Direct Assistance
Facility E

Results Reporting and Patients’ Management
# Team Members

<table>
<thead>
<tr>
<th>Names</th>
<th>Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Champion Sponsor</td>
<td></td>
</tr>
<tr>
<td>Team Leader</td>
<td></td>
</tr>
<tr>
<td>QI Expert/Coach</td>
<td></td>
</tr>
<tr>
<td>Data Manager</td>
<td></td>
</tr>
<tr>
<td>Front Line Team Member(s)</td>
<td></td>
</tr>
<tr>
<td>Other Team Members</td>
<td></td>
</tr>
</tbody>
</table>
Hospital Background

• It is a high volume facility
• It has 127 Beds, 13 Doctors, 15 clinical officers, 76 Nurses, 13 Lab techs.
• 2610 currently in care, on ART 2602, 100 ART patients a day. The viral load uptake is 96%.
• The suppression rate is at 92%.
• 300 specimens collected for VL testing/month.
• Acts as a VL hub for other sites.
<table>
<thead>
<tr>
<th>Name</th>
<th>Level of Support</th>
<th>Key Interests / Issues</th>
<th>Assessment of Impact (H, M or L)</th>
<th>Action Items / Strategy to Influence</th>
<th>Key Communication Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital administration</td>
<td>E</td>
<td>Funds and policies</td>
<td>H</td>
<td>Funds</td>
<td>Through presentations &amp; narrative reports</td>
</tr>
<tr>
<td>Partners (UMB, AHF, AFYA KAMILISHA)</td>
<td>E</td>
<td>Funds and technical assistance</td>
<td>H</td>
<td>Funds and TA</td>
<td>Project progress and emails</td>
</tr>
<tr>
<td>Patients</td>
<td>E</td>
<td>Health services</td>
<td>H</td>
<td>Clinic attendance</td>
<td>Logs and calls</td>
</tr>
<tr>
<td>Staff</td>
<td>E</td>
<td>Development and implementation of SOP’s and guidelines</td>
<td>H</td>
<td>Implementation of SOP and guidelines</td>
<td>CME and reports</td>
</tr>
<tr>
<td>KNH lab</td>
<td>E</td>
<td>Timely feedback of results</td>
<td>H</td>
<td>Feedback</td>
<td>Emails and portal log in</td>
</tr>
<tr>
<td>Community</td>
<td>N</td>
<td>Collaboration and being part of the team</td>
<td>M</td>
<td>Disseminating information</td>
<td>Meetings</td>
</tr>
<tr>
<td>Suppliers</td>
<td>SP</td>
<td>Ensuring that commodities are available</td>
<td>H</td>
<td>Timely supply of commodities</td>
<td>Calls and emails</td>
</tr>
</tbody>
</table>

R = Resistant, SK = Skeptical, N = Neutral, SP = Supportive, E = Enthusiastic
The Story of Our Project
## 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>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overarching Goal</strong></td>
<td><strong>Aim Statement 1</strong></td>
<td><strong>Intervention</strong></td>
</tr>
</tbody>
</table>
| Effective client management to realize consistent excellent care to patients resulting to Viral load suppression through documentation, monitoring and follow up | To increase % of high VL results documented on the green cards in patients’ files from 23% to 80% by March 2019. Metric  
\[
\frac{\text{# of HVL results documented on green cards}}{\text{# of patients with HVL}} \times 100
\]  
**Aim Statement 2**  
To increase the percentage of patients with at least one EAC documented from 0 to 80% by March 2019. Metric  
\[
\frac{\text{# of HVL files with at least one EAC documented}}{\text{# of patients with HVL}} \times 100
\]  | Redesigning the process of results flow  
Redesigning the process of communication flow |
This project is about:
Improving documentation of high viral load results and EAC sessions.

It’s important because we are concerned about:
Incomplete documentation, resulting in inadequate follow up of clients.

