Thank You
Habitudes: Using Images to form Leadership Habits and Attitudes
Strengthening the Laboratory Clinic Interface

The SLMTA / Quality Improvement Approach

4 December 2016

Barbara Chase McKinney, MD, MPH

#ASLM2016
@BCMcKinneyMD
5 Countries – 5 Stories
TANZANIA – How the SLMTA approach became an inspiration for a hospital star rating system for the entire country
BOTSWANA – Laboratorian tapped to lead hospital accreditation effort after laboratory obtains international accreditation
MALAWI – CEO calls on Laboratorian to Implement Total Quality Management (TQM) for Hospital
MOZAMBIQUE and SWAZILAND embrace the laboratory-clinic interface collaborative (LARC) to drive the implementation of viral load testing.
WHY?

START WITH WHY

HOW GREAT LEADERS INSPIRE EVERYONE TO TAKE ACTION

SIMON SINEK

WITH A NEW PREFACE AND AFTERWORD
Diagnostics - Clinical Relay
Looking Back
Laboratories in Africa attaining international accreditation
Yes We Can!

2009
Accreditation
How a notion galvanized laboratories around the world
<table>
<thead>
<tr>
<th>Step</th>
<th>What happens?</th>
<th>Who is responsible?</th>
<th>Procedures needed?</th>
<th>Pitfalls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Order placed</td>
<td>Clinician determines need</td>
<td>Clinician</td>
<td>Ordering protocols</td>
<td>Unauthorized person ordering inappropriate order</td>
</tr>
<tr>
<td>2. Patient presents to laboratory</td>
<td>Laboratory interacts with patient</td>
<td>Patient / Laboratory</td>
<td>Customer Service</td>
<td>Lack of timely service</td>
</tr>
<tr>
<td></td>
<td>Requisition reviewed for proper information</td>
<td>Clinician, Clerk, or Laboratory</td>
<td>Criteria for specimen acceptability</td>
<td>Interaction not client-friendly</td>
</tr>
<tr>
<td>3. Requisition completed &amp; reviewed by laboratory staff</td>
<td>Note specific test requested and determine what type of sample is needed</td>
<td>Laboratory</td>
<td>Specimen requirements for (venous) blood collection</td>
<td>Incomplete patient data</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SOP for each analyzer</td>
<td>Incomplete clinical history</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clerical errors</td>
</tr>
<tr>
<td>4. Specimen determined for collection</td>
<td>Blood drawn from patient; Sputum, urine, stool, or other specimen is collected</td>
<td>Blood - Clinician or Laboratory, Non-blood specimens - Clinician or Patient</td>
<td>Phlebotomy key competencies Phlebotomy training checklist</td>
<td>Blood - Wrong tube, incorrect amount of blood, Injury Non-blood specimens - incorrect specimen or incorrect collection procedure; improper labeling</td>
</tr>
<tr>
<td>5. Specimen collected</td>
<td></td>
<td>Laboratory</td>
<td>Specimen management</td>
<td>Clerical errors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Inadequate Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clerical error</td>
</tr>
<tr>
<td>6. Specimen logged</td>
<td>Appropriate information recorded in specimen log</td>
<td>Laboratory</td>
<td>Specimen management</td>
<td>Unsatisfactory specimen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Specimens with hazardous handling conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Inadequately labeled specimen</td>
</tr>
<tr>
<td>7. Specimen accepted or rejected</td>
<td>Specimen accepted or rejected based on meeting acceptance criteria</td>
<td>Laboratory</td>
<td>Specimen management Criteria for specimen acceptability</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Specimen assigned according to test request/s</td>
<td>Requests reviewed for Testing priority - STAT versus routine If multiple tests to be done, sequential workstations versus allocating Centrifugation required Send out versus in-house testing</td>
<td>Laboratory</td>
<td>Guidelines for STAT testing Guidelines for multiple test from one sample Specific SOPs for each analyte SOP for send outs (specimens referred to other facilities for testing)</td>
<td>Processing not performed in a timely fashion as ordered Missing some tests on a requisition with multiple tests requested Centrifuge not performed in a timely manner Send out tests not referred in a timely matter or transported inappropriately</td>
</tr>
<tr>
<td>Step</td>
<td>What happens?</td>
<td>Who is responsible?</td>
<td>Procedures needed?</td>
<td>Pitfalls</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>9.</td>
<td>Routine quality checks completed</td>
<td>Prior to testing, determine if proper routine QC, reagent validation, equipment maintenance and calibration completed</td>
<td>Laboratorian</td>
<td>SOP for each <em>analyte</em>, Guidelines for quality checks of all Log / Charts for each analyzer or test</td>
</tr>
<tr>
<td>10.</td>
<td>Specimen analyzed</td>
<td>Run analysis on specimen</td>
<td>Laboratorian</td>
<td>Specific SOP for each <em>analyte</em></td>
</tr>
<tr>
<td>11.</td>
<td>Test results analyzed</td>
<td>Review test results for accuracy, legibility, &amp; validity; Cross-checking; Assure proper quality monitoring</td>
<td>Laboratorian, Supervisor</td>
<td>Specific SOP for each <em>analyte</em></td>
</tr>
<tr>
<td>12.</td>
<td>Test results recorded</td>
<td>Transfer test results into logbook, Record results accurately</td>
<td>Laboratorian, Clerk</td>
<td>Test Reporting SOP; Specimen Management</td>
</tr>
<tr>
<td>13.</td>
<td>Test results communicated / reported</td>
<td>Notify Clinician of results via written report, Verbal reporting if necessary, Critical Values reporting, Assure that referral specimens are properly tracked</td>
<td>Laboratorian, Nurse</td>
<td>Specimen management Client satisfaction guidelines</td>
</tr>
<tr>
<td>14.</td>
<td>Documents and records maintained, filed &amp; stored</td>
<td>File &amp; store results in a retrievable fashion, Transfer files to long term storage, Dispose of files at an appropriate time</td>
<td>Laboratorian</td>
<td>SOP for document &amp; record management (Including Document &amp; Record Retention schedule)</td>
</tr>
</tbody>
</table>
The Specimen Flow Process

