Remote Assistance Facility C

Results Management and Patient 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>
BACKGROUND INFORMATION

• A level 4 hospital

• Our CCC has a total number of 3580 patients actively on care with an average of 100 clients seen per day.

• Our current suppression rate is 97%.
## Stakeholder Analysis

<table>
<thead>
<tr>
<th>NAME</th>
<th>LEVEL OF SUPPORT</th>
<th>KEY INTERESTS / ISSUES</th>
<th>ASSESSMENT IMPACT (H, M OR L)</th>
<th>ACTIONS ITEMS / STRATEGY TO INFLUENCE</th>
<th>KEY COMMUNICATION POINTS</th>
<th>DATE</th>
<th>EFFECTIVE YES/NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>KARP</td>
<td>R, SK, N, SP, E</td>
<td>✓</td>
<td>Implementation of changes</td>
<td>Assist in sustaining the change</td>
<td>Ensure complete filling of viral load results in patients files</td>
<td>30&lt;sup&gt;th&lt;/sup&gt; November</td>
<td>YES</td>
</tr>
<tr>
<td>STJMH Management</td>
<td>✓</td>
<td>✓</td>
<td>Strengthening of the system</td>
<td>Providing resources</td>
<td>-provide stationaries</td>
<td>15&lt;sup&gt;th&lt;/sup&gt; October</td>
<td>YES</td>
</tr>
<tr>
<td>MOH</td>
<td>✓</td>
<td>✓</td>
<td>Monitoring</td>
<td>Conduct supervisions</td>
<td>Feedback</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; December</td>
<td>To leave supervision reports behind</td>
</tr>
<tr>
<td>Ampath</td>
<td>✓</td>
<td>✓</td>
<td>Testing &amp; results availability</td>
<td>Results accuracy/timely testing</td>
<td>Ensure accurate results to right patients</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; January</td>
<td>YES</td>
</tr>
<tr>
<td>GIS</td>
<td>✓</td>
<td>✓</td>
<td>Implementation</td>
<td>Sustain change</td>
<td>Frequent trainings &amp; updates</td>
<td>23&lt;sup&gt;rd&lt;/sup&gt; November</td>
<td>YES</td>
</tr>
<tr>
<td>Clients</td>
<td></td>
<td>✓</td>
<td>Service quality</td>
<td>To give feedback on service quality</td>
<td>Inform</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**KEY**

- **Sp** - supportive
- **Sk** - skeptical
- **H** - high
- **M** - moderate
- **R** - Resistant
- **E** - Enthusiastic
- **L** - low
- **N** - Neutral
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>To have proper documentation and filing of HIV viral load hard copy results in the patients file in order to give consistent, satisfactory care to patients hence viral load suppression</td>
<td><strong>AIM Statement</strong>&lt;br&gt;To increase the number of hard copy viral load results in the patients file from a base line of 23% in August 2018 to 95% by March 2019.</td>
<td><strong>Intervention</strong>&lt;br&gt;• Establish SOP for result management&lt;br&gt;• Task assignment to data officers/clerks to ensure filing of hard copy results&lt;br&gt;• Train healthcare workers on the importance of hard copy viral load result in patient management&lt;br&gt;• Avail SOP circular on result management</td>
</tr>
</tbody>
</table>

**Metric:**<br>**Numerator:** Number of patient files with hard copy viral Load results<br>**Denominator:** Number of viral load results received from the testing laboratory
Elevator Speech

This project is about consistent filing of hard copy viral load results as a result of these efforts, there will be consistent and satisfactory patient care hence viral load suppression.

