IMPROVING RECORDS AND DATA MANAGEMENT IN THE ART CLINIC OF MPUMUDDE HC IV

BY

NANKANJA RITA, MED ICT; BA ED; Cert M&E

&

KAYIZZI JOSEPH BARNES, MSc. (PRH); BA (Hons)

PGD (BA); Cert M&E

MEDIUM TERM FELLOWS

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Declaration

I, Nankanja Rita and Kayizzi Joseph Barnes do hereby declare that this end-of-project report entitled Improving records and data management in the ART clinic of Mpumudde HC IV has been prepared and submitted in fulfillment of the requirements of the Medium-term Fellowship Program at Makerere University School of Public Health and has not been submitted for any academic or non-academic qualifications.

Signed ……………………………… Date……………………………………
Nankanja Rita, Medium-term Fellow

Signed ……………………………… Date……………………………………
Kayizzi Joseph Barnes, Medium-term Fellow

Signed ……………………………… Date……………………………………
Maganda Albert Koma, Institution Mentor

Signed ……………………………… Date……………………………………
Sebuliba Isaac, Institution Mentor

Signed ……………………………… Date……………………………………
Dr. Tumwesigye Benson, Academic Mentor
Fellow’s role in project implementation

This project was implemented by the fellows with the help of the Jinja district staff and Mpumudde HC IV staff. Since Mpumudde is one of the sites supported by Baylor Uganda, it was easy to work with the staff. The fellows introduced the concept of continuous quality improvement to the DHT of Jinja district which in turn identified the district HMISFP to participate in the project on behalf of the district. A meeting was organized at Mpumudde, where the fellows and the district HMISFP introduced the concept to the facility staff. A CQI team was formed which was composed of fellows, district HMISFP and facility staff. One of the fellows was the first chairperson and the other the secretary until later when roles were changed in the team. A number of problems were identified by the team however poor records and data management especially in the ART clinic was selected as priority problem to deal with. Activities to improve this area of concern records were drawn and different team members were given different roles to improve performance. Among others, the fellows were in charge of training staff, mentorship, procurement of accessories needed and developing SOPs. Facility staffs were on the other hand responsible for data entry, analysis, organizing performance review meetings and filing. Both fellows also participated in proposal writing, data collection and analysis, monitoring and evaluation of the project and finally compilation of the project report.
Acknowledgements

- We wish to thank God for enabling us to complete this project successfully.
- We would also like to thank MakSPH/CDC fellowship program for selecting us to be part of the program. We thank MakSPH staff especially Mr. Matovu Joseph, for the continuous guidance and not giving up on us.
- Baylor Uganda, we are happy to be part of the Baylor family.
- Our institutional mentors, Mr. Albert Maganda, Mr. Sebuliba Isaac and academic mentor, Dr. Benson Tumwesigye, we are so grateful for your guidance and support.
- Not forgetting Mpumudde HC IV staff especially the CQI team; Dr. Joseph Wakonta, Peter Mulungwa, Sr. Margaret Atai, Betty Naigaga, Peter Kitakule, Rebecca Konso, Proscovia Menya, you were a wonderful team to work with.
- Fellow CQI fellows, thanks for being part of the class.
<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART</td>
<td>Antiretroviral Therapy</td>
</tr>
<tr>
<td>CQI</td>
<td>Continuous Quality Improvement</td>
</tr>
<tr>
<td>DHT</td>
<td>District Health Team</td>
</tr>
<tr>
<td>EID</td>
<td>Early Infant Diagnosis</td>
</tr>
<tr>
<td>HMISFP</td>
<td>Health Management Information system Focal person</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention Mother to Child Transmission</td>
</tr>
<tr>
<td>SOPs</td>
<td>Standard Operating Procedure</td>
</tr>
</tbody>
</table>
Executive Summary
Mpumudde HC IV is located in Jinja district and is expected to serve a population of 35,800 people according to its coverage area. The ART clinic at this facility was started in 2007 and has grown to currently serve over 1500 patients, 500 being on ART. HIV counseling and testing at this facility stands at 250 persons per month and an average of 30 new HIV positive individuals are enrolled monthly. The ART clinic runs every Wednesday and Thursday of the week by five health workers who include three clinicians, two nurses and four volunteers (expert clients). Average clinic attendance stands at 50 clients per clinic day.