As a result of these efforts:
We will ensure that the viral results are in the green cards and the HVL clients are attending EACs. **Success will be measured by showing improvement in:**
Increased % of HVL results available in the green cards and documented EAC sessions.

What we need from you: Administration
Collaboration and ownership of the process by other departmental heads as we cascade LARC to other departments of the hospital
Process Mapping
The First Step Towards Improvement - Old Process
Process Mapping
The First Step Towards Improvement - New Process

RESULTS FROM THE LAB → TO DATA FOR ENTRY INTO EMR → RESULTS TO CLINICIAN FOR ENTRY INTO GREEN CARDS → HVL TO ADHERANCE COUNSELLOR FOR BOOKING & EAC SESSIONS → PHARMACY
## Process Map

<table>
<thead>
<tr>
<th>Process Step</th>
<th>What Happens?</th>
<th>Who is responsible?</th>
<th>Duration</th>
<th>Forms/logs</th>
<th>Opportunity for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Triage</td>
<td>Vital taken - Weight, BP, Height Screening of sick patients who need prompt care</td>
<td>Nutritionist/Peer Counsellor</td>
<td>10 minutes</td>
<td>Daily register for nutritional services CCC patient appointment cards</td>
<td></td>
</tr>
<tr>
<td>2. Consultation</td>
<td>Screening for OIs (TB, STIs, Cancer Screening) Competing the assessment tools Offer family planning services Competing the EMR forms Assess for VL eligibility and request if due</td>
<td>Clinician/ Nurse</td>
<td>20 Minutes</td>
<td>Green Card IPT/ICF card Lab request form Cancer screening cards EMR</td>
<td>Incomplete lab request form; assure 2 IDs available for each patient</td>
</tr>
<tr>
<td>3. Phlebotomy at the Lab</td>
<td>Verify requisition - Age, sex &amp; CCC numbers. Log into the VL tracking register Draw blood into EDTA tubes via venepuncture Capture age, sex CCC number on the EDTA tube</td>
<td>Lab Technologist</td>
<td>10 minutes</td>
<td>Lab request forms Lab tracking log</td>
<td>Expand time window for VL blood draw</td>
</tr>
<tr>
<td>4. Centrifugation &amp; Storage of samples.</td>
<td>Centrifuge and aliquot 2ml into cryovial Store samples at -20°C temperature.</td>
<td>Lab Technologist</td>
<td>30 minutes</td>
<td>Preventive Maintenance charts</td>
<td>Sample processing, centrifuge samples at mini-lab, storage issues</td>
</tr>
<tr>
<td>5. Package samples for transport</td>
<td>Remote login into the Excel sheet Packaging and transport to KNH CCC Lab with a copy of completed excel spreadsheet</td>
<td>Lab Technologist</td>
<td>Shrs</td>
<td>Create VL sent list with 2 patient IDs for tracking purpose</td>
<td></td>
</tr>
<tr>
<td>6. Receive samples at testing Lab</td>
<td>Download excel sheet Verification of samples against the spreadsheet Notification for any rejections done</td>
<td>KNH Lab staff</td>
<td>30 minutes</td>
<td>Excel spreadsheet</td>
<td></td>
</tr>
<tr>
<td>Step</td>
<td>Task Description</td>
<td>Responsible</td>
<td>Time</td>
<td>Comments</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-----------------</td>
<td>-------------</td>
<td>------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Analyze samples</td>
<td>Molecular lab technician</td>
<td>5 hours – 3 weeks</td>
<td>Reduce sample rejection rate due to insufficient volume, WB (vs plasma), dedicated VL req form to speed up sample log-in; clinic vs lab sample ID</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Testing of Samples</td>
<td>Molecular lab technologist</td>
<td>5 hrs-2 weeks</td>
<td>High VL results flagged by LIS</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Tracking results</td>
<td>Molecular lab technologist</td>
<td>30 minutes</td>
<td>Multiple copies are printed</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Results picked up for delivery to the clinic</td>
<td>Lab Staff/Clinician</td>
<td>5 minutes</td>
<td>Results print outs</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Consultation</td>
<td>Clinician/Peer Counsellor</td>
<td></td>
<td></td>
<td>the lab tech delivers the results to the data manager for input into the EMR who then sorts and gives the clinician for transcription to the green card. The list of HVL results given to psychosocial counsellor for calling and booking of EAC</td>
</tr>
<tr>
<td>12.</td>
<td>Filling area</td>
<td>Data officer</td>
<td>2-4 days</td>
<td>SMS result delivery</td>
<td></td>
</tr>
</tbody>
</table>
## Process Mapping

