in inappropriate antibiotic prescribing (IAP).
Qualitative component- Semi-structured interviews (duration 12-30 minutes) were conducted with 16 emergency department doctors using case vignettes. Interviews were audiotaped, transcribed verbatim and analysed using the framework method.

Results: The antibiotic audit revealed that 31% of antibiotics prescribed in the emergency department were inappropriate. Logistic regression analysis confirmed the choice of antibiotic as the only variable that significantly influenced IAP. In this study, selection of ceftriaxone was the only factor that predicted IAP (p<0.001).
Interviews identified prescribing culture, lack of awareness of local hospital guidelines and organisational constraints after-hours as the main factors that influenced IAP. Despite high level of familiarity with national antibiotic guidelines the study identified a culture of under-dosing and ‘defensive medicine’ associated with aminoglycoside prescribing.
Participants (doctors) recommended strategies such as education, restricting antibiotic availability and locally developed consensus-based approach as way to improve prescribing.

Conclusion: This study found that broad-spectrum antibiotics, primarily ceftriaxone, are still widely overprescribed. Improving knowledge and guideline familiarity alone is not sufficient; the culture of prescribing needs to change to improve antibiotic prescribing.

Implications for practice
This information will help to design interventions that target prescribing behaviour, which could lead to practice improvement and better clinical outcomes. Most of the study participants were locum doctors who only work several shifts in succession at the study site and then move on to work in different hospitals across Australia. Any behavioural interventions targeting this group of doctors may have impact at a national level and not just limited to the study site.

Disclosure of Interest: None Declared
Objectives: The ABCDE (Awakening and Breathing Coordination, Delirium monitoring/management, and Early exercise/mobility) bundle has been proposed as an interdisciplinary intervention to prevent and mitigate ICU delirium, but uptake of ABCDE processes has been variable to date. Our study examined the effects of using a structured deployment approach on ABCDE bundle adoption across multiple hospitals in a large delivery network.

Methods: We used a multifaceted implementation program to rollout and maintain performance of the ABCDE bundle. Key program features included linking elements of the ABCDE bundle as a set of coordinated care processes, designation of site champions, modification of the electronic health record (EHR) to provide decision support, staff training, reports developed under a rapid cycle improvement framework, and performance accountability as a system goal. The ABCDE bundle was deployed across 12 adult ICUs in 6 hospitals (tertiary hospital, 4 community hospitals, rural hospital) under a quasi-experimental, prospective study design in two intervention groups (“basic,” and “enhanced,” 3 hospitals per group). Both groups had access to EHR modifications and performance reports; enhanced hospitals received supplemental training on the bundle and direct engagement of champions. Eligible patients were 18 years of age or older with a requirement for mechanical ventilation more than 24 hours and less than 14 days. Time series analyses were used to assess for differential impacts of bundle adoption tactics between intervention groups.

Results: 4401 patients met inclusion criteria over a 3-year study period. Composite bundle adherence increased in both intervention groups between Year 1 and Year 2 of the implementation program, but the magnitude of increase was greater in basic hospitals (30% to 71%, p<0.001) vs. enhanced hospitals (42% to 56%, p<0.001). Statistically significant improvements in adherence to individual bundle elements (excepting early mobility in enhanced hospitals) were also observed in both groups during the Year 1-Year 2 interval. Between Year 2 and Year 3, composite bundle performance in basic intervention ICUs remained at 70%, while adherence in the enhanced intervention group continued to increase (56% to 65%, p<0.001). Compared to Year 2, adherence to individual bundle elements increased in Year 3 (achieving statistical significance in all areas other than delirium screening in the basic intervention group). Risk-adjusted difference-in-differences analysis indicated that the average bundle adherence improved by 33% and 41% (relative to Year 1) in Years 2 and 3 respectively. However, ICUs in the basic intervention group had an 18% greater increase in bundle adherence over the 2 years following bundle implementation than ICUs in the enhanced group. On extended follow-up after completion of the formal study, composite bundle performance at the implementation program hospitals (as well as other hospitals in the system not in the study cohort) has consistently remained at or above the 75-80% range.

Conclusion: Performance of ABCDE processes improved broadly across a cohort of heterogeneous ICU environments with use of a multifaceted implementation program. Given the accelerated bundle uptake in hospitals receiving the basic adoption intervention, EHR modification to facilitate workflow and support standardized reporting appears be a higher-yield implementation step relative to other tactics (providing a basis for quality improvement resource allocation). Although specific factors at the basic intervention sites (e.g., a strong ICU leader or an existing robust safety culture) may also have influenced rates of ABCDE practice adoption, over time, with consistent application of a structured deployment approach, hospital performance of the ABCDE bundle within the healthcare system converged.

Disclosure of Interest: A. Masica Grant / Research support from: Grant R18-HS021459 from the Agency for Healthcare Research and Quality (AHRQ)
**ISQUA16-1952**

**IMPROVING COMPLIANCE OF SURGICAL HAND WASHING THROUGH THE EYE OF THE LENS.**

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**Objectives:** To evaluate the compliance of surgical hand scrubbing and to increase the compliance of surgical hand scrub time to at least 2 minutes with periodic feedback.

**Methods: Methodology:** This was an observation study. This study was conducted at Aga Khan Hospital for Women and Children Kharadar, which is a densely populated area of city Karachi, Pakistan. Duration of the study period was from 1st April to July 31st, 2014. A remote video auditing system consisting of human auditors, visualizing surgical hand washing practices of surgical team, with motion sensor, was installed in the scrub area wall visualizing the scrub sink only. A clock was displayed for the health care professionals to aid in ensuring two minutes hand washing. All surgeons, technicians, and surgical assistants were included in the study. Surgical scrubbing was measured during a 4-week period by remote video auditing without feedback and a 12-week period with feedback. During the prefeedback period the surgical team knew about the camera monitoring but they did not know what the camera was monitoring. Performance feedback in percentage value was continuously displayed in operating room sign board. Data from the infection control department for surgical site wound infection rate was evaluated during the study duration period to see if the compliance to 2 minute hand scrub made any difference to the existing surgical site wound infection rate of the hospital. An auditor was responsible for viewing the recordings and timing the hand washing procedure time, analysis and recording the data.

The data was password protected in computers, access of which was only with the auditor and team leader.

**Results:** During the first 4 weeks the overall compliance to 2 minute surgical scrub was 14.6%, among surgeons, surgical assistants and technicians. The next 12 weeks with feedback compliance increased to 80.7%, with rates ranging from 59% to 94% (p value 0.001) which is significant. The least compliant to 2 minute hand scrubbing were surgeons with baseline rate of 10.5%. This was closely followed by surgical assistants and technicians with baseline compliance of 15.5% and 18%, which is quite close. As soon as feedback was given compliance rose in all three groups with rates ranging from 50% to 95% in all three groups. The SSI rate significantly went down from 6.3% to 2.1% mean (p value 0.008) after initiation of feedback

<table>
<thead>
<tr>
<th>Team members</th>
<th>Prefeedback 4 weeks</th>
<th>Postfeedback 4 weeks</th>
<th>Post feedback 4 weeks</th>
<th>Post feedback 4 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeons</td>
<td>10.5%</td>
<td>50%</td>
<td>84.7%</td>
<td>93%</td>
</tr>
<tr>
<td>Surgical Assistants</td>
<td>15.5%</td>
<td>48%</td>
<td>96%</td>
<td>94%</td>
</tr>
<tr>
<td>Technicians</td>
<td>18%</td>
<td>75%</td>
<td>95%</td>
<td>95.3%</td>
</tr>
</tbody>
</table>

**Conclusion:** Video surveillance with feedback for hand washing is an effective tool for measuring hand hygiene and improving compliance.  

**Keywords:** hand hygiene, surgical scrub compliance, camera


**Disclosure of Interest:** None Declared
OBJECTIVES: The effectiveness of interventions to implement clinical guidelines is variable, particularly because it often involves changing healthcare professional behaviour within a complex system. Whilst behaviour change interventions informed by theory are significantly more effective, those developed to support implementation often use intuition rather than theory. Whilst the tacit knowledge and experience of healthcare professionals is crucial, the content of these interventions can be difficult to communicate, generating problems with replicability and generalizability. The objective of this study is to use behaviour change theory and co-design to develop interventions to overcome barriers to referral of colorectal cancer patients with a high risk of carrying hereditary cancer genes to genetics counselling services.

METHODS: Two large Sydney hospitals participated in this study. The top five barriers to referral identified by a validated questionnaire were discussed in four semi-structured focus groups and seven individual interviews with 19 healthcare professionals involved in the referral process. Participants discussed ideas for intervention strategies that they envisaged would be effective in addressing the key barriers to referral, and were guided by the research team about which theoretical behaviour change techniques (BCTs) were likely to be effective in addressing each type of barrier. Once senior management granted permission in each hospital; teams were supported to implement the interventions in their organization and re-auditing to assess change in practice.