Baylor – Uganda started supporting Mpumudde ART clinic in April 2011 and after a site assessment that was done at the facility by CQI fellows together with health facility personnel, it was observed that the health facility had several challenges hindering service delivery including; having no HB estimation machine, poor record keeping, lack of up to date counseling knowledge, inadequate supply of drugs like dapsone, long patients waiting time, and having no waiting area for clients. Through this assessment it was observed that in order to improve service delivery in the ART clinic of Mpumudde HC IV there was a great need to improve records and data management. To achieve this, the CQI project was set with a goal to establish an efficient records and data management system at Mpumudde HC IV by March 2012. To achieve this goal, the project trained and mentored 15 facility staff in records and data management, equipped the health facility with patients’ files and filing shelves, supported electronic data entry and conducted monthly performance review meetings. This improved quality of service delivery, motivated health workers and reduced patient waiting time in six months.
1. Introduction and Background

Mpumudde HC IV is located in Jinja district and is under management of Jinja Municipality Council. It is one of the health facilities that support patients from Busoga sub-region and the neighborhood. It has been operating for some time now though the ART clinic at this facility was started in 2007 and has grown to currently serve over 1500 patients, 500 being on ART. Some of the services being provided include HIV counseling and testing which stands at 250 persons per month. Currently, on average 30 of new HIV positive individuals are enrolled into the ART clinic monthly. The ART clinic is run every Wednesday and Thursday of the week by five health workers including three clinicians, two nurses and four volunteers (expert clients). Average clinic attendance stands at 50 clients per clinic day. With all the services that were being offered at the facility in the field of HIV/AIDs, documentation and filing of the patients’ records was very poor. Again, what was not being realized here was that records in health service delivery are an important component for client follow up and tracking.

Baylor-Uganda was mandated by Ministry of Health to strengthen the health management information systems among other health related activities after winning a five year grant from CDC 2010 - 2015 to support government health facilities that offer comprehensive HIV/AIDS services in Eastern Uganda. Mpumudde HC IV in Jinja district is one of the HIV/ART Care facilities being supported by Baylor Uganda. After a site assessment that was done at the facility, by CQI fellows together with health facility personnel it was observed that the health facility had several challenges hindering service delivery including poor record keeping. Only one filing cabinet with a capacity of 800 charts was available to store all the records, yet the clinic had a cumulative of over 1200 patients, as per 30th September 2011. This compromised the filing
system and consequently it was hard to retrieve an unscheduled client’s file as it took over 20 minutes. There was also no evidence of data analysis, interpretation and use at the facility. There was a computer for data management but it was not being used because it had no software to enter and analyze data. This meant that data were not being put to use for planning purposes, research and patient management. Thus the CQI project came in and trained and mentored 15 facility staff in records and data management, computerized records and enhanced data use, equipped the health facility with patients’ files and filing shelves, and conducted monthly performance review meetings. In particular the project trained and mentored staff in filling the HIV care/ART card, Pre-ART and ART registers, the comprehensive HIV quarterly report, Early Infant clinical charts, EID referral forms and Early Infant register.

2. Literature review
Records in health service delivery are an important component for client follow up and tracking, yet it is usually ignored. Records should be considered as an eminent section which cannot be overlooked because without records, there is no evidence that something has taken place. A record is a document or other electronic or physical entity in an organization that serves as evidence of an activity or transaction performed by the organization and that requires retention for some time period (TechNet SharePoint Server, 2010).

Records are put in place such that patients’ information is retained. They enable follow up of the clients and in the end proper management of these clients. It is therefore good to acclaim that records are the clients who remain at the facility while the actual clients go back to their homes. If managed poorly, an organization might fail to achieve its objectives. In this case, a health facility might fail to offer a good service to its clients and if managed poorly, clients may die,
move to other facilities or get lost. This impacts on the continuity of the service. Shepherd and Yeo (2003, p.22) reinforce this stating that ‘In any organisation, managing records should be a strategic function, with a continuing programme that is effective across the organisation as a whole.’

Data that is found in patients’ records, if entered and analysed, can be used for decision making, planning purposes and research all in the bid to improve on the service being offered. In his publication on performance management Jones (2003, p.6) notes ‘Good records management practice is an investment for the organisation although it could easily be viewed as an overhead. The need to demonstrate tangible returns on investment is crucial if the programme is going to continue attracting funding and support.’ This shows that is records are managed well and the data is being used, there are a lot of benefits that can accrue from this and these benefits motivate both the clients and the health workers. Against this background therefore, improving records and data management in the ART clinic of Mpumudde HC IV was the best that the project could achieve.

