Improving Health Worker Performance

Lessons from a global review of programs & Malawi's experience and learning

15 June 2021

Quality, Equity, Dignity

A Network for Improving Quality of Care for Maternal, Newborn and Child Health

Hosted jointly by the Quality of Care Subgroup of the Child Health Task Force and the Network for Improving QoC for MNCH

Child Health Task Force
Goal

To strengthen equitable and comprehensive child health programs - focused on children aged 0-19 in line with the Global Strategy for Women's, Children's, and Adolescents' Health (2016-2030) - through primary health care, inclusive of community health systems.

Quality of Care (QoC) Subgroup

Goal: To create a platform in the child health community to advocate for and provide targeted support to countries to improve QoC for children in countries where Task Force members are active.

Review and suggest subgroup activities here: bit.ly/QoCworkingdoc

Today's Webinar

Improving health worker performance in low- and middle-income countries (LMICs) remains a major challenge

Part 1: Presentations

- Dr. Alex Rowe will cover the findings from a systematic review on the effectiveness of interventions to improve health worker performance in LMICs.
- Dr. Owen Musopole from the Ministry of Health, Malawi, will share the country's experience and learning to support improvement of health worker performance.

Part 2: Questions & Answers

The Network for Improving Quality of Care for Maternal, Newborn and Child Health

Bangladesh, Côte d'Ivoire, Ethiopia, Ghana, India, Kenya, Malawi, Nigeria, Sierra Leone, Tanzania, Uganda

Goals

1. **Halve maternal and newborn mortality in health facilities in Network countries, as well as stillbirths, by 2022**
2. **Improve the experience of care**

Strategic Objectives

Quality, Equity, Dignity
A Network for Improving Quality of Care for Maternal, Newborn and Child Health

World Health Organization

unicef

Featured Speakers:

Dr. Owen Musopole
Deputy Director
Quality Management Directorate
Ministry of Health and Population
Malawi

Dr. Alex Rowe
Senior Specialist
Resilient and Sustainable Systems for Health Team
The Global Fund to Fight AIDS, Tuberculosis, and Malaria

The effectiveness of interventions to improve health worker performance in low- and middle-income countries:

A systematic review

Alexander K. Rowe, MD, MPH

Resilient and Sustainable Systems for Health Team,
The Global Fund to Fight AIDS, Tuberculosis, and Malaria

Guest Researcher,
Malaria Branch,
U.S. Centers for Disease Control and Prevention (CDC)

Definition: What is quality?

- Many perspectives
  - Structural quality (e.g., availability of equipment)
  - Quality assurance (e.g., for medicines)
  - Program quality
  - Health care quality
- For this presentation
  - Health care quality, in terms of health worker (HW) practices (e.g., patient assessment, diagnosis, treatment, counseling, and treating patients with dignity)
  - High-quality = services are safe, effective, and patient-centered
  - **Why?** Health care quality/HW practices correlated with health outcomes, easy to understand, most evidence

Relevance: Why quality matters?

1) High quality needed for country programs to have impact (correlated with health outcomes)

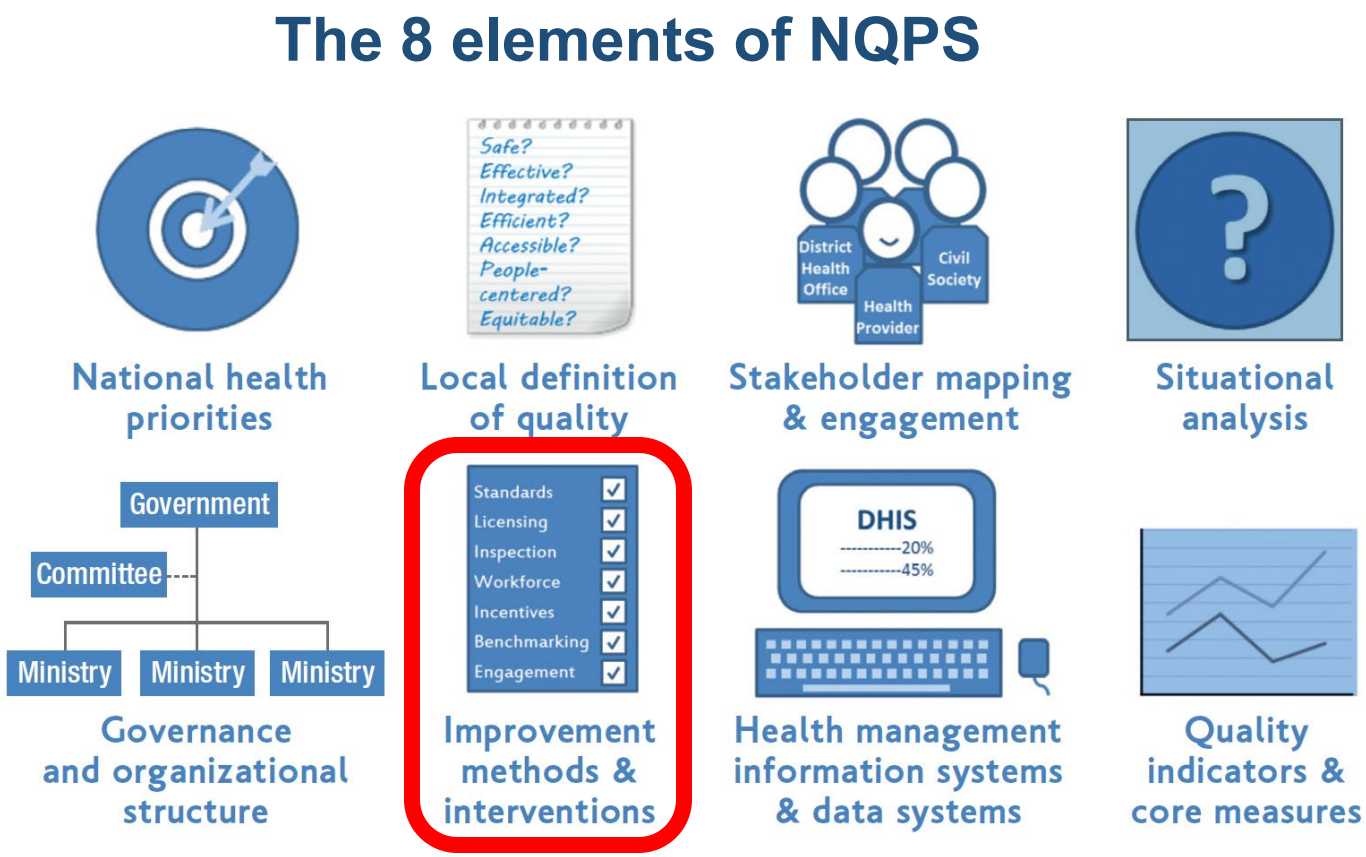
2) Poor quality is big problem in low- and middle-income countries (LMICs)
   - Only half of patients typically receive needed treatments (among those seeking care)
   - **High burden:** 5–8 million deaths (660K for HIV & TB, or 29% of all HIV & TB deaths in LMICs), $1.5 trillion in lost productivity, which perpetuates poverty & diseases of poverty