RESULTS: Interventions were co-designed using theoretically underpinned behaviour change techniques by healthcare professionals and the research team (see Table 1 for examples). Implementation of interventions and assessment of practice change is currently underway.

Table 1. Example barriers, intervention strategies, and behaviour change techniques

<table>
<thead>
<tr>
<th>Barrier Domain</th>
<th>Description of actual barrier</th>
<th>Intervention Strategy</th>
<th>Behaviour Change Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental context and resources</td>
<td>Reflex secondary testing (BRAF V600E testing for MLH1 abnormal specimens) has been agreed in principle by the hospital pathology service but implementation of in-house testing is delayed</td>
<td>Pathology Service to develop a departmental protocol to automatically send MLH1 abnormal specimens to alternative pathology service for BRAF V600E testing</td>
<td>Environmental changes: adding items to facilitate the behaviour; restructure of social environment</td>
</tr>
<tr>
<td>Cognitive, memory and decision making</td>
<td>Terminology in the pathology reports can be confusing, making the decision to refer difficult. Currently a mix of terms used: “positive/negative,” “abnormal/normal,” “preserved/lost”</td>
<td>Review of wording for IHC and BRAF V600E pathology reporting to make results easier to interpret</td>
<td>Prompts, triggers, cues</td>
</tr>
<tr>
<td>processes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION: Co-designing interventions with healthcare professionals using behaviour change theory can produce strategies that are appropriate for addressing specific psychosocial barriers, and are more likely to be realistic, feasible, and acceptable within their context. The impact of these interventions on practice change will be presented.

DISCLOSURE OF INTEREST: None Declared
INTEGRATING INDIVIDUAL PATTERNS OF CANCER SCREENING AMONG WOMEN TO IDENTIFY COMMON PREDICTORS: DATA FROM A LARGE HMO IN ISRAEL OVER 15 YEARS.

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Objectives: Routine screening for early detection of cancer follows preventive medicine guidelines. Longitudinal population rates of keeping current exams are used as quality indicator for health maintenance organizations (HMO). Little attention is given to behaviors of individuals across different indices. We use individual data on cancer screening to highlight common patterns and identify sub-groups for targeted intervention.

Methods: Screening exams for breast (BC) and colorectal cancer (CRC) were recorded during 2000 - 2014 for 22,733 women followed from age 50 in a large HMO in Israel. Survival analysis methods were used to assess time to screening exam. Cox models stratified by exam type evaluated the effect demographic factors on screening patterns.

Results: Over 15 years of follow-up, 93.23 % of women had at least one mammography exam and 84.57% a first screening for CRC (colonoscopy, 21.22%; occult blood, 63.35%). Median time to first mammography was 1.72 years while median time to first CRC screening was 7.72 years. Factors associated with time to first mammography included a history of prior screening for BC (Relative Hazard, RH=1.70, 95%CI: 1.65-1.74) indicating probable high-risk women, immigrants (RH=1.06, 95%CI: 1.03-1.09), high socioeconomic status (SES) (RH=1.05, 95%CI: 1.02-1.08) and diabetes (RH=1.06, 95%CI: 1.00-1.10); Arab minority (RH=0.83, 95%CI: 0.76-0.91) and Orthodox women (RH=0.84, 95%CI: 0.75-0.94) were associated with slower time to first exam. Time to first mammography was strongly associated with time to subsequent exams and not to demographics. Interestingly, time to first screening for CRC was also strongly associated with time to first mammography exam, in addition to the demographic factors. Women who delayed first mammography to an age over 54 were less likely to perform screening for CRC (RH=0.79, 95%CI: 0.77-0.82).

Conclusion: Integrating data on individual women utilizing preventive health services provided interesting insights and highlighted the importance of improving rates of first screening and examinations among minorities. Parameters estimated in this analysis are used in micro-simulation models to predict population secular trends and provides a novel tool for planning targeted interventions among specific sub-groups of women.

Disclosure of Interest: None Declared
THE INSTITUTIONAL RESPONSE TO MORTALITY ALERTS: AN EVALUATIVE FRAMEWORK

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Objectives: In the UK, considerable investment has been made in mortality surveillance and alerting systems to notify health care provider organisations when above-expected trigger thresholds are breached. Research has to date largely focused upon whether mortality is an effective indicator of quality of care. There is a lack of understanding concerning the ways in which organisations are currently using mortality data and associated alerts, and the extent to which these responses are effective at promoting organisational learning and quality improvement. This study set out to develop an evaluative framework for institutional capability, to effectively respond to mortality alerts, based upon qualitative analysis of a large dataset from case studies at 11 alerted providers in the UK.

Methods: 65 qualitative interviews were conducted across 11 UK providers. Providers were selected based upon receipt of recent mortality alerts in two specific clinical areas (Sepsis and Acute Myocardial Infarction). Interviewees from each provider were selected based upon their involvement with mortality and included Mortality Leads, Medical Directors and Information/Coding Specialists. In order to validate the emerging framework, interviews and a focus group were conducted with data service provider representatives and regulatory bodies. Qualitative data was analysed using the Framework Method in which both inductive and deductive reasoning were combined to develop and iterate key dimensions, drawing upon perspectives contributed by a multidisciplinary research team (organisational/health psychology, informatics, sociology, health services management and patient safety).

Results: An evaluative framework was developed consisting of nine key thematic areas. These include structures and processes to support mortality governance, use of information, mortality review and local improvement as well as broader influences such as the organisational culture, senior leadership and external environment. The presence of key committees, roles and processes for effective mortality governance was identified as important as well as effective organisational use of mortality data to detect and respond to signals proactively. Issues associated with the accuracy of mortality coding were raised by interviewees and appropriate investment in mortality coding capability was viewed as essential. The robustness and frequency of mortality review contributed to an organisation’s capacity to learn from alerts and translate findings into local actions for improvement using systematic methodology. More broadly, the organisation’s attitude towards the avoidability of mortality and the strategic priority assigned to it by senior leaders were perceived to be highly influential. However, front-line clinical involvement in the process and inter-professional collaboration were additionally highlighted as critical. Finally, interviewees emphasised the role of the regulator in encouraging organisations to respond to mortality alerts as well as external pressures from the media, public and national campaigns.

Conclusion: Achieving an optimal response to a mortality alert is a complex institutional process that draws upon a variety of interrelated internal organisational and external factors. The evaluative framework produced as a result of this study can be used as a practical tool to better support health care provider organisations in using and responding to mortality alerts, to improve patient safety and quality of care. This could enable more enhanced outcomes from the investment that has been made in mortality surveillance and alerting systems in the UK and beyond.

Disclosure of Interest: None Declared
Objectives: This presentation showcases national workplace safety and violence prevention findings from health care organizations participating in the Accreditation Canada program in order to identify system strengths and opportunities for improvement.

Methods: Workplace safety is assessed as part of the Accreditation Canada Leadership Standards. The Workplace Violence Prevention Required Organizational Practice (ROP) included in the Leadership Standards remained unchanged and was evaluated in 970 unique health care organizations between 2011 and 2014. The ROPs are evidence-informed practices that address high-priority areas central to quality and safety. National results of 64,070 respondents were also analyzed from the Worklife Pulse Tool, a survey questionnaire completed by direct care providers, physicians, and staff focused on worklife.

Results: Based on the Accreditation Canada Leadership Standards, national results across sector indicate that leaders support a safe work environment and the quality of worklife. Certain elements or criteria were not in place in more than 30 organizations (10%) and as such, opportunities exist for a coordinated approach to preventing workplace violence, identifying and monitoring processes and outcome measures [1] related to the work environment, and monitoring fatigue and stress levels. The ROP on workplace violence prevention showed a decreasing trend in compliance from 87% in 2011 to 81% in 2014. This indicates that a focus on violence prevention must remain a leadership focus as compliance with the Workplace Violence ROP has been identified as one of the lowest across all ROPs in the Accreditation Canada program. Results show that in addition to a policy, it is critical to ascertain the risk of workplace violence, develop a formal process and documentation, and provide staff training for violence prevention. Based on 64,070 responses from direct care providers, physicians, and staff, opportunities exist for health leaders’ commitment to a safe workplace (73% positive response), and actions to prevent abuse in the workplace (78% positive response).