3. Statement of the problem
Only 27% of the clients’ records between April and September 2011 were found complete in the ART Clinic of Mpumude HC IV. This indicated inadequacies in clients’ records, documentation and largely poor data management as observed by poor filing system, data storage and retrieval. As a result, the facility observed an increase of patient waiting time mainly contributed by a long client file retrieval time at an average of 20 minutes. This would eventually lead to client dissatisfaction hence poor compliance to appointments, and then poor treatment outcome. This project therefore planned to establish an efficient records and data management system at
Mpumudde HC IV aiming at improving the quality of service delivery particularly in the ART clinic.

- **Documentation in the data capture tools**

The data capturing tools used in the ART clinic include; the HIV care/ ART card, Pre-ART and ART registers and the comprehensive HIV quarterly report, Early Infant clinical charts and Early Infant register. The HIV care/ART card is considered to be the primary tool as it captures most of the information needed on the patients. Putting this into consideration, new patients’ HIV care/ART cards for the months of April to September 2011 were assessed for their completeness and it was found out that, on average only 27 percent were completely filled as indicated in figure 1.

![Graphical presentation of complete records for new clients](image)

**Figure 1: Completeness of new patients’ records**
Again, the facility has over 25 staff and only the Records’ Assistant was trained in HIV records/data management. Thus majority of the staff and expert clients (volunteers) did not know how to fill the tools correctly. It was observed that expert clients did most of the recording in the Pre-ART register and they would leave out most of the important information needed like staging, the follow up section among others.

- **Storage of client records**

Only one filing cabinet with a capacity of 800 charts was available to store all the records, yet the clinic had a cumulative of over 1200 patients, as per 30th September 2011 and on average thirty new clients were being enrolled into the clinic each month. This made it difficult to store all these records in the one available filing cabinet and therefore, had compromised the filing system. Consequently it became hard to retrieve an unscheduled client’s file as it would over 20 minutes.

- **Data Analysis and Use**

There was no evidence of data analysis, interpretation and use at the facility. The facility had a computer which could be used for data entry but it had no software to analyze data. This meant that data was not being stored and therefore not being put to use for planning purposes, research and patient management.

4. **Justification/Rationale**

There were various problems listed down by the team which compromised effective service delivery particularly in client follow up and tracking. Inadequate records and data management
scored top as the main problem during the discussion using brainstorming and multi-voting approaches.

In order to improve service delivery in the ART clinic, records had to be improved first. Since this was the most pressing gap that needed to be addressed, the project was set to improve just that. The records person was the only one trained in records and data management and she was not involved in the ART clinic, there was no filing system in place and therefore retrieving patients’ files was a problem and the data capture tools themselves were incompletely filled. This impacted on patients’ waiting time, poor follow up of clients and therefore unsatisfactory service delivery.

5. Conceptual framework
Figure 2: Conceptual Framework

It was observed that, inadequate records and data management in ART clinic of Mpumudde HC IV in Jinja was caused by inadequate skills of staffs in data management, lack of filing shelves, no software to computerize records and records being handled by many unskilled staffs. To overcome all these the CQI project implemented; training and mentorship of staffs in records and data management, provision of filing shelves, installed a software and developed standard operating procedures for records and data management.

Training and mentorship of staffs in records and management improved capacity of staff in records and data management, filing shelves helped to put in place a clear filing system and good storage of clients’ records this reduced greatly on the time spent while retrieving unscheduled client from over 20 minutes to less than three minutes, computerization of records eased data analysis and generation of reports. This project therefore aimed at establishing an efficient records and data management system in the ART clinic at Mpumudde HC IV which helped in improving the quality of service delivery.

6. Project Objectives

The main objective of this CQI project was to establish an efficient records and data management system in the ART clinic at Mpumudde HC IV by March 2012 which aimed at improving service delivery.