Specimen Collection & Transport
- Order placed
- Patient presents to laboratory
- Requisition completed & reviewed by laboratory staff
- Specimen type determined for collection
- Specimen collected
- Specimen logged

Specimen Testing
- Specimen accepted or rejected
- Specimen assigned according to test request/s
- Routine quality checks completed
- Specimen analyzed
- Test results analyzed
- Test results recorded

Result Reporting
- Test results communicated / reported
- Documents and records maintained, filed & stored
The Viral Load Cascade

- Demand Creation for Testing
- Specimen Collection & Processing
- Sample Transport
- Laboratory Testing
- Result Reporting & Interpretation by Clinician
- Patient Management
SLMTA - Meet the Clinician

**ACTIVITY**  Meet the Clinician

**PURPOSE**
Clinicians and laboratorians must work together to provide quality patient care. Neither can achieve that goal without the other. This activity facilitates communications and sharing perspectives as the first step toward building that relationship.

**RESOURCES NEEDED**
- Handout 1: Questions for Clinicians
- Handout 2: Questions for Laboratorians
- PowerPoint presentation - The Principles of Quality Assurance
- Job Aide: Creating a Clinician Handbook
- Flipchart and markers
**SLMTA: A Global Movement for Laboratory Continuous Quality Improvement**

**First cohorts of 135 labs in 11 countries enrolled**
- 2009

- **2009**
  - SLMTA launched in Kigali
  - First TOT conducted at ACIL

- **2010**
  - First generation indigenous master trainers created
  - SLMTA song unveiled at 1st Symposium, ASLM2012

- **2011**
  - 1st SLMTA lab accredited
  - QC/MV Curriculum introduced at Roche SC

- **2012**
  - AJLM SLMTA Supplement published
  - SLMTA music video unveiled at 2nd Symposium, ASLM2014

- **2013**
  - CDC Excellence in Partnering – International Award
  - Official SLMTA website launched

- **2014**
  - 1st SLMTA lab accredited
  - QC/MV Curriculum introduced at Roche SC

- **2015**
  - SLMTA 2 curriculum introduced at Roche SC
  - QC/MV lecture video series launched at 3rd Symposium, ASLM2016

- **2016**
  - 1,103 laboratories enrolled
  - 47 countries
  - 31 labs accredited
  - 2,632 people trained
  - 100+ implementing partners

- **2017**
  - The next chapter?

**Program Indicators As of 2016**
What is the challenge for 2017?

What is the next frontier?
Diagnostics - Clinical Relay
Thought Questions

In your own setting...

• What are you doing to assure that the handoff between the laboratory and the clinic is resulting in better patient care?

• What could you do to enhance the laboratory-clinic interface?
  • by next Tuesday?
  • in medium and long term plans?

• Are there any ongoing initiatives that you could use to drive the health systems toward greater quality & value?