3) We can do something about it

4) Efficiency issues. Poor quality is wasteful: medicines, diagnostics, out-of-pocket expenses

How this presentation fits into the bigger picture

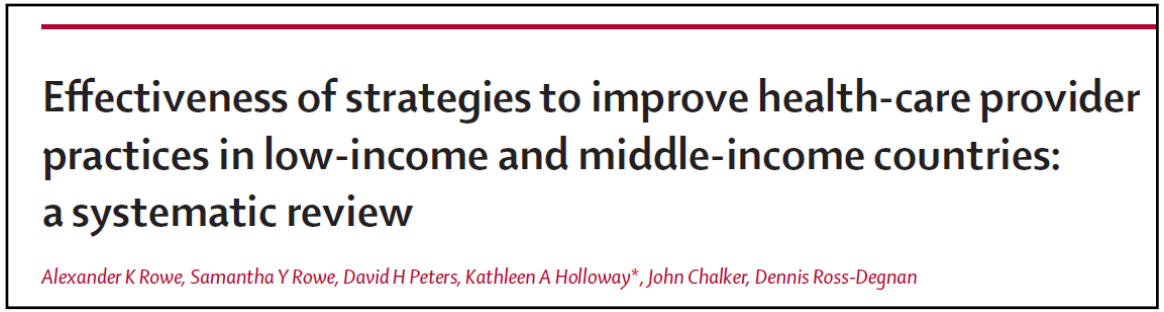
- To improve quality of care, WHO encourages countries to develop a national quality policy & strategy (NQPS)
- Choice of interventions should be based on global evidence (among other factors)
- This presentation summarizes global evidence on effectiveness of interventions to improve quality of care



Evidence source: Health Care Provider Performance Review

- Systematic review of effect of any intervention to improve HW performance in LMICs
- **HWs:** Facility/community HW, pharmacists, shopkeepers who sell drugs, private sector
- Cochrane methods, eligible study designs: controlled trials and interrupted time series

Lancet Global Health 2018


Effectiveness of strategies to improve health-care provider practices in low-income and middle-income countries: a systematic review

Alexander K Rowe, Samantha Y Rowe, David H Peters, Kathleen A Holloway*, John Chalker, Dennis Ross-Degnan

- **Literature search:** screened 216,477 citations (1960s–2016)
- Includes >700 studies on >100 strategies (e.g., Lancet GH has 118 strategies)
- Many outcomes, for today: HW practices (e.g., % of patients correctly treated)
- **Effect sizes:** absolute %-point change (e.g., 10 %-point improvement)
  - 40% baseline performance + 10 %-point improvement → 50% follow-up
  - Also means intervention improves quality for 1 out of every 10 patients

Overview of studies

- Analyses for this presentation included 389 studies with at least 1 HW practice outcome, which represented wide range of contexts in 64 countries
- 59% of studies had high risk of bias
- Studies often short: 2/3 had follow-up times <10 months
- Interventions aimed to improve quality for variety of health conditions and for all ages (although many studies included children)

Effectiveness of interventions to improve practices of professional HWs

(generally facility-based HWs, e.g., physicians, nurses, and midwives)

General findings

- Mean baseline was 40%
- Among all 101 interventions, median improvement = 12 %-pts
  (Typical scenario: 40% BL + 12 %-pt improvement = 52% F/U)

Important: even after intervention, usually much room to improve

General findings

- Mean baseline was 40%
- Among all 101 interventions, median improvement = 12 %-pts
  (Typical scenario: 40% BL + 12 %-pt improvement = 52% F/U)
- Most interventions (80%) tested by only 1 or 2 studies
  - Generalizability extremely limited
  - Presentation focuses on interventions tested by 3+ studies
- Effect sizes vary widely for most interventions
  - Ex. Train only, median effect: 10 %-pts (IQR: 6, 21; range: –20, 61)
    (N=78 studies)

General findings

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  - Ex. Train only, median effect: 10 %-pts (IQR: 6, 21; range: –20, 61)
    Thus, ¼ of effects: <6 %-pts, and ¼ of effects: 21 to 61 %-pts
  - Demonstrates difficulty in predicting intervention's effect
  - Underscores importance of monitoring effect of any intervention

Effectiveness of interventions tested by 3+ studies

	Median effect size, %-pts
• Printed information or job aids for HWs only	1
• ICT for HWs as sole intervention (N = 4 studies)	1
– Broadened intervention definition (ICT +/- other intervention components, N = 28 studies)	8

Goal: analyze larger pool of studies with greater diversity of context and implementation approaches

Effectiveness of interventions tested by 3+ studies

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• Training only	10

Are some training approaches more effective?

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• Training only	10

Training tended to be more effective when it…

- Was at least partly conducted at HWs' routine work site, by 6–10 %-points
- Used clinical practice, by 7–8 %-points

BMJ Global Health 2021;6:e003229

http://gh.bmj.com/cgi/content/full/bmjgh-2020-003229

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• Printed information or job aids for HWs only	1
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– Broadened intervention definition (ICT +/- other intervention components, N = 28 studies)	8
• Training only	10
• Supervision only	15

Are some supervision approaches more effective?

Effectiveness of interventions tested by 3+ studies

	Median effect size, %-pts
• Printed information or job aids for HWs only	1
• ICT for HWs as sole intervention (N = 4 studies)	1
– Broadened intervention definition (ICT +/- other intervention components, N = 28 studies)	8
• Training only	10
• Supervision only	15

Supervision tended to be more effective when supervisors…

- Received supervision, by mean of: 9 %-pts (p = 0.097) NS
- Participated in group process activities (e.g., problem solving), by mean of: 14 %-pts (p = 0.098) NS

Effectiveness of interventions tested by 3+ studies

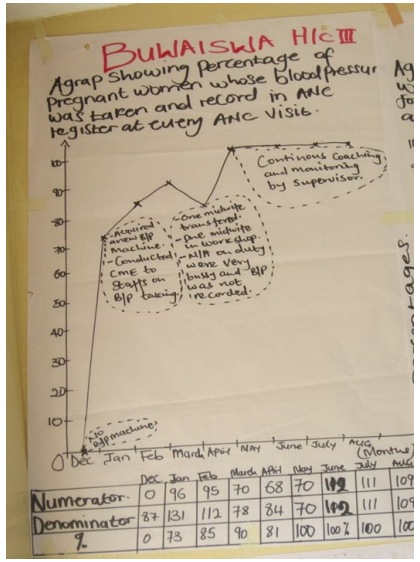
	Median effect size, %-pts
• Printed information or job aids for HWs only	1
• ICT for HWs as sole intervention (N = 4 studies)	1
– Broadened intervention definition (ICT +/- other intervention components, N = 28 studies)	8
• Training only	10
• Supervision only	15
• Training + supervision	18