6.1 Specific objectives

The specific objectives of this project were;
i) To improve knowledge and skills among facility staff in records and data management by December 2011

ii) To develop an efficient filing system and computerize records at the facility by March 2012

iii) To enhance analysis and data use at the health facility

7. Methodology

CQI project team formation
The CQI fellows held meetings with different people to give feedback on their progress concerning CQI training. These included meeting the Baylor-Uganda institutional supervisors, regional supervisors and later meeting the facility management of Mpumudde HC IV. It was during the meeting with facility management and following the guidance of the facility Incharge of Mpumudde HC IV and explanation by the fellows about the CQI project that members accepted to be part of the team and the final CQI team of eight members was formed as shown in table 1.

Table 1: CQI project team members

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Position</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Menyha Proscovia</td>
<td>Clinical Officer/ Health Educator</td>
<td>0774320290</td>
</tr>
<tr>
<td>2</td>
<td>Atai Margaret</td>
<td>Registered midwife/ HCT coordinator</td>
<td>0772487842</td>
</tr>
<tr>
<td>3</td>
<td>Konso Rebecca</td>
<td>Registered Comprehensive Nurse</td>
<td>0712287503</td>
</tr>
<tr>
<td>4</td>
<td>Naigaga Elizabeth</td>
<td>Medical Records Assistant</td>
<td>0772689575</td>
</tr>
<tr>
<td>5</td>
<td>Bogere Joy</td>
<td>Registered midwife/ In charge PMTCT</td>
<td>0782597959</td>
</tr>
<tr>
<td>6</td>
<td>Peter Mulungwa</td>
<td>District HMIS Focal Person</td>
<td>0772366923</td>
</tr>
<tr>
<td>7</td>
<td>Joseph Kayizzi</td>
<td>Fellow/M&amp;E Coordinator</td>
<td>0772917640</td>
</tr>
<tr>
<td>8</td>
<td>Rita Nankanja</td>
<td>Fellow/M&amp;E Officer</td>
<td>0776386309</td>
</tr>
</tbody>
</table>
Five of the team members were health workers in Mpumudde HC IV, one person was from the district and two are fellows / Baylor Uganda staff. The facility staffs on the CQI team were the ones who worked in the HIV/AIDS clinic and they headed different sections in the facility.

In order to come up with inadequate records and Data management as the problem to address, various steps were taken and they included; a session of brainstorming on a number of challenges faced by the ART clinic in Mpumudde HC IV. These included; No HB estimation machine, Poor storage of clients’ records, Health workers not trained in records and data management, No training in counseling updates, No drugs like dapsone, Unclear roles in records’ filling, Inadequate records keeping, Over waiting of clients because they all had to be seen by the clinician, Staff reporting late for work and there being no waiting area for clients. After screening and sorting out the problems that could be handled by the CQI project team, only five remained and a multi-voting process was done as indicated in table 2.

**Table 2: Multi-voting on the most pressing problem**

<table>
<thead>
<tr>
<th>Problems</th>
<th>1st vote</th>
<th>2nd vote</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Inadequate records and data management</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>B) No training in counseling updates</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>C) Staff not trained in records and data management</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>D) Over waiting of clients because they all have to be seen by the clinician</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>E) Staff report late for work</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note cutoff is 3*
At the end of multi-voting, three problems remained as the most pressing ones and a theme selection matrix was done putting into consideration the impact on the external customer and the need for improvement as shown in table 3.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Customer</th>
<th>Impact on external customer</th>
<th>Need to improve</th>
<th>Overall score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Inadequate records and data Management</td>
<td>Clients, health workers</td>
<td>4.9</td>
<td>5</td>
<td>24.5</td>
</tr>
<tr>
<td>B) No training in counseling updates</td>
<td>Clients, counselors</td>
<td>3.6</td>
<td>4.4</td>
<td>15.8</td>
</tr>
<tr>
<td>C) Staff not trained in records and data management</td>
<td>Health workers, donors</td>
<td>3.4</td>
<td>3.1</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Basing on the outcomes in the theme selection matrix above, it was evident that inadequate records and data management impacted a lot on the external customer and therefore there was enormous need to improve on records and data management in the ART clinic in Mpumudde HC IV.

From the root causes that were identified, counter measures were drawn for which practical methods were identified. This CQI project focused on implementing counter measures namely; training and mentorship of staff in records and data management, providing filing shelves to improve on storage of patients’ records, computerizing records, developing standard operating procedures for records and data management and conducting performance review meetings to assess the progress of the project.
• **Training in records and data management**

Project implementation started in December 2011 with conducting on-site trainings of staff in records and data management. Twenty two health facility personnel were trained in filling the HIV care card, Pre-ART, ART registers and generation of PMTCT/EID monthly and Comprehensive HIV quarterly reports. This was done with the aid of Ministry of Health facilitators and Jinja district HMIS Focal person.