Conclusion: The results from the Accreditation Canada standards, Required Organizational Practices and worklife questionnaire confirm that workplace safety continues to be of widespread concern across health organizations in Canada and internationally, with important implications for health care workers, patients and the health system (Accreditation Canada, 2015). Accreditation Canada continues to enhance the accreditation program to support health organizations across Canada and internationally in mitigating safety risks. For on-site surveys that began in 2015, the Long-term Care Services Standards were strengthened to include content in the area of abuse involving residents, family and team members. For on-site surveys that began in January 2016, significant revisions have also been made throughout the program, including in the Leadership Standards, to strengthen and broaden the principles of client- and family-centred care. Accreditation Canada continues to inform health system performance and share a unique perspective on quality and safety using national system-level data collected through the accreditation process.


Disclosure of Interest: None Declared
THE RESULTS OF A PROJECT FOR ACCREDITATION PROGRAM DISSEMISION IN SMALL CLINICS IN SÃO PAULO-BRAZIL.

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ONA - ORGANIZAÇÃO NACIONAL DE ACREDITAÇÃO, São Paulo, Brazil

Objectives: Accreditation programs exist in Brazil for 17 years, but the percentage of healthcare organizations accredited in the country is lower for 5%, and more than 50% of accreditations are performed at hospitals. Over the past 04 years, private and government initiatives promoted greater demand for accreditation processes, including for non-hospital healthcare organizations. However small clinics, with up to 50 employees, found difficulties on adher to accreditation programs, due to the costs and overlapping of their work processes. In 2013 the Federation of Hospitals, Clinics and Laboratories of São Paulo, identifying these issues and determined to encourage the qualification of its members, proposed a partnership with ONA- Brazilian National Accreditation Organization to facilitate the accreditation of this type of organization. So the project called compass was set.

Methods: This project was voluntary for outpatient clinics and was developed in 4 modules: Sensibilization, Organizational Diagnostics, Training and Development and Accreditation. The 03 first modules happened over 2014. Sensibilization - There were 10 workshops on quality management, patient safety and accreditation, lasting 4 hours each, in 10 cities in the state of São Paulo. The second module was the Organizational Diagnosis - Eight clinics had joined the project and were submitted to evaluation visits, based on the ONA methodology that is ISQua Accredited, where all their work processes were checked and an initial report of non-conformities and improvement opportunities was written. The third module was Training and Development. Clinics participants attended 07 meetings of 16h each, over 6 months with presentation and discussion of content relating to quality management, patient safety, compliance with legislation and existing notes in the initial assessment reports. The fourth module was the assessment for accreditation. Organizations had 12 months after the end of the training module to request the evaluation visits for accreditation. This survey followed strictly the existing rules ONA's accreditation methodology for clinics.

Results: The Sensibilization module had the participation of more than 500 managers and small clinics directors. Joined the project 08 clinics that performed organizational diagnosis visits and actively participated in the training and development module. All with frequency above 80% in this module. Six clinics were evaluated within the deadline, by the end of 2015, one was evaluated in early 2016 and another will be evaluated in March 2016. All evaluated clinics were accredited. Five clinics were accredited at level 1, fulfilling to the principle of safety and a clinic was accredited at Level 2 fulfilling to the safety and integrated management principles, according to ONA's methodology. Considering only Leadership and Management section of ONA’s standards these were the finding at the 02 visits:

<table>
<thead>
<tr>
<th>Major elements</th>
<th>Organizational Diagnosis Survey</th>
<th>Accreditation Survey</th>
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<tbody>
<tr>
<td>Management model</td>
<td>04 clinics</td>
<td>04 clinics</td>
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<tr>
<td>Institutional Policies</td>
<td>05 clinics</td>
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<td>People development</td>
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<td>Biohazards action plans</td>
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<td>06 clinics</td>
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<td>Supply chain management</td>
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Conclusion: The implementation of a project aimed to promote accreditation programs to small clinics indeed spread accreditation through these organizations, and meet the requirements and standards can be achieved from the appropriate training of leaders. The leadership and management were consistently improved at these small clinics, mainly people development. The success of the project enabled its replication in 2015 with the participation of 16 clinics. In the year 2016 it will be extended to home care organizations.

Disclosure of Interest: None Declared
BUILDING THE MONITOR AND EVALUATION FRAMEWORK FOR THE NATIONAL HEALTH INSURANCE IN TAIWAN

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Objectives: The Taiwan National Health Insurance has been initiated for almost 20 years, but still did not develop a framework for monitor and evaluation. In the past, experience-based indicators were developed by different unit in charge of specific tasks. It is essential to provide sound supervision framework with specific monitoring indicators developed by method from rigorous and scientific basis. The purpose of this study is to develop a framework for monitor and evaluation the operation of health care insurance based on experience from domestic and developed countries.

Methods: The prototype of framework was developed by reach team from synthesizing available reference and literatures. Three stages of developing process were done. In the first stage, two expert meetings were held to know the scope and boundary of the study. One questionnaire was mailed to 58 experts and analyzed by concept mapping method. Key dimensions and sub-dimensions were chosen based on survey result for choosing dimension and sub-dimensions. In the second stage, modified Delphi Technique was conducted for developing monitoring indicators. Three inclusion criteria cover importance, feasibility and usability of indicators. The cut-off point was based on RAND Appropriateness Method. In the third stage, the relative weight of dimension, sub-dimension and different indicators was obtained from Analytical Hierarchy Process and expert consensus. We also provide empirical result of chosen indicators in the last stakeholder meeting and get comments from experts.

Results: We proposed a framework for monitor and evaluation the performance of the National Health Insurance. From survey and concept mapping, we choose four dimensions including effectiveness, efficiency, quality and financial fund raising. Two sub-dimensions were covered by effectiveness (health status, satisfaction), efficiency (macro efficiency, value of resources) and quality (safety, efficacy). Three sub-dimensions were covered by financial fund raising (financial balance of income and expenditures, level of health care expenditures, fair financing). We founded 76 indicators for the six sub-dimensions of medical part and 23 indicators for financial part. In Delphi questionnaire of medical part, 44 indicators and 28 indicators for the first round and second round respectively. In Delphi questionnaire of financial fund raising part, 21 indicators and 12 indicators for the first round and second round respectively. Finally, we chose 26 indicators out of nine sub-dimensions. 21 of them can have empirical data for further discussion about threshold or just for observation. 4 Statistical process control chart was applied to demonstrate results of indicator trend. Weight result can show consistent finding in AHP and expert consensus, but the difference was bigger from AHP. Effectiveness has higher weight than quality of care.

Conclusion: It is feasible to apply systematic methods such as concept mapping, modified Delphi Technique as well as Analytical Hierarchy Process to develop a sound monitor and evaluation framework, developing monitoring core indicators and provide a platform for communication among different stakeholders. In this study, we combine face-to-face discussion and virtual meeting to collect opinions from experts with different backgrounds to develop dimension, sub-dimensions and indicator as well. It is important to consider data collection while developing indicators. In the future, application of framework and indicators might fit different purposes, and practical application to payer might be essential, too. We recommend that future research might apply other methods of consensus building to review and update current results.

Disclosure of Interest: None Declared
LEVERAGING THE CAPABILITIES OF MSQH ELECTRONIC ASSESSMENT TOOL TO IMPLEMENT THE MEASUREMENT OF PERFORMANCE INDICATORS
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Objectives: The study aims to facilitate in the development of web based performance indicator quality improvement reporting system under the hospital accreditation program

Methods: MSQH Electronic Hospital Accreditation Program (My e-HAP) is the core of the Electronic Assessment Tool for Hospital Accreditation Program. The main function of the My e-HAP is to enable healthcare facilities and surveyors to access, complete and utilise the self-assessment documents and survey findings over the web. In the MSQH Hospital Accreditation Standards 4th Edition, specific Performance Indicators have been identified for each service standards. Healthcare facilities preparing to go for the Hospital Accreditation Survey are required to subscribe to these performance indicators. The MSQH envisage the potential of an automated process for facilities to measure the quality of care and continuous improvement initiatives. In addition the development of an automated web based system is an important step to create, manage and monitor the healthcare facilities Key Performance Indicators (KPIs). It also helps MSQH to track and enhanced the healthcare facilities performance.
In this study, four phases of interactive processes are involved:
- Defining the target audience and needs
- Pilot testing and refinement
- Software development including validation and testing algorithm
- User acceptance testing

Results: The application allows healthcare facilities to enter their KPI (Key Performance Indicator) data into one specially designed system rather than use conventional methods such as spread sheets - which by their very nature are prone to errors. Concurrently, the KPI reporting system is linked to the MSQH My e-HAP system. The MSQH Performance Indicator reporting system covers the technical specifications i.e. rationale for the indicators, definitions, inclusion and exclusion criteria, numerators, denominators and data collection. This system will help healthcare facilities in the implementation of performance indicators as required under the MSQH current standards. MSQH surveyors can also review the information on the performance of the healthcare facilities online without waiting for hard copies. Furthermore, Performance Indicator Reporting System helps MSQH optimize the processing of accreditation services, elimination of paper-based processing; improve communication with clients and stakeholders and at the same time address the quality of services

Conclusion: The pursuit for quality improvement requires the measurement of performance; outcomes of services need to be measurable. For Quality to be managed and improved it must be understood, defined and the existing quality of care must be established. Thus assessing and measuring the quality of care in a way that enables it to be quantified is an essential ingredient for quality improvement.