• What tools and skills do you have to offer the entire healthcare system?
5 Countries – 5 Stories
TANZANIA – How the SLMTA approach became an inspiration for a hospital star rating system for the entire country
Mr. Mike Mwasekaga
Dr. Fausta Mosha
## Star Rating Tool: 12 Assessment Areas

<table>
<thead>
<tr>
<th>Domain</th>
<th>Indicators</th>
<th>Total Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legality</td>
<td>1 indicator</td>
<td>1</td>
</tr>
<tr>
<td>Social accountability at the health facility</td>
<td>7 indicators</td>
<td></td>
</tr>
<tr>
<td>Handling of emergency cases and referral system</td>
<td>7 indicators</td>
<td></td>
</tr>
<tr>
<td>Use of facility data for planning and service improvements</td>
<td>6 indicators</td>
<td></td>
</tr>
<tr>
<td>Client Focus</td>
<td>4 indicators</td>
<td></td>
</tr>
<tr>
<td>Facility infrastructure</td>
<td>14 indicators</td>
<td></td>
</tr>
<tr>
<td>Staff Performance Management</td>
<td>5 indicators</td>
<td></td>
</tr>
<tr>
<td>Organisation of services</td>
<td>8 indicators</td>
<td></td>
</tr>
<tr>
<td>Infection Prevention / Control</td>
<td>11 indicators</td>
<td></td>
</tr>
<tr>
<td>Clinical Services</td>
<td>13 indicators</td>
<td></td>
</tr>
<tr>
<td>Clinical Support Services</td>
<td>20 indicators</td>
<td></td>
</tr>
<tr>
<td>Health Facility Management</td>
<td>12 indicators</td>
<td></td>
</tr>
</tbody>
</table>

### Facility Star Rating

<table>
<thead>
<tr>
<th>Minimum Score in Four Domains</th>
<th>0-Star</th>
<th>1-Star</th>
<th>2-Star</th>
<th>3-Star</th>
<th>4-Star</th>
<th>5-Star</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19%</td>
<td>0-19%</td>
<td>20-39%</td>
<td>40-59%</td>
<td>60-79%</td>
<td>80-89%</td>
<td>90-100%</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td>**</td>
<td>***</td>
<td>****</td>
<td>*****</td>
<td></td>
</tr>
</tbody>
</table>
BOTSWANA – Laboratorian tapped to lead hospital accreditation effort after laboratory obtains international accreditation
Nyangabgwe Hospital
Francistown, Botswana

- Public Hospital, one of two referral hospitals in the country, serving northern Botswana
- Established in 1988
- Authorized inpatient beds 542
- Estimated Number of Patients served / year
  - Admissions – 21,185
  - OPD – 50,410
  - A&E – 25,860
Nyangabgwe Laboratory

- 2006 – began a 9-year journey toward accreditation
- 2007 - Pictured following renovation by PEPFAR
- 2012 - Lab was enrolled in SLMTA
  - Implemented Quality Improvement projects
- 2015 - Awarded best performing department in Nyangabgwe Hospital
“Accreditation of laboratories and hospitals is in the forefront of the Ministry’s strategy to improve the competence and quality of the health care delivery system in Botswana...”

Dr. Tshipayagae, Nyangabgwe Hospital Superintendent

www.sadcas.org
Hospital Accreditation Journey

• 2010 - Nyangabgwe Hospital enrolled in COHSASA accreditation

• January 2016 - Very little or no progress towards accreditation
  • No policies and procedures as required by COHSASA
  • Staff did not understand
    • Quality Improvement
    • Accreditation
    • Standards
  • Self assessments inaccurate & not being done as required by COHSASA
  • No Quality Improvement Projects
BOTSWANA – Laboratorian tapped to lead hospital accreditation effort after laboratory obtains international accreditation

Hospital Management wanted someone who understood quality improvement to spearhead the accreditation process...

Kelebeletse Mokobela Tapped in March of 2016
Where did they start?

1. Establish Hospital Peer Review Working Group/Committee
   • Training (Crash Course) for Peer Reviewers
     • Standards
     • Assessment/Scoring - Compliance, Non Compliance, Partial compliance
   • Mock assessments

2. First Peer Review Self Assessment conducted March 2016
   • Majority of non compliant standards were due to lack of policies and procedures
Project Summary

• **Aim**
  • *Develop Hospital Policies and Procedures by December 2016*

• **What did we do**
  • Identify all policies and procedures that needed to be developed
  • Create/Train Hospital SOP-development committee - multidisciplinary
  • Quality Training based on COHSASA requirements