• **Mentorship of staff**

Mentoring staff in records and data management started two weeks after the trainings in filling the data capture tools. During mentorships fifteen staffs were reoriented in filling these tools and patient clinic numbers were streamlined; that is to say all patients were given unique identifiers and duplicated eliminated. It should be noted that at baseline (September 2011), the percentage of completed records for new clients was only 27 percent. With both training and mentorship, 95 percent records of new clients being were complete by 30th June 2012 with an improvement of 68 percent.

8. **Project Achievements/results**

For each objective, different activities were planned and different targets set. Outputs that were achieved and outcomes are discussed.

8.1 **Objective 1: To improve knowledge and skills among facility staff in records and data management by December 2011**
### Table 4: Improving knowledge and skills

<table>
<thead>
<tr>
<th>Planned Activities</th>
<th>Target</th>
<th>Output</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Train staffs in filling HIV/ART tools</td>
<td>15</td>
<td>22</td>
<td>• Increased completeness of new patients’ records from 27% in Sept 11 to 95% by June 2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Streamlined patients’ clinic numbers</td>
</tr>
<tr>
<td>2 Mentor staff in data management</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Training and mentoring of staffs in HIV/ART tools was done and 22 health workers were trained. Again, 10 health workers were mentored. This helped to improve on documentation and completeness of new patients’ recorded increased from 27% in September 2011 to 95% by June 2012 as shown by figure 3.

**Figure 3: Graph showing completeness of New Clients’ Records**

![Graph showing completeness of New Clients’ Records](image)
8.2 Objective 2: To develop an efficient filing system and computerize records at the facility by March 2012

Since there was no filing system at the facility and the records were not computerized at all, different activities were planned which led to the achievement of the set object as shown in table 5.

**Table 5: Developing an efficient filing system and computerizing records**

<table>
<thead>
<tr>
<th>Planned Activities</th>
<th>Target</th>
<th>Outputs</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Provide filing shelf</td>
<td>1</td>
<td>2</td>
<td>Retrieving a patient’s file reduced to less than three minutes</td>
</tr>
<tr>
<td>2 Develop SOPs for records and data management</td>
<td>Done</td>
<td></td>
<td>Approved by mentors and referred to by Facility staff</td>
</tr>
<tr>
<td>3 Install software and computerize records</td>
<td>OpenMRS installed and records computerized</td>
<td>Duplicates eliminated, Easy report generation</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4: Filing before and after implementation of the project**
Inactive files were sorted. These included the lost to follow up, dead and transfer outs. These were filed separately as shown in figure 5.

Figure 5: Inactive clients’ files

After ensuring that completeness in filling records and setting a filing system was being done, all records were entered into the computer. This was done with the use of the OpenMRS electronic data management system which enables easy analysis and reporting. A data clerk was hired to enter all backlog data and a total of 1249 records were entered as backlog. The Records’ Assistant was trained in the use of the system and continues to enter data for all clients that are enrolled and updates made for all old clients as shown in figure 6.
Figure 6: Computerization

The CQI team with the guidance of mentors, developed standard operating procedures, that are to guide health workers in handling records and data management. These were shared with all the staff and a booklet designed and kept at the facility.

8.3 To enhance data analysis and use at the health facility

Table 6: Data analysis and use

<table>
<thead>
<tr>
<th>Planned Activities</th>
<th>Target</th>
<th>Achievement</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conduct performance review meetings</td>
<td>4</td>
<td>5</td>
<td>Measure work done, identify gaps, get solutions</td>
</tr>
<tr>
<td>2. Mentor staff in data analysis and reporting</td>
<td>2</td>
<td>2</td>
<td>Monthly quality of care reports produced and shared</td>
</tr>
</tbody>
</table>
Five performance review meetings were held monthly starting March 2012. These helped to give feedback on the progress of the project which enhanced decision making. These meetings were attended by the CQI project team, staff of Mpumudde HC IV, District Health staff and institutional supervisors. The meetings took place at the health facility and role of the chairperson was rotated among the different CQI project team members. It is during these meetings that data was being shared. Data sharing helped in solving daily problems that were hindering good service delivery. A staff member once commented that “I do not know if this is positive or negative, but I should call it negative. Through this data sharing, we have managed to see the gaps that need to be bridged. It is as if this project is making us see more gaps in our work”

![Third performance review meeting](image-url)

**Figure 7: Third performance review meeting**

9. **Lessons learned**

   - Team work is an important element for successful completion of any project
• Implementing Quality improvement motivates staff to realize gaps in the service delivery and devise the best means to bridge them.