References: PERFORMANCE INDICATORS
MSQH HOSPITAL ACCREDITATION STANDARDS - 4TH EDITION
PERFORMANCE INDICATORS MSQH HOSPITAL ACCREDITATION STANDARDS - 4TH EDITION

Disclosure of Interest: None Declared
Objectives: The cluster aims to promote local economic development, quality of life and improved health indicators of the RS state through the implementation of the adapted model of the German Medical Valley, in the customized form of Technologies Cluster for Health. The project for the implementation of it is also intended to act in the development of local professionals and retaining talent in the country promoting the education sector and facilitating the generation of scientific and technological programs and projects in the state of Rio Grande do Sul. In addition to promoting entrepreneurship, innovation and creation of new technologies in the health sector and adjacent thus providing the community around it access quality services and products.

Methods: During the project structuring process to launch the Cluster for the Rio Grande do Sul state government have been several surveys designed to power the project, also known as "contextual search" in addition to using other tools of strategic design as brainstormings, triple helix innovation, design thinking, business model canvas - these are some examples of instruments that were used to clarify the project's needs. The functions of planning and strategic monitoring of projects and complementary activities at the same are structured in the form of a management board and it is the executive secretary of the planning implementation tasks and tactical monitoring and Medical Valley Erlangen will be up to management consulting and technical monitoring during the process of structuring the same, and within this component is the partnership with the Medical Valley will be critical in that it has more than 15 years of important management experience European Cluster specializing in technologies related to health care.

Results: The management of the cluster results after its implementation will be carried out through the use of various indicators related to the strategic project areas: human resources, technological innovation, business, market, quality of life and environment.

The activities of the future will be based on responsibility, ethical and social consciousness, cooperative and collaborative models in the knowledge economy, in small and medium-sized enterprises, the new entrepreneurship geared to the quality of life, actively inserted in the information society and citizen participation committed and responsible.

Conclusion: In short, this initiative for the creation of the Technology Cluster in the RS Health aims to build a new economic model that assumes offer to the Brazilian society a new path, where the citizen is the center of this model of economic and social development.


Disclosure of Interest: None Declared
ISQUA16-1564
CREATING A CULTURE OF SAFETY: A ROADMAP OF AN INTERNATIONAL HEALTHCARE ORGANIZATION JOURNEY TO BUILDING EFFECTIVE TEAMS WITHIN AND ACROSS DISCIPLINES
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Objectives: The goal of this project was to inform the development of a program that adapts the TeamSTEPPS approach to an international institution. The goal for the overall TeamSTEPPS implementation was to create a culture of safety environment that encourages safe communication among healthcare professions.

Methods: By recognizing where communication failures occur, Team STEPPS curricula will be applied to address and correct communication failures with the goal of decreasing sentinel events impacting patient safety and long term sustainability of the Team STEPPS culture within an international healthcare organization. The program includes an assessment plan, an implementation plan, an evaluation plan, and an institutional sustainment plan. A focus group was created by researchers to determine how Team STEPPS implementation would address specific issues in the facility.

Results: A roadmap was developed to guide the intuition’s path towards effective communication within and across disciplines. The identification of root causes of poor communication in healthcare organizations and to implement the Team STEPPS approach to solve them.

Conclusion: Adapting TeamSTEPPS approach will create a more efficient, patient centered and coordinated system in an international healthcare organization. Creating well-thought implementation, evaluation, and sustain plans with the health care professionals will strengthen teamwork and make the plans more successful. When a gap between what they are currently doing and what they want to do is filled, evidence-based practices will be effectively implemented within the team. Promoting effective communication within and across disciplines is the first step in improving the quality of care in hospitals. The Team STEPPS approach could be a new standard of care to improve communication skills within healthcare teams.

Disclosure of Interest: None Declared
Objectives: The Transformation and Quality Service (TQS) at Melbourne Health (a large quaternary health service in metropolitan Melbourne, Australia) is tasked with supporting the efficient and effective achievement of quality related outcomes by the organisation. The achievement of these outcomes is largely dependent on the quality improvement capabilities of staff, yet as at the end of 2014 TQS did not have a structured and sustainable approach to capability building. The objective of this initiative was to develop an integrated professional development program that equipped staff with the knowledge, skills and attributes needed to become transformative agents in relation to quality improvement.

Methods: A secondment opportunity was created for the role of Transformation and Quality Learning and Development Manager. This role then took on the responsibility of creating a program that expressed the needs of the team and coordinated the delivery of quality improvement education. Collaboration with the Organisational Development team allowed for the formulation of a Learning and Development Matrix, which addressed the gaps identified by staff, and situated these in context the domains of expertise within TQS: Patient Experience, Improvement Science, National Standards, and Risk Management. Considerable consultation with members of TQS ultimately led to the development of a calendar that provided a year-long schedule for eighteen different quality improvement courses. The purpose of these courses was to develop capability by training staff in the latest concepts, information and techniques related to quality improvement. Subjects with anecdotally high demand were scheduled multiple times, and there was an attempt to provide variety in start times to accommodate access for shift working staff.

Results: During 2015 a total of 349 staff attended 18 professional development courses offered across the four TQS practice domains: Patient Experience (4 courses), Improvement Science (8 courses), National Standards (2 courses) and Risk Management (4 courses). Feedback from participants showed high satisfaction with all elements of course provision and learning outcomes were achieved. In October 2015 an Accreditation survey undertaken by the Australian Council on Healthcare Standards, awarded the TQS Quality Improvement Training and Professional Development Program ‘Met with Merit’ status, which indicates that the surveyors saw examples of exceptional quality and a higher level of achievement than was required to meet the standard.

Conclusion: Melbourne Health requires the right mix of quality improvement skills, knowledge, attributes and expertise to be effective and achieve its strategic objectives. The development of the Quality Improvement Training and Professional Development Program has shown that a focussed and sustained educational effort can actively support quality improvement.

Disclosure of Interest: None Declared
Objectives: Medical technology, such as electrosurgery, imposes major risks for the patient and can have a serious influence on clinical outcome and wellbeing of patients if not applied correctly. The aim of this research is to investigate the relationships between the quality and thoroughness of electrosurgical educational programmes, variety in actual usage and application of electrosurgical techniques in the perioperative setting, and the clinical outcome of the procedures.

Methods: The presented work includes an inventory among experts, a questionnaire among surgical residents, real-time capture of instrument use and finally clinical follow-up. With this approach we are able to use scientifically validated methods to improve quality and safety of medical technology usage and to support quality improvement in education. Some serious complications include bowel perforations and skin burns are considered to be preventable by ensuring a proper understanding of the technologies and their applications and an awareness of potential risks. However, recent studies found many gaps in the knowledge about the safe use of electrosurgical devices. The main focus of the inventory was to obtain an experts’ opinion on the current training programmes and on the general knowledge of their residents in electrosurgery. In the questionnaire for residents more detailed questions were asked about the training programmes. Also a more in-depth view was inquired about the importance of training and the level of knowledge of supervisors. For the real-time capture of electrosurgery application a current sensor was developed that records the magnitude of electric current delivered to an electrosurgical device. While plugged in between the power plug of the device and socket, it was able to detect device activation times and a reliable estimate of the power level settings. These parameters were recorded for 92 laparoscopic cholecystectomies and 45 breast cancer surgeries performed by different surgeons and residents. To evaluate clinical outcome and surgeon’s performance, seroma formation was selected as the most important parameter.

Results: A total of 30 experts participated in the inventory, mentioning a 1-hour theoretical lecture as the most offered educational program. Also 60% stated that residents don’t know enough about electrosurgery and 20% mentioned that education is not obligated to attend. An interesting result of the responses of the 200 residents was the fact that 30% had encountered an incident regarding electrosurgery. Moreover, 35% thinks the theoretical knowledge of their supervisors is not sufficient and 65% adjusts their way of application to the supervisor of the day. The current measurement data shows that there are differences in the way electrosurgery is applied by different surgeons during a laparoscopic cholecystectomy. Variations among surgeons are seen in the number of activations, the activation time and the approach for removal of the gallbladder. After patient follow-up a remarkable relation was seen between the use of a certain set of electrosurgical settings and the formation of seroma in the breast.