### The First Step Towards Improvement

(Show your process table. Provide sufficient detail of the entire process. Highlight the area/s for improvement.)

<table>
<thead>
<tr>
<th>Process Step</th>
<th>What Happens?</th>
<th>Who is responsible?</th>
<th>Duration</th>
<th>Forms/logs</th>
<th>Opportunity for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Reschedule HVL patients clinic dates</td>
<td>Call patients with high VL results and schedule appointment for clinic visit</td>
<td>Peer educator</td>
<td>30 minutes</td>
<td>Call log and appointment book</td>
<td>Book the clients for EAC immediately. Appointments should be 30 days upon receiving results</td>
</tr>
<tr>
<td>14. Enhanced adherence counselling</td>
<td>Explain VL results; investigate reasons for high VL (adherence issues or treatment failure. Patients are seen monthly and adherence assessed for 3 months</td>
<td>Psychosocial counsellor</td>
<td>30-45 minutes</td>
<td>MMAS-8</td>
<td>Redesign the communication flow</td>
</tr>
<tr>
<td>16. Follow up VL request</td>
<td>Repeat VL after 3 months of excellent adherence</td>
<td>Clinician</td>
<td>15 minutes</td>
<td>Lab request forms</td>
<td>A clerical person to assist nurse in paperwork</td>
</tr>
</tbody>
</table>
• Gap (Problem Statement):

Inadequate enhanced adherence counseling due to incomplete documentation of high viral load results in patients files
• Voice of Customer (VOC)
  • Our customers were HIV positive clients
  • We selected the right customer for the study
  • Data was collected using self administered questionnaire.
  • We learnt that we had formulated many questions we should have questions which are specific to the project
  • We don’t engage the patients in their care
  • Customers may not be the client only but may include the consumers touching the process
• Metric Selected

Baseline data
• Average score for the 3 months was 23.2%

<table>
<thead>
<tr>
<th></th>
<th>June 2018</th>
<th>July 2018</th>
<th>August 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Score</td>
<td>41.6</td>
<td>0</td>
<td>28</td>
</tr>
</tbody>
</table>
METRIC 2

# of files with at least one EAC documented

*100

# of patients with HVL

Baseline: Moving from 40% in December 2018 to 80% by March 2019.
Data Collection plan

During baseline we used 3 data points and collected data 2 weekly. (June, July, Aug 2018)

In the following months we analyzed data fortnightly and had 12 data points.

We learnt that 77% of the files did not have the viral loads documented in the green cards and patients did not have EAC sessions documented appropriately.

The baseline data for EAC was collected during the month of December 2018. Data for EAC is collected monthly.
Define

Measure

Analyze

Improve

Control

**Materials/Supplies**
- Inadequate supply of green cards
- Why? Inadequate funding

**Process**
- The flow of the patients from the ccc to the lab why? We were loosing the patients between the ccc and lab.
- There is no standard process of receiving and management of results why? No SOP

**People**
- Lack of translating knowledge into practice
  - Why? Training was done 1 year before arrival of tools
  - Role conflict
  - Why? roles were not clearly defined

**Environment**
- Space is not adequate
- Facility was a health centre and no new structure after Upgrade so no filling space

**Policy / Procedure**
- Change of documentation tools
- Overreliance on donor support

**Equipment**
- Lack of printer/breakdown
- Lack of toner
- Why/ overload of machine

**Incomplete documentation of HVL on patient green cards**
Define  
Measure  
Analyze  
Improve  
Control

Materials/Supplies
Lack of printing papers/toner
Why? No funds

Process
There is no standard process for documenting EAC sessions
WHY? No SOP

People
Limited human resources
Knowledge gap
Why - Not trained on the tools (staffs)
Why - tool was not available
Why - Need not identified
- Undefined roles

Environment
Inadequate space
Why? No room for EAC
Why? Building converted from a staff quarter

Policy/Procedure
No tool for EAC
Why? Guideline lacking collecting tool for EAC.

