

Minutes of the MoH/JICA Workshop for Internal Quality Control

Date, 10th and 11th December, 2009

Venue, Chrismar Hotel in Lusaka

Day One (Thursday, 10th December, 2009)

Morning Session: Dissemination Meeting for Internal Quality Control (IQC)

1.0 Opening Remarks

The meeting was officially opened at 09:48hrs by the Master of Ceremony, Dr. Gardner Syakantu who is also the Acting Director, Directorate of Clinical Care and Diagnostic Services, Ministry of Health (MoH). He apologized for having delayed and informed the guests that the Permanent Secretary would be coming in later. He briefly outlined the importance of Quality Assurance in the laboratory and the expectations of the Project and its findings and the way forward after the Project ends next year.

2.0 Opening Prayer

The workshop was opened with a prayer by Ms Christine Mwamba from SCMS.

3.0 Introduction of Participants

There were totally thirty-eight attendances from various organizations such as MoH, UTH, Level II & III Hospital Laboratories, CDC, CIDRZ, ZPCT, SCMS, MSH and JICA.

4.0 Presentation on General Information of The Project

Ms. Fales Mwamba, Acting Deputy Director of Laboratory Services gave the first presentation on the Project for Strengthening HIV/AIDS Laboratory Network Services. This is a Ministry of Health Project supported by JICA. In the presentation, she mentioned some points as follows;

- Importance of Quality Assurance (QA)
- The partnership between the Project and the UTH laboratories
- The project started in June 2007
- Development of Internal Quality Control (IQC) forms and the quarterly supervision visits conducted to the ten target laboratories with the UTH laboratory staff

(See Attachment 1 for details)

5.0 Presentation on Overall Progress of IQC Performance in The Target Laboratories

Dr. Jubra Muyanga, the Project Consultant, gave the next presentation on the overall progress of IQC performance in the target laboratories.

He mentioned some points as follows

- At the time the Project was embarking on its program, there was a quality assurance system in place in most of the target laboratories. But what was lacking was a uniform system and defined, standardized and harmonized way of doing things.
- Challenges which the Project was facing such as long distances
- Challenges which the target laboratories were facing such as human resources (he cited Lewanika General Hospital as the least number of laboratory staff and Kitwe Central Hospital had the highest while Kabwe General Hospital had a fair number of human resource)
- How to evaluate the performance of the target laboratories by applying the concept of correctness and frequency in the use and filling in of the IQC forms.
- Poor performance in using the IQC forms due to lack of understanding the forms, skills to use certain laboratory equipments and the availability of enough skilled human resource

(See Attachment 2 for details)

6.0 Discussion

- Dr. Syakantu confirmed that the issue of human resource was indeed a challenge but he assured the participants that the ministry was trying its best to address the staffing levels in all the facilities, and soon the situation would be stabilized. He also acknowledged that there was a relationship between the number of staff and the performance in the laboratories.
- Dr. Clement Ndongmo from CDC mentioned that supervisors should not behave like Police officers who looked for faults from their juniors and that they should enforce a good spirit of working together.
- Ms. Mwamba wanted to know what was happening to the out of range QC results and what steps should be taken to correct them.
- Mr. Davy Nsama from MoH/UTH wanted to see the actual establishments in the target laboratories so as to compare the good performance in relation to the number of staff.

