Remote Assistance Facility F

Improve documentation of high VL results in the EMR (IQ Care)
# Team Members

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Team member</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>Frontline Members</td>
<td></td>
</tr>
<tr>
<td>Other team members</td>
<td></td>
</tr>
</tbody>
</table>
Facility Information / Background

- Started in 1992 as a GOK Dispensary
- Catchment population: 130,000
- Bed capacity: 30
- Staffing: MO:2, Clinicians: 6, Nurses:32, Lab: 3, others staff: 100
- Average OPD Workload: 7400/month
- Average deliveries: 120/Month
## STAKEHOLDER ANALYSIS

<table>
<thead>
<tr>
<th>Column1</th>
<th>Column2</th>
<th>Column3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>SATISFY</td>
<td>ENGAGE</td>
</tr>
<tr>
<td></td>
<td>• County</td>
<td>• CHVS</td>
</tr>
<tr>
<td></td>
<td>• HMT</td>
<td>• KEMRI</td>
</tr>
<tr>
<td></td>
<td>• KEMRI</td>
<td>• DATACLERK</td>
</tr>
<tr>
<td></td>
<td>• LAB</td>
<td>• CLINICIAN</td>
</tr>
<tr>
<td></td>
<td>• KEMSA</td>
<td>• NURSE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• LAB</td>
</tr>
<tr>
<td>LOW</td>
<td>MONITOR</td>
<td>INFORM</td>
</tr>
<tr>
<td></td>
<td>• KEMRI</td>
<td>• Patients</td>
</tr>
<tr>
<td></td>
<td>• KEMSA</td>
<td>• Community</td>
</tr>
<tr>
<td></td>
<td>• COUNTY</td>
<td>• USAID</td>
</tr>
<tr>
<td></td>
<td>• FHI 360</td>
<td>• County</td>
</tr>
<tr>
<td>LOW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOW</td>
<td></td>
<td>HIGH</td>
</tr>
</tbody>
</table>
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>To achieve effective client management through Improved documentation of High VL results in the EMR (IQ Care).</strong></td>
<td><strong>AIM Statement:</strong> Improve documentation of high VL results in the EMR from 66% to 95% by Feb 2019.</td>
<td><strong>Intervention:</strong> Redesigning the process of receiving results from the lab to the records office:</td>
</tr>
<tr>
<td></td>
<td><strong>Numerator:</strong> • No. of high VL results documented in the EMR</td>
<td>- Ensured availability of dedicated and functional computer in the data room.</td>
</tr>
<tr>
<td></td>
<td><strong>Denominator:</strong> • Total no. of high VL results received in the lab</td>
<td>- Entering HVL results in the EMR before filing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Re-assignment of roles and responsibilities by task shifting less roles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Dedicated staff to be entering the VL results in the EMR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Identified VL/EID Champion in the facility</td>
</tr>
</tbody>
</table>
This project is about
• Improving documentation of High VL results in the EMR

As a result of these efforts
• Identify high VL missed opportunities and returned to care.
• Improve adherence counselling
• Improve VL uptake
• Improve quality of care ART clients

It’s important because we are concerned about:
  ❖ VL Suppression rate
  ❖ Data accuracy

Success will be measured by showing improvement in:
  ❖ VL suppression rate
  ❖ Documentation
  ❖ Reduced VL TAT
  ❖ Patient care

What we need from you: resources, stationery, Computer, printer and mentorship support.
Old Process Mapping

1. **Assessment done**
   - Patients triaged

2. **Clinician review**
   - Sample is taken

3. **Sample in lab**
   - Sample preparation

4. **Sample transport**
   - By lab staff
   - To NPHRL

5. **The orange is the OFI**

6. **Transcription of results into EMR**
   - By data manager
   - Not done
   - HVL clients not called
   - Clinician not alerted

7. **Sample results**
   - Received by lab staff from NPHRL
   - Printed and taken to the ccc data manager to be transcribed in the EMR
# Process Mapping
## The First Step Towards 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><strong>File Retrievals</strong></td>
<td>- File retrieved &lt;br&gt;- Recording client visits</td>
<td>Data Clerk &lt;br&gt;Link desk &lt;br&gt;Mentor mother</td>
<td>24hrs</td>
<td>Appointment book</td>
<td>- Defaulters called and not followed up later after the first call &lt;br&gt;- Follow up of defaulter is not done</td>
</tr>
<tr>
<td><strong>Triaging</strong></td>
<td>- Taking Vitals &lt;br&gt;- Express patients &lt;br&gt;- Pill count</td>
<td>Nurse</td>
<td>5 minutes</td>
<td>Green/Blue card</td>
<td>- No Bp machine in the CCC area. They borrow &lt;br&gt;- No slot for temperature &lt;br&gt;- Missing some vitals in the file BMI, Bp</td>
</tr>
<tr>
<td><strong>Adherence</strong></td>
<td>- Adherence &lt;br&gt;- Follow ups &lt;br&gt;- Counseling of new clients &lt;br&gt;- Confirmatory of the new clients</td>
<td>Adherence</td>
<td>10 – 15 minutes</td>
<td>Blue card</td>
<td>- No suspected treatment failure register &lt;br&gt;- No chv’s checklist &lt;br&gt;- No log for adherence recording &lt;br&gt;- When adherence is done no notes are recorded &lt;br&gt;- Not all patients of adherence linked to CHV</td>
</tr>
</tbody>
</table>
## Process mapping