• Records and data are essential

10. Challenges experienced and how they were overcome

Table 7: Challenges and how they were overcome

<table>
<thead>
<tr>
<th>Challenges</th>
<th>How they were overcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Power on and off affecting data entry</td>
<td>• Data entry done beyond working hours</td>
</tr>
<tr>
<td>2. Computer break down, losing work done</td>
<td>• Repaired and data re-entered</td>
</tr>
<tr>
<td>3. Slow procurement process</td>
<td>• Improvised with available items from regional office</td>
</tr>
</tbody>
</table>

11. Conclusions

• Training and mentorship improved knowledge and skills among health facility personnel in records and data management and thus improved service delivery.

• Filing shelves and computerization enhanced an efficient filing system.

• Data analysis enabled health workers to identify gaps that needed improvement.

• Employing quality improvement methods and approaches improved performance of client records and data management at Mpumude HC IV.

12. Way Forward and Recommendations

• For the project to succeed, a sustainability plan was developed and adopted.
- Conducting regular meetings to continue addressing gaps and also share data in facility monthly meetings
- Select a new quality improvement team for the health facility
- Periodically rotate CQI team roles among members.
- Continuous mentoring of members and other staff in CQI is highly recommended
- District and Fellows to continue providing support supervision
- SOPs for records and data management to be followed

13. References


APPENDIX A: Standard Operating Procedures

STANDARD OPERATING PROCEDURES (SOPs) FOR RECORDS AND DATA MANAGEMENT IN ART CLINIC OF MPUMUDDE HEALTH CENTRE IV – JINJA DISTRICT

Developed by

Mpumudde HCIV Quality Improvement Team*

Under the Guidance of

MakSPH 2011/2 CQI Fellows - Nankanja Rita and Kayizzi Joseph Barnes

MakSPH/CDC/ BAYLOR-UGANDA CONTINOUS QUALITY IMPROVEMENT PROJECT

June 2012

* (QI Team: Peter Mulungwa, Proscovia Menya, Betty Naigaga, Rebeeca Konso, Joy Bogere, Margaret Aaii, Rita Nankanja & Joseph Kayizzi)
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1.1 Introduction
The purpose of this Standard Operating Procedure (SOP) is to define the minimum standards of data management in Mpumudde HC IV in Jinja. It describes the process to be followed in conducting data management activities and support the obligation to follow applicable guidelines in the conduct of data management activities. This will ultimately ensure high quality data management for good service delivery. This Standard Operating Procedure applies to data management of HIV/ART and EID care clinics.

A: Forms completion and correction
PURPOSE: To establish the process for completing and correcting patient Forms, registers and questionnaires.

POLICY: The Records assistants and all clinic personnel will be educated and trained to understand the proper methods of completing and correcting forms, registers and questionnaires in accordance with all applicable Ministry of Health (MOH) protocol and sponsor regulations and guidelines.

RESPONSIBILITY: Records Assistant, Clinic Personnel

PROCEDURE:
1) The records assistant and clinic personnel will be trained to complete forms, registers and questionnaires in accordance with the following requirements.
   a) Complete all entries on forms, registers and questionnaires in blue or black ink only. No pencil or colored pens.
   b) All questions should be answered and boxes ticked according to the specific instructions on the form.
2) The records assistant and clinic personnel will be trained to correct forms, registers and questionnaires in accordance with the following requirements.
   a) Correct all entries on forms, registers and questionnaires in blue or black ink only. No pencil or colored pens. Never use correction fluid i.e. “white out.”
   b) To make an error correction, draw a single line through the incorrect information, write the correct information and then initial and date the change.
   c) Never erase or obliterate entries that require correction.
3) Forms, registers and questionnaire entries that are not done according to procedure will result in incomplete or inaccurate data, and inadequate source documentation.
4) All data corrected on forms, registers and questionnaires will be entered in a timely manner using the appropriate program, and initialed and dated by the records assistant.
5) The records assistant and clinic personnel will read and understand the pertinent definitions listed in this policy and procedure.

