Improving quality and safety in resource poor settings

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Challenges faced in improving quality in African countries
- Reasons why implementing quality improvement interventions is difficult
- How ISQua can help
- COHSASA and its experience in African countries:
  1. South Africa
  2. Botswana
  3. Nigeria
  4. Swaziland
  5. Rwanda
  6. Lesotho
- Patient Safety linked to accreditation in South Africa
- The future

Waiting is an ever-present problem

Associated factors:
- admission process
- administration
- patient records
- patient rights and management.

Findings:
- Emergency rooms crowded with the sick waiting to be seen
- Pharmacy waiting rooms crowded with the sick waiting to be seen and for medicines

Health records and policies and procedures play an important role in waiting times and patient care in general

- Poor storage of medical records
- Policies are often old and not applicable anymore

Infection prevention and control?

- Environmental drying of washed, disposable tubing, catheters and endo-tracheal tubes prior to reuse
- Blood-stained linen left in sluice room

Clinical Support Services:
6. Availability of medicines and supplies

- Expired medication dispensed
- Organisation of Medications
Patient safety can be a problem

Health and safety risk – oil and oxygen – fire/explosion hazard

Emergency exits

Reasons why quality improvement programmes are difficult to implement in African countries

- A lack of management skills
- Management resistant to change with poor commitment and motivation
- Failure to act upon identified deficiencies
- Delayed response to quality improvement requirements
- Public Works Department does not provide maintenance and repair services
- Failure to take responsibility for actions – ‘passing the buck’
- Poor disciplinary procedures for staff
- Low profile of QA units

Inadequate government support also impedes progress:

- Poor response from provincial authorities to general report backs on hospitals’ progress
- Insufficient use made of information provided to assist provinces in their efforts to improve hospital performance
- Lack of awareness of the full potential of quality improvement programmes among provincial programme managers
- Lack of support for hospitals to correct identified deficiencies

What can be done to improve the situation?

1. Follow the ISQua approach to establish a certification / accreditation organisation

- Multidisciplinary internationally accredited Standards
- Evaluation Methodology
- Infrastructure
- Policies and Procedures
- Information
- Policies and Procedures

HENCE CAPACITY TO:

- Capacities to develop, analyse and manage data
- Identify deficiencies
- Comprehensive reporting
- Direct CQI
- Understand Standards
- Using data for CQI
- Ongoing self-evaluation against standards by facilities
- Continuous monitoring of facility progress
- Research
- Updating based on ISQua Principles
Understand the ISQua principles that establish a foundation for setting quality standards for healthcare facilities

1. Patient/client-focused
2. Encompass management and support infrastructure.
3. Focus on quality and performance improvement.
4. Comprehensive standards (facility-wide)
5. Reflect quality dimensions.
6. Define planning and evaluation process.
7. Can be objectively measured (should be RUMBA).

Healthcare facility system standards are statements:

that define the key functions, activities, processes and structures required for the departments to be in a position to provide quality services and as determined by professional bodies, health care professionals, staff, patients and citizens.
Developing standards: a road map

Five phases:
- Normative
- Empirical (piloting)
- Consensus
- Publication
- Implementation

This approach was used in developing the South African accreditation standards.

Empirical phase

Pre-accreditation process
1. Necessary documentation supplied (standards, guidelines, chronic disease management templates and policy and procedure templates)
2. Training
3. Support

The multidisciplinary approach to healthcare facility standards using hospital standards as an example

But having standards is not enough!

The challenge is to implement them.
This requires:
- buy-in (ministries, provinces, districts, hospitals);
- extensive training in standards and QI (hospital, provincial, national);
- using acquired skills to address non-compliance with standards;
- ongoing monitoring of progress, encouraging and incentivising;
- appropriate financial, logistical, infrastructural, management and administrative support.
- An information system that will enable the baseline situation to be determined and will also allow tracking improvements until accreditation status is achieved.
b) The Quality Assurance Monitoring and Reporting System

- Quality Information System should:
  - Provide continuous access to current standard compliance data.
  - Enable management at all levels to make informed decisions.
  - Support ongoing quality improvement programmes.
  - Assist facilities to reach and maintain accreditation standards.
  - Be a tool for the ongoing monitoring of performance indicators.

1. Facility overall scores
2. Facility department scores
3. Performance indicator scores
4. Quality improvement monitoring instruments

10. Accreditation

Accreditation – A Definition

- Usually a voluntary process by which a government or non-government agency grants recognition to health care institutions which meet certain standards that require continuous improvement in structures, processes, and outcomes.