Conclusion: Improvement of quality and safety demands for detailed registration of surgical signatures during procedures and specific indicators of clinical outcome of the patients. Scientific validation of causal effects of these relationships provides input for the development of a best practice model.

Disclosure of Interest: None Declared
ISQUA16-1954
A NOVEL MODEL FOR EVALUATING PERFORMANCE USING A LAPAROSCOPIC SIMULATOR USING AN AUTOMATIC SOFTWARE PROGRAM
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Objectives: Complications in laparoscopic procedures include injuries during entry to the procedure's cavity, injuries to adjacent organs and blood vessels, misuse of electrocautery and inaccurate cutting. The aim of this study to assess a laparoscopic cutting assignment using a novel, objective, computer based algorithm.

Methods: We analyzed cutting assignment in a Box Trainer Simulator (BTS) using image-processing software. We evaluated: (1) Cutting Area Error (CAE) – areas enclosed by cutting deviations from the specified line; (2) Sharp Cut Error (SCE) - A deviation from the line with no area included; (3) Smoothness: the difference between the slopes of the actual cutting and optimal cutting. A forth indicator, performance, was defined as a dichotomous measure, (1 –perfect score in both CAE and SCE).

Results: Overall, 343 cutting assignments were included. No significant differences in indicators were found between residencies or years of surgical experience. The correlation was good between CAE and smoothness (R=0.64, P<0.001) and fair between CAE and SCE (R=0.353, p=0.008). There was significant improvement in accuracy between the first session and subsequent sessions for all three measures (p<0.001, p<0.01 and p<0.001, respectively). Compared with the first session (16% with perfect score in CAE), 53% of trainees scored 41 perfectly in the second session (p<0.001). Similarly, in the first session, no trainee scored 1 in performance, while in the second session 12% scored 1 (p=0.006). No difference in time needed to complete the assignment between residencies or surgical experience after the 3rd session

Conclusion: Our software proved reliable in analyzing cutting assignment in a BTS. The improvement in time required to complete the task did not affect the accuracy. Re-evaluation after the 3rd session is mandated in order to tailor-made the training sessions. We have shown that our software is able to reliably assess the cutting ability of a trainee, providing an objective tool for feedback and tailoring personal laparoscopy training programs.

Disclosure of Interest: None Declared
IMPLEMENTING AN ORGANISATION-WIDE ELECTRONIC MORTALITY TOOL IN AN AUSTRALIAN TERTIARY HOSPITAL
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Objectives: To implement a tool to ensure consistent documented mortality review in a timely manner in a tertiary healthcare facility.

Methods: Mixed methods design with:
A quantitative analysis of proportion of deaths that are reviewed using the mortality tool and classified according to classification scale and,
qualitative analysis of stakeholder perceptions of enhanced patient care as a result of systematic review of patient's deaths.

Results: High level of engagement by the Senior Physician staff due to the clinical relevance of the mortality process and the tool. There is an opportunity for qualitative analysis of the proportion of patient deaths reviewed using the mortality tool, the classifications of the deaths and trending of systems issues identified via the mortality tool.

Conclusion: The early engagement of senior medical staff, together with commitment from the organisation, both financially and with Executive level sponsorship in both the development and the implementation of the mortality tool was essential. This was coupled with the embedding of the process within the existing clinical audit processes.


Disclosure of Interest: None Declared
DEVELOPING AND TESTING PATIENT SAFETY ICONS FOR PROVIDING TAILORED PATIENT CARE IN INPATIENT SETTINGS: ELECTRONIC PATIENT SAFETY DASHBOARD

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Objectives: The goal of this study was to develop and test a set of icons to represent tailored safety information to patients and their care partners via a patient safety dashboard. Displaying actionable icons on an electronic inpatient portal facilitates structured and effective communication to prevent adverse events and empower patients and families to participate in their care.

Methods: An existing dataset from a previous study was used to identify initial patient safety dashboard content requirements. After conducting a focus group with Patient and Family Advisory Council (PFAC) members, an initial set of icons representing patient safety concepts were developed and validated along with information about actionable intervention plans for each concept. Content Validity Index (CVI) testing from May to July, 2015 with PFAC members as well as hospitalized patients/family was used to iteratively refine and finalize the icon designs. All CVI testing participants rated each icon’s representation of the underlying concept on a four-point scale (1=strongly disagree to 4=strongly agree) and then prioritized the icons in terms of safe care at the hospital. Icons were considered final when consistently garnering scores of 3 or 4 from testers.

Results: Thirty patient safety dashboard icons were developed after twenty patient interviews and two PFAC focus groups (eight to nine participants each). While some concepts, such as latex allergy or food restriction, were easily represented in intuitive icons; other concepts, such as preventing ventilator associated pneumonia or preventing delirium, proved to be more difficult to represent, and took more refinements to finalize. Taking into account level of education of CVI testing participants revealed how literacy could impact the understanding of icon concepts and educational content. Safety concepts were categorized, per testing feedback, into: physical activity, diet, safety risks (infection, ventilator pneumonia, falls), and care preferences. Patient education material supporting each icon was developed using public domain patient educational content resources. Logic for prioritizing display of icons was identified based on results from prioritization scores (e.g. wash hands, activity goals, and latex allergy).

Conclusion: Safety icons for the patient safety dashboard were developed and validated using the CVI technique and more importantly, the input of bedside patients and care partners as well as PFAC members. These icons would provide a personalized patient safety plan with specific education information that can be easily understood by patients and families in inpatient settings. As a next step, we will conduct a pilot study with the patient safety dashboard to determine practical application in the hospital setting.

Acceptance of Influenza Vaccine in Healthcare Workers in New Territories East Cluster Using a Health Belief Model

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Objectives: Influenza vaccine is recommended for healthcare workers (HCW) to reduce mortality and morbidity attributable to influenza. Influenza vaccination coverage among HCW remains the lowest compared with other priority groups for immunization. Little is known about the acceptability and compliance with seasonal influenza vaccines among HCWs in New Territories East Cluster (NTEC).

To examine the risk perception regarding seasonal influenza and influenza vaccination in HCW as well as the acceptance and compliance of influenza vaccine among HCW; to find out the reasons for accepting or refusing influenza vaccination, and to determine information sources regarding the effectiveness of influenza vaccine.

Methods: We conducted a cross-sectional survey in Family Clinics and four hospitals in NTEC, namely, Prince of Wales Hospital, Tai Po Hospital, Alice Ho Miu Ling Nethersole Hospital, and North District Hospital. HCWs are defined to include doctors, nurses, allied health professionals, administrative and supporting staff. Multiple logistic regression analysis was performed to identify factors associated with immunization acceptance.

Results: One thousand one hundred and eighteen HCWs returned their questionnaires in the end of February, 2016. The overall response rate was 37.3%. They were asked about their influenza immunization history as well as the reasons for accepting or declining the influenza vaccination. Response rate in different groups of HCW is as follows: doctors 11.5%, allied health 7.6%, nursing staff 46.2%, administrative 4.7% and supporting staff 30%. Near forty percent of HCW had received influenza vaccine in the last three years but only 25% of medical staff had received influenza vaccine in past 12 months and 23.7% intended to receive vaccination in coming 12 months. The most frequently cited reasons for accepting the seasonal flu vaccination were “for patient’s safety”, “better to be protected” and “worry about catching flu”. Approximately 56.5% of HCW who refused to have influenza vaccination cited “Dislike injections” as the main reason for refusing vaccination and “fear of developing undesirable reaction from the vaccine” (52.1%) was the second reason they were concerned. Other reported barriers include ambivalence about the efficacy and fear of side effects. Hospital Infection Control information provided by Hospital Authority was the most easily accessible source of information, which was followed by information from Centre for Health Protection and opinions from medical colleagues.

A significant proportion of doctors or nurses are more willing to take the vaccination while those of allied health or supporting staff were less likely to have the vaccination. This may imply that we should arrange more publicity on influenza vaccination to improve their acceptance in receiving the vaccination. Besides, middle-aged group was more willing to take vaccination while the younger aged group tended to resist to vaccination.

Conclusion: The seasonal influenza vaccination coverage among the HCWs in our cluster was low. We have identified a number of specific attitudinal barriers and misconceptions about immunization in NTEC. Targeted health education and health promotion campaigns may improve staff immunization acceptance rate.

Disclosure of Interest: None Declared
Objectives: There has been a rapid increase in the use of healthcare system and imaging studies in Korea. Consequently, the burden of radiologists has increased dramatically, and prompt interpretation of the results became difficult. Thus, we sought multidisciplinary methods to increase the prompt interpretation rate of the magnetic resonance (MR), computed tomography (CT), and simple X-ray studies before the outpatient return for a follow-up visit.