It is important because we are concerned about

1. Loss to follow up of high viral load patient cases due lack of hard copy results

2. Lack of traceability of transcriptional errors from the testing lab portal to the EMR

Success will be measured by showing improvement in presence of viral load hard copy results in the patients files and improved patient care. What we need from you is consistent supply of stationary
Process Mapping
The First Step Towards Improvement
## 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>
</table>
| HTS ROOM           | Eligibility criteria assessment                     | HTS provider              | 30 minutes | Line listing book, MOH 362, ICF form, Referral form, Linkage book | - Improve on Privacy at screening desk  
- Label the line listing desk  
- Improve on documentation in the registers |
|                    | Testing of eligible clients                         |                           |          |                                   |                                                                   |
|                    | Positive clients are referred to the enrolment desk  |                           |          |                                   |                                                                   |
| SOCIAL WORK DEPARTMENT | Reassessment  
Counseling  
Enrollment  
Treatment preparation 1 | Social worker  
Client mentor  
Adolescent champion | 45 minutes | Pre ART register, ART register, Defaulter register, Hei forms | - Add more registers to reduce the spaghetti movement  
- The registration room needs to be expanded  
- Need for adherence register |
| TRIAGE             | Reassessment and counseling  
Taking vitals  
Treatment preparation 2  
Nutrition assessment and education  
Enter vitals in IQ care  
Refer to the clinician | Triage nurse | 15 minutes | Daily attendance book, Daily attendance list, Green card, Nutritional register, Defaulter register(for both new and old clients) | Need for privacy at the triage area for client confidentiality |
<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>CONSOLTATION ROOM</td>
<td>Counseling</td>
<td>RCOs</td>
<td>15 minutes</td>
<td>-green card</td>
<td>add more registers to reduce spaghetti movement</td>
</tr>
<tr>
<td></td>
<td>-patient review</td>
<td></td>
<td></td>
<td>-ICF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Treatment preparation 3</td>
<td></td>
<td></td>
<td>-ART register</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-TB screening and treatment of other opportunistic infections</td>
<td></td>
<td></td>
<td>-prep/pep register</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Nutritional assessment and prescription</td>
<td></td>
<td></td>
<td>-pharmacy order form</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-VL and other lab requests</td>
<td></td>
<td></td>
<td>-IPT register</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Prescription</td>
<td></td>
<td></td>
<td>-Presumptive TB register</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Family planning information and referral</td>
<td></td>
<td></td>
<td>-HVL tracking register</td>
<td></td>
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<tr>
<td></td>
<td>-TCA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHLEBOTOMY</td>
<td>review requisition form</td>
<td>Lab officer</td>
<td>15 minutes</td>
<td>VL request form</td>
<td>Proper labelling of the phlebotomy room</td>
</tr>
<tr>
<td></td>
<td>-sample collection</td>
<td></td>
<td></td>
<td>VL register</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-transportation to the laboratory</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LABORATORY</td>
<td>Centrifuging</td>
<td>Laboratory officer</td>
<td>45 minutes</td>
<td>VL request form</td>
<td>Have thermometers in cooler boxes</td>
</tr>
<tr>
<td></td>
<td>-sample storage</td>
<td></td>
<td></td>
<td>VL tracking logs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Sample package</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>-Remote logging</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transportation to testing laboratory</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LABORATORY</td>
<td>Downloading/printing and recording of Viral load results</td>
<td>Laboratory officer</td>
<td>30 minutes</td>
<td>Hard copy of VL results</td>
<td>-Introduce results release log register</td>
</tr>
<tr>
<td></td>
<td>-flagging of High viral load results</td>
<td></td>
<td></td>
<td>Viral load register</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dispatch of high VLs to clinician and suppressed to the data officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Step</td>
<td>What Happens?</td>
<td>Who is responsible?</td>
<td>Duration</td>
<td>Forms/logs</td>
<td>Opportunity for Improvement</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>----------</td>
<td>----------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>PHARMACY</td>
<td>Confirmation of the regimen from the system</td>
<td>Pharmacist</td>
<td>15 minutes</td>
<td>Daily activity register, differentiated care registers, nutrition register, PEP register, PEP files</td>
<td>Introduce an Inventory book for recording the drugs dispensed</td>
</tr>
<tr>
<td></td>
<td>- packaging of drugs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- counseling (both pre and post)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- dispensing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DATA ROOM</td>
<td>Verifying and validation of the results of the hard copy against the soft copy</td>
<td>Data officer</td>
<td>One day</td>
<td>Hard copy VL results, VL hard copy summary, IQcare</td>
<td>- Verification of hard copy results against the results entered in IQcare. - Ensuring all hard copy VL results are in the patient files</td>
</tr>
<tr>
<td></td>
<td>- retrieving of the files</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- filling of hard copy results</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- data backup</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- line listing for daily appointments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Step</td>
<td>What Happens?</td>
<td>Who is responsible?</td>
<td>Duration</td>
<td>Forms/logs</td>
<td>Opportunity for Improvement</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
<td>---------------------</td>
<td>----------</td>
<td>------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>PHARMACY</td>
<td>Confirmation of the regimen from the system - packaging of drugs - counseling (both pre and post) - dispensing</td>
<td>Pharmacist</td>
<td>15 minutes</td>
<td>Daily activity register - differentiated care registers - nutrition register - PEP register - PEP files</td>
<td>Introduce an Inventory book for recording the drugs dispensed</td>
</tr>
<tr>
<td>DATA ROOM</td>
<td>Verifying and validation of the results of the hard copy against the soft copy - retrieving of the files - filling of hard copy results - data backup - line listing for daily appointments</td>
<td>Data officer</td>
<td>One day</td>
<td>Hard copy VL results VL hard copy summary - IQcare</td>
<td>- Verification of hard copy results against the results entered in IQcare. - Ensuring all hard copy VL results are in the patient files</td>
</tr>
</tbody>
</table>
## New process map