Effectiveness of interventions tested by 3+ studies

	Median effect size, %-pts (broadened definition)
• Group problem solving only	28 (12)
• Group problem solving + training	56 (16)

E.g., Continuous quality improvement, or **collaborative improvement**

QI teams in network of facilities test changes in processes of care using Plan-Do-Study-Act cycles



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QI teams in network of facilities test changes in processes of care using Plan-Do-Study-Act cycles


PLOS ONE **2019**

RESEARCH ARTICLE

The effectiveness of the quality improvement collaborative strategy in low- and middle-income countries: A systematic review and meta-analysis

Ezequiel Garcia-Elorrio[1]*, Samantha Y. Rowe[2,3], Maria E. Teijeiro[4], Agustín Ciapponi[5‡], Alexander K. Rowe[2‡]

https://doi.org/10.1371/journal.pone.0221919

Collaborative improvement + training

Median 63 %-pts (N = 4 studies)

Effectiveness of interventions tested by 3+ studies

	Median effect size, %-pts (broadened definition)
• Group problem solving only	28 (12)
• Group problem solving + training	56 (16)
• Strengthened infrastructure + supervision + other mgmt techniques + training	33 (29)

E.g., HW group process/meetings

E.g., Provision of medicines

Effectiveness of interventions tested by 3+ studies

	Median effect size, %-pts (broadened definition)
• Group problem solving only	28 (12)
• Group problem solving + training	56 (16)
• Strengthened infrastructure + supervision + other mgmt techniques + training	33 (29)
• Strengthened infrastructure + supervision + other mgmt techniques + training + financing/other incentives	58 (33)

E.g., Performance-based non-financial incentive
(ID badge & advertising sign after HWs passed a test)

Effectiveness of interventions tested by 3+ studies

	Median effect size, %-pts (broadened definition)
• Group problem solving only	28 (12)
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Are multi-faceted interventions more effective than simpler ones?

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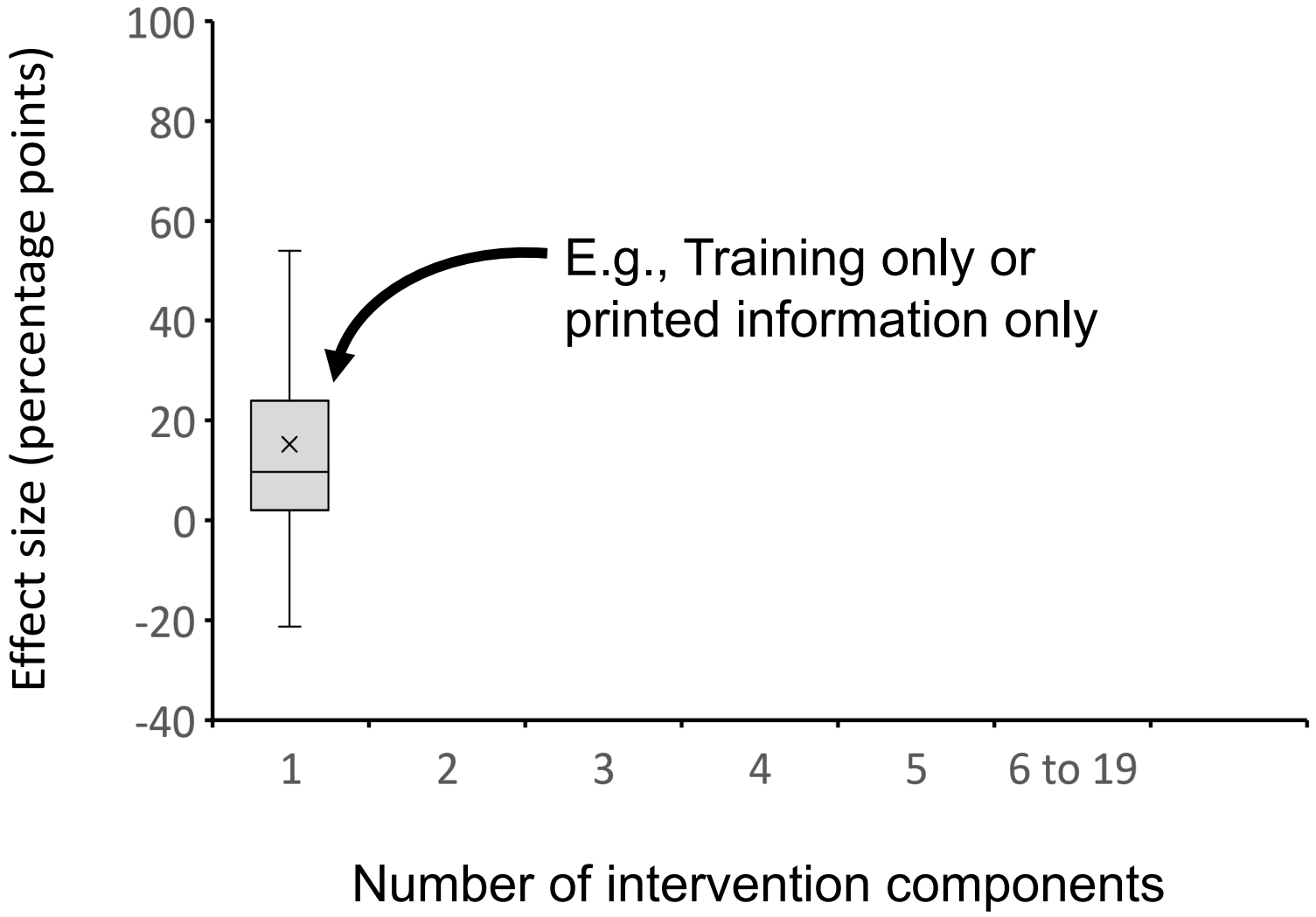
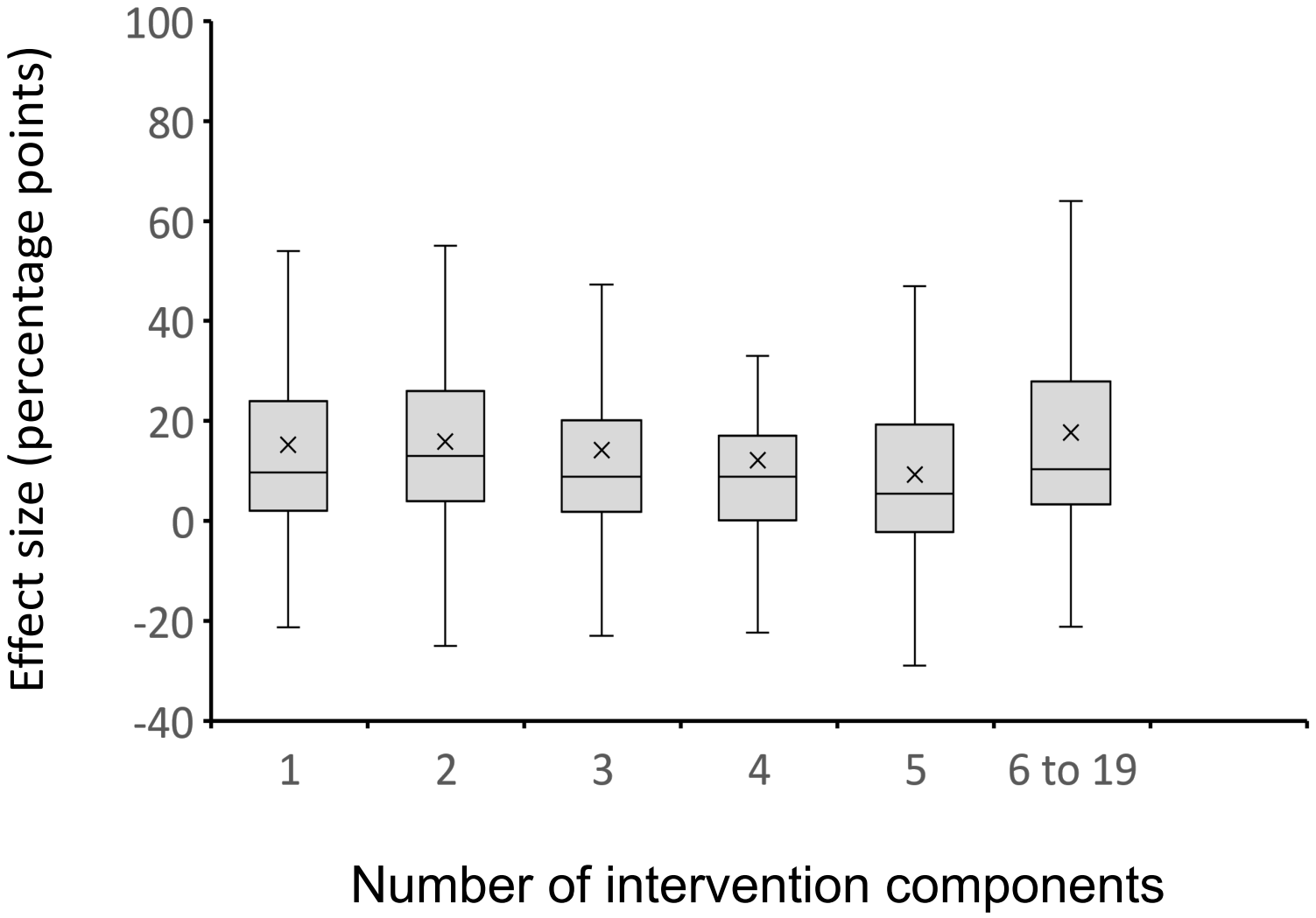


