Applying Quality Improvement to Health Professional Regulation

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University Research Co., LLC
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CURRENT AND FORMER PROJECTS
University Research Co., LLC – Center for Human Services

• Celebrating 45 years

• Headquartered in Bethesda, MD

• Working in over 30 countries

• Center for Human Services: non-profit work since 1968

Current and former URC-CHS projects
Aga Khan Foundation
Bill & Melinda Gates Foundation
The Bi-national Education Initiatives at the California Policy Research Center (CPRC)
The Hispanic Scholarship Fund (HSF)
The Institutes of Mexicans Abroad (IME)
National Institute on Drug Abuse
State of New Jersey, California, Texas, Washington, Pennsylvania

U.S. Agency for International Development, USAID
- Bureau of Global Health
- Office of Foreign Disaster Assistance
US Department of Health and Human Services (CDC/HRSA)
UNICEF
WHO / FIND
Global Fund –AIDS, TB, Malaria
US Department of Education:
- Office of Migrant Education
- English Language Acquisition
- Rehabilitation Services Admin.
Worldwide Projects

- Health Care Improvement: 2007-2012 USAID
- Translating Research into Action: 2009-2013 USAID
- TB Care: 2010-2015 USAID
- Data Quality and Technical Asst: GFATM 2009-2012

Illustrative Bilateral Projects:
- South Africa: TB USAID; HIV Counseling & Testing: CDC
- Ghana, Cambodia, Benin – Malaria: USAID *
- Uganda: Food by Prescription for HIV: USAID
  Strengthening Systems for HIV/AIDS: USAID
  Infectious Disease Capacity Research: Gates/Accordia
- Jordan Health Care Accreditation: USAID
- Cambodia and Benin: Strengthening Health Systems: USAID
- Botswana and Nigeria HIV/AIDS Services: CDC
Overview

Part 1: Introduction to Quality, Quality Assurance & Quality Improvement
   Discussion: 10 min

Part 2: How quality improvement can be applied to health profession regulation
Part 3: Lessons learned from applying quality improvement to human resources for health management
   Discussion: 20 min

Part 4: Improvement Collaborative, A Model to Rapidly Spread Improvement
   Discussion: 10 min

Part 5: Total Quality Management: Introduction to Process mapping and other ‘Quality’ tools
   Discussion: 30 min
<table>
<thead>
<tr>
<th>Learning objectives</th>
<th>Working objectives</th>
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<tbody>
<tr>
<td>1. To develop a basic understanding of QI principles</td>
<td>1. To define improvement in the health professions regulation context</td>
</tr>
<tr>
<td>2. To understand the purpose of process mapping and how it can be used as a tool for regulatory improvement</td>
<td>2. To map regulatory processes</td>
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<tr>
<td>3. To understand the purpose of measurement and data in QI</td>
<td>3. To identify and define relevant indicators</td>
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<tr>
<td>4. To examine lessons learned from applying QI to human resources for health management</td>
<td>4. To brainstorm how country teams could strengthen stakeholder relationships and attain wider benefits</td>
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What do you want to walk out with by the end of today?
What is Quality?
What is Quality?
Quality From Whose Perspective?

- Clients & Family
- Provider
- Health Care Managers
- Community
Definition of Quality

“Doing the right thing, right, the first time. Doing it better the next time, within the available resources, and to the satisfaction of the community.”

ODI Consulting

“..proper performance (according to standards) of interventions that are known to be safe, that are affordable to the society in question, and have the ability to produce an impact on mortality, morbidity, disability and malnutrition.”

MI Roemer & C Montoya Aguilar
WHO, 1988
Dimensions Of Quality

- Technical performance
- Access to services
- Effectiveness
- Interpersonal relations
- Efficiency of service delivery
- Continuity of services
- Safety
- Physical infrastructure and comfort (Amenities)
- Choice of services
## Quality from a Systems View

<table>
<thead>
<tr>
<th>Inputs (Resources)</th>
<th>Processes (Activities)</th>
<th>Outcomes (Results)</th>
</tr>
</thead>
<tbody>
<tr>
<td>People</td>
<td>• What is done?</td>
<td>• Health services delivered</td>
</tr>
<tr>
<td>Equipment</td>
<td>• How it is done?</td>
<td>• Change in health behavior</td>
</tr>
<tr>
<td>Supplies</td>
<td></td>
<td>• Change in health status</td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td>• Client satisfaction</td>
</tr>
<tr>
<td>Information Technology</td>
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</tr>
</tbody>
</table>
The cost of Quality