DEFINITIONS:
- Confidentiality: Prevention of disclosure, to other than authorized individuals, of a sponsor's proprietary information or of a subject's identity.
- EID: Early Infant Diagnosis
B: Forms Quality assurance

PURPOSE: To establish the process for quality assurance of Forms prior to data entry.

POLICY: The records assistant will be educated and trained to understand the proper methods of completing forms/registers and proofing all forms submitted by the clinic staff for quality assurance in accordance with all applicable MOH protocol and sponsor regulations and guidelines.

RESPONSIBILITY: Records assistant

PROCEDURE:
1. The Records assistant will receive completed forms from clinic personnel along with copies of applicable source documentation when required: the following are the main forms and registers to be filled
   (a) HIV/AIDS care/ART card
   (b) Pre-ART register
   (c) ART register
   (d) Exposed Infant clinical charts
   (e) Exposed Infant register

2. The Records assistant will proof all completed forms as follows:
   (a) All information transferred from provided source documentation (Individual ART care card) to registers will be proofed for accuracy.
   (b) Dates of enrolment, ART start, e.t.c will be verified for accuracy.
   (c) All forms will be proofed for accuracy, completeness, logic, and conformance to forms completion instructions.

3. Errors found on forms will be returned to the appropriate clinic personnel and corrected as follows:
   (a) All errors will be corrected on the forms by drawing a line through the incorrect data, writing the correct information, and initialing and dating the change.
   (b) The appropriate clinic personnel will be notified of any errors that also require correction of the source documentation.
   (c) If an error or suspected error is found which requires clinical judgment, the appropriate clinic personnel will be consulted for correction.

4. The records assistant will read and understand the pertinent definitions listed in this policy and procedure.

DEFINITIONS:
Quality: Providing the best service which ensures both Clients’ and health workers’ satisfaction
C: Data Entry

PURPOSE: To establish the process of computerizing all patient records for easy reporting and follow up

POLICY: The records assistant will be educated/mentored and trained to understand how to enter patient records proper into the database.

RESPONSIBILITY: Records assistant

PROCEDURE:
1. The Records assistant will receive completed forms from clinic personnel.
2. He/she will check for errors and asking the clinic personnel to correct them before entering data into the database.
3. The records assistant will also ensure that the data entered into the database is a true reflection of that recorded on the client’s forms.

DEFINITIONS:

Database: A database is an organized collection of data in tables, typically in digital form.
D:  Filing

PURPOSE: To establish the process for organizing patients’ Forms in an efficient and effective order.

POLICY: The Records assistants and all clinic personnel will be educated and trained to understand the efficient and effective methods of filing forms.

RESPONSIBILITY: Records Assistant and Clinic Personnel

PROCEDURE: The records assistant and clinic personnel will be trained to understand the efficient and effective methods of filing forms in accordance with the following requirements;
   a) Ensure confidentiality.
   b) Less time consuming i.e. a filing system to be adopted should not take more than 30 seconds clinic personnel to trace a patient’s forms.
   c) Patients’ forms will be filed basing on clinic numbers.

DEFINITIONS:
1) Clinic numbers: These are unique identifiers/numbers given to clients for easy identification.
2) Filing: Preservation and methodical arrangement of documents and papers
**E: Data transfer**

**PURPOSE:** To establish the process through which data should move from one station to another.

**POLICY:** The records assistant will be educated and trained to understand the proper methods of data transfer. Any other clinic personnel rather than the records assistant will first get written permission from the Facility Incharge to be allowed to transfer data. The clinic personnel who would wish to transfer data should specify in writing the purpose and need of the data. His/her request will either be granted or rejected basing on the decision of the Facility Incharge.

**RESPONSIBILITY:** Facility Incharge and Records assistant

**PROCEDURE:**
1. The Records assistant will transfer data whenever necessary but transferring data should be mainly for:
   (a) Data analysis
   (b) Data cleaning
   (c) Data security

2. The Records assistant will receive an approval from the Facility Incharge any person be it clinic personnel to take any data from the clinic.
   (a) People who will be allowed by the Facility Incharge to take the data should first request in writing and specify why they need the data.
   (b) Data should be given to staff who are conducting research and should be cautioned not to miss use it.
F: Data Analysis

PURPOSE: To establish the process of analyzing data entered for data analysis after successful data entry.