<table>
<thead>
<tr>
<th>Data Records</th>
<th>Records Officer</th>
<th>IQ care ART register</th>
<th>Results missing in the IQ care and ART register</th>
<th>Viremia register missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Filling the EMR register was done when the patient came for the appointment</td>
<td>10-15 minutes</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Incomplete filling the ART register</td>
<td></td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consultation room</th>
<th>Clinician/Nurse</th>
<th>Green Card</th>
<th>VL not sent the right time for patients with adherence issues</th>
<th>Missing MDT book for recording</th>
</tr>
</thead>
<tbody>
<tr>
<td>History taking and screening</td>
<td>10 – 15 minutes</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

| Pharmacy                                          | Pharmacy Officer| ADT and DAR register| Missing MDT register                                           |
|---------------------------------------------------|-----------------|----------------------|---------------------------------------------------------------|-----------------------------|
| - Verifying the file and the prescription        | 10 – 15 minutes | -                   | -                                                             | -                           |
| - Dispensing from system and preparing the drugs to dispense |                 | -                   |                                                 | -                           |
| - Actual dispensing                               |                 | -                   |                                                 | -                           |
| - Confirm pill count if any issues send back the patient to the adherence counselor |                 | -                   |                                                 | -                           |

<table>
<thead>
<tr>
<th>LAB</th>
<th>Lab Officers</th>
<th>Sample viral load log</th>
<th>Missing SOP on collection and release of results to clinicians/clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Verify viral load requisition forms</td>
<td>10 minutes</td>
<td>-</td>
<td>Missing SOP on collection and release of results to clinicians/clients</td>
</tr>
<tr>
<td>- Collection of the sample, packaging, transportation.</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Receiving of the results and updating the VL tracking log.</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- VL champion Identifies and highlights high VL results and send to the data entry clerk in the CCC.</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
New Process

Assessment done
Patients triaged

Clinician review
Sample is taken

Sample in lab
Sample preparation

Sample transport
By Rider
To NPHRL

Result sent back to facility
Through NPHRL website

The green is the new process flow

Clinicin review
Clinicians alerted of HVL patients and action is taken immediately to provide quality care

Patients with HVL are called immediately

Data Manager receives results and immediately transcribes them into the EMR

Results received by lab staff printed and taken to ccc data manager
Gap (Problem Statement):
- Delayed clinical decisions due to Incomplete documentation of High VL results in EMR and files.
Voice of Customer (VOC)

• Our customer was the Patients

• Tool used to collect the VOC Questionnaire

• Collection Process - using random selection, 50 patients were surveyed using a self administered questionnaire
RESULTS (N= 50)

RESPONSES
- In general: Satisfied (100%)
- Had VL: 44 (88%), No: 6 (12%)
- Know results: 36 (72%), No: 14 (28%)

AREAS OF IMPROVEMENT
Lessons learned

• Departments were informed of areas of improvement
• Customer surveys should be carried out quarterly to respond to our customer needs.
• Clients are not aware of what HVL is and its importance.

INTERVENTIONS

• Give awareness talks to clients about HVL and its importance.
Define Measure Analyze Improve Control

**Numerator:** No. of High VL results in the EMR

**Denominator:** Total no. of High VL results received in the lab

Baseline Data: 66% of patients had documented high VL results in EMR.
- Had 7 data points from Jan-Jul’18
- 66% is the average of the 7 months
### Data Collection Tool

**Define**

- Objective: 
  1. To assess and establish the level of documentation for clients with high viral loads in the facility.
  2. To establish the documentation of the intervention process for clients with high viral load.
  3. To improve on the documentation of clients with high viral loads and the intervention process for the same.

<table>
<thead>
<tr>
<th>S.no.</th>
<th>Documentation(Y/N)</th>
<th>Intervention documented(Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>file</td>
<td>ART Register</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>STF Register</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>EMR</td>
</tr>
<tr>
<td>4</td>
<td>file</td>
<td>ART Register</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>STF Register</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>EMR</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Data abstraction checklist from August 2018 to February 2019.