Are multi-faceted interventions more effective than simpler ones? **No.**



Effect of interventions to improve performance of lay or community health workers (CHWs)

Top image. World Vision. https://www.worldvision.org/health-news-stories/malaria-burundi-half-country-sick. Accessed May 16, 2018.

Lower image. Malaria Consortium. https://www.malariaconsortium.org/blog/recognising-community-health-workers-this-world-health-day-and-world-health-workers-week-2/. Accessed May 16, 2018

Improving lay or CHW performance

- 18 studies, most with high or very high risk of bias
- 14 interventions, most tested by 1 or 2 studies each
- For training only (N = 4 studies), median effect = 2 %-points
- For interventions that included community support and training for CHWs, effects ranged from 8 to 56 %-points

Evidence-based guidance on improving HW practices in LMICs

General guidance on improving HW practices

1) Effect of any intervention should be monitored so managers can know how well it works. Monitoring data could be used to adapt interventions to local conditions and facilitate learning, with aim of increasing effect.

2) General approach
   - Initial intervention (based on research evidence and knowledge of local context)
   - Monitor HW practices
   - Address gaps (which should be expected) by modifying or abandoning intervention or layering on new one
   - Continue to monitor and modify as needed

3) Decision-makers should not assume multi-faceted interventions are more effective than simpler ones

Guidance for professional HWs (i.e., not only CHWs)

1) **Printed information or job aids** to HWs as sole intervention is unlikely to change performance

2) **ICT** typically has small-to-modest effects

3) **Training** or **supervision** generally have moderate effects. May be more effective to combine training with other interventions, such as supervision or group problem solving.
   - To increase effect of training, it may be beneficial to conduct part of training on-site and to include clinical practice
   - To increase effect of supervision, it may be beneficial to supervise supervisors and to have supervisors engage in problem-solving

4) **Group problem solving** typically has moderate effects

5) **Multi-faceted interventions** of infrastructure, supervision, management techniques, and training (+/- financing/other incentives), and intervention of **group problem solving + training** *(esp. collaborative improvement + training)* tend to have large effects

Guidance for improving CHW performance

1) Only **training** CHWs usually has small effects

2) Interventions that include **community support plus training** for CHWs might lead to large improvements, although evidence is limited

Limitations

1) Limitations of studies: lack of detail on intervention and context, lack of standard methods, difficulty in assessing study precision and strength of implementation, high risk of bias, short follow-up, and small scale

2) Overview analysis (much lumping). Designed to identify broad patterns across all studies. However, results do not reflect nuances, e.g., all countries combined.

   Solution: conduct context- and content-specific analyses with publicly-available HCPPR databases.

HCPPR website: www.HCPperformancereview.org

Health Care Provider Performance Review

1) Use menus to select studies
2) Click on “Run analysis”

Home | Download Databases | Publications | Video Tutorials

Example question: What is effectiveness of interventions to improve quality of care for HTM in Africa?

The Health Care Provider Performance Review (HCPPR) is a systematic review of ...ncome countries (LMICs).

Health workers in LMICs play a central role in preventing and treating illness; howe... ...tives, and technology-based interventions, exist to improve performance in LMICs. An unders... ...esearchers, and other development partners. The HCPPR systematically examines published and u... ...ider performance in LMICs. Studies on any strategy were included for any type of health care provider (including hospital- and clinic-based health workers, community health workers, pharmacists, and staff working in drug shops) for any health condition. Only studies with relatively robust evaluation designs were included (i.e., controlled trials and interrupted time series). The HCPPR includes more than 700 studies. On this website, users can perform rapid on-line analyses of HCPPR data, as well as download more detailed versions of the review’s databases.