Methods: We built a multidisciplinary task force team composed of faculties, technicians, and nurses from the radiology department, oncologists, outpatient clinic nurses, and members of the Performance Improvement team. “Prompt interpretation” was defined as reporting of the interpretation before 8:30 AM on the day the outpatient return for a follow-up visit. Quarterly reports of the prompt interpretation rate were analyzed for 21 months.

Results: The causes of low prompt interpretations rate of outpatient imaging examinations were analyzed. First, the follow-up visiting schedules were often brought forward before the interpretation of imaging studies. Second, the number of imaging studies done during weekends increased and caused high burden from the start of the week. Third, the number of outpatients was highest on Mondays, further increasing the burden.

To overcome these problems, the task force team made a new policy that most patients, if possible, should be scheduled to visit after at least seven days interval to provide time for radiologists for proper interpretation of the studies. For patients who were to return to the clinic within the coming seven days, a new automatic marking system was introduced to the list of unread imaging studies to alert radiologists for priority interpretation. We reported the prompt interpretation rate monthly to the hospital leadership and shared the result with all hospital staffs. The prompt interpretation rate of MR and CT studies has increased from 75.3% to 91.7%, and that of simple X-ray studies has also increased from 94.9% to 96.1% during the 21 months.

Conclusion: Hospital-wide multidisciplinary efforts and quality measure management increased the rate of the prompt interpretation of outpatient imaging studies before the outpatient return for a follow-up visit.

Disclosure of Interest: None Declared
APPLICATION OF ELECTRIC HEALTH RECORD DATA TO QUALITY INDICATOR (QI); TRIAL AND VALIDATION FOR DESIGN AND DEVELOPMENT OF THE STANDARDIZED AUTOMATIC MODULES

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Objectives: Measuring the quality of care by Quality Indicators (QIs) and improving them becomes popular in Japan. However there are various problems like the heavy workload to staffs in health care institutes for collecting data and calculating QIs, timeliness to calculate QIs, various definition of the QIs, and so on. It is important to calculate QIs timely and quickly in reducing the workload. So we defined the definition and developed a new module for calculating QIs automatically by the common and valid definitions from electrical health record (EHR). We applied the module in 10 hospitals and reviewed the results.

Methods: We selected 14 QIs from QIs of hospital associations in Japan and AHRQ (Agency for Health Research and Quality). The selection criteria were (1) the QI is highly related to improvement of health care quality and safety, (2) the QI is not difficult to calculate from EHR data. We designed these QIs in specific definitions in detail and developed a calculating module. We also applied this QI module to the EHR system in one hospital to review the feasibility of it.

Results: We selected 14 QIs (see below). We also defined those definitions in detail and specification of the module.

1) Low Hb patients rate before using MAP
2) Ratio of platelet decrease before applying platelets
3) Order-finished ratio before the date
4) Ratio of controlled Diabetes
5) Ratio of pressure ulcer
6) Ratio of combined conference
7) Ratio of CT-MRI done 24hrs before the admission for Stroke
8) Ratio of cerebrovascular evaluation for Stroke
9) Ratio of rt-PA intravenous injection
10) Ratio of prescribing warfarin at discharge
11) Ratio of physical therapy to patients with stroke at an early stage
12) Ratio of bar-cord checking before injection
13) Ratio of implementation of rehabilitation to patients with severe dementia
14) Ratio of finishing discharge summary in two weeks

We developed QI calculating module and applied it to the EHR of one hospital to review it. After we got the results in that hospital, we tried to apply this module to other 9 hospitals from August to November, 2015.

We modified the ETL (extract, transform and load) tools for some QIs. For example, for the QI no.2, some hospital described the number of platelet with the unit of “*10^3 per microL” and others used the unit of “per microL”, and for the QI no.8, the order of the carotid artery echo was described in the form of physiological test in some hospitals but it was described in the form of the radiography in other hospitals.

Conclusion: The QIs in this project was used the time data and results of clinical tests. Those are not available from DPC data or the receipt data. If these QIs were calculated timely, medical staffs like doctors and nurses might refer those data interestingly.

In Japan, we already have some projects related QIs and benchmarking leaded by hospital associations, but we could not compare the QI data over the bounds of the hospital groups because the definitions of the QIs are not completely the same. However, using this module, it would be possible for many health care institutes to show their QIs in the same definition. Ten hospitals have started to calculate their QIs by this module.

To implement this module widely, there are some problems to be solved. For example, we need some arrangements to apply this module because there are the differences like in QI no.2 or 8 described above, and of course we need increase the number of the QIs.

We also try to expand this module and to make a field or consortium for collaboration of other QIs with many stakeholders to other EHR vendors in Japan. We believe it becomes a cornerstone of QI in Japan for improving quality and safety in health care area.

Disclosure of Interest: None Declared
EVALUATION OF EFFECTIVENESS OF WEB-BASED MOBILE APPLICATION TO MANAGEMENT AND CONTINUOUS CONTROL OF LENGTH OF STAY OF PATIENTS IN A LARGE HOSPITAL

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Objectives: This study aimed to verify the effectiveness in reducing the length of hospital stay of patients of a web-based application for managing patients admitted to hospital, used by staff specifically designated for this purpose.

Methods: A “before and after” design to evaluate the effectiveness of the web-based application for monitoring admissions. It was conducted between August 2015 and January 2016 in Hospital Regional of Unimed of Fortaleza, with 300 beds, being 60 of ICU. It is the largest private hospital in Ceará, northeastern Brazil. It is an internationally accredited hospital, by the Canadian Council on Health Services Accreditation. The application was developed by the team of hospitalar management, in order to be fully customized to the hospital, with units scaled exactly as in the hospital in its graphical interface. The application can be used on mobile and fixed terminals, and updates made by users are displayed in real time to all users. The system relies on color logic for patients (red, yellow, green), that guides the way with which the team must monitor the client. In addition, it classifies patients according to the category of care at a given moment, and issuing a daily general report which is sent for all users with the list of all patients in their respective categories. Finally, it has an automatic user signalling system, in which a user can trigger another one instantly, and a system of monitoring and analysis of discharge forecasts. Participated in this study all patients adults with over 15 days of hospitalization in the institution admitted to open units. Patients with litigation were excluded. Patients were followed from the moment they completed 15 days of hospitalization until their death or discharge. The studied variables were length of stay, number of hospitalizations in hospital, number of customer complaints related to bed, all in comparison of the period of test with the same period of 2014-2015. Temporal trend analysis was performed on minitab v 17, using regression of Poison to verify the statistical significance of temporal trends found.

Results: It was found statistically significant reduction in length of stay, with a reduction of 5.6 days to 4.9 days, value of p 0.001. Units with further reductions were the intensive care units, with a reduction from 6.0 to 2.0 days, value of p 0.001. The relative percentage of complaints relating to hospital beds fell from 18% to 3.6%. The mean waiting time for bed came to close to zero hours in requests from the intensive care units. The number of hospitalizations per month in the hospital increased 16% compared with the same period in the previous year.

Conclusion: It is concluded that the application was quite effective, achieving significant results in all the indicators evaluated. The length of stay have fallen more in the intensive care units shows that the greater availability of beds in the open units had reflection in all units of the hospital. It was noted also reduction in infection rates. The largest number of admissions held is reflected in greater financial return to the institution. It is believed that the final results can be even more expressive, after increased application of the tool, and use in patients with less than 15 days of hospitalization.

Disclosure of Interest: None Declared
Objective: - Demonstrate how global standards for product, location, patient and caregiver identification together with barcode technology, and standardised information sharing between IT systems can assist hospitals to achieve accreditation.
- Illustrate how the efforts of suppliers, wholesalers, governments and regulators from around the world who are aligning with global standards, provide benefit to hospitals undertaking accreditation.

Methods: Analysis was undertaken to understand the accreditation standards of key ISQua member organisations and identify (1) How GS1 global standards would help hospitals meet specific accreditation criteria as noted in the standards, and (2) The current status of hospitals, industry, governments and regulators regarding use of GS1 global standards in the areas identified in point 1, above. Further analysis was then completed to identify the non-accreditation related benefits resulting from hospitals leveraging current industry activity and global GS1 standards to achieve accreditation.

Results: GS1 global standards were found to assist approximately 20 accreditation criteria in the following categories:
- development of individualised plans of care and comprehensive clinical records for both emergency care and non-emergency patients enabling effective handover between caregivers
- specimen handling, transport, disposal and identification
- documenting in the patient record clinical and diagnostic procedures as well as medications ordered and administered
- medication and medical device recalls and incident monitoring, management and reporting, plus expired stock management
- managing caregiver authority to order and prescribe and administer medicines
- prevention of counterfeit or diverted products entering the hospital environment

The significant majority of both medicines and medical devices traded today carry a GS1 identifier in a GS1 barcode applied by the brand owner. This means that healthcare providers are able to leverage this identifier and barcode for medicine and medical device administration, ordering, replenishment, recall and traceability. The role of the identifier is then important not only for accreditation but also achieving overall healthcare provision efficiency. Already more than 65 countries access the GS1 standards for medicine and medical device identification.