Quality costs can be divided into two categories:

1. **Quality control costs** – necessary for achieving high quality
   - Prevention costs
   - Appraisal costs

2. **Quality failure costs** – consequences of poor quality
   - Internal failure costs
   - External failure costs
The cost of poor quality

THE TIP OF THE ICEBERG

Death
Prolonged illness
Misdiagnosed patients
Incorrect use of drugs/antibiotics
Incorrect treatment

THE REST OF THE ICEBERG

Wasted materials
Wasted time
Unnecessary services
Dissatisfied patients
Suspicious community
Prolonged infectiousness
Dissatisfied managers
Frustrated workers
Lost productivity
Legal Actions
Quality Assurance (QA)
“Quality Assurance is a set of activities that are carried out to set standards in order to monitor and improve performance so that the care provided is as effective and as safe as possible.”

The Quality Assurance Project, 1993
Core Activities of Quality Assurance

- Designing/Defining Quality
- Improving Quality
- Measuring Quality
The Quality Assurance Process

1. Planning for QA
2. Setting standards
3. Communicating standards
4. Monitoring
5. Identifying the problem
6. Defining the problem operationally
7. Choosing a team
8. Identifying the root causes
9. Developing solutions and actions
10. Implementing and evaluating QI effort
Institutionalization of Quality Assurance

Policy

Enable Environments

Core Values

QD

QI

QC

Quality Care

Support Functions

Leadership

Resources
Institutionalizing QA is a Process that evolves over time as the capacity for QA matures.
Quality Improvement
Why Quality Improvement?

• “no health care provider wants to provide poor care or services to patients”
• QI represents strategic and systematic approach to meet the needs of those we serve
• QI provides simple, proven and effective QI tools and methodologies
• US: Institute of Medicine (IOM) *Crossing the Quality Chasm* report: “Between the health care we have and the care we could have lies not just a gap, but a chasm.”
• Identification of six key areas: safety, effectiveness, patient-centeredness, timeliness, efficiency and equity.*

What do we mean by quality improvement?

... it depends on your criteria

Faster?

Easier?

Safer?

More efficient?

Less expensive?

What would be an improvement in the AHPRC?
What can Dilbert teach us about improvement?

www.dilbert.com February 1, 2004
Continuous Quality Improvement (CQI)

• Quality improvement is an organizational approach to improve quality of care and services using a specified set of principles and methodologies.
• Continuous, ongoing
• Feeds into “the bigger picture”
# QI - part of QA

<table>
<thead>
<tr>
<th></th>
<th>Quality Assurance</th>
<th>Quality Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
<td>Measuring compliance with standards</td>
<td>Continuously improving processes to meet standards</td>
</tr>
<tr>
<td><strong>Means</strong></td>
<td>Inspection</td>
<td>Prevention</td>
</tr>
<tr>
<td><strong>Attitude</strong></td>
<td>Required, defensive</td>
<td>Chosen, proactive</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Outliers: “bad apples” People</td>
<td>Processes Systems</td>
</tr>
<tr>
<td></td>
<td>Individuals</td>
<td></td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>Medical provider</td>
<td>Patient care</td>
</tr>
<tr>
<td><strong>Responsibility</strong></td>
<td>Few</td>
<td>All</td>
</tr>
</tbody>
</table>
What does it mean to “apply quality improvement”?
The “PDSA” cycle

**Act:**
- Take action based on results
- What changes are to be made?
- Next cycle?

**Plan:**
- Objectives
- Questions and predictions (why?)
- Planning (who, what, where when)
- Plan for data collection
- Communicate the change, engage stakeholders

**Do:**
- Carry out the plan
- Document problems and unexpected observations
- Begin data analysis

**Study:**
- Complete the analysis of the data (impact of intervention?)
- Compare data to predictions
- Summarize what was learned

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2. What are we trying to accomplish?

**Improvement aim**

- Specifies scope of the improvement goal
- Specifies numerical goals for outcomes that are achievable
- States the timeframe
- States how the aim will be achieved

*EXAMPLE:
To increase the participation of nurses and midwives in CPD sessions by 30% within 6 months

*Not always known

How could AHPRC help countries to set clear improvement aims?
3. What change will lead to an improvement? Developing and testing changes

- Use diagnostic strategies such as gathering information and/or process mapping to understand how the current system works
- Carefully examine the regulatory system and identify possible changes
- Changes are informed by evidence, experience, innovation
Model of a system

The sum of all elements (including processes) that interact together to produce a common goal

**Inputs**

Resources necessary to carry out a process

**Quality improvement**

**Process**

A series or sequence through which inputs are transformed into outputs.