For instructions on how to use this website, please view the video tutorials (click on the “Video Tutorials” tab, and select a video).

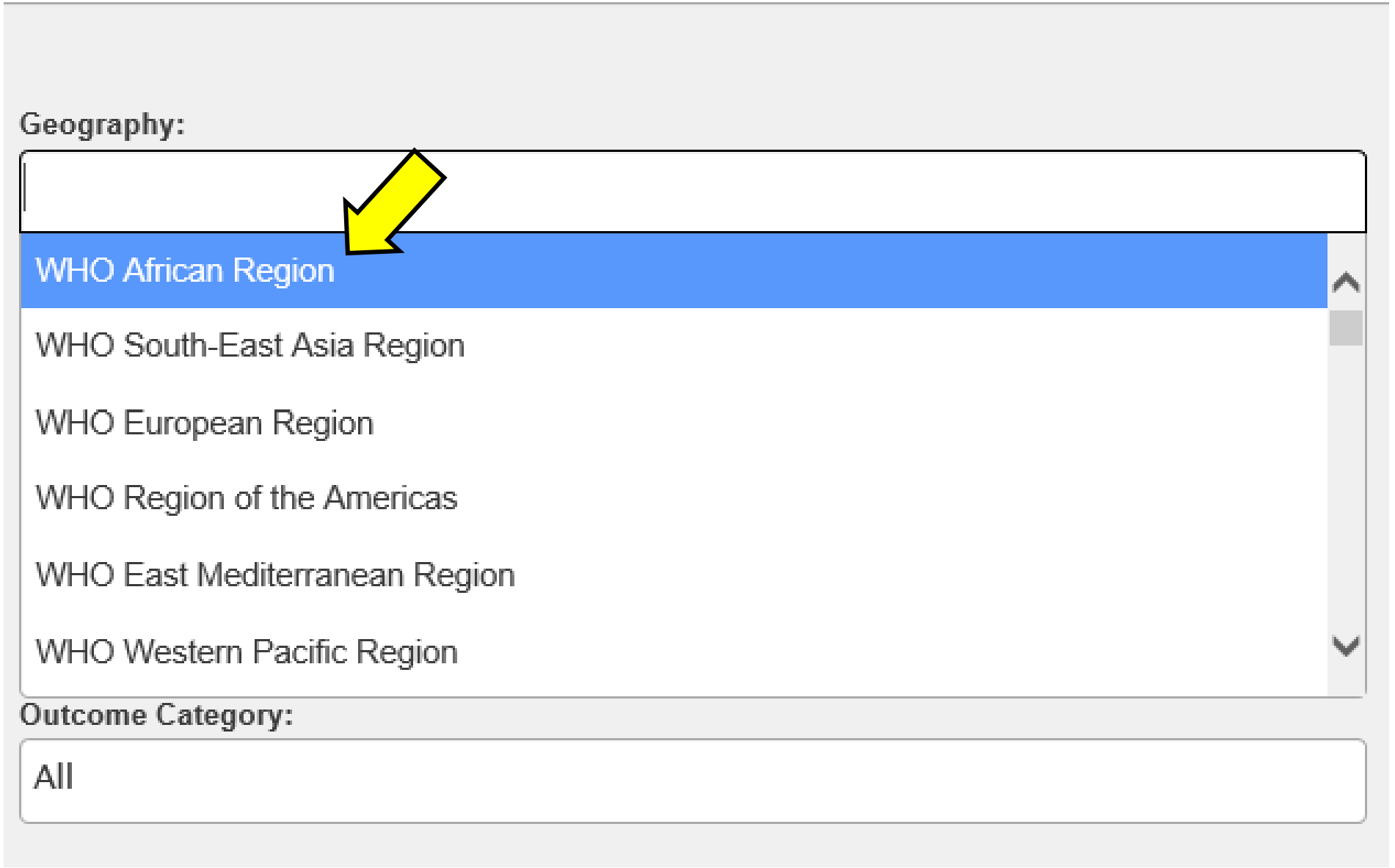
Geography: All

Strategy: All

Setting: All

Setting Ownership: All

HCPPR website: www.HCPperformancereview.org



HCPPR website: www.HCPperformancereview.org

Geography:
× WHO African Region

Strategy:
All

Setting:
All

Setting Ownership:
All

Health Worker Type:
All

Health Condition:
× HIV/AIDS +/- other sexually transmitted diseases × Malaria × Tuberculosis

Outcome Category:
All

Risk of Bias:
All

Income Level:
All

Lay or Community Health Workers (CHWs):

- (●) All studies (i.e., studies of lay/CHWs AND health facility-based health workers)
- ( ) Include only lay or CHW predominant studies
- ( ) Exclude lay or CHW predominant studies (i.e., only include health facility-based health worker studies)

Random control:

- (●) All studies
- ( ) Include only randomized [illegible]led studies
- ( ) Exclude randomize[illegible]led studies

Run analysis Reset

HCPPR website: www.HCPperformancereview.org

Healthcare Provider Performance Review

Home | Download Databases | Video Tutorials

Perform Analysis

Analysis of Strategy Effectiveness

Strategy	Number of Study Comparisons in Analysis	Analysis of Median Effect Sizes (MES)	
		Median of MES Values	Interquartile Range of MES Values
Strategies tested by at least 3 study comparisons each:			
Strengthening infrastructure + Health system financing and other incentives + Supervision + Other management techniques + Training	3	63.0	N/A
Supervision + Training	4	44.9	N/A
Supervision only	3	22.6	N/A
Group problem solving only	5	19.6	12.9 to 24.9
Strengthening infrastructure + Training	3	12.4	N/A
Training only	9	10.0	4.6 to 49.5
Information and communication technology or mHealth for HCPs only	5	3.9	−2.4 to 36.2
Group problem solving + Information and communication technology or mHealth for HCPs	3	−2.4	N/A

Global reports and guidance

Themes from 3 global reports

- Improving quality of care requires system-wide action
- Leverage UHC to improve quality
- Develop a nation quality strategy
- Use systems thinking
- Measure and report what matters most to people (e.g., competent care, user experience, & health outcomes)
- Govern for quality
- Ignite demand for quality in the population
- Greater focus needed on informal healthcare sector, people affected by extreme adversity, & corruption
- More research needed

From WHO

- WHO Quality Planning Guide, https://www.who.int/publications/i/item/9789240011632
- Quality of care in fragile, conflict-affected & vulnerable settings: taking action https://www.who.int/publications/i/item/9789240015203
- WHO Quality Toolkit (coming soon)