• **Results**
  • Quality manual containing all hospital policies based on ISO 9001 and COHSASA requirements was developed
  • 114 hospital generic SOPs identified
    • All 114 SOPs developed and ready for authorisation by end of November 2016
    • 32 clinical SOPs were identified and completed ready for authorisation
    • 14 clinical protocols developed and undergoing review by departments
### Progress in addressing deficiencies since December 2014

#### Table:

<table>
<thead>
<tr>
<th></th>
<th>Score</th>
<th>Deficiencies</th>
<th>PC</th>
<th>NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline 2010</td>
<td>51</td>
<td>1248</td>
<td>630</td>
<td>618</td>
</tr>
<tr>
<td>Jan-15</td>
<td>49</td>
<td>1521</td>
<td>965</td>
<td>556</td>
</tr>
<tr>
<td>Mar-16</td>
<td>57</td>
<td>1135</td>
<td>620</td>
<td>515</td>
</tr>
<tr>
<td>Oct-16</td>
<td>59</td>
<td>1122</td>
<td>702</td>
<td>420</td>
</tr>
</tbody>
</table>

#### Bar Chart:

- **Score**
- **Deficiencies**
- **PC**
- **NC**
What were the “key ingredients” that made this successful? What lessons did you learn?

• Training of staff is key
• Management involvement is very important
• Team Approach – Multidisciplinary / involvement of staff at all levels
Words of Wisdom...

• To Laboratory
  • Lab QMS is very advanced; therefore, when spreading to other hospital departments, remember it takes time:
    • To develop understanding / comprehension
    • To overcome resistance
    • To change attitudes toward accreditation and quality
  • Lab staff leading hospital quality need to be patient and invest in training

• To Hospital
  • It took the laboratory many years to reach where they are now – be patient with the process
  • Don’t expect everything to be perfect at the beginning – just implement what you know and the rest will follow
  • Share documents with other departments in the hospital – there is no need for duplication
Laboratory and Hospital Accreditation – How they fit.

Jacqui Stewart
CEO
The Laboratory staff in the SLMTA programme are often in a unique position in a hospital in terms of the depth of training they undergo in relation to **quality and accreditation**.

The basic principles are the same although the content may be different.

Examples of areas of support:
- Infection prevention and control systems
- Development of SOPs, protocols, procedures
- Quality improvement methods
- Data and trend analysis
Be aware there may be feelings of resentment – the lab is “getting all the attention and funding”

The SLMTA programme is often run in very resource constrained hospitals. When improvements happen in the lab, it accentuates the shortfalls in other departments.

Be open to sharing information with colleagues in other departments.

Be sensitive to their challenges, which may be different from yours.
Service scores across a hospital in the accreditation programme where laboratory was already in SLMTA programme

<table>
<thead>
<tr>
<th>1</th>
<th>Management &amp; Leadership</th>
<th>2</th>
<th>HR Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Admin Support</td>
<td>4</td>
<td>Access to Care</td>
</tr>
<tr>
<td>5</td>
<td>Patient &amp; Family Rights</td>
<td>6</td>
<td>Management of Info</td>
</tr>
<tr>
<td>7</td>
<td>Risk Management</td>
<td>8</td>
<td>Quality Improvement</td>
</tr>
<tr>
<td>9</td>
<td>Infection Control</td>
<td>10</td>
<td>Med/Surg/Paeds &amp; Obs</td>
</tr>
<tr>
<td>11</td>
<td>Med/Surgical Care</td>
<td>12</td>
<td>Critical Care</td>
</tr>
<tr>
<td>13</td>
<td>Obst/Maternity Care</td>
<td>14</td>
<td>Psychiatric Care</td>
</tr>
<tr>
<td>15</td>
<td>Psychiatric Care</td>
<td>16</td>
<td>Paediatrics</td>
</tr>
<tr>
<td>17</td>
<td>Op Theatre &amp; Anaesthetics</td>
<td>18</td>
<td>Laboratory</td>
</tr>
<tr>
<td>19</td>
<td>Radiology &amp; Diagnostic Imaging</td>
<td>20</td>
<td>Pharmacy</td>
</tr>
<tr>
<td>21</td>
<td>Pharmacy</td>
<td>22</td>
<td>Emergency Care</td>
</tr>
<tr>
<td>23</td>
<td>Outpatient Care</td>
<td>24</td>
<td>Medical Care</td>
</tr>
<tr>
<td>25</td>
<td>Surgical Care</td>
<td>26</td>
<td>Critical Care</td>
</tr>
<tr>
<td>27</td>
<td>Medical Care</td>
<td>28</td>
<td>Combined Outpatient/Emergency</td>
</tr>
<tr>
<td>29</td>
<td>Combined Outpatient/Emergency</td>
<td>30</td>
<td>Sterilising &amp; Disinfecting Unit</td>
</tr>
<tr>
<td>31</td>
<td>Sterilising &amp; Disinfecting Unit</td>
<td>32</td>
<td>Food Service</td>
</tr>
<tr>
<td>33</td>
<td>Food Service</td>
<td>34</td>
<td>Linen Management</td>
</tr>
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<td>35</td>
<td>Linen Management</td>
<td>36</td>
<td>Housekeeping Service</td>
</tr>
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<td>37</td>
<td>Housekeeping Service</td>
<td>38</td>
<td>Maintenance Service</td>
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<td>39</td>
<td>Maintenance Service</td>
<td>40</td>
<td>Resus System</td>
</tr>
<tr>
<td>41</td>
<td>Resus System</td>
<td>42</td>
<td>Medical Equipment Management</td>
</tr>
</tbody>
</table>