The Accreditation survey process

1. Documentation review (policies and procedures, patient record audit, minutes, HR management and training records, etc.)
2. Assessment of facilities and equipment
3. Staff interviews (clinical, reception, practice manager)
4. Patient interviews
Accreditation award process

The Council for Health Service Accreditation of Southern Africa (COHSASA):
- is a not-for-profit ISQua established in 1995.
- ISQua accredited since 2002.
- has worked with 777 healthcare facilities in 11 African countries, including South Africa.
- is working with NDOH as a partner organisation helping with the NCS.

ISQua Internationally Accredited Accreditation Bodies

<table>
<thead>
<tr>
<th>Accredited Organisation</th>
<th>Date of First Accreditation</th>
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<tbody>
<tr>
<td>Health and Disability Auditing New Zealand - HDANZ</td>
<td>1996</td>
</tr>
<tr>
<td>Australian Council on Healthcare Standards - ACHS</td>
<td>1997</td>
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<tr>
<td>Accreditation Canada</td>
<td>1998</td>
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<tr>
<td>Accreditation South Africa - COHSASA</td>
<td>2002/6/10</td>
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<tr>
<td>Australian National Health Accreditation Health Quality Programme - NPHAQ</td>
<td>2003/10</td>
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<tr>
<td>Quality Improvement and the QC Accreditation Program, Australia - QIC</td>
<td>2004</td>
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<tr>
<td>Accreditation for Healthcare Accreditation - PAMA</td>
<td>2004</td>
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<tr>
<td>Joint Commission International, United States of America - JCI</td>
<td>2007</td>
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<tr>
<td>Healthcare Accreditation Society, United Kingdom - HCAS-UK</td>
<td>2007</td>
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<tr>
<td>Malaysian Society for Quality in Health - MSQH</td>
<td>2008</td>
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<tr>
<td>British Association of Blood Banks, Accreditation and Quality Programmes - BABB</td>
<td>2008</td>
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<tr>
<td>Spanish Federation for Accreditation and Research - FEMAS</td>
<td>2009</td>
</tr>
<tr>
<td>Health Care Accreditation Council of Japan - HCAC</td>
<td>2009</td>
</tr>
<tr>
<td>Health Accreditation System International, Accreditation Department of Health Services and Certification, Co.</td>
<td>2009</td>
</tr>
<tr>
<td>Australian Private Hospitals, Healthcare Certification Program</td>
<td>2009</td>
</tr>
<tr>
<td>Netherlands Institute for Accreditation in Healthcare - NIAC</td>
<td>2009</td>
</tr>
<tr>
<td>Accreditation Canada and the Faculty of Medicine of Public Health and Law - COHSASA - FAM</td>
<td>2011</td>
</tr>
<tr>
<td>Regional Accreditation Program of British Columbia, Canada - SAP</td>
<td>2011</td>
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<td>Health and Disability Auditing New Zealand - HDANZ</td>
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Levels and Types of Health Facilities Implementing COHSASA Quality Improvement and Accreditation Programmes

- Public Health Facilities
  - Environmental Health Offices (EHO)
  - Emergency Medical Service Stations (EMS)
  - Primary Health Care Centres
  - Community Health Centres
  - District Hospitals
  - Regional Hospitals
  - Tertiary Hospitals
- Private Health Facilities
  - Hospitals
  - Clinics
  - Hospices
- Public and Private Health Facilities in other African countries

Objectives of the COHSASA Quality Improvement and Accreditation programme

- Assess and record the level of compliance against internationally accredited multidisciplinary standards using the coqis programme.
- Use the data produced to provide regular reports on the situation in participating facilities.
- Use the reports to identify priority deficiencies that form the focus of quality improvement programmes.
- Embed quality improvement as a continuous process.
- Train regional staff to support, manage and sustain continuous quality improvement programmes on an ongoing basis.

Results of using a facilitated quality improvement / accreditation approach in African countries

| Months | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Good   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Moderate|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Poor   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

Results of using a facilitated quality improvement / accreditation approach in African countries

- Good
- Moderate
- Poor
- Poor support from deprived base
Examples of improvements with good and poor management support

Progress Report: Overall Service scores – X Hospital in a Province in South Africa

Determining pre-accreditation award status

To determine the pre-accreditation grade, the scores of the following components are assessed:
1. Accreditation overall scores
2. Service element scores

In addition, the service elements are grouped into 3 performance areas:

Performance area 1: Management
- Management and leadership
- Human Resource Management
- Management of Services
- Health and Safety
- Prevention and Control of Infections
- Management of Clinical and clinical support
- Information Technology
- Medical Practitioner Services
- Medical, Surgical, Obstetric/Maternity Care
- Operating Theatre and Anaesthesia Service
- Radiology Service
- Pharmaceutical Services
- Emergency Care
- Outpatient Care
- General Medical and Surgical Care
- Obstetric/Maternity Care
- Maintenance Service
- Resuscitation Service

Performance area 2: Clinical and clinical support
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Performance area 3: Technical and domestic
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An algorithm is used to determine the grade

The Graded Recognition Certification Programme

The Graded Recognition Certification Programme was developed to assist facilities that do not reach accreditation level.