Conclusions

1) Inadequate health care quality is large problem, but solutions exist
2) Research has important limitations, but results useful to inform decision-making
3) Some interventions seem more effective than others (e.g., training + group problem solving, some multi-faceted strategies); consider in appropriate context
4) Seem to be ways to make training and supervision more effective
5) Avoid ineffective interventions (e.g., only printed info)
6) Important to monitor effectiveness for all interventions (in general, need more measurement of quality of care…without data, it's difficult to pay attention)
7) Consider broader actions for improving quality (from global reports)
8) High-quality research needed (e.g., on CHWs)
9) HCPPR's website can be used to find evidence tailored to your geography, health condition, and service delivery context

LESSONS FROM A REVIEW OF PROGRAMMES AND MALAWI COUNTRY EXPERIENCE

Dr Owen Musopole

Deputy Director Quality Management
Ministry of Health
Malawi

Introduction to QMD

- The QMD was **established in 2016 to provide strategic leadership & coordination of QM initiatives** across the health sector in Malawi

3 DIVISIONS

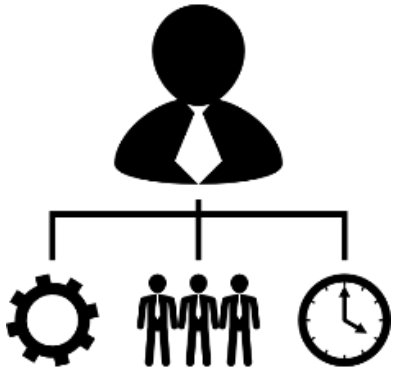
1. Norms & Standards

2. Quality Assurance

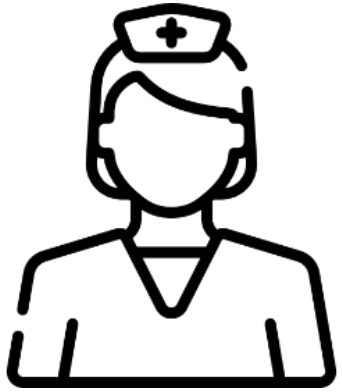
3. Quality Improvement

QM Policy

Key Priorities for improving QOC in the Health Sector

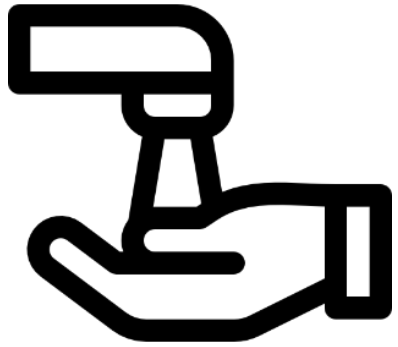


Leadership, Governance & Accountability

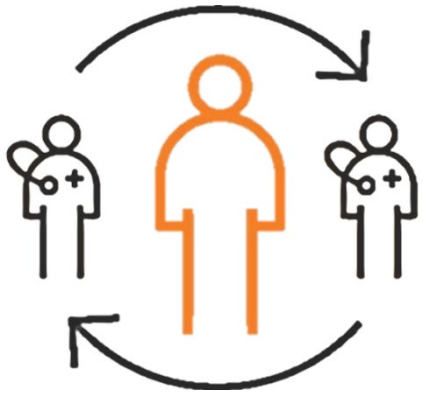


HRH

Clinical Practice

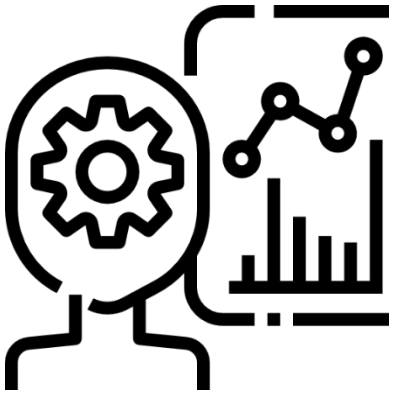


Client Safety



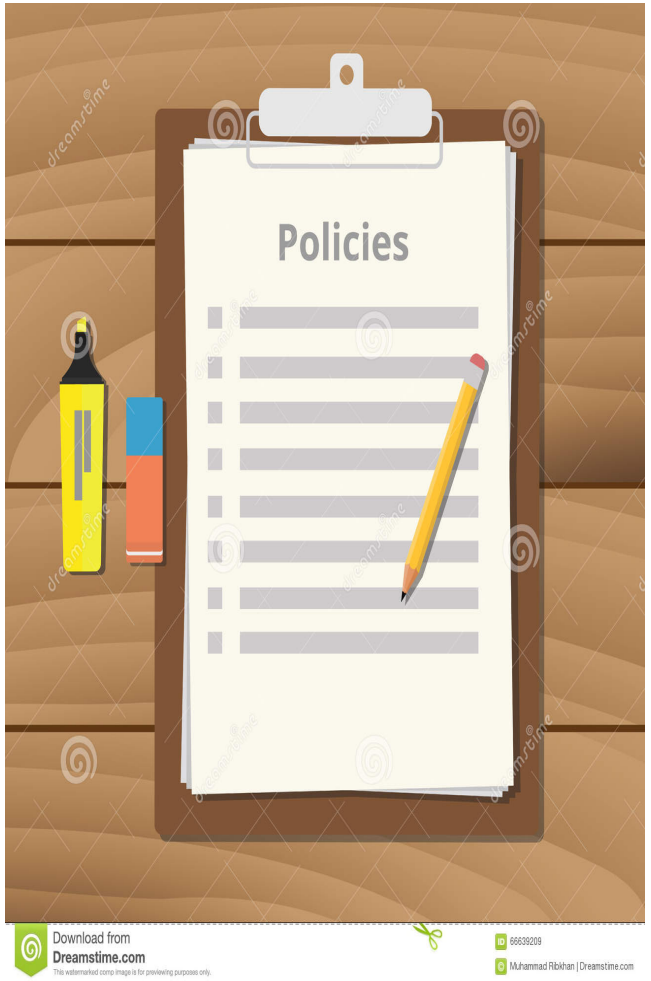
People-Centered Care

Support Systems



Evidence-Based Decision Making

Updated National policies & Strategic documents



- *National Quality Management Policy 2017-2022*
- *National Quality Management Strategy 2017-2022*
- *QoC Roadmap 2017-2022*
- *QoC MNH Implementation guide*
- *QoC MNCH Standards*
- *Paediatric standards*
- *QI training manual*
- *Mentorship manual 2020*

QOC IN MALAWI

- Malawi joined the global QOC network in 2016
- The QMD had just been established to provide strategic leadership and coordination of all QM initiatives
- Strategic documents available:
  - Quality Management Policy
  - Quality Management Strategy
  - QM training manual
  - MNCH QOC roadmap
  - MNCH QOC implementation guide
  - MNH QOC standards for Child and Young adolescents
  - QOC standards for MNCH QOC assessment tools
- Malawi is using MNCH (Integrated) as a pathfinder for QoC
- Implementation of QOC roadmap is around the LALA strategy adapted from WHO.