POLICY: The records assistant and some key clinic personnel will be educated and trained to understand how to analyze data in accordance with all applicable MOH protocol and sponsor regulations and guidelines.

RESPONSIBILITY: Records assistant

PROCEDURE: The records assistant and some key clinic personnel will regularly analyze data mainly for the following purposes;
(a) Regular reporting
(b) Patient monitoring
(c) Reports/information for planning purposes
(d) Performance management

2. The Records assistant will give feedback to the clinic personnel on the findings after data analysis.

DEFINITIONS:
Data Analysis: This is a process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making.
G: Query resolution
PURPOSE: To establish the process of resolving any queries that may arise and to make it easy to do reporting.

POLICY: The Records assistants will be educated and trained to understand the proper methods of resolving queries. In this way, they will be able to extract all the data that may be needed to make different kinds of reports and to correct all the inconsistency that may have arisen in the data.

RESPONSIBILITY: Records Assistant

PROCEDURE:
1) The records assistant will be trained on the truth that queries arise regularly. Then the records assistant will be trained on how to handle different queries and on the need to resolve all queries that arise.
2) The records assistant will then be trained on how best to exploit queries in making reports.

DEFINITIONS:
Query: A precise request for information retrieval with database and information systems
H: Data Reporting

PURPOSE: To establish the process of compiling/adding data on certain indicators to come up with a report.

POLICY: The Records Assistant will be educated and trained on the reporting templates that are approved by MoH and where HIV/AIDS data is required to be reported. These include; the Quarterly comprehensive MOH HIV report template, PMTCT/EID monthly report and the HMIS 105 monthly report.

RESPONSIBILITY: Records Assistant

PROCEDURE:
1. The Records Assistant will be trained and mentored in the reporting tools.

2. The data analyzed will then be compiled and put in the different report templates for reporting.
3. All components of the report will be filled completely and accurately as required.
4. The reports will be then shared with other staff before being submitted to the health sub districts, MOH and partners
5. The Records Assistant and the Facility In charge should all have copies of reports that are sent out such that incase of any need for validation, reference is made to the right copies.

6. Reporting is done on monthly, quarterly and annual basis.

7. Deadlines for submitting the reports will be followed such that timely reporting is considered.

DEFINITIONS:
Reporting: Quantifying the work done by health workers and sharing it with different stakeholders
I: Data Security

PURPOSE: To establish the process for internal and external computer virus protection of Mpumudde HC IV ART clinic data.

POLICY: The Records Assistant will be educated and trained to understand the proper methods of data security in regards to Clinic data in accordance with all applicable MOH protocol and sponsor regulations and guidelines.

RESPONSIBILITY: Records Assistant

PROCEDURE:
1. McAfee virus scan software will be installed on all computers used for data entry, scanning, and exporting.

2. The Records Assistant will update the virus protections definition via the McAfee software every other week, and note the time and date completed on the data security log.

3. Computers designated for data entry, export, and scanning will be password protected, and used expressly for data management i.e. Internet surfing, emailing, or Instant Messaging is prohibited if not work related.

4. The Records Assistant will read and understand the pertinent definitions listed in this policy and procedure.

DEFINITIONS:
Confidentiality: Prevention of disclosure, to other than authorized individuals, of a sponsor's proprietary information or of a subject's identity.
**J: Data back up**

**PURPOSE:** To establish the process of keeping an extra set of data outside what is in the system.

**POLICY:** The Records Assistant will be educated and trained to understand the need to regularly back up the data entered on a daily basis. This will enable easy retrieval of this data in case the computer system goes down.

**RESPONSIBILITY:** Records Assistant

**PROCEDURE:**
1. An external disk will be put in place for backing up.

2. The Records Assistant will then be taken through the process of backing up both internally and externally.

3. Internal back up will involve the Records Assistant at the end of each day to go through this process. Click Start-OpenMRS-Admin-Backup. Follow the prompts to the end. Data will be saved in the WHO file found on Local Disk C.

4. External back up will involve the following path; Start-My computer-Local Disk C-Program files-WHO-Mysql-Data-Ibdata1, then save that file.

5. Back up should be done on a daily basis.

**DEFINITIONS:**

Back up: Keeping a copy of data somewhere else to fall back to.