Baseline vs Progress
jacqui@cohsasa.co.za
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+27 78 169 1496

www.cohsasa.co.za
MALAWI – CEO calls on Laboratorian to Implement Total Quality Management (TQM) for Hospital

Jason Blanchard, CEO
• 275 Bed capacity, providing healthcare to one of the poorest districts in Malawi since 1902.

• Provides specialized women & child’s health, infectious diseases, chronic diseases, general surgery, pediatrics, dental, radiology and lab services.

• Main training site for Malamulo College of Health Sciences and also hosts a Loma Linda University Field Station.
Blantyre Adventist Hospital

• Private 40 bed tertiary hospital in the city of Blantyre.

• Provides specialized Surgical, Medical, OB-GYN, Pediatrics, Dental, Radiology, Laboratory, ICU and Emergency care services.
The Laboratory Connection

Elde Paladar
SLMTA Master Trainer
What did you do?

2-Day Workshop

• Goal - Improve **efficiency** (cost) and **effectiveness** (quality)
• Customer Focus
• Quality Improvement – PDCA
• Teamwork
• Analytical Tools
• Process Mapping / P+S=O
• Training / Competency Assessment
• Documents/Documentation

Post-Workshop Assignments

• **Process Mapping** – Key processes in every department
• **6S** for an efficient workspace
• **Implement Quality Improvement Projects**
## Improvement Projects: Results (BAH)

<table>
<thead>
<tr>
<th>BAH IMPROVEMENT PROJECTS</th>
<th>DEPARTMENT</th>
<th>BASELINE (Average)</th>
<th>CURRENT (Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce patient process time</td>
<td>OPD</td>
<td>220 mins</td>
<td>45 mins</td>
</tr>
<tr>
<td>Reduce number of rejected films</td>
<td>Radiology Department</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>Reduce discharge process time</td>
<td>Nursing Department</td>
<td>5 hrs</td>
<td>30 mins</td>
</tr>
</tbody>
</table>
## Improvement Projects: Results (MAH)

<table>
<thead>
<tr>
<th>MAH: IMPROVEMENT PROJECT</th>
<th>DEPARTMENT/s</th>
<th>BASELINE (Average)</th>
<th>Sep to Nov (Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce Turn-Around-Time (TAT) for repair/maintenance request</td>
<td>Maintenance department</td>
<td>5 days</td>
<td>2 days</td>
</tr>
<tr>
<td>Reduce number of Lab Test done/ performed but NOT billed or charged to the patient</td>
<td>Lab, Nursing, Clinicians and Accounts departments</td>
<td>23% (Q1 of 2016). 41,000-Total # of test performed – *if 1 test cost $1 then that 23% is $9430 lost</td>
<td>14%</td>
</tr>
<tr>
<td>Reduce number of drugs administered and or procedures performed but NOT billed or charged to the patient</td>
<td>Nursing, Clinicians and Accounts departments</td>
<td>24% (Q1 of 2016)</td>
<td>12%</td>
</tr>
</tbody>
</table>
Recognition to verify that indeed there is improvement in the quality of services?
Blantyre Adventist Hospital won the *Service Excellence Awards/Hospital Sector for 2015* organized by *Chartered Institute of Customer Management*

*This year, 2016, BAH has been nominated again for this category.*
Key Ingredients for Success

- Create a genuine quality culture
- Knowledge, Expertise and Skills
- Top Management Support and Commitment
- Motivation
Words of Wisdom

• **Quality** is important for hospital management & needs to extend to all levels of the organization

• If SLMTA/quality improvement is confined to laboratories, then the patient will not experience an organization-wide quality service

• A TEAM is only as strong at its weakest link
Most Important reason for hospital’s existence...
Diagnostics - Clinical Relay
MOZAMBIQUE and SWAZILAND embrace the laboratory-clinic interface collaborative (LARC) to drive the implementation of viral load testing.
The Viral Load Cascade

- **LARC MOZAMBIQUE**
  - Demand Creation for Testing
  - Specimen Collection & Processing
  - Sample Transport
  - Laboratory Testing
  - Result Reporting & Interpretation by Clinician
  - Patient Management

- **LARC SWAZILAND**
What is LARC?