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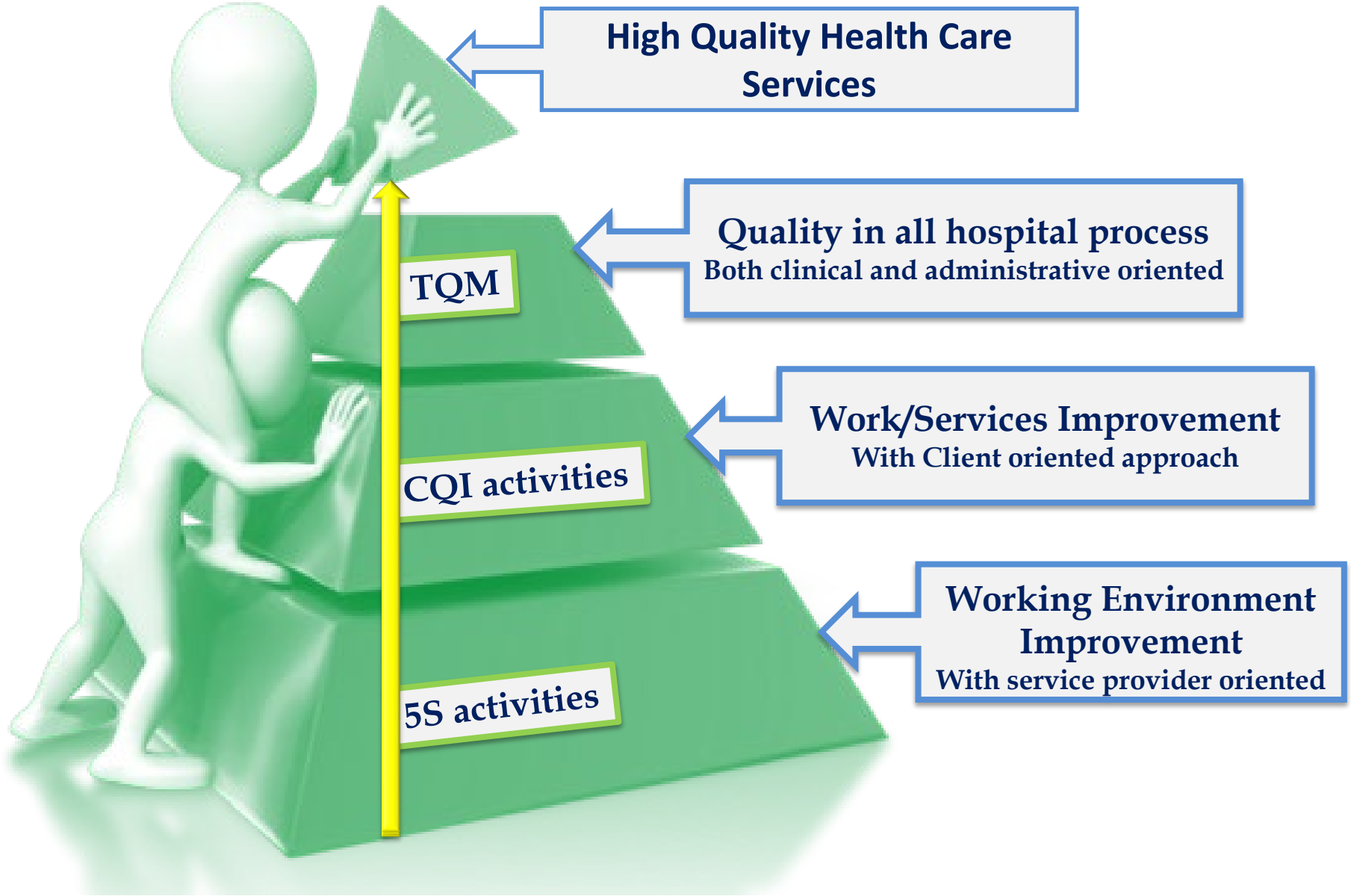
The Quality Improvement Model For Malawi



Achievements

- ✓ QI training manual
- ✓ Training materials
- ✓ 9 Improvement Advisors at QMD-IHI trained
- ✓ QI Trainers in the districts
- ✓ QIST teams and wits established at CHs & DHs
- ✓ QI projects
- ✓ Collaborative learning sessions in QI
- ✓ Quality of care network-learning platform
- ✓ Partner support – ***EGPATH,GIZ,NEST360,WHO,Unicef, Maikhanda etc***

Quality Improvement Teams

Quality Improvement Support Team (QIST) (Hospital level)	Work Improvement Team (Department level)
• Head of the institution • District Nursing Officer/Chief Nursing Officer • Heads of departments/Ward In-charges • Environmental Health Officer • Administrator • Health statistician/HMIS officer • Transport Officer • QM focal person • Pharmacy • Laboratory • A community representative	*5 – 10 members • Nurse-midwife • Clinician • Anesthetist • Pharmacist +/- stores clerk • Laboratory • Biomedical technician • Hospital Attendant • Cleaner

QI trainings

Three-day Quality Improvement (QI) training for Quality Improvement Support Teams (QIST)

30 trained per district for 9 learning districts

VIRTUAL QI TRAINING

4-day virtual QI training (supported by WHO)
≈80 participants from learning districts and Central Hospitals
- 3 hour session in the afternoon
- Inconsistent participation due to network challenges

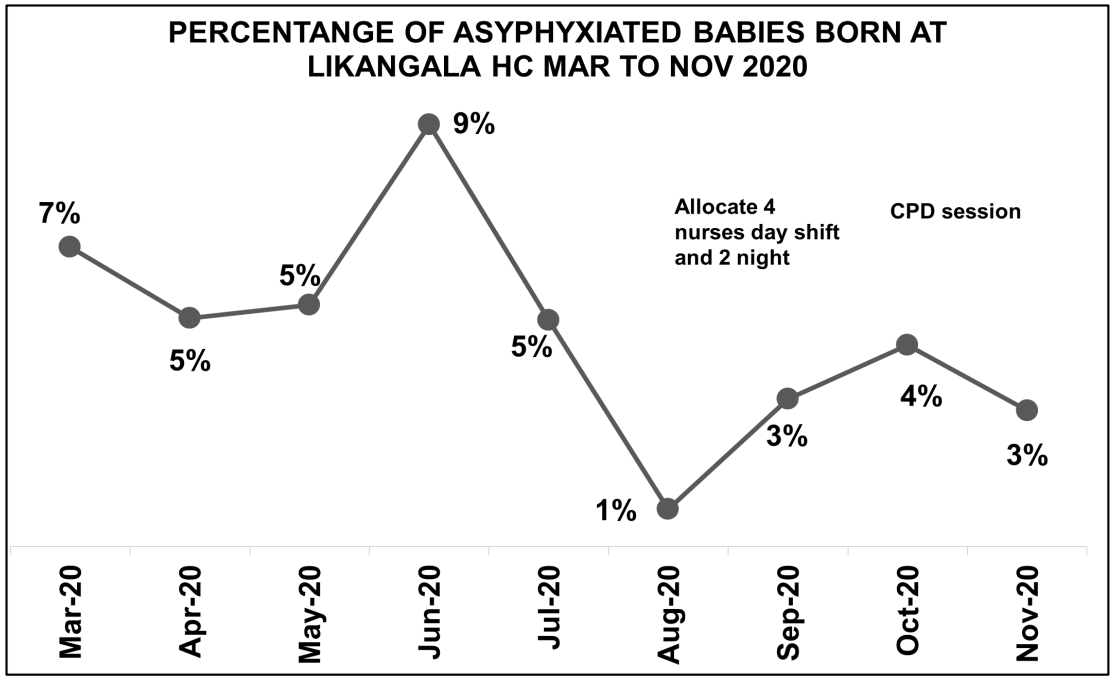
3-day District Collaborative Learning Sessions