This helps overcome the “all or nothing” fear and motivates facilities to keep improving after the external survey:
- Pre-accreditation grade
  - entry level (roughly 60 - 70% compliance)
  - intermediate level (roughly 85 - 75% compliance)

Full accreditation

Maintaining gains in quality and safety needs on going effort.

Case study: Review of average hospital progress measured in terms of standard compliance in KwaZulu-Natal Province from 1998 to 2005

Accreditation lapses after 2 years

Although later editions of the standards are more comprehensive, this does not account for the overall decline in hospital compliance. Formal processes required to maintain the level of quality achieved were lacking.

ONGOING MAINTENANCE IS ESSENTIAL.
Our work is showing us that strictly applied quality improvement methods can improve safety and quality by:
- guiding interventions
- monitoring progress
- identifying improvements
- highlighting impediments to the improvement process so strategies can be developed to overcome the majority of difficulties.

**Critical success factors:**
1. The hospital’s multidisciplinary team must be committed.
2. Provincial and national support (motivation, performance agreements, and good financial management) in the long term is essential.
3. On-going efforts to maintain gains in quality and safety are needed.

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**Advantages in implementing both sets of standards**

- The NCS identify whether agreed processes and practices are carried out.
- Accreditation standards focus on required systems (structures, processes, and outcomes) and their strengthening.

The benefit of integration is the provision of required core outputs plus continuous quality improvement in all systems, resulting in ever-increasing improvement over time.
**Background**

- A Gap Analysis was conducted that revealed that despite good infrastructure, there was a need to improve the Quality of health services delivery.
- Several Quality improvement mechanisms have been introduced in our health sector over a decade and have resulted in differing degrees of success.
- Most of these initiatives usually started with quick wins and only achieving short-term successes and faded away.
- Desire by Government to have all health facilities in accredited.
- Funding from CDC - Botswana and MoH to support evidence-based accreditation.

**Methods**

A Facilitated Accreditation programme using COHSASA standards was initially employed and later replaced by a self-evaluation and sampled validation programme using their web-based Quality Information System – CoQIS.

**Phase 1**
- Two district hospitals and four clinics in their catchment area were enrolled in accreditation programme.
- Baseline assessments were conducted (March-April 2009).
- Training on quality improvement (QI) was provided to facility-based teams supplemented by regular support visits.
- QI techniques were applied to address identified gaps from assessments.

**Phase 2**
- Three referral hospitals and 2 district hospitals were enrolled – July 2010.

To achieve accreditation,
- All services must score at least 80 out of 100 with compliance for all critical criteria.

**Facilities Currently Enrolled In The Accreditation Programme**

The COHSASA and MSH methodologies were found to be complementary and synergistic and were merged to form the QIL Program.
Average score at baseline was 39 (range 36-43)

At third validation, average score increased to 73 (range 69-79)
Main impediments to improving overall scores included:

- Deficiencies in corrective and preventive maintenance of infrastructure and equipment
- Inadequate health and safety systems
- Quality improvement activities seen as added responsibility
- Fluctuations in overall scores due to staff movements

Conclusions

- A systematic approach to accreditation, guided by standards, measurable targets and coupled with leadership development enabled significant improvements in both types of facilities
**Moving forward**

- Development of maintenance strategy for plant, machinery and buildings – long term
- Equipping facilities with required medical equipment
- Intensified contract management for maintenance
- In-service training, coaching and mentoring on quality improvement
- Weekly project management reviews with MOH executive

**Swaziland**

- In Swaziland, COHSASA worked with four other NGOs as part of a coalition for strengthening health systems
- This was a donor funded programme
- Six hospitals, three community health centres and eight primary health care clinics were enrolled in the programme
- All were public or faith based facilities
- The programme included on-site facilitation and support from COHSASA to the health care facilities and responsible officers of the Ministry of Health

- Three primary healthcare clinics achieved a sufficient level of improvement, to be entered for an external accreditation survey.
- Two achieved Full Accreditation
- Challenges:
  - The funding for the programme was interrupted for more than six months
  - The Ministry of Health was not able to commit full time support to the programme
  - Major supply shortages
  - Equipment choice often imposed by donors

**Percentage improvement in each of the seventeen facilities in Swaziland (grouped by type of facilities)**

**Rwanda**

- [Graph showing percentage improvement for different facilities in Rwanda]
Three teaching hospitals were entered into the programme by the Rwandan Ministry of Health.

Baseline and External Surveys were carried out by COHSASA.

Facilitation and support visits were provided by an independent organisation.

After less than 24 months, the hospitals underwent an External Survey.

The programme included training and Baseline Surveys carried out by an independent organisation.

One hospital achieved accreditation after four years in the programme.

Two hospitals had only intermittent support because of lack of funding.

The programme restarted in 2012 in all three hospitals plus one additional hospital.

This was a privately funded programme.

In Nigeria, COHSASA worked with two private sector hospitals.

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The programme included training and Baseline Surveys carried out by COHSASA.

The Baseline data was used to train the staff to use the CoQIS Information system to evaluate and manage the programme.

The programme was monitored and supported remotely by COHSASA.

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Lesotho

- A World Bank funded Public / Private Partnership between the Government of Lesotho and Netcare – Tsepong
- The project includes a Referral Hospital with a Gateway Clinic and three Filter Clinics
- Accreditation was a pre-requisite in the tender for the project
- The Filter Clinics were completed first
- Challenges:
  - Facilities overwhelmed with patients as soon as they opened
  - Managing case load and demand

The influence of patient safety research on clinical decision making

Reporting Systems

Advanced Incident Management System (AIMS)

A computerised system for monitoring, analysing, reporting and managing problems ranging from near misses to sentinel events across the entire spectrum of health care

Notifying incidents

Hospital staff phone in to call centre: they are guided to provide detailed data specific to the incident by cascading questions

The computer system captures, classifies and grades clinical incidents, adverse events and near misses.

Once alerted, hospital staff use the Internet to:
- access call centre data
- manage incidents
Did the incident result in harm, loss or damage?

“Any event or circumstance that could have, or did lead to, unintended or unexpected harm, loss or damage”

Adverse event

Did the incident result in harm, loss or damage?

NO

Near miss

Adverse patient incident

Adverse event

YES

AIMS Data 2007-2012

- 55 month period of data collection
- 45 Hospitals, clinics and CHCs entered the programme

Acknowledgements to A. Lineger and S. Kabane

Data analysis AIMS

- Level 1 – demographics, types, severity and trends
- Level 2 - associations between outcomes and contributory factors.
- Level 3 – statistical testing of relationships
- Level 4 – to test the impact of AIMS on quality (pre and post intervention changes made in the system and reduction in SAC 1 outcomes)

Reporting trends 2007 – 2012 by 6 month groups

Reports overall for the region by hospital groupings

Number of clinical incidents by SAC ratings over 54 months in all 31 hospitals.
**Origin of clinical incidents – all hospitals (n = 6528)**

- Death of adult: 57% (556)
- Death of child: 37% (358)
- Other and child death: 2% (20)
- Permanent disability: 1% (12)
- Major complication: 3% (33)

**Clinical SAC 1 outcomes described (n=979)**

- Total deaths = 934/979 = 95%

**SAC 1 outcomes – what they actually mean**

- SAC 1: 25%
- SAC 2: 15%
- SAC 3: 48%
- SAC 4: 12%

**Clinical SAC categories all hospitals (n=3947)**

- SAC 1: 15%
- SAC 2: 13%
- SAC 3: 58%
- SAC 4: 14%

**Clinical SAC categories Academic hospitals (n=2345)**

- SAC 1: 33%
- SAC 2: 21%
- SAC 3: 37%
- SAC 4: 9%

**Clinical SAC categories Regional hospitals (n=589)**

- SAC 1: 43%
- SAC 2: 17%
- SAC 3: 30%
- SAC 4: 10%

**Clinical SAC categories District (n=1013)**

- SAC 1: 10%
- SAC 2: 12%
- SAC 3: 55%
- SAC 4: 23%

**DOCRI concept**

- Reckless behaviour
- At risk behaviour
- Non-adherence
- Competency
- Delays

- DOCRI for SAC 1 outcome = 30%
- OR = 1.75 (1.5 - 2.0) p<0.00001
- RR = 1.14 (1.10 - 1.18) p<0.00001

**Improving quality and patient and staff safety in Africa**

- Combination certification, accreditation and incident reporting: to maintain standards and identify when and why errors occur, address and prevent recurrences.
- Accreditation standards based on internationally accepted principles to ensure that systems and processes are in place to ensure quality and safety.
- Core certification and regulation standards ensure that basic processes and outputs are produced.

- Incident reporting: Report adverse events, identify errors, so that learning can take place and risks reduced.

**Critical Success Factors**

- Enthusiastic multidisciplinary participation
- Complete buy-in
- Monitoring of progress
- Formal recognition of progress and success

**Core certifications and regulations**