Laboratory African Regional Collaborative

africanregulatorycollaborative.com
About LARC
Bridging the Laboratory Clinic Interface

• Aimed at improving the interface between laboratory technologists and technicians and nurses and midwives

• 2014 – UNAIDS LAUNCHES 90-90-90: A TRANSFORMATIVE AGENDA TO LEAVE NO ONE BEHIND

• UNAIDS 90-90-90 goals aim by 2020:
  • 90% of all people living with HIV will know their HIV status
  • 90% of all people with diagnosed HIV infection will receive sustained ART
  • 90% of all people receiving ART will have viral suppression

• VIRAL LOAD TESTING INTEGRAL

• Improving communication between laboratory personnel and clinicians along the continuum is essential to achieving the 90-90-90 goals.

• The LARC initiative will provide time limited grants to six countries (Kenya, Malawi, Mozambique, Swaziland, Tanzania, and Uganda)
Project Overview – IHI Collaborative Model

Planning
Johannesburg

Session 1
Dar es Salaam

Session 2
Entebbe

Session 3
TBD

Report out to Stakeholders
LARC Curriculum
Guiding Principles for Quality Assurance

- Focus on **processes** to increase the productivity of work
- Focus on the needs of the **users**
- Use **data** to improve services
- Use **teams** to improve quality
- Improve **communication**
Process Maps

Current State

Future State
\[ P + S = O \]
“What gets measured, gets fixed.”
Use your Data

• Be transparent – display data prominently

• Act on information
Teams
Quality Improvement (QI) Approach

**DMAIC** Framework: To Improve Any Process

- **Define**
  - Nature of the problem? Goals / Aims Timeline Scope

- **Measure**
  - Magnitude of the problem? Select metric to show improvement

- **Analyze**
  - What are the most important causes of the problem?

- **Improve**
  - What change will we make to address the causes of the problem?

- **Control**
  - How can we sustain & spread the improvements? Communicate success
LEAN - Eliminating Waste

- Mis-utilization of skills
- Re-prioritization
- Transportation/Material Movement
- Inventories
- Motions (movement)
- Waiting
- Over-production
- Over-processing
- Defects
The Model for Improvement (IHI)

Aim
- What are we trying to accomplish?

Measure
- How will we know that a change is an improvement?

Change
- What change can we make that will result in improvement?

Small tests of change
- Act
- Plan
- Study
- Do
Change Management

Change is Good.
Transformation is even better.
Switch

• DIRECT the Rider
  • FOLLOW THE BRIGHT SPOTS.
  • SCRIPT THE CRITICAL MOVES.
  • POINT TO THE DESTINATION.

• MOTIVATE the Elephant
  • FIND THE FEELING.
  • SHRINK THE CHANGE.
  • GROW YOUR PEOPLE.

• SHAPE the Path
  • TWEAK THE ENVIRONMENT.
  • BUILD HABITS.
  • RALLY THE HERD.
Project Checklist

**Session 1 Deliverables**

- Identify Stakeholders
- Map the Process (Current State)
- Identify / Prioritize Opportunities
- Action Plan
- Project Outline
- Baseline Metrics / Data Collection Plan
- VOC Information
- Elevator Speech
- Communication Plan
- 1 Rapid/Small Test of Change (PDSA)
- Presentation

**Session 2 Deliverables**

- Root Cause Analysis
  - Fishbone Diagram, 5 Whys, or Pareto Chart
  - Update Project Outline, if necessary
  - 1 Rapid/Small Test of Change (PDSA)
  - 1 5S Exercise
  - 1 Visual Management Application
  - Create Future State Map (if ready)
  - Presentation

**Session 3 Deliverables**

- Update Project Outline, if necessary
- Validate Solution(s) / Interventions
- Modify Solution(s) where necessary by additional Test of Change (PDSA)
- Create Control Plan
- Transfer to Operational Owner
- Share/Spread Intervention, if applicable
- Final Presentation
Embed Improvement in your DNA
Continuous Quality Improvement = The Way We Work
This story is important because...
Mozambique