**Measure**

**Analyze**

**Improve**

**Control**

**WHO**

- Brenda Kipchumba

**HOW OFTEN**

- 2 weekly

**WHAT**

- Patient with high VL results, documentation in the EMR

**WHERE**

- Records office, CCC

**HOW**

- Using the log, data will be collected through record reviews

**TRAINING**

- Using data collection tool

**SUSTAINABILITY**

- Owned by Ongata Rongai health centre
Data collection process
- 7 data points for baseline
- Frequency: monthly
- Ongoing data: monthly
- Data analyzed and presented as a trend line

34% of the HVL results were missing in the EMR
Cause and effect diagram (fishbone)

**PEOPLE**
- Competing priorities
- High workload
- Lack of clear defined roles
- Lack of prioritisation
- No dedicated person for keying in results

**PROCESS**
- Upon receipt of results from the lab they were not keyed in immediately by the data clerk.

**MATERIALS**
- Lack of printing papers

**ENVIRONMENT**
- Overcrowding
- No proper filing

**POLICY**
- No SOP for efficient flow of results

**EQUIPMENT**
- Data office did not have a dedicated computer for keying in results in the EMR by the data clerk.

**EFFECT**
- Incomplete documentation of High VL results in the EMR
<table>
<thead>
<tr>
<th>Impact</th>
<th>Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>minor improvement</td>
<td>Easy to do</td>
</tr>
<tr>
<td>major improvement</td>
<td>difficult</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Just do it</th>
<th>May be someday</th>
</tr>
</thead>
<tbody>
<tr>
<td>2ND if impactful</td>
<td>Construction of a spacious CCC</td>
</tr>
<tr>
<td>Results not analysed</td>
<td>Partitioning of phlebotomy area</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Just do it</th>
<th>Documentation of HVL in the STF register, file, ART register and EMR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No documentation of MDT</td>
<td>No BP machine</td>
</tr>
<tr>
<td>No examination couch</td>
<td>Testing confirmation by Adherence person</td>
</tr>
<tr>
<td>No temperature in the green card</td>
<td>No SOP in the lab</td>
</tr>
<tr>
<td>Booked clients files not ready in the morning</td>
<td>Computer and Printer(lab)</td>
</tr>
</tbody>
</table>
Just Do Its
- Met all the departmental in charge of the facility
- Met cross cadre teams
- Gave a CME to all staff
- Met the care supporter: HSDSA
5S - BEFORE

5S - AFTER
5S - BEFORE

5S - AFTER

Define, Measure, Analyze, Improve, Control
Visual Management
Small Test of Change (PDSA # 1)

- Define
- Measure
- Analyze
- Improve
- Control

- Roles reassigned
- Data claret oriented to the new roles

- Analyze of the results there was improve from 66-88% btwn Aug-Oct’18.

- Reassign roles to allow data clerk to receive results and transcribe in the EMR

- New roles and responsibilities adopted by the data clerk

- Roles reassigned
- Data claret oriented to the new roles
• Small Test of Change (PDSA #2)

- Adopted the intervention of having a dedicated computer for transcribing results in the records office.

- On analysis of the results, there was improvement of results documentation from 88-96% between Oct-Dec ‘18.

- Provision of a dedicated computer by FHI 360 to the records office.

- Computer provided to the records office.

- Data clerk transcribes results into the EMR.
• Small Test of Change (PDSA #3)

- Identified, trained and gave JD to the mentor father to take up the role of VL champion.
- Identified a dedicated personnel to take up as a VL champion.
- On analysis of the results there was improvement of results documentation from 96-99% between Dec'18-Feb'19
- Adopted the intervention of having a dedicated personnel to take up as VL champion.
Run Chart

% High VL results in EMR

- **Baseline data from Jan to Aug**
  - Aug: 66%
  - Sep: 72%
  - Oct: 89%
  - Nov: 93%
  - Dec: 96%
  - Jan: 98%
  - Feb: 99%

- **PDSA 1**
- **PDSA 2**
- **PDSA 3**
What we did to solve the problem

• Reassigned roles and responsibilities to allow data clerk to receive and transcribe results in the EMR

• Provision of dedicated computer by FHI 360 to the records office

• Identified dedicated personnel to take up as a VL champion.
The 5s

Sort, Set in order, shine, standardize, sustain

5S-Level of Excellence

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sort</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>Set</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>Shine</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Standardized</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Sustain</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>
Challenges

A. Getting information from the data manager
B. Competing priorities
C. Communication delays to the patients

Address challenges
• Reassigning of duties to the data clerk
• Appointing a VL champion
• Clinician can see results in the EMR and communicate to the patients
Lessons Learned

• Team work and intercadre communication
• Using CQI to tackle gaps in the facility
• Monthly meetings of the CCC stakeholders
THANK YOU