<table>
<thead>
<tr>
<th>Process Step</th>
<th>What Happens?</th>
</tr>
</thead>
</table>
| Data Room     | Verifying and validation of the results of the hard copy against the soft copy and signing the results summary  
|               | -results release log being signed by both laboratory staff and data staff  
|               | -filling of hard copy results and the summary by data staffs assisted by 2 more staffs.  
|               | -data backup  
|               | -line listing for daily appointments. |
Problem Statement:
From baseline study done in August 2018, 77% of CCC patients’ files did not have hardcopy viral load results, this affects progressive patients’ viral suppression monitoring.
### Voice of Customer for healthcare workers – Survey Findings

<table>
<thead>
<tr>
<th>VOICE OF CUSTOMER QUESTIONS</th>
<th>YES RESPONSE</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Is it relevant to file hard copy of VL results in patient files?</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>2 Are there any discrepancies between the EMR and the hardcopy results?</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>3 Are the hardcopy results filed frequently?</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>4 Is EMR verification done against hardcopy results?</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>5 Are the EMR VL results accurate as compared to hardcopy results?</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>
DATA ANALYSIS

- Importance of Hardcopy Result
- Discrepancy Between EMR and Hardcopy
- Frequency Filling
- Verification of Hardcopy Against EMR
- Accuracy of EMR Against Hardcopy
- Importance of Hardcopy Result

Legend:
- Column1
- Column2
LESSONS LEARNT

1. Discrepancy between hardcopy VL result and EMR
2. Filling was not being done as frequent as it should be
3. All healthcare workers agreed that hardcopy results should be present in the patient file regardless of the EMR.
Voice of the Customer Survey

CUSTOMER – Patients
Voice of customer survey 17th -21st January 2019
Questions
1. Are the facility staff welcoming
2. Are you able to get satisfactory response from the staffs
3. Do you normally spend minimum time required at the clinic
4. Is confidentiality observed by staff
5. Do you wish to continue getting care from St. Joseph mission hospital CCC?

METHOD –80 questionnaires were issued out and 59 responded
VOC RESULTS DISPLAY-FOR CLIENT

- Welcoming/Accommodative
- Staff Knowledge
- Turn Around Time at the Clinic
- Confidentiality
- Continue Care at St. Joseph

[Bar Chart]

- NO
- Column1
LESSONS LEARNT

1. Confidentiality and TAT are the major patients’ concern at below 50%
2. There are some delays in the clinic making clients stay longer than they should
3. All CCC staff orientation on the complete process is key

After the outcome the voice of customer assisted in the following areas:
- Staffs to keep client information confidential
  - Improving confidentiality by training
- More staffs allocated to areas with high workload i.e at the triage to help improve TAT.
• Metric Selected
  Number of patients’ files with recent hard copy viral load results over number of patients whose VL results have been received from the testing laboratory

• Baseline Data
  Three months (June, July and August) data abstraction was done. 23% of patient files had the latest hard copy viral load results
• Data Collection Process
  • Data Collection Tool
HARDCOPY VL RESULTS FILED

- **Baseline study period**
  - June: 29%
  - July: 21%
  - Aug: 18%

- **Task Shifting**
  - Sep: 76%

- **Supervision**
  - Oct: 87%
  - Nov: 100%
  - Dec: 100%
  - Jan: 100%
  - Feb: 100%

- **Target**
  - June: 20%
  - July: 40%
  - Aug: 60%
  - Sep: 80%
  - Oct: 90%
  - Nov: 99%
  - Dec: 100%

**Months VL Done**
- June
- July
- Aug
- Sep
- Oct
- Nov
- Dec
- Jan
- Feb
The five why’s

1. Why was filling not done weekly
   - Oversight by the data clerk to file hardcopy viral load results
2. Why
   - No task assignment at the data office
3. Why
   - There was no Standard Operating Procedure for filling of the hard copy viral load results
4. Why
   - Lack of sensitization on the need for the standard operating procedure
5. Why
   - No circular on management of results and lack of knowledge of this requirement by NASCOP
• Data Collection Process - **Data Analysis & Interpretation**

From the data, we learnt that there is an improvement in filing from baseline data of 23% in August to 100% in January 2019 attributed to:

1. Having a procedure in place for HIV viral load result management
2. Task assignment among data clerks which included daily filing of hardcopy VL results
3. Training the healthcare worker on the importance of viral load hardcopy results and this practice is a requirement by NASCOP.
MAGNITUDE OF THE PROBLEM

Failure to file the VL hard copy results is violation of NASCOP requirement. EMR, the system used by clinicians is not able to pick results directly from the testing laboratory results portal, the results have to be fed into the EMR manually. Discrepancy between results in the EMR and hard copies has been noted at times due to typographical errors, therefore there is great need for the hard copy results in the file for backup and consistent follow up of high viral load cases. High viral load register was also being shared during clinic hours leading to some missed records.
LARC Process.

Environment

Equipment

Missing of the VL hard copy results from the patients’ files.