Viral Load Cascade – Demand Creation for Testing
Creating Demand for Viral Load Testing

Demand from Clinicians

Demand from Patients
Bagamoyo Health Center

• Primary health care facility in the National Health System (NHS)
• 6914 HIV+ patients on antiretroviral treatment
• One clinician trained in VL monitoring in 2015
• Despite National Guidelines calling for VL monitoring, CD4 monitoring still used for pregnant women and children 2-5 (MCH Clinic)

Maputo City, Mozambique
Bagamoyo Health Center – Baseline Data

• Approximately 5 VL tests ordered per month over the 6 months prior to beginning LARC
• 0% VL tests ordered appropriately in the MCH Clinic
  • 25 charts reviewed
  • 11 patients required VL testing according to country algorithm
  • 0 VL tests ordered
Mapping the Process
Summary – Observations on Successful Implementation of a New Clinical Algorithm

What does not work

• Sending out the Algorithm in an email
• Training Alone
• Training one person in a clinic without the “how to” for training their colleagues
• Multiple algorithm versions circulated, some with different VL cutoffs

Recommendations for success

• Clinical competence must be developed
  • Use of actual cases
  • Mentoring/Coaching
  • Demonstrating competency
• Process mapping is very beneficial for planning prior to implementing a new process
• Change management is required, so all understand:
  • “The Why”
  • How each person will be affected by this change
Intervention

• Education for Clinicians
• Copy VL Requisition Forms
• Post National Algorithm in Consultation Rooms
• Weekly Chart Audit
Visual Management
<table>
<thead>
<tr>
<th>MDS</th>
<th>Nome da consulta</th>
<th>Data de nasc.</th>
<th>TIN</th>
<th>ISS</th>
<th>Nome da Chave</th>
<th>Data de pedido do Cargo Vital</th>
<th>Nome do Cargo Vital</th>
<th>Data de referência no laboratório</th>
<th>Data de referência no laboratório</th>
<th>Estado</th>
<th>Cargo Vital</th>
<th>Comentários</th>
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<td>Maria</td>
<td>01/01/2022</td>
<td>Pedro</td>
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*Weekly Chart Audit / Data Collection Tool*
# Project Summary

<table>
<thead>
<tr>
<th>What are we trying to accomplish?</th>
<th>How will we know if a change is an improvement?</th>
<th>What change will we make that will result in an improvement?</th>
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<tbody>
<tr>
<td><strong>Overarching Goal</strong></td>
<td><strong>AIM Statement</strong></td>
<td><strong>Intervention</strong></td>
</tr>
</tbody>
</table>
| Increase the demand for viral load testing for the HIV+ patients of the Maternal Child Health Clinic (MCH) and the Bagamoyo Health Facility, in order to prevent vertical transmission and detect treatment failure | Increase the percentage of viral load tests ordered according to national algorithm - From 0% (Baseline July 2016) to 80% by 30 June 2017 for entire clinic (HIV+ clients) | **Create Demand from the Clinician**  
  • Education for Clinicians  
  • Copy VL Requisition Forms  
  • Post National Algorithm in Consultation Rooms  
  • Weekly Chart Audit | **Create Demand from Patients**  
  • Patient Education Sessions  
  • Patient Education Materials |
RESULTS – MCH Clinic

VIRAL LOAD TESTING ORDERED ACCORDING TO NATIONAL GUIDELINES

% VL TESTS ORDERED

22-Jul  29-Jul  1-Nov

0  100  95  87

n = 25  n = 42  n = 86
RESULTS - Entire Clinic

LARC Clinician Training /Engagement

Bagamoyo Clinic Viral Load Tests Ordered
Swaziland

Viral Load Cascade – Result Reporting and Interpretation by Clinician
Process Mapping in Classroom
Go & See - Trace/Validate Process at Site
Motshane Clinic – Baseline Data

12% of patients were receiving appropriate clinical follow-up
The Viral Load Cascade

- Demand Creation for Testing
- Specimen Collection & Processing
- Sample Transport
- Laboratory Testing
- Result Reporting & Interpretation by Clinician
- Patient Management
Define | Measure | Analyze | Improve | Control

8 METERS

RESULTS LOST

Define | Measure | Analyze | Improve | Control

8 METERS

RESULTS LOST

Define | Measure | Analyze | Improve | Control

8 METERS

RESULTS LOST

Define | Measure | Analyze | Improve | Control

8 METERS

RESULTS LOST
Where were the VL test results?
Introduce a high viral load log with actions to be taken on results and chain of custody

Review of HVL log
Desk review of files and documents

Patients with high VL not being identified and timely follow-up actions not done.