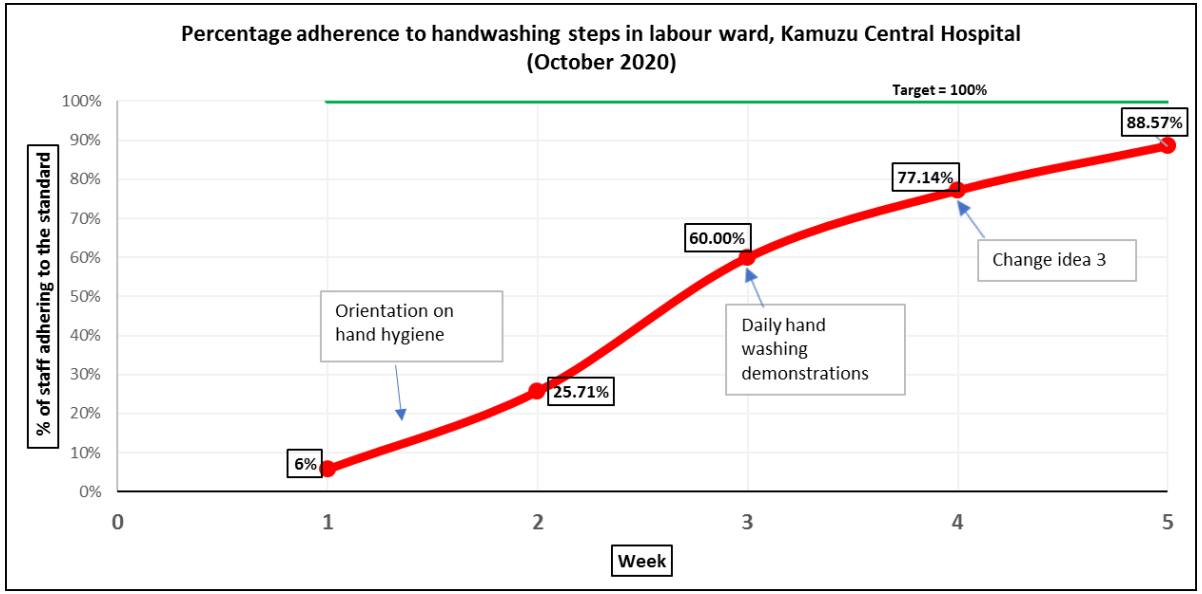
≈50 Participants per district plus stakeholders

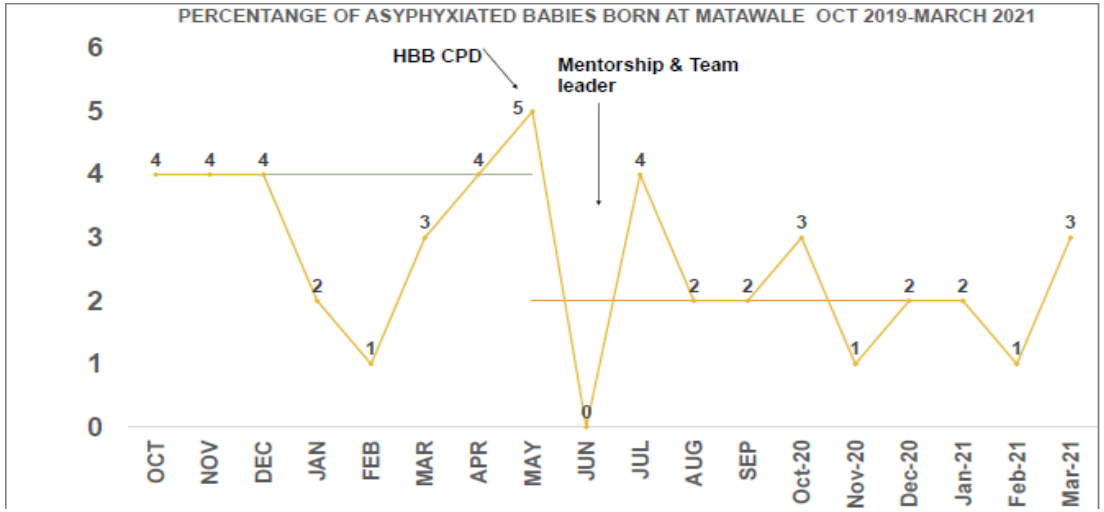
Facilities share progress of QI projects Standard 1 & 9

Teaching of QI Tools

Some QI projects shared during District Collaborative Learning Sessions …







Collaborative learning sessions
Participant interpreting a run chart from a QI project from their facility

One of WIT (Work improvement team plotting a parato chart) for their Quality improvement project

5s Supportive supervision & Feedback session for one of the learning sites (Mzimba District Hospital)

Very crucial to performance improvement

Supportive supervision and feedback boosts team morale!!

Recognition & certification District focal persons for QI/IPC after completion of a practical training in IPC

Performance management Systems in the civil service in Malawi

- PMS introduced in 2008
- Not yet institutionalized in the public service
- No linkage between rewards and performance
- Currently an area requiring serious reforms

Challenges

- Work Improvement Teams at departmental level not adequately trained
- High staff turn-over
- No much interest from Senior doctors/clinicians
- Improvement projects not completed in time
- Covid 19 pandemic disrupted the focus of many QI teams
- No standardized assessment for healthcare workers after QI trainings – nothing to share for now

Proposed QI Mentorship Program

- 6-month QI Mentorship program with aim of improving skills in facilitating QI in 9 MNCH Qoc learning districts
- Build a pool of district mentors – 12 per district
- Conduct QI mentorship/ coaching visits to MNCH Qoc learning sites
- Get successful QI Projects in each district for possible spreading to other health facilities

Thank you for listening!!

QMD acknowledges the support of partners in Quality improvement agenda in Malawi