- Dr. Muyanga explained some of the findings of the out-of-range QC results. He mentioned that the question on the actual establishments was referred to the Laboratory In Charges who also had a difficulty in giving the answer as the MoH was still working on the matter.
- Mr. Mubita Kabalanyana from UTH explained the various errors in QC and how to resolve them depending on the nature of error. He pointed to the fact that there was more to QC than just running the QC materials on a daily basis. He also pointed out that UTH was looking at ways to improve this aspect as a reference laboratory.
- Mr. Kandela from UTH explained the commonest errors encountered and gave guidelines on how to resolve them in addition to what Mr. Kabalanyana had explained.
- Ms. Mwamba advised the guests to spend more time in discussing ways and means of resolving the challenges being faced by the target laboratories so that they all could be at the same level in their IQC performance.
- Ms. Esther Ngoma from Ndola Central Hospital alluded to the fact that it was a challenge for the laboratories to access stationery within their facilities and this was important in terms of sustainability of the programme.
- Dr. Clement Ndongmo from CDC wondered what would happen to the program when the project came to the end. He wanted to know who would take over the work the project had initiated.
- Mr. James Mwale from Chipata General Hospital wondered why the vendors did not service equipment that they had supplied and come to service only when there was a breakdown of the equipment.
- Dr. Muyanga said that the Project was targeting the three tertiary and the seven provincial laboratories, so it was now upon the MoH and other partners to take up the challenge so that the program could be rolled down to the lower facilities. As an example, he cited ZPCT that had taken some of the IQC forms to the lower facilities. On the other hand, he emphasized that the target laboratories should have responsibility to take up the supervisory role in their respective provinces. He also added that he could not comment why the vendors came only when the equipment was broken down, but he was aware that there should be Memorandum of Understanding made between MoH and the vendors and the memorandum should have a component on servicing for the equipments they had supplied.
- Mr. Shinya Matsuura, Project Coordinator, added that the first thing the project considered was sustainability of this program and thus the project always conducted the supervisory visits with the UTH staff and reported to the MoH. He

- Ms. Motoko Seko from NAC/JICA mentioned that it was the MoH that put the sustainable system in place.
- Ms. Felistas Mwale from MSH stated that MoH needed to do more to address the issue of human resources in all the health facilities. She also pointed to the strict adherence to the staff establishment and the retention scheme.
- In IQC performance, all the facilities were facing more or less the same challenges. They all bordered on human resource, lack of proper and well-serviced equipment, the type of management within the laboratories, and de-motivation among staff (e.g. by the delays in changing the salary scale for those who had upgraded their profession.)
- On how the target laboratories should improve their performance, Mr. Clement Phiri from MoH said that the poor performance should be interpreted as a motivating factor to work extra harder so that they could be at the same level with other laboratories that were doing very well. He also said that if other laboratories were able to do it, all of them could do it.
- Mr. Physiwell Sikateyo from CIDRZ emphasized the importance of documenting all QC results and all the target laboratories should be urged to set a good example, then they would in turn supervise the lower facilities on how to use the same IQC forms.

7.0 Official Opening Remarks by Permanent Secretary

The guest of Honour, Dr. Velepi Mtonga, Permanent Secretary, Ministry of Health, came in at 11:38hrs. Dr. Syakantu welcomed her and the Zambian national anthem was sung. Then he briefed her about how far the meeting had gone.

The talking points by the Permanent Secretary were as follows.

- Human resources, equipment, and reagents were critical for quality work
- She noted that the laboratory had been playing an important role in the ART program
- Additional 1.2 million people needed to be on ART.
- The 5th National Plan for the Health Services included the laboratory components
- The EQA programme for CD4 had been launched.
- Five centres certified to carry out ART special tests, namely UTH, CIDRZ, Maina Soko Military Hospital, Ndola Central Hospital and Kitwe Central Hospital for the first QA step in the laboratory services in Zambia.

- Ministry was eager to see the program rolled down to the districts.
- The Ministry was doing all it could do to address the challenges which we were facing, for example, it was supporting colleges like Chikankata School of Bio-medical Sciences to address the human resource constraints. The Chikankata School would produce at least 25 graduates by 2010 and Ndola School of Bio-medical Sciences had introduced part time classes, and 30 students would graduate by the end of this year.
- On new improvements in the laboratory, Sichili and Mwense were cited as the new sites where CD4 counts could be done.
- PCR and Viral Loads to be introduced in certain hospitals.
- Laboratory equipments to be placed in strategic places where they could be accessed by other nearby health facilities hence, rationalizing their usage. In this case specimens could be referred to the other facility rather than referring the patient.
- The Ministry was grateful to JICA for taking the lead in pioneering IQC in health facilities. This was the first step in quality laboratory services, then EQA would strengthen all the health facilities in the country.