Process works well
Modify logbook
Do 2nd PDCA with modified log

Introduce a high viral load log with actions to be taken on results and chain of custody

PDSA #1

ACT

PLAN

STUDY

DO

- Define
- Measure
- Analyze
- Improve
- Control

PDCA Cycle

Define
Measure
Analyze
Improve
Control
### MOTSHANE CLINIC HIGH VIRAL LOAD TRACKING LOG

**Please put in the date of when the below actions on high viral load results were carried out and your initials.**

<table>
<thead>
<tr>
<th>Patient Name, Surname and MOT Number</th>
<th>Received in the lab</th>
<th>Received by nurse</th>
<th>Reviewed by nurse</th>
<th>Received by the Expert Client</th>
<th>Actions taken by expert client (Please tick actions carried out and put initials)</th>
<th>Day of follow up review by nurse</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mbakabi</td>
<td>26/01/16</td>
<td>27/01/16</td>
<td>Zimne</td>
<td>28/01/16</td>
<td>Call Patient 09:55, Call Treatment Supp., File Results, Next appointment</td>
<td>11/02/16</td>
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**Total patient results with high Viral loads =**

**Total Patients with high VL acted on fully within 2 days =**

100%
Client Follow-Up Attempts

Date of Follow-Up: 9/16/2016	Method: ☐ Phone ☐ Home Visit ☐ SMS

Date of App: ☐ Reason for Missed Appt: ☐

Outcome of Follow-Up: ☐ New Appt: ☐

Date of Follow-Up: 24/08/2016	Method: ☐ Phone ☐ Home Visit ☐ SMS

Date of App: ☐ Reason for Missed Appt: ☐


Client Follow-Up Attempts

Date of Follow-Up: 9/16/2016	Method: ☐ Phone ☐ Home Visit ☐ SMS

Date of App: ☐ Reason for Missed Appt: ☐

Outcome of Follow-Up: ☐ New Appt: ☐

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Client Follow-Up Attempts

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Date of App: ☐ Reason for Missed Appt: ☐


Client Follow-Up Attempts

Date of Follow-Up: 9/16/2016	Method: ☐ Phone ☐ Home Visit ☐ SMS

Date of App: ☐ Reason for Missed Appt: ☐

Outcome of Follow-Up: ☐ New Appt: ☐

Date of Follow-Up: 24/08/2016	Method: ☐ Phone ☐ Home Visit ☐ SMS

Date of App: ☐ Reason for Missed Appt: ☐

Date | Reason | Outcome
--- | --- | ---
14/09/16 | High viral load | Pt had an issue with time she cannot keep time becomes inconsistent
12/10/16 | High viral load | Pt has managed to keep time in the morning and in the evening
RESULTS

MOTSHANE CLINIC RESULTS FROM 26/07/16 TO 13/10/16

- Patients with HVL: 17
- Total called within 2 days: 17
- Total attended 1st counselling session: 12
- Pending appointments: 2
- LTFU: 3
**Motshane Project Summary**

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<td><strong>Overarching Goal:</strong> Improve the care &amp; management for patients with high HIV viral load (HVL), specifically addressing the result reporting/clinician interpretation step of the viral load cascade.</td>
<td><strong>AIM Statement</strong> Increase the percentage of HVL patients with documented appointment and timely clinical follow-up from 12% to 80% by 30 June 2017. <strong>Metric:</strong> Numerator – # of patients who met the defined HVL follow-up criteria. Denominator – # of patients with high VL.</td>
<td><strong>Your Intervention</strong> HVL Results Tracking / Handoff Log plus HVL Register with appropriate follow-up actions (Results review by clinician, Call patient to set up adherence counselling (EAC) appt., 3 EACs, Viral Load reordered).</td>
</tr>
</tbody>
</table>
PDSA – Not one and done!

Repeated Use of PDSA Cycle

- Implementation at Scale
- Wider Scale Tests of Change
- Fine Tuning Tests
- Small-Scale Tests

Changes that result in improvement

Data
Inter-cadre Collaboration
Thought Questions

In your own setting...

• What are you doing to assure that the handoff between the laboratory and the clinic is resulting in better patient care?

• What could you do to enhance the laboratory-clinic interface?
  • by next Tuesday?
  • in medium and long term plans?

• Are there any ongoing initiatives that you could use to drive the health systems toward greater quality & value?

• What tools and skills do you have to offer the entire healthcare system?
Diagnostics - Clinical Relay

Clinical Services

Diagnostics
Thank You