When considering accreditation criteria related to patient and caregiver identification the GS1 Global Service Relation Number (GSRN) is a formally approved ISO standard, also adopted by CEN, called CEN ISO TS 18530.

The non-accreditation benefits of using global standards for hospitals include the following areas:
- Increased inventory visibility, accuracy of supply, speed of product recall, accurate patient level costing reduction in expired stock costs through stock re-assignment
- Accurate consignment management, accuracy of supply, minimise clinical time/cost locating replacement items
- Implant registration / implant recording in medical records
- Improved cost efficiency, reduced time searching for surgical instruments
- Increased accuracy of supply, minimise clinical time/cost locating replacement items

Details about the specific accreditation criteria hospitals may satisfy using GS1 standards, practical examples of non-accreditation based benefits, plus current levels of implementation of GS1 standards by suppliers (brand owners) will be discussed.

Conclusion: Analysis has shown that hospitals can use GS1 standards to meet a range of accreditation criteria as well as achieve significant operational benefits. Suppliers (brand owners) are adopting GS1 standards for product identification and these are accepted by regulators and jurisdictions in 65 countries. This means that hospitals have the ability to leverage the activities of their suppliers, and at the same time use ISO/CEN TS 18530 for patient and caregiver identification.

Disclosure of Interest: None Declared
THE EFFECT OF MOBILE APPLICATION ON HEALTH MANAGEMENT OF DIABETIC PATIENTS

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Objectives: The mobile application for diabetes management is expected to be effectively utilized for education and management of individual patients. Through active intervention of medical professionals, the patients can easily understand their medical status related to the disease using data they personally entered in the diabetes management mobile application. It is also possible to receive feedback from medical professionals based on the analysis of real-time shared data.

Methods: The application was developed so that diabetic patients can perform self-management. The mobile app allows the patient to input data on his/her health status such as blood pressure reading, weight, and blood glucose level. The patients are instructed on how to interpret individual blood glucose level by utilizing the messaging function while realizing user environment by minimizing data entry regarding NFC Blood Glucose Meter. Moreover, the effect of a meal to blood glucose level was taught by instructing the patients to enter information of simple meals, rather than requiring detailed and more accurate information like number of calories. Medication information or photos taken before and after meals were recorded and then these records were entered by touching the icons for exercise intensity and time. Data was accessed in daily and monthly graph form. On the other hand, to address inquiries, continuous communication between the patients and medical professionals was encouraged through massage exchanges. The subjects of study were 19 people who voluntarily participated in diabetes management through the mobile application in 2015.

< Process > Introduction of the diabetes management mobile application → Education on application installation and data entry → Summary of Diabetes Self-Care Activities Questionnaire (hereafter referred to as SDSCA) → Diabetes management through mobile application for 6 weeks → Composition of SDSCA → Completion

Results: SDSCA was analyzed and compared by using paired t-test and the statistical significance was set at p<0.05.
- There was significant difference between the average score on 10 items in the SDSCA nursing part (blood glucose measurement, foot management, medication, etc.) before and after using the application (p<0.05).
- There was significant difference between the average score on 5 items in the SDSCA nutrition part (diet plan, fruit, high fat food, etc.) before and after using the application (p<0.05).
- There was an increasing trend in the average score of 2 items in the SDSCA exercise part (exercising at least 30 minutes, etc.) after using the application compared to the average score before using the application. However, there was no significant difference.
- There was significant difference in the overall average SDSCA scores before and after using the health management application among the diabetic patients (p<0.005).

Conclusion: The patients were encouraged to change their disease-related behaviors through repeated education on the importance and necessity of lifestyle change to reduce their blood glucose levels. These massages were explained thoroughly and interpretation was made in relation to self-care behavior, hypoglycemia prevention and patient safety, accident prevention. During the outpatient examination, the patients directly experienced changes in their thoughts and behavior; messages, blood glucose measurements, and meal assessments were also shared and discussed in the session. Such can be interpreted as their desire for information and psychological support at home. Therefore, the developed mobile application on the smartphone is expected to be effectively utilized in patient management by more number of patients.

Disclosure of Interest: None Declared
ISQUA16-2362
BETWEEN THE ‘ELECTRONIC’ FLAGS – DEVELOPING AN ELECTRONIC TRACK AND TRIGGER OBSERVATION CHART FOR USE IN NSW PUBLIC HOSPITALS
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Objectives: In January 2010, the New South Wales (NSW) Clinical Excellence Commission (CEC) introduced a large scale state-wide system across all hospitals called Between the Flags (BTF) to improve the early recognition and response to deteriorating patients. BTF is a multi-element safety net system consisting of, (i) governance standards, (ii) calling criteria incorporated in standard observation charts, (iii) minimum standards for a clinical emergency response system, (iv) specially designed education materials and (v) feedback on performance. The CEC and eHealth NSW have worked in close partnership with Cerner Corporation to develop electronic versions of the Standard Adult and Paediatric General Observation (SAGO/SPOC) Charts. The build commenced in 2011 with user acceptance testing occurring throughout 2012.

Methods: The paper SAGO and SPOC charts were developed in the eMR via a customised Patient Summary ‘MPage’ which provides a one page interactive view for each patient. The design was developed to meet the following baseline requirements to: replicate the track and trigger functionality of the paper based charts; flex the graphs and pop up alerts according to the patient’s age reference ranges; provide alerts based on the colour coded calling criteria and a forcing function to call for a Clinical Review and/or Rapid Response; enter alterations to calling criteria; print the trended chart for transfer purposes; and, full audit capabilities.

Results: The electronic observation charts were piloted in the emergency department at Port Macquarie Hospital in March 2013 with the rollout described by the Director of Clinical Governance as the smoothest, easiest change implementation ever. The electronic charts are now actively used in over 100 Emergency Departments, Recovery and inpatient Units across NSW with another 187 units implementing in 2016/17.

Conclusion: The BTF electronic observation charts are now embedded in NSW emergency departments and improving the early recognition and response to deteriorating patients. The next phase is to rollout the electronic charts across inpatient wards in all NSW public hospitals.

Disclosure of Interest: None Declared
A MODEL TO ENHANCE THE SECONDARY USE OF DATA FOR IMPROVING MEDICATION SAFETY IN HOSPITALS

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Objectives: Effective secondary use of data (SUD) can help increase the quality and safety of medication use, however the process of SUD and any potential influencing factors are understudied. There is a current need to understand which factors influence SUD to support quality improvement in medication safety and how they influence the process. We therefore aimed to identify the main stages, the barriers, and facilitators to SUD through an improvement science perspective, and understand stakeholder requirements.

Methods: Open ended semi-structured interviews were conducted with key stakeholders with experience in SUD; interviews were recorded, transcribed and analysed thematically using an inductive and deductive approach on NVivo 10.

Results: In total 30 qualitative interviews were conducted, resulting in 25 hours of audio recording. Overall the term and concept of SUD was seen to be new and hard to define due to the difficulty in differentiating between primary and secondary uses of data. The proposed definition for SUD would be: The use of existing electronic clinical or operational data for secondary purposes other than its primary purpose of data entry or direct patient care. The secondary purposes include, data used for: business intelligence, cost, education, efficiency, feedback, improve quality of care and reducing risk, improving existing systems, performance management, personal development, research, service improvement, surveillance, system monitoring, time management, and training. In total 6 stages were identified for SUD process. SUD was identified as being advantageous however four main factors influenced its practical use: SUD users’ knowledge, organizational setting, technology (the system used, the software and hardware required for analysis, and human and system interactions) and policies and security, all of which affect each stage of SUD. Themes such as leadership and culture were deemed to influence the acceptance of SUD in organisations. The data quality was important, it helped determine the whether the data could in fact answer the question posed. These four factors have many different elements which can either hinder to promote SUD in hospitals. Engagement from clinicians receiving the data, acceptance of data, and obtaining high quality data were classed as intermediary outcomes that led to achieving the final outcomes such as improving medication safety.

Conclusion: The improvement science literature emphasises the importance of effective use of data within quality improvement work to help focus improvement efforts. Healthcare organisations could potentially maximize their return on the implementation of information systems via SUD. However having knowledge of the different factors influencing SUD is critical to ensure data can be effectively reused. The interviews highlighted the four main factors which influence SUD. These factors need to be considered in order to determine which potential barriers or drivers exist within organisations wishing to reuse data. We need to gain better knowledge of the technical and contextual barriers around SUD in order to successfully implement SUD interventions and improve medication and patient safety. Therefore this conceptual framework is a useful tool for healthcare professionals in designing better SUD interventions to support quality and safety.