Dr. Syakantu thanked the PS for coming despite her busy schedule, which demonstrated the importance she attached to the laboratory Quality Control program. Dr Syakantu then invited the PS to join the participants on a tea break.

8.0 Presentation on Good Laboratory Practices (Central Hospital)

Mr. Sam Addo from Kitwe Central Hospital gave his presentation on Good Laboratory Practice (GLP). Firstly he introduced Kitwe Central Hospital with its main departments, staffing levels and its size in terms of bed capacity, then he defined GLP, its principles, needs of QA program in place, its components and factors that could affect laboratory results.

9.0 Discussion (Continued)

- Ms. Grace Mwikuma from Arthur Davison Children's Hospital (ADCH) expressed the feeling that it was not fair to assess the laboratories using the same forms as the other facilities that were already familiar with the forms. She suggested that the orientation should be done before the implementation of any program.
- In response, Dr Muyanga stated that the orientations on the IQC forms were conducted within three months for all the ten target laboratories. If some staff

- Mr. James Mwale from Chipata General Hospital wondered why the retention scheme did not include laboratory staff.
- In response, Dr. Syakantu explained from where, how and why the retention scheme was introduced. In conclusion he said that there was a proposal which would be disseminated to all the facilities.
- On the use of distilled water for the chemistry analyzers, Mr. Naofumi Hashimoto, Project Short-term Expert, suggested that MoH should buy a big de-ionizer placed at one point so that MoH could distribute the de-ionized water through Medical Stores Limited (MSL) together with other hospital supplies.
- Mr. Kabalanyana gave a comment to emphasize the fact that the staff should fill in the IQC forms regularly and that they should not just depend on the information stored on the computers.
- Ms. Mwale suggested that it should be necessary to communicate with the laboratories and get de-ionized water from them. She also emphasized the need to take care of the laboratory equipment by the laboratory staff themselves, not to just depend entirely on the vendors. She also emphasized on the laboratory staff to follow the recommended procedures when switching on and off of the equipment. This would enhance both the performance and the durability of the equipment. Laboratory In-Charges should take the lead. She also pointed out the fact that most of the Laboratory In-Charges were not trained managers, hence there would be need to train them. For example, in the past, the Government used to send people to the National Institute of Public Administration (NIPA) for training in administration. This helped to equip the In-Charges with management skills. Since nowadays it did not happen, some laboratories failed to perform.
- Ms. Rachanee Cheingsong from CDC said that they were working on a training program for laboratory management so that they were equipped with management skills to lead their respective laboratories
- Dr. Syakantu said there was need to reorient the In-Charges on the IQC forms as the focal point. He also said that the In-Charges needed to attend the local management meetings where they could brief management on how the laboratory was working, its challenges and the new improvements they intended to implement. This would help them to get local management support and also funds to be needed. He also emphasized on the importance of communication at every level. He also

10.0 Official Closing Remarks by Resident Representative, JICA Zambia office

Mr. Shiro Nabeya, Resident Representative, JICA Zambia Office gave his official closing remarks. The talking points in his remarks were as follows.

- He was hopeful that the issues brought out in this meeting would help the laboratories to improve their services.
- He also hoped that MoH and other cooperating partners would help to sustain the program.
- He thanked the MoH/UTH for the input, contributions and the guidance to the project.
- Finally, he thanked all the participants and wished them all the best in the implementation of the recommendations arising from this workshop.

Afternoon Session: Workshop for IQC Improvements

Participants:

Mr. Lanya Kandela and Mr. Justine Malemba from UTH Laboratories,
Laboratory In-Charges from the target laboratories of the Project,
Dr. Jubra Muyanga, Mr. Naofumi Hashimoto and Mr. Shinya Matsuura from the
Project

Purpose:

- To bring out the various challenges in using the IQC forms, especially the challenging ones
- To discuss the corrective measures to be taken when facing a certain challenge.
- To revise the contents of the SOP of the IQC forms

1.0 Q&A and Discussion

- Ms. Esther Ngoma from Ndola Central Hospital brought out issues on the Levy Jennings (L-J) chart. There was another question on what should be done in the QC errors of 10X, shift, and R4S.