Equipment
Lack of printing machine
Lack of toner
Why? Lack of funds

Lack of documentation of EAC sessions
**IMPACT / EFFORT GRID** A Tool for Prioritizing Opportunities

<table>
<thead>
<tr>
<th>IMPACT</th>
<th>EFFORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Improvement</td>
<td>Easy to Do</td>
</tr>
<tr>
<td>Minor Improvement</td>
<td>Easy to Do</td>
</tr>
<tr>
<td>Just Do It if Impactful</td>
<td>Difficult to Do</td>
</tr>
<tr>
<td>- improving the documentation of VL TAT - assigning someone to file VL results</td>
<td></td>
</tr>
</tbody>
</table>
• Just Do Its

<table>
<thead>
<tr>
<th>activity</th>
<th>Action</th>
<th>resolved</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAC planning</td>
<td>Psychosocial counsellor should be involved in planning EAC sessions</td>
<td></td>
</tr>
<tr>
<td>EAC form completion training</td>
<td></td>
<td>Psychosocial counselor trained other staff on EAC</td>
</tr>
</tbody>
</table>
5S Level of Excellence

Sort
Before: 20
After: 60

Set
Before: 20
After: 40

Shine
Before: 40
After: 60

Standardize
Before: 20
After: 40

Sustain
Before: 20
After: 40
• Small Test of Change (PDSA 1)

- Adopted printing of the green cards and EAC forms in the Lab
- Improved from 0% to 45.6% between 1st - 14th Sep 2018

- Discuss with Lab Manager to allow for printing of materials required for the clinic (Green cards/EAC forms) with UMB support
- Lab manager print green cards and delivers to data manager
• Small Test of Change (PDSA 2)

- Define
- Measure
- Analyze
- Improve
- Control

- Adopt regular sensitization to new members
- Training of staffs on the new tools
- Improvement from 45.6% to 66% between 15th - 30th Sep 2018
- Data manager sensitized the members on the tools

ACT

PLAN

STUDY

DO
Small Test of Change (PDSA 3)

- Discard the flow and redesigned a new flow process
- Drop from 66% to 62% between 1st - 14th Oct 2018
- Redesigning of results flow
- Lab-Data manager-Peer educator-Clinician
- Results received from the Lab-data manager-Peer educator and Clinician who documents in the green cards when client comes
• Small Test of Change (PDSA 4)

- Redesigned the flow process
- Lab-data manager-Clinician –Peer educator

- Adopted the new flow process

- Improvement from 62% to 80% between 15th - 30th Oct 2018

- Redesigned the flow process-
  - Lab-data manager-Clinician –Peer educator
- Clinician update the files before client comes
• EAC Small Test of Change (PDSA 1)

- The process flow was changed to ensure that the data manager directly communicates to the EAC counsellor on clients with HVL
- Improvement from 38.09% to 90% between Dec 2018 to Jan 2019
- Redesign communication channel
- The process flow was changed to ensure that the data manager directly communicates to the EAC counsellor on clients with HVL
- Adopt the new process.
Intervention – ‘After State’ Process Map

• To solve the problem we:
  ✓ printed green card, and EAC forms
  ✓ sensitized team members
  ✓ reassigned roles
  ✓ Redesigning the flow process
### Intervention – ‘Before’ State Process Map