**Outputs/Outcomes**

The outputs and outcomes are the services/products resulting from the inputs and processes.

- Eg – legislation, policy, staff
- Eg – licensing, accreditation, providing CPD
- Eg – competent nurses, standard of care, regulatory capacity

USAID Health Care Improvement Project
3. What change will lead to an improvement?

- Use diagnostic strategies such as gathering information and/or process mapping to understand how the current system works
- Carefully examine the regulatory system and identify possible changes
- Changes are informed by evidence, experience, innovation

EXAMPLE IMPROVEMENT AIM:
To increase the participation of nurses and midwives in CPD sessions by 30% within 6 months

What changes could achieve this improvement aim?
4. How do we know if there is improvement?

**Measurement data**

- Focus on what can be measured within available timeframe
- Define indicators
- Use time series charts to compare data with predictions
- Use data to inform the next PDSA cycle
Types of indicators

Input Indicators
- # of regulatory staff
- Resources for CPD
- Level of support for legislative reform
- Existence of legislation

Process Indicators
- % planned coordination meetings held
- % nurses licensed
- Licensing processing time

Output Indicators
- % nurses undertaking CPD
- Improvement in nurse and midwife competency
- Improved regulatory capacity

Outcome Indicators
- Reduction in Maternal Deaths

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4. How do we know if there is improvement?

**EXAMPLE INDICATOR**

**Indicator:** The % of planned coordination meetings held  
**Numerator:** Meetings held  
**Denominator:** Total # of planned meetings  
**Source:** Management records  
**Person Responsible:** Nursing council  
**Frequency:** Monthly

**Measurement data**

- Focus on what can be measured within available timeframe  
- Define indicators  
- Use time series charts to compare data with predictions  
- Use data to inform the next PDSA cycle

What are the relevant indicators for CPD?

What are the relevant indicators for legislative review and reform?
Part 2:

How does quality improvement apply to health professions regulation?
Dimensions of health workforce development

- Service Level
- Competency
  - Training
  - CPD
  - Career pathway
- Service Coverage
  - Size
    - Resources
    - Supply
    - Recruitment
    - Retention
- Service Scope
- Capacity
  - Skill mix
  - Environment
  - Support systems

Wuliji, T (2009)
Transitioning from pre-service education to practice: The status quo

Health system

- Service delivery
- Health workforce
- Information
- Medical products, vaccines and technology
- Financing
- Leadership/governance

Pre-service education

USAID Health Care Improvement Project
Transitioning from pre-service education to practice: Institutionalizing improvement models in practice and regulation

**Improvement models:**
- Health worker performance (practice)
- Regulation

**Strengthen health system**
- Service delivery
- Health workforce
- Information
- Medical products, vaccines and technology
- Financing
- Leadership/governance

**Change agents**

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Part 3:

Lessons learned from applying QI to Human Resources for Health Management
Healthcare workforce development
Results and approaches

- Improved quality of services
- Improved healthcare outcomes
- Influence policy

Engagement
Productivity
Performance

Research
Tools
Programs
Platform

USAID Health Care Improvement Project
Healthcare Workforce Development Programs - applying quality improvement methods to improve health

Niger

National scale up

Tanzania

Ethiopia - CHWs

Mali - CHWs

May 2009
Jan 2010
Jun 2010
Jan 2011
Jun 2011
Jan 2012

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Healthcare Workforce Development Programs - applying quality improvement methods

1. Improve HR management
2. Improve performance, productivity, engagement
3. Build capacity for sustainability

Adequate Environment

Clear and aligned tasks

Career Advancement

Competency Development

Reward & Recognition

Performance Feedback

Fair Evaluation

USAID Health Care Improvement Project
Program: Niger
Improving health worker performance

Adherence to Norms for Essential Newborn Care
District Hospitals, Tahoua, Niger

% adherence to norms for essential newborn care
% health workers with job descriptions

USAID Health Care Improvement Project
Program: Niger
Improving outcomes

All sites Contraceptive prevalence
J09  F  M  A  M  J  J  A  S  O  N  D  J10  F  M  A  M
13  17  20  10  12  22  15  13  17  12  17  12  18  16  21  18  23

CSI Wadata contraceptive prevalence
11  11  11  7  7  7  18  18  14  18  21  29  30  37  26  41

National average contraceptive prevalence
7  7  7  7  7  7  7  7  7  7  7  7  7  7  7  7  7

Percentage

USAID Health Care Improvement Project
Program: Niger
Improving health worker productivity

Average waiting time for Pre-natal consultation visit in three collaborative sites at baseline in 2009 and midline in October 2010, Niger

<table>
<thead>
<tr>
<th>Site</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD Konni</td>
<td>139.40</td>
<td>3.0</td>
</tr>
<tr>
<td>HD Bouza</td>
<td>94.90</td>
<td>46.6</td>
</tr>
<tr>
<td>CSI G Idder</td>
<td>355.70</td>
<td>52.5</td>
</tr>
</tbody>
</table>
Program: Tanzania
Improving health worker performance

% of exposed children under 18 months receiving daily Cotrimoxazole prophylaxis per month

LS 1
Teams map and analyze processes

Coaching visit 1

Coaching visit 2

Coaching visit 3

LS 2 Teams develop job models

Percentage

<table>
<thead>
<tr>
<th>Month</th>
<th>LS 1</th>
<th>Coaching visit 1</th>
<th>Coaching visit 2</th>
<th>Coaching visit 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>J 2010</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
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<tr>
<td>A 2010</td>
<td>20</td>
<td>30</td>
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<td>S 2010</td>
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<td>60</td>
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<td>50</td>
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<td>N 2010</td>
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<td>60</td>
<td>70</td>
<td>80</td>
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<tr>
<td>D 2010</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>J 2011</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

# of HIV exposed infants that started receiving cotrimoxazole within 2 months of age

<table>
<thead>
<tr>
<th>Month</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>A</td>
<td>9</td>
<td>32</td>
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<tr>
<td>S</td>
<td>16</td>
<td>32</td>
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<td>O</td>
<td>17</td>
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<td>N</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>D</td>
<td>32</td>
<td>40</td>
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</tbody>
</table>

The estimated # of HIV exposed infants born in the preceding 12 months

<table>
<thead>
<tr>
<th>Month</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>67</td>
<td>84</td>
</tr>
<tr>
<td>A</td>
<td>67</td>
<td>84</td>
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<tr>
<td>S</td>
<td>67</td>
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<td>O</td>
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<td>84</td>
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<tr>
<td>D</td>
<td>67</td>
<td>84</td>
</tr>
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Data Table

USAID Health Care Improvement Project
Objectifs de performance

Poste :

Accouchement :
Assister 100% des parturientes par un personnel qualifié.

Individu :
Prendre en charge toutes les parturientes :
Administer 10 UI d'ocytocine dans la minute qui suit l'accouchement.
Rationalizing roles and clarifying expectations: The health worker dimension
Tanzania: Process mapping and redesign

Redesigned process map for Kitama Dispensary

[Diagram of process map with steps including Outreach services, Registration (Weighing, TB screening, Sample for CD4), WHO staging, Eligible for ART?, Adherence counseling, Administer OI drugs, and Schedule for next visit for ART initiation or care.]
Key lessons learned

• Improving human resources management can improve performance and outcomes
• Build QI and HRH management capacity of QI teams
• Peer approaches to HRH management are effective
• Engage stakeholders throughout
• Coaching is key
• Leadership
• Shared learning
• Documentation and measurement as a motivator
Discussion : 20 min
Part 4:

Improvement Collaborative

A Model to Rapidly Spread Improvement
What is a Collaborative?

A collaborative is an organized effort of shared learning by a network of facilities/communities/districts to:

• Adapt to their local situations a known, best practice model of care (e.g., PMTCT) for a specific priority health problem (integrating PMTCT with ANC) or to develop a best practice model

• Make changes in support systems and service delivery processes to improve performance

• Achieve significant results in a short period of time (12-18 months) and thus reduce the gap between the ideal practice and current practice

• Scale up the adapted/developed model throughout the organization (health system) using an intentional spread strategy
What is the Purpose of the Collaborative Approach?

- Rapid spread of improvement in priority programmes
- Rapid capacity building of health staff to develop and implement improvement plans
- Decreasing dependence on outside support
- Strengthen sustainability of improvement projects and programmes
- Creating ownership of improvement programmes
- Strengthening a team approach to improvement
Improvement Strategies for specific Clinical Services

Content of Care

| Evidence-based: Standards | Protocols | Guidelines |

Process of Care

<table>
<thead>
<tr>
<th>Quality Improvement Methodology</th>
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<tbody>
<tr>
<td>• Systems</td>
</tr>
<tr>
<td>• Compliance</td>
</tr>
<tr>
<td>• Variation</td>
</tr>
<tr>
<td>• Attitudes/Motivation</td>
</tr>
</tbody>
</table>

Training/Support

Outcomes/Outputs (Limited)

Improved Outcomes

Increased Efficiency

Adapted from: Paul Balalden, Patricia Stoltz
A Framework for Continual Improvement in Healthcare
The Joint Commission Journal on Quality Improvement
October 1997
How do we apply a collaborative approach? (CPD example)

• Invite all the relevant stakeholders (nursing managers) in your area to a collaborative effort.
• Invite clusters from several areas (cluster: hospital with all clinics referring to that hospital and community in that area): hospital managers, clinic managers, PHC manager, MCH / HIV manager, CDC manager, Care and support staff and representatives from clinic committees and hospital board and request them to bring all CPD statistics for last 12 months
• Give a brief overview of QA technology
• Analyze data with the whole team
• Identify problem areas
• Analyze problem areas
• Develop improvement interventions, set objectives and identify indicators to monitor progress
The first “cluster” implements the improvement package and monitor the indicators
After one month the original group meets again
Data from the indicators (from first cluster) are analyzed and progress evaluated
Follow the PDSA cycle
This process is repeated for 3 – 6 months
When the “cluster” shows the desired improvement the team scale up and:
All “clusters” have to apply the same process in their area, considering lessons learned from the original process
Original group meet every quarter to provide feedback and learn from each other
Why Collaborate?

• Shared learning among networks of health care teams
  – More rapid progress
  – Each team learns from work of the others: don’t re-invent the wheel

• Value added of multiple teams (facilities) working on same problem
  – Peer group provides motivation for QI work
  – Facilitates spread of improvements--more efficient
  – Basis for scaling up a successful package of changes
Traditional Quality Improvement vs. Collaborative Improvement

Traditional

– Multiple topics for improvement
  • Each team independent
– Diverse measurements
– Single improvement action or change
– Informal sharing of lessons, better practices
– Benchmarking; Limited spread or scale up

Collaborative

– Common improvement aim
  • Care model
– Common set of indicators
– Package of changes
– Organized, systematic sharing
– Intentional, planned spread strategy
Attributes of a successful collaborative

- Action oriented
- Results-oriented-accelerate improvement
- Change package developed from ideas supplied by experts in the topic
- Use of model for improvement
- Support system for the participants
- Leadership structure to keep up the pace
- Values
  - Everybody learns, everybody teaches
  - A sense of “family” and support
  - A sense of urgency and competition
Diagram Showing the Selection of Different Types & Levels of Facilities in a District or Province in the Pilot testing wave

(A Slice of the System in a Health District)
Diagram Showing the Scale up of pilot model throughout a region/country

(A Slice of the System in a Health District)
Improvement Model
(improvements in 6 to 15 months)

Select Area & Clinical Service

Identify Facility Team

Improvement Training

Baseline Assessments

TB Teams/ QA Staff

Learning Session

AP

Learning Session

AP

Learning Session

AP

Facility and/or sub-district

Support

District Meetings

Visits

Monthly/Quarterly Team Reports

Phone calls

Assessments

Policy Dialogue/Advocacy

Improvement package
- Knowledge/skills - Refreshers
- Efficiency – System/Process redesign, integration
- Compliance - Job aids
- Self/supervisory assessments
- Monitoring/evaluation

Outcomes/Results

ongoing
Overall aim: Improved CPD / regulation system

- Increased proportion of nurses complying with CPD / regulatory framework

**Cycle 1:** Develop and test an outreach model in a cluster

**Cycle 2:** Design and test improved access

**Cycle 3:** Redesign processes

**Cycle 4:** Standardize the system

**Cycle 5:** Staff education in new system

Improved access to CPD activities / regulatory framework to improve quality of care
Overall aim: Improved CPD / regulation system

- All regions providing CPD activities
- Community utilization of programme
- Communication Between regions
- Information System
Part 5:

Total Quality Management:

Introduction to Process mapping and other ‘Quality’ tools
Total Quality Management (TQM)
What is TQM?

• TQM means that an organization’s culture is defined by and supports the constant attainment of customer satisfaction through an integrated system of tools, techniques and training.

• This involves the continuous improvement of organizational processes, resulting in high quality services.
Total Quality Management Tools

- They help organizations to identify, analyze and assess data that is relevant to their organizations
- These tools can identify procedures, ideas, statistics, cause and effect concerns
• A vertical bar chart which depicts the distribution of data set
• It can be used to:
  - graphically represent a large data set
  - process results and determine if a current process was able to produce positive results
Process mapping: Flow diagram

It is a graphic representation of how a process works, showing the sequence of steps.

**WHY?**

- Describes the sequence of steps in a process
- Make the process clear and understandable
- Reduce complexity
- Eliminate unnecessary duplication
- Eliminate loops
- Rationalize the steps of the process
- Helps to guide discussion on identifying problems
- Reduce waste

How could process mapping be useful for improving regulation?
Process mapping: Flow lines

**Step**

- One flow line out of a step

**Decision**

- Two flow lines out of a decision
  - Must ask a yes / no question
FLOWCHART: WAITING FOR MAMMOGRAPHY

Patient arrives

Register patient?

Y

Patient receives/fills questionnaire

Mammogram done

N

Refer out/reschedule

Physician available?

Y

Physician interprets mammogram

Examine patient

Order ultrasound exam?

Y

Ultrasound exam

N

Confer with patient

N

Wait

Y
Analyzing a Flow Chart

- Does this step need to be done?
- Where are the delays?
- Is the sequence of steps appropriate?
- Are there missing steps?
3. Fishbone (cause-effect/ Ishikawa) Diagram

It is a tool used to discover all the possible causes for a particular effect

- It can be used as a first step in problem solving by generating a comprehensive list of possible causes
- It leads to greater understanding of the problem
- It can be developed through brainstorming
- The head of the fish is the quality problem identified
No CPD system

Personnel

- Lack of knowledge & Skills
  - Attitude
    - Poor record keeping

Processes

- No policies / guidelines / legislation
- No money
  - No trained CPD providers
- No rural outreach programs
- No in-service training program
- Poor M&E of CPD credits
- No referral / tracking systems
- No competition

Clients

- No CPD system
- Poorly informed
  - Accepting attitude
  - Not empowered
It is used to collect ideas from a group without regard to the validity of those ideas.

**Rules:**
1. All groups members have equal input into the process
2. There are no “dumb ideas”
3. Use moderator to enforce the rules and record the ideas
4. Prioritize ideas
5. Do not hold discussions
6. Each idea should be written down on a flip-chart or board
5. Benchmarking

- Benchmarking is a technique for learning from others’ success in an area where the team is trying to make improvements.
- Benchmarking is useful when trying to develop new services or seeking options for potential solutions.
- It is replicating, not copying.

How to use benchmarking?

- Identify other groups, organizations that have valued services.
- Visit these sites and talk to managers and workers to identify the processes and problems.

Tips for success

- Know your own processes.
- Choose the right partner.
- Use benchmarking to stimulate creative thinking and change.
- Act on the results.
6. Gantt Charts

- A Gantt chart provides a graphical illustration of a schedule that helps to plan, coordinate, and track specific tasks in a project.
- A Gantt chart aids planning by showing all activities that must take place and when they are scheduled to be carried out.
- Provide graphic guide for carrying out a series of activities, showing the start date, duration, and overlap of activities.
- Most useful in planning and monitoring of activities.
How to use Gantt Charts

- List all the activities
- Determine when each activity must start
- For each activity mark the starting date and completion date