- Mr. Kandela answered the questions by first explaining what would cause such errors and whether it was a random or systematic. Then he went on to explain that before any resolution was made, we needed to make sure that the de-ionized water was ok, the control material itself was ok and its storage was also ok. Then the reconstitution was also ok by using the correct volumetric pipette to measure the correct volume. On the other hand, the equipment itself should be ok. These were what we needed to do as the daily maintenance. Therefore, if all were well, it would help us to relatively identify where the problem was coming from and we could make the corrective measure.
- He also mentioned that if all were ok but we still observed the 10x, we should recalculate the new mean for the particular test, then fill in the new mean. But we needed to have not less than 20 values in order to validate our new mean.
- The other errors were dependent on the quality of water being used, technique in reconstituting the control material, and the status of the control material and the equipment.
- There was a suggestion that since UTH was a national reference laboratory, it should take the lead to evaluate reagents and controls before MSL distributed to the respective laboratories country wide, especially for clinical chemistry.
- Mr. Kandela responded that, in the mean time, it would not be feasible that UTH embarked on such a program, but if MoH saw it fit, UTH could do it as long as we had all the various equipment being used in the various facilities in the country and the most needed human resources.
- He also emphasized the need to consult the respective vendors and manufactures of the equipment for specialized and expertise specifications.
- The other form which was cited to pose a challenge was the antimicrobial susceptibility disc quality control form. Ndola Central Hospital had used this form, while most target laboratories did not use it as they had no control organisms and a suitable storage fridge at -80°C.
- Mr. Justin Malemba from UTH went through the form as an orientation. He also went through the procedure of culturing starting from media preparation to the actual inoculation and the things to use in order to avoid heavy inoculums. He then named the organisms which they sent as controls, he also mentioned that even though various facilities did not have the required storage facilities, they could still use them as long as they were stored at -20 °C (i.e. the freezing compartment of common fridges) and revitalized every three months. Therefore, the issue of not having a specific storage facility should not be an excuse and the target laboratories

2.0 Wrap Up of the Afternoon Session

Dr. Muyanga summarized the session of the day by giving the possible solutions to the queries and challenges faced in the usage of the IQC forms. He urged the participants to take the issues discussed seriously. He also pointed out to the 5th national plan and he was confident that MoH with other partners would sustain this program and roll it down to lower facilities in the future. He thanked them and looked forward to the next day, and closed the session at 17:20hrs.

Day Two (Friday, 11th December, 2009)

Workshop for IQC Improvements (Continued from the Day 1)

Dr. Muyanga welcomed the participants to the second day of the workshop at about 09:10hrs. He summarized the expectations for the day's program and how it will proceed. He then asked the participants if there was anything left from yesterday's discussion that was on the challenges on using the IQC forms.

1.0 Q&A and Discussion (Continued from the Day 1)

- A form was cited which was the Reagent Preparation Quality Control Form.
- Mr. Malemba from UTH explained the form, how it should be used and what was expected from the users. He emphasized the importance of writing the full name of the person who had prepared the reagent and particularly to the details of the reagent itself, including manufacturer, lot number, and expiry date.
- He also emphasized that all the used IQC forms should be reviewed by a person overseeing the IQA program, such as a section head or a Laboratory In-Charge. This was also an observation as most of the target laboratories did not review the forms.
- There was a concern whether the column of Corrective Action should be there or be removed from the form. This was because the participants felt that since there was a column of comments, corrective action column should be removed.
- However it was agreed that the corrective action column should be maintained if we follow the example there is a "NO" in this column implying no corrective action

- In spite of the SOP on corrective action saying “Describe the corrective action”, there was another column for comments. Then Dr. Muyanga suggested that the form should be taken back to the formulators so that they could clarify on these issues.
- Other participants felt that there was the same problem on the Media Preparation Quality Control Form, therefore the form also should be taken back to be reviewed.

2.0 Group Discussion

Dr. Muyanga divided the participants into two groups and gave both groups different topics to be discussed. The topics of each group were as follows

Group 1: “How can we improve IQC performance?”

Group 2: “What is good laboratory management?”

2.1 Feedback from the Group 1 for “How can we improve IQC performance?”

Group 1 presenter was Ms. Catherine Lunda from Solwezi General Hospital.

She started the presentation by highlighting the understanding of the importance of IQC, the need to work as a team, commitment by all the staff, internal and external communication among staff, adequate supply of inputs, motivations of staff and management support from the Government and CPs.

Dr. Muyanga pointed out that some of the issues mentioned in the presentation can be addressed locally with the help and support from local hospital management. He cited Mansa General Hospital Laboratorie as where the laboratorie showed its presence in the hospital and its voice reached other hospital staff. He said that it all started with the way the laboratory portrayed itself. He thanked them for their presentation to bring out issues affecting IQC and how we can improve Internal Quality Assurance (IQA) in our respective laboratories.

2.2 Feedback from the Group 2 for “What is good laboratory management?”

The presenter for group 2 was Mr. James Mwale from Chipata General Hospital. He first defined what management is then he stated the weaknesses of laboratory Management such as late coming for work, lack of communication, non usage of SOP, lack of supervision, lack of delegation, lack of planning and lack of commitments

Then he continued to the strengths of laboratory management such as availability of management support, availability of trained man power, availability of SOP and equipments, reliable supply of reagents and consumption items, donor support, regular meetings among staff.

Then he gave the basic applicable points on how good laboratory practice can be achieved at a work place. Among the things, he highlighted included punctuality, dedication to work, use of SOPs, proper supervision, delegation of work, planning and open channel of communication and not forgetting team work.

3.0 Presentation on Good Laboratory Management

At 11:30hrs, Mr. Naofumi Hashimoto, the JICA short term expert gave his presentation on Good Laboratory Management. He first outlined the various forms of managements and the areas where it could be applied. Some of which included; Logistics, Environment and safety, service, human resource and communication as things which needed serious management. He emphasized that laboratories needed all these highlighted factors for good management. He compared the Laboratory In-Charge to a conductor of an Orchestra, who had a task to harmonize the players of various music instruments to produce a nice and fine music. Hence the Laboratory In-Charge had a task to harmonize the staff to work and produce quality results. He urged the participants to use the various forms of management he presented in order to improve the performance in their laboratories. (See Attachment 3 for details)

4.0 Q&A and Discussion

- Ms. Esther Ngoma from Ndola Central Hospital raised a concern patterning to environment and safety management. This was because the laboratories at her Hospital were not all that safe due to the fact that they leaked and got flooded during the rainy season and there was no ventilation as it was situated at the basement. The hospital management was aware of the issue and she suggested that they could relocate to the 4th floor or the former TB ward on the same floor. The hospital director promised to take up the matter but up to now nothing had happened.
- Mrs. Mwamba said the MoH had not been informed about the need to relocate the laboratories at Ndola Central Hospital. She acknowledged that Ndola Central Hospital had to officially write to MoH to inform them and seek advice about the relocation of the laboratories.

5.0 Closing Remarks

- Ms. Fales Mwamba officially closed the workshop with closing remarks as follows.
- Thanked all the participants for their attendance to this important workshop
- Urged the participants to continue using the IQC forms and to put the production of quality results in the first place for reliable services to the patients. This would in turn make it easy to get support from the local managements.
- Emphasized the need to communicate if things were not going well in the laboratory such as writing a memo to inform problems which the laboratory was facing.
- Alluded to the introduction of EQA program. If there were strengthened IQA program in place, EQA would not be a challenge at all.

The Chair
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