Disclosure of Interest: None Declared
ISQUA16-2989
DRIVING SUSTAINABLE IMPROVEMENTS IN QUALITY OF CARE: NATIONAL CLINICAL GUIDELINES FOR QATAR
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Objectives: This abstract presents an initiative by Qatar’s MoPH to improve quality of healthcare by standardization and development of clinical guidelines to optimize healthcare services by bridging the gap between the diversely trained healthcare professionals.

Methods: The National Clinical Guideline project has been underway since April 2015, whereby the processes for guideline development and localization by different organizations in Qatar was mapped via MoPH, stakeholder consultations. This situational analysis exercise aimed primarily to identify gaps between current guideline sources, development and use in Qatar in relation to international best practice approaches. Subsequently, guideline topics for the most common conditions were identified and a framework for guideline and pathway development was put in place. Baseline guidelines were compiled utilizing reliable updated clinical evidence which was adapted and localized when subject matter Experts (SMEs) convene in a series of guideline development group workshops. Stakeholders’ engagement, communication plans and change management processes were established to support the project at different levels.
Guidelines developed are being translated into Pathways, the first 6 highest priority Guidelines and Pathways will be piloted in the first half of 2016 to ensure clarity and localization to the Qatari context prior to overall implementation. The guidelines and pathways will be made available to all clinicians via the local MoPH website. Information technology including help desk support are in place to handle technical and content related issues. Providers are able to electronically send feedback and the help desk will direct concerns to the responsible guideline team members. Internal capacity building involved the training of MoPH staff on use of Map of Medicine and Map Management Suite to support ongoing guideline and pathway development.

Results: Thirty priority guideline topics were identified, currently 6 clinical guidelines and pathways have been developed, 5 MoPH staff received training on use of Map of Medicine and Map Management Suite. The project brought together different national projects and initiatives to work in a standardized manner to produce clinical guidelines for a wide range of specialties. These will be developed utilizing a standardized framework and presented in an easy to read and accessible format.

Conclusion: The future outlook is to continue to respond to Qatar’s expanding healthcare needs. The MoPH is working to develop a compliance framework that will be measuring adoption, effectiveness of the guidelines and their impact on quality of healthcare services provided.

Disclosure of Interest: None Declared
THE IMPLICATION OF MEDICAL CARE COLLABORATION TO REDUCE TUBE THORACOSTOMY COMPLICATIONS IN THORACIC SURGICAL PATIENTS
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Objectives: Tube thoracostomy are a widespread intervention to remove abnormal accumulations of fluid or air between pleura in patients admitted to acute respiratory or cardio-thoracic surgery care units. Caring for patients with chest tube required knowledge and skill to ensure patient safety. However, there is limited information regarding the best care methods on patient after procedure. In this article, we introduced a prospectively standardized approach by medical care collaboration to avoid mismanagement of chest drains and reduced procedure-related complication consequentially.

Methods: A checklist of standardized care was developed by multidisciplinary meeting and routinely used since July 2014. All procedure knowledge was introduced for nurse by two hour training session and for patient’s caregivers by a 20 minutes video. Clinical data and procedure related complication are collected before (Phase I, January to December 2013) and after (Phase II, July 2014 to May 2015) the implication of the checklist.

Results: There were 249 patients who received tube thoracostomy in Phase I and 344 patients in Phase II. Complications occurred for 21 patients (8.4%) in Phase I and 3 patients (0.9%) in Phase II (P < 0.01). There were no procedure-related deaths. After introducing the checklist and medical care collaboration, the migration or dislodge of chest tube was never happened.

Conclusion: The collaboration of nurse and patient’s caregiver and the implication of standardized checklist could reduce complication rate and further avoid chest tube dislodge or migration. Our results may help promote safety while taking care of these patients.

Disclosure of Interest: None Declared
THE TRACER METHOD IN HEALTH CARE ORGANIZATION
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Objectives: The patient tracer method aims to retrospectively analyze, with the front line team, different steps of care and services given to a patient by integrating their experience or their close relatives. This method assesses the professional coordination that contribute to the care and services of a selected patient. This approach implicates more the patient in their care as well as in quality improvement methods.

First, this approach was developed for the purpose of French hospitals accreditation to assess the steps of care during the stay of hospital patient. As this experience was positive in hospitals, it has been tested by primary care teams. It concerns complex patients, who have special needs concerning care or social services at home. It was experimented to analyze integrated care and services. A guide book including tools is to be published (march 2016).

Methods: Ten voluntary teams were selected to try out that method from January to May 2015. Each organization had to carry out at least 2 “tracer-patients” to support their teams and involve the patients’ representatives. It involved 83 professionals (doctors, nurses, social staff, pharmacists, physiotherapists...). The objective was to test the method to make sure of its appropriation to generate and share experience. The selected organizations attended a launch meeting, then had a follow-up phone call and a final meeting. The analysis of care coordination involved patients with polypathologies or mental health problems.

Results: 21 “tracer-patients” were carried out in various sectors (psychiatric and mental health teams, patient center medical homes, health networks, collaborative teams in primary care, an innovative integrative devices for the elderly). The patient care during their stay was analyzed with the teams in charge of the patient, from the local standards, which were adapted to the patient along with with the previously defined team’s goals. The patient experience was taken into account during the assessment. The professionals were satisfied with this effective approach, which identifies problems, takes into account the feelings of the patients and strengthens team cohesion. Also, the patients has appreciated being listened to and asked for their opinion. The guide book proposes tools that will facilitate the method implementation.

Conclusion: The patient tracer method efficiently allows teams to detect the potential problems in the care process. It is a method that supports team cohesion and dynamics. It improves communication between professionals provided that it is led in an educational way, without judgment or blame. This way, the HAS has been able to introduce the patient care experience into the quality improvement methods. It can be used in hospitals and in primary care subject to conditions to be gathered.

The development of this method in France has drawn the professionals’ attention in hospitals and primary care. This dynamic, coming from the introduction of this new method in hospitals, permits its implementation in primary care by collaborative teams. It will help collaborative teams using the method as an ongoing improvement tool.
LESSONS LEARNED FROM THE ANALYSIS OF SERIOUS ADVERSE EVENTS COLLECTED AS PART OF THE ACCREDITATION OF DOCTORS AND MEDICAL TEAMS IN FRANCE

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Objectives: Under the 2004 health insurance law, French National Authority for Health (HAS) is in charge to plan and carry out the accreditation process of doctors and medical teams. It’s a voluntary approach of risk management which involves 19 high risk medical specialties working in hospitals (surgery, anesthesiology and intensive care, other specialties with interventional activities as well as obstetric ultrasound examinations). The main aim of accreditation is to improve patient safety by reducing number and severity of care-related adverse events. To achieve this goal, HAS collects, since 2007, adverse events reported by doctors engaged in accreditation process and, with the help of approved bodies, analyzes them and produces risk-reduction tools. The objectives of the study are to describe serious adverse events (SAE - event resulting in death, life-threatening, requiring hospitalization or prolongation of existing hospitalization) of the database and identify common underlying system problems and/or failures in order to correct them.

Methods: The analysis focus on all SAE reported to the HAS from January 2011 (when a root-cause analysis questionnaire more detailed was used) to February 2016. Analyzed variables are adverse event description, time and outcome of the event, reporting date, medical specialty of reporter, patient details, patient medical history and diagnosis, healthcare settings and root-cause analysis (root cause analysis par in-depth analysis). Statistical analysis was done using the statistical software R, from the R foundation for Statistical Computing.

Results: Among 57757 care-related adverse events collected during the study period, 5272 SAE were reported (9.13%). The number of reports increased steadily and significantly between 2011 and 2016 (+22.09%, p<0.05). Eighteen specialties were involved in the reporting of serious adverse events. Medical specialties of reporters are mainly gynecology and obstetrics (43.5%), digestive and visceral surgery (22.4%), thoracic surgery (8.5%), orthopedic surgery (8.2%), anesthesiology (7.6%) and urologic surgery (2.7%). Patients concerned by SAE are predominantly women (69.9%). Median age of patients at time of event is 37 years in women and 66 years in men. SAE reported generally occur during intraoperative period (44.8%) and, to a lesser extent, during postoperative period (33.1%). Preoperative period is concerned in only 12% of SAE (10.1% missing data). When information was given (63% missing data), SAE arise most often during therapeutic procedures (29.2%).

Conclusion: This is the first time that SAE of a French national voluntary reporting system have been described. Communication of these data should increase public accountability. Moreover, it will promote the implementation of a nationwide mandatory reporting system of never events or serious events, which should be effective in the very near future.