<table>
<thead>
<tr>
<th>Program Tasks</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PMTCT</strong></td>
<td>1 2</td>
</tr>
<tr>
<td>Finalize collaborative methodology for scaling up of interventions</td>
<td></td>
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<tr>
<td>Identify facilities in each province</td>
<td></td>
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<tr>
<td>Implement/monitor improvement interventions</td>
<td></td>
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<tr>
<td><strong>Palliative Care - Basic Health Care Support</strong></td>
<td></td>
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<tr>
<td>Develop a framework for improving palliative care services</td>
<td>3 4</td>
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<tr>
<td>Identify local CBOs/FBOs (small grants)</td>
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<tr>
<td>Finalize improvement intervention package</td>
<td></td>
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<tr>
<td>Implement/monitor improvement interventions</td>
<td></td>
</tr>
<tr>
<td><strong>Palliative Care - HIV/TB</strong></td>
<td>5 6</td>
</tr>
<tr>
<td>Develop a framework for improving HIV/TB services</td>
<td></td>
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<tr>
<td>Finalize improvement intervention package</td>
<td></td>
</tr>
<tr>
<td>Implement/monitor improvement interventions</td>
<td></td>
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<tr>
<td><strong>Palliative Care - Counseling and Testing</strong></td>
<td>7 8</td>
</tr>
<tr>
<td>Conduct rapid assessment of current CT services</td>
<td></td>
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<tr>
<td>Develop a framework for improving CT services</td>
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<tr>
<td>Finalize improvement intervention package</td>
<td></td>
</tr>
<tr>
<td>Implement/monitor improvement interventions</td>
<td></td>
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<tr>
<td><strong>ARV Services</strong></td>
<td>9 10</td>
</tr>
<tr>
<td>Assess quality of ARV services</td>
<td></td>
</tr>
<tr>
<td>Develop improvement package</td>
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<tr>
<td>Implement/monitor improvement interventions</td>
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<tr>
<td><strong>Evaluation and Dissemination</strong></td>
<td>11 12</td>
</tr>
<tr>
<td>Design compliance survey protocol and tools</td>
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<tr>
<td>Conduct survey</td>
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<tr>
<td>Conduct special studies on best practices (ongoing)</td>
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<tr>
<td>Disseminate results in various fora</td>
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</tbody>
</table>
7. Reporting Results

• Reporting results is very important in that it helps staff focus on the problem at hand and the progress made.
• It helps staff to realize when improvement interventions are not producing the intended results, leading to the review of the improvement plan.
THE STORYBOARD

PROBLEM
Long period between patient referral for X-ray and service

QI TEAM
Dr. Morwa
Ms. Oodi
Ms Bokao
Dr Gill

PROBLEM ANALYSIS

SOLUTION
1. Reduce wasted slots with patient-on-call system
2. Compress unit time by having radiologists set own schedule

RESULTS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Before:</td>
<td>Ave. = 7 days</td>
</tr>
<tr>
<td>After:</td>
<td>Ave. = 5 days</td>
</tr>
</tbody>
</table>
8. A HEALTHCARE SYSTEM MODEL

Integrated Management of Childhood Illness

**INPUTS**
- Standards
- Medications
- Trained staff
- Job aids
- Information
- Supervision
- Test Kits
- Mentoring and coaching

**PROCESS**
- **Assess:**
  - Danger signs
  - Signs/symptoms
  - Immun. status
  - Vit A status
- **Classify**
- **Plan treatment**
- **Counsel mother**
- **Record**

**OUTPUT**
- Clients managed according to algorithm

**OUTCOMES**
- **Clients correctly diagnosed**
- **Correct treatment**
- **Mother knows what to do**
- **Accurate records**

**IMPACT**
- Decreased:
  - Mortality
  - Complications
  - Morbidity-days

**ENVIRONMENT**

**POLICIES**

**PLANS**
## TQM Tools

<table>
<thead>
<tr>
<th>Tools Used to:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>A. Identify and quantify problem</strong></td>
<td>1. Histogram</td>
</tr>
<tr>
<td></td>
<td>2. Flow Chart / Process Map</td>
</tr>
<tr>
<td></td>
<td>3. Run Chart</td>
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<td>4. Pareto Chart</td>
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<td></td>
<td>5. Control chart</td>
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<tr>
<td><strong>B. Determine Root causes</strong></td>
<td>1. Cause-and-effect diagram (fishbone diagram)</td>
</tr>
<tr>
<td><strong>C. Develop and select potential solutions</strong></td>
<td>1. Brainstorming</td>
</tr>
<tr>
<td></td>
<td>2. Benchmarking</td>
</tr>
<tr>
<td></td>
<td>3. Affinity Diagram</td>
</tr>
<tr>
<td></td>
<td>4. Prioritization Matrices</td>
</tr>
<tr>
<td>Tools used to:</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| D. Implement Quality Improvement Interventions | 1. Gantt Chart  
                          | 2. Storyboard                                                   |
| E. Make decisions                 | 1. Voting  
                          | 2. Nominal Group Technique  
                          | 3. Prioritization Matrices |
| F. Analyze a system               | 1. Healthcare system modelling                                  |
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www.hciiproject.org
www.urchs.com