<table>
<thead>
<tr>
<th>BEFORE</th>
<th>AFTER</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>No green cards</td>
<td>Printed green cards</td>
<td>Ensured all files had green cards</td>
</tr>
<tr>
<td>No defined roles</td>
<td>Reassigning of roles</td>
<td>ensured sense of responsibility</td>
</tr>
<tr>
<td>No defined flow process</td>
<td>Defined flow process</td>
<td>Ensured no duplication of roles and prevented role conflict</td>
</tr>
<tr>
<td>Delay in results getting to clinician</td>
<td>Results got to the clinicians promptly</td>
<td>Ensured results were put on green card and were not lost</td>
</tr>
</tbody>
</table>
% HVL DOCUMENTED IN PATIENTS GREEN CARD

PERIOD (MONTHS)


Define Measure Analyze Improve Control

Point of intervention - PDSA 1

PDSA 2

PDSA 3

PDSA 4
EAC DATA ANALYSIS

% EAC ATTENDANCE DOCUMENTED

PERIOD (MONTHS)

Sep-18  Oct-18  Nov-18  Dec-18  Jan-19

80%  80%  80%  90.00%  80%

38.09%  33%  36%  40%

POINT OF INTERVENTION PDSA 1

PERIOD (MONTHS)
CHALLENGES AND HOW THEY WERE ADDRESSED

challenges

- Conducting of meetings was a challenge.
- Inadequate supplies e.g. green cards
- Since change takes time, it was not easy to convince some staff members especially regarding some changes in process.

Address challenges

- members conducted meetings standing and always had an agenda
- Adequate supplies ensured through printing more cards
- Display of data and prompt feedback with teams and other members of the staff made them embrace the project. The enthusiastic ones were engaged fully.
Lessons Learned from LARC

• Active mentorship is key to success in any learning process
• LARC improved interdepartmental relationship
• It has improved leadership skills
• Effort is not equal to performance
• Application of LARC in OTZ
• LARC can be cascaded into other departments
# ACTION PLAN

<table>
<thead>
<tr>
<th>Topics/Goal</th>
<th>Action Item</th>
<th>By whom?</th>
<th>By When?</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement the changes</td>
<td>Filling of HVL, ensure 3 EAC clinics</td>
<td>Ongoing</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>Assessment of progress</td>
<td>Review of weekly finding</td>
<td>Bi-weekly</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>Complete CMM</td>
<td></td>
<td></td>
<td>20\textsuperscript{th} Feb.</td>
<td>done</td>
</tr>
<tr>
<td>Develop SOP</td>
<td>Ensure completion of SOP</td>
<td></td>
<td>15\textsuperscript{th} March 2019</td>
<td>done</td>
</tr>
</tbody>
</table>
## Project Title: Improve documentation of HVL in green cards and documentation of EAC sessions

### Project Owner - CCC In charge

### Critical Elements for Quality

**Process Step:** The most critical step is the data manager receives physical results from the lab transcribes to the EMR, then gives to the clinician who transcribes to the green card at the same time gives the list to the EAC counsellor who then calls through the peer educators and books for EAC sessions. In case this step is compromised, there is that likelihood of the old process reverting.

**Output:** Improved documentation in the green cards and EAC sessions.

### Monitoring over Time

**Metric:**
- # Of HVL results documented on green cards *100
  - # of patients with HVL
  - # of files with at least one EAC documented *100
    - # of patients with HVL

**Acceptable Range** – 90% to 95%

**How measured** – Monitoring the progress of the project. Data Collection Plan

### Control or Reaction Plan

We do a root cause analysis using the fish bone.

### Accountability

**Who is responsible for measuring** – Psychosocial counsellor and Data manager

**Where is the measure reported** – CQI team

**To whom is it reported** – CQI champion

**Who is ultimately responsible** – Medical Superintendent

### Related Documentation

- Future/Improved State Process Map: Review new process in the power point slide# 9
- Standard Work Instructions: We have an SOP in place
- Data – We already have an updated Run Chart slide # 32 & 33