FISHBONE DIAGRAM

- Excess workload
- No replacement of clinical staff
- Insufficient staff in clinical area
- No continuous supply of printing materials
- Printer breakdown
- SOPS not being followed
- Did not see need since CCC is paperless

Define

Measure

Analyze

Improve

Control

MATERIALS AND SUPPLIES

PEOPLE

PROCEDURE / POLICY

PROCEDURE / POLICY

Public Health Informatics Institute
<table>
<thead>
<tr>
<th>IMPACT / EFFORT GRID A Tool for Prioritizing Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Just do It</strong></td>
</tr>
<tr>
<td>▪ Labeling of the Phlebotomy room</td>
</tr>
<tr>
<td>▪ Avail enough registers</td>
</tr>
<tr>
<td>▪ Have complete Documentation at HTS</td>
</tr>
<tr>
<td>▪ Proper labeling of Line listing area.</td>
</tr>
<tr>
<td>▪ Have enough registers</td>
</tr>
<tr>
<td>▪ Improve in archival</td>
</tr>
<tr>
<td>▪ Signing of result release log</td>
</tr>
<tr>
<td>▪ Have pharmacy inventory book</td>
</tr>
<tr>
<td><strong>Just do it if impactful</strong></td>
</tr>
<tr>
<td>• None</td>
</tr>
</tbody>
</table>

**Define**

**Measure**

**Analyze**

**Improve**

**Control**
• Just Do It
  Before

after
Just DO It Cont.

Highlighting high VL results
LINE LISTING AREA
Define  Measure  Analyze  Improve  Control

5S - BEFORE  5S - AFTER
5S - BEFORE
23% of patient file had hardcopy viral load result

5S - AFTER
100% of patient file had hardcopy viral load result
VISUAL MANAGEMENT
Small Test of Change (PDSA #1)

- Results verification
- Weekly filing of hard copy results
- Availing of registers at necessary points
- Standardizing the process by involving others through CMEs

ACT

- To increase the no of hardcopy VL results filed from 29% in the first month of baseline study to 95% by mar 2019
  - (Have evidence)
  - reviewing /countersigning.

PLAN

- What was adoptated
- Results verification
- Timely printing of hardcopy
- Timely filling of the hard copy
- What was abandoned
- Pilling up of unfilled results

DO

- What was adoptated
- Results verification
- Timely printing of hardcopy
- Timely filling of the hard copy
- What was abandoned
- Pilling up of unfilled results

STUDY

- Check(analyse)
- From the first month of baseline data to the month of October an improvement of 58% has been realized.
Small Test of Change (PDSA #2)

Define
- Results verification
- Weekly filing of hard copy results
- Availing of registers at necessary points
- Standardizing the process by involving others through CMEs

Measure

Analyze

Improve
- What was adopted
- Results verification
- Timely printing of hardcopy
- Timely filling of the hard copy
- What was abandoned
- Piling up of unfilled results

Control

ACT

PLAN

STUDY

DO

- Analyse (Check)
- From the month of October to December an improvement of 12% has been realized.
- To increase the number of hardcopy VL results filed from 29% in the first month of baseline study to 95% by Mar 2019
- (Have evidence)
- Reviewing/countersigning.
Intervention – ‘After State’ Process Map

1. Spaghetti movement of the viral load register
   • Intervention
   The register be placed in the Program coordinators room and all respective departments to fill the register from the coordinators room to help him review and address any problem with high viral load documentation
Intervention in spaghetti movement

BEFORE
Triage
Community room
Clinician 4

REGISTERS
1. HIGH VIRAL LOAD REGISTER

AFTER
Triage
Community room
Clinician 4

REGISTERS
HIGH VIRAL LOAD REGISTER

Clinician 1
Clinician 2
Clinician 3

High viral load register A
Define | Measure | Analyze | Improve | Control

RESULT FILLING

JUST DO IT

1ST PDSA | 2ND PDSA
Challenges

• Lack of sufficient time to carry out project activities effectively

Address challenges

• Train non team members on how to implement some of the just do its to be able to concentrate on the main project.

Divide work i.e data collection
Lessons Learnt

• Hardcopy viral load results are very essential in patient management regardless of the presence of the EMR

• With proper policies put in place and frequent monitoring, hardcopy results can be easily filed in the patient file.
## Action Plan

<table>
<thead>
<tr>
<th>Topics / Goals</th>
<th>Action Item</th>
<th>By whom</th>
<th>By when</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formulate sop on result management</td>
<td>Write sop</td>
<td></td>
<td>March 30&lt;sup&gt;th&lt;/sup&gt; 2019</td>
</tr>
<tr>
<td>Follow up on hardcopy results filling</td>
<td>File abstraction</td>
<td></td>
<td>Twice monthly</td>
</tr>
</tbody>
</table>