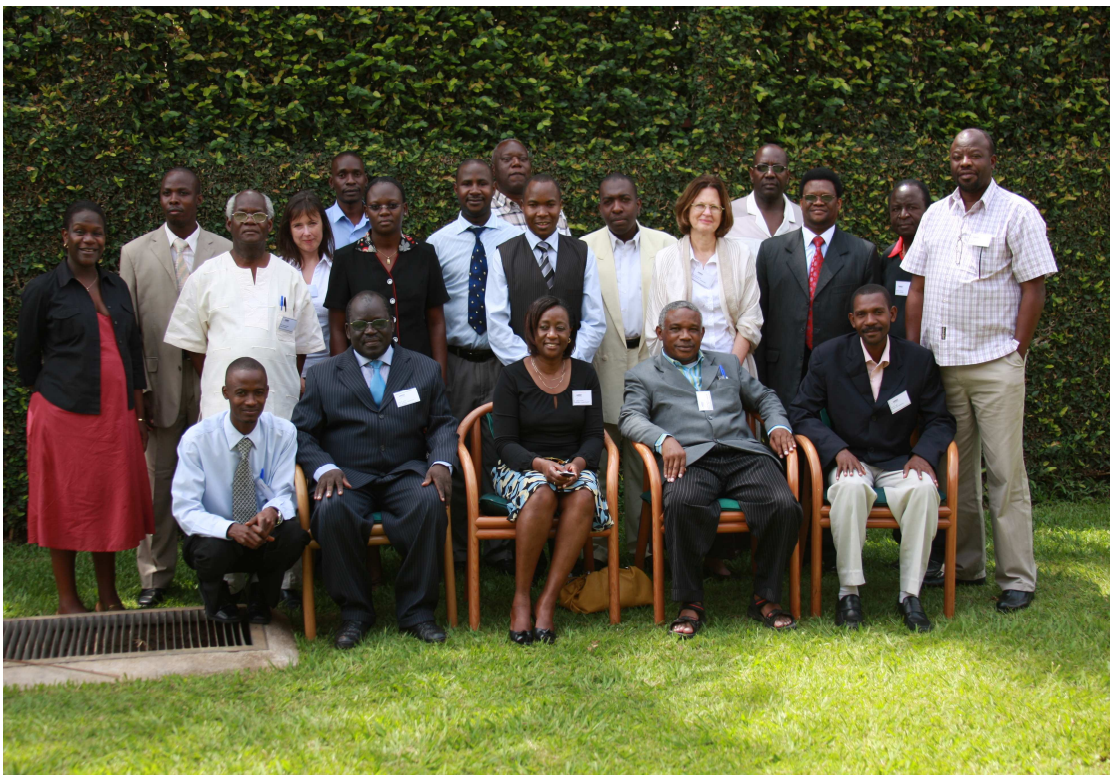
PROCEEDINGS OF THE 2ND ANNUAL MEETING OF THE EAST AFRICAN REGIONAL EXTERNAL QUALITY ASSURANCE COMMITTEE (EA-REQAC)



MUNYONYO COMMONWEALTH RESORT HOTEL

KAMPALA, UGANDA

19th – 20th FEBRUARY 2009

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AFB	Acid Fast Bacilli
AMREF	African Medical and Research Foundation
AMREF- KCO	AMREF – Kenya Country Office
ART	Anti-Retroviral Therapy
CD	Country Director
CPHL	Central Public Health Laboratory
DG	Director General
DHS (C&CH)	Director Health Services (Clinical and Community Health)
DMLT	District Medical Laboratory Technologist
EA-REQAC	East African Regional External Quality Assurance Committee
EA-REQAS	East African Regional Quality Assessment Scheme
EQAS	External Quality Assessment Scheme
HB	Haemoglobin
HF	Health Facility
HIV	Human Immunodeficiency Virus
HSSP	Health Sector Strategic Plan
IDSR	Integrated Disease Surveillance and Response
IHR	International Health Regulation
LFT	Liver Function Test
MOHSW	Ministry of Health and Social Welfare
MOH	Ministry of Health
MOU	Memorandum of Understanding
NDC	National Disease Control
NEQAS	National External Quality Assessment Scheme
NPHLS	National Public Health Laboratory Service
PHL	Public Health Laboratory
PHEIC	Public Health Events of International Concern
QA	Quality Assurance
QC	Quality Control
RCC	Regional Coordinating Centre
RFT	Renal Function Test
SOP	Standard Operating Procedure
TAT	Turn Around Time
TB	Tuberculosis
TOR	Terms of Reference
WBC	White Blood Cell
WHO	World Health Organization
WHO-AFRO	World Health Organization - Africa Regional Office

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INTRODUCTION

This second meeting of the East African Regional Quality Assurance Committee (EA-REQAC) followed the first meeting held in Mazsons Hotel, Stone Town, Zanzibar, on 26th - 27th April 2006. The Committee was established following recommendations made during the first Regional Technical Meeting of the East African Regional External Quality Assessment Scheme (EA-REQAS) held in Arusha, Tanzania, on 3rd – 4th April 2003. The role of the Committee is to steer the operations and technical activities of the EA-REQAS. The Committee comprises two representatives from each Ministry of Health, representatives from the AMREF Coordinating Centres in Kenya, Uganda and Tanzania, representatives from the World Health Organization (WHO Country Offices, WHO AFRO Regional Office, WHO Headquarters), donors and special guests. The meeting venue rotates among the member states and the host country chairs the meeting.

The committee is guided by the following mission and purpose.

Vision
Improved health care delivery within the East African region.

Mission
To establish and operate a well coordinated regional laboratory quality assessment scheme (EA-REQAS) through participation of country health care providers and development partners, aimed at improving laboratory services to enhance quality health care delivery.

Objectives of the scheme include but are not limited to:

- Measuring laboratory performance
- Identifying and rectify problem areas
- Standardizing laboratory techniques
- Providing continuing education
- Improving communication between clinicians, laboratory and public health staff
- Giving confidence to clinicians on the performance of their own laboratories

The meeting agenda/Time Table is given in **Appendix 1**

MEETING PROCEEDINGS

Day One: 19th February 2009

Opening remarks

The chairperson welcomed all delegates for what he called a memorable and very important 2nd East African Regional External Quality Assurance Committee (EA-REQAC) meeting held for the first time in Kampala, Uganda. He proceeded with climate setting and invited all delegates to make self introductions. He then invited the Country Director Representative - AMREF in Uganda, to officially welcome the Chief Guest and delegates to Uganda.

Country Director – AMREF in Uganda

The Country Director (CD) representative gave the CD's apologies for not attending the meeting and welcomed the Chief Guest, representatives of Ministries of Health (MOH) from Kenya, Tanzania Mainland, Zanzibar and Uganda, and AMREF Regional Laboratory Programme staff. He proceeded to read the Country Director's speech to the delegates noting that health laboratory services play an important role in ensuring the quality of health care services and the scheme supports national laboratory quality assurance programmes. He thanked the Ministries of Health of participating countries and WHO for their ongoing support to the Scheme.

Update of the scheme – Dr Jane Carter

The chairperson invited Dr Jane Carter to present a brief of the scheme activities since the 1st Regional East African Quality Assurance Committee meeting held in Zanzibar. Dr Carter thanked the Guest of Honour and members for attending the meeting. She informed delegates that the Scheme was born in the late 1990s to contribute to quality assessment and improvement of laboratory services in the region. The Scheme is intended to be highly educational, supportive and developmental but above all the Scheme is owned by the Ministries of Health of each country with AMREF acting in a coordinating role. The East African region now shares the laboratory standards through this scheme, a major achievement that was adopted in Arusha, Tanzania, in 2003. The Scheme also encompasses the participation of other health workers including clinicians and public health officers with the aim of fostering good communication between them. The scheme has so far produced four documents (Standard Operating Procedures (SOPs) for Essential Laboratory Tests, Laboratory Utilisation for Clinicians, Care and Maintenance of Laboratory Equipment; and the Quality Manual) and completed two sample surveys. She proposed that the scheme should eventually be extended to Burundi and Rwanda who are now members of the East African Community. Dr Carter invited delegates to use the meeting to critically assess and analyse the successes and shortcomings of the Scheme, and suggest areas for improvement.

Dr Carter's summary presentation is given in **Appendix 4.**

The Chairman, Dr Yusuf Mpairwe (standing) welcoming members to the meeting. The Chief Guest, Dr Kenya Mugisha Nathan (seated middle) and Dr Juma Nabembezi representing AMREF Uganda looking on.

WHO Representative in Uganda – Mr J. Mwoga

The speech from the World Health Organization Country representative in Uganda (WHO/WR) was presented by the Programme Officer responsible for laboratory services in the country office, Mr. Joseph Mwoga. He congratulated AMREF for organising this meeting and observed that the Scheme was undoubtedly important owing to the critical role that laboratories play in the health sector. Participation of clinicians and public health officers in the scheme is timely especially in strengthening Integrated Disease Surveillance and Response (IDSR). However, he pointed out challenges for laboratories and possible remedial actions as follows:

Challenges:

1. Few available quality laboratories – clinical care minus quality laboratory services wastes resources and may lead to antimicrobial resistance
2. Most laboratories cannot identify common bacteria, for example *Escherichia coli*, cholera, thereby relying on other regions to confirm diseases especially highly infectious diseases.
3. Inadequate laboratory supplies
4. Poor incentives for laboratory workers
5. Lack of minimum essential laboratory equipment leading to unreliable results
6. Weak coordination of laboratories, little networking or supervision and ambiguous quality tests

Remedial actions:

1. Develop comprehensive laboratory policies – Uganda was in the final process of developing a national laboratory policy
2. Formulate strategic plans for laboratory services
3. Strengthen or establish laboratory leadership
4. Set up more reference laboratories to coordinate training, laboratory activities including standards, research and networking
5. Create and strengthen partnerships and collaboration for success
6. Strengthen laboratory supply systems
7. Improve QC/QA of public health laboratories, including development of SOPs
8. Strengthen laboratory equipment support system
9. Strengthen laboratory information management systems
10. Strengthen monitoring and evaluation
11. Source funding and support from partners such as the Global Fund
12. Strengthen partnerships and collaboration

He reiterated that WHO will continue its support for the scheme as part of the effort to strengthen disease prevention and control, and encouraged the delegates to share experiences.

WHO-AFRO – Dr Thomas Aisu

In his remarks, Dr Thomas Aisu, representing the World Health Organization -AFRO Region stated that the International Health Regulations (IHR) of 2005 lay great emphasis on laboratory services. The IHR 2005 stipulates that all counties must put in place laboratory services systems within a stated time frame. He hoped that those responsible for laboratory services within the East African region were aware of the IHR and had already taken the necessary steps to implement them.

Official opening by the Chief Guest – Dr Kenya Mugisha Nathan

Thereafter, the Country Director Representative AMREF in Uganda invited the Chief Guest Dr Kenya Mugisha Nathan, Director of Health Services (Clinical and Community Health) MOH Uganda, to officially open the 2nd EA-REQAC meeting. In his speech, the Chief Guest welcomed delegates from the region, conveyed greetings from Dr Zaramba, Director General (DG) of Health Services and the topmost custodian of health services in Uganda. He said that the DG was very much in support of the scheme and was appreciative for choosing Uganda as the host for the 2nd Regional External Quality Assurance Committee meeting. The Chief Guest mentioned that he was privileged and pleased to have been invited to officiate at the opening of this very important meeting, recognized the importance of this meeting and affirmed that it would go a long way to finding concrete strategies for improving the quality of health laboratory services. He encouraged the Scheme to invite on board its neighbours from Rwanda and Burundi who will undoubtedly contribute to greater partnership and improved standards. They are already part of East African Community. The laboratory services should be standardised so that there is free movement among the professionals in East Africa. He noted that the meeting had come at an appropriate timing for the country since Uganda was in the process of advancing from Health Sector Strategic Plan (HSSP)-2 to HSSP-3, and the recommendations of the meeting would help shape the 3rd Plan. He also noted that laboratory services in Uganda have been neglected despite playing a key role in diagnosis, but now resources are being set aside for the health sector and new structures are being constructed with support from AMREF and other partners. He was happy to learn that

the four laboratory reference documents had been produced. The Chief Guest further acknowledged that in recent times, the laboratory sector is assuming great importance and significance due to its role in supporting clinical management of quality health services. Giving false laboratory results may be highly dangerous to the recipient. He observed that even the President of Uganda believes in proper, adequate and early diagnosis of illness which will significantly lead to cost reduction and resource savings.

The Chief Guest, Dr Kenya Mugisha Nathan, giving his opening remarks

The Chief Guest gave a number of recommendations:

1. Work as a team for any success – quality minus team work is not success
2. Improve laboratory human resources – continued support, create more medical laboratory schools
3. Establish policies, SOPs and reference materials that the scheme is already working on
4. Equip the laboratories – training minus equipment is useless
5. Always practise otherwise skills will fade away
6. Include the private sector – many people seek services from the private sector
7. Keep abreast with the East Africa treaty[1] to improve services (address East African Community regional policy to improve services)
8. The Scheme should not die at the end of the pilot phase
9. The Scheme should be transformed into a programme rather than a project
10. There should be a positive change of attitude of laboratory staff and other health staff
11. There is need to expand the Scheme faster, only 8 out of 80 districts are currently covered in Uganda

The Chief Guest further pointed out that the first survey of the Scheme was useful in improving public health laboratories in Uganda. He thanked AMREF, WHO and other partners for the support extended to the scheme. He singled out AMREF for the outstanding efforts in boosting health laboratory services.

He declared the meeting officially open at 9.58 AM.

[1] http://cdi.lyon3.free.fr/doc/EACTreaty.pdf

Terms of Reference for regional and national EQA committees and review of outcomes of Zanzibar meeting – Dr Jane Carter

Dr Jane Carter reviewed the Terms of Reference for the East African Regional Quality Assurance Committee (EA-REQAC) as adopted at the Zanzibar meeting. In the TOR, guidelines for constituting national EQAS committees are clearly stipulated. The Zanzibar meeting developed and established:

- A Mission and Purpose although these would change upon involving Burundi and Rwanda
- The types of pathological materials targeting primary health care and not a particular disease
- Selection of reference laboratories in each country for material production
- Tripartite MOU involving Ministry of Health, reference laboratory and AMREF Coordinating Centre
- Consent forms – for some materials consent forms are not needed, as they are prepared in a simulated manner
- Selection of districts for participation in the pilot scheme. A few districts were initially selected but these are now greater due to district divisions.
- Distribution system from the reference laboratories to the Coordinating Centres and then to the participating health facilities.

Regional Coordinating Centre Presentation – Mr Rodgers Dena

Two surveys have been prepared and distributed so far: Survey One (1107001) and Survey Two (0908002). 8 materials were distributed in Survey One and 6 materials in Survey Two. All materials produced by the reference laboratories were quality checked by AMREF (10% of samples). In order to set target values for each survey, five (5) reference laboratories were identified in Nairobi to process the samples and give results.

Survey materials were distributed to 193 laboratories in both surveys. Not all laboratories sent back responses (80% in Survey One and 64% in Survey Two). Average Turn around time (TAT) was poor in both surveys (52 days in Survey One and 81 days in Survey Two). Marking was carried out independently by two staff and checked by a third. Overall performance improved from 50% in Survey One to 56% in Survey Two.

There were major technical errors in haemoglobin estimation, Gram staining and peripheral blood film examination. In general, there was limited involvement of clinicians and public health staff in answering the questions. This was felt to be due to lack of confidence of clinicians and public health staff, but they need encouragement to participate as part of the learning process.

The RCC presentation is given in **Appendix 5.**

From both surveys, a number of issues were identified that required amendment or improvement. These were:

- Quality checking documentation – done at both reference laboratories and the RCC. A standard format requires to be developed.
- Payments to reference laboratories producing materials. There have been significant delays in payments to some laboratories and this need to be improved.

- Turn around time (TAT). Average time taken from despatch of materials from the RCC to receipt of the reports from the participating laboratories needs great improvement. This issue needs to be addressed by each national EQA Committee in discussion with national laboratory services. Reports from participating laboratories should be received by the RCC within one month of submitting the survey materials from the RCC.
- Packing of survey materials need to be explored. The current boxes are good but they take up a lot of space when shipping. The use of re-sealable plastic bags needs to be explored.
- Submission of the "preliminary" report to individual health facilities needs to be speeded up. Reports should be submitted within one month of receipt by the RCC.
- Tracking sheets used. Some facilities were complying while others were not. It was agreed to streamline the process and make it more user-friendly. The main information needed is date of receipt and despatch of results by the participating health facility.
- Marking keys and marking processes. There were suggestions for adjusting both qualitative and quantitative marking keys, including addition of negative marks for "clinically dangerous" reports. It was agreed marking will be carried out by one staff initially, then checked by two others.
- The format of the "composite" report to national laboratory administrations needs to be strengthened and include the data presented. This will help with policy formulation for individual countries.
- The RCC data base has not yet been fully developed and is not operational. Currently data is stored in an Excel file. Various data base programmes to help with report generation and statistical analysis are being explored. WHO AFRO to assist with data base development. The data base must be able to distinguish a zero mark from a "no answer".
- System strengthening for reference labs and public health labs

Country presentations and cross cutting issues

The chairperson invited country presentations of REQAS updates. The presentations from Zanzibar, Tanzania Mainland, Uganda and Kenya are given in **Appendix 6.**

Crosscutting issues

- *National committees*

The presentations revealed similar gaps in the formation of the country committees. Country EQA committees were not constituted as per the guidelines. All member countries need to review their TORs. The committees act in an advisory capacity only to provide advice to the government on laboratory policies and issues.

- *National laboratory policy*

Zanzibar and Uganda do not yet have national laboratory policies in place but are in the process of formulating them; Kenya and Mainland Tanzania already have them. Tanzania is working on implementing the provisions of an Act of Parliament which was passed in 2007. Uganda is working on faster expedition of a national laboratory policy to support the legal framework.

- *Transportation of QA materials*

In Uganda, the MoH has entered into an agreement with Posta Uganda (a communication/ transportation company mainly owned by the Government of Uganda) to provide an efficient transportation system for their mails to peripheral points. In this scheme all costs are covered by the central government. This approach has proved a success so far for transportation of scheme materials and return of reports to the central point. In Tanzania, the AMREF country office transported the QA materials to the districts and from there the districts distributed the QA materials to the peripheral sites. It was recommended that Tanzania to come up with a more sustainable national mechanism of transporting QA materials. In Zanzibar (where distances are small) all materials and responses were delivered manually. In Kenya, the Ministry was used to distribute the materials and there were notable delays. It was agreed that there is need for further sensitisation meetings for participating districts to ensure prompt delivery of materials and return of results. The methods of communication need to be reconsidered as well.

- *Lack of good specimen referral systems*

It was identified that most participating facilities lack functional and efficient specimen referral systems, which could be used to support REQAS. This was recognised this as a funding gap in all countries and they will look for ways of supporting it.

- *Staff attrition (transfers, redundancy)*

The staff who are knowledgeable about REQAS are being transferred and reshuffled, and this has interfered with the smooth running of REQAS. During sensitisation meetings, staff need to be told to carry out a proper handover when they leave.

- *Support supervision*

Irregular visits to laboratories, weak in-country monitoring of REQAS activities, lack of funds, and lack of staff motivation were pointed out as factors influencing performance.

Section of Committee members during the meeting

Presentation discussions

RCC resolutions

- Marking keys: it was agreed to award a zero mark to "no answer given". Laboratories will be encouraged to give reasons for no answers, such as lack of equipment. A negative mark will be given to clinically dangerous answers or wrong answers instead of a zero mark.
- The 25% +/- counts and the 10% error margins should be referred back to the RCC to decide but the coordinating centre should employ the services of a statistician to review these error margins. The current marking key for malaria parasite counts is given in Table 1.

Table 1: Reporting malaria parasite counts

Malaria parasites seen, correct species (if *P. falciparum*, ±25% of correct count/200 WBC); or correct negative result	**3 marks**
Malaria parasites seen (if *P. falciparum*, ± >25% ≤ 50% of correct count/200 WBC)	**2 marks**
Malaria parasites seen, wrong/no species, (if *P. falciparum* ± >50% of correct count /200 WBC or no count)	**1 mark**
False positive or false negative, no result, other result	**0 mark**

- Clinicians at the participating facilities will be required to sign the reports before despatch as proof that they have reviewed the responses. The feedback from the health facilities should be endorsed by the overall person in-charge of each health facility.
- For the Hb reports, the use of standard deviations of the targeted mean to replace absolute values should be explored. The participating laboratories will continue to work and report in grams per decilitre.
- On the marking process, this will continue as it is for now, but will be reviewed as the scheme grows to maturity.
- The use of the Nairobi best laboratories was sought to be extended to other countries' best laboratories. However, due to logistical and financial implications, it was resolved that since there were currently no hitches or problems encountered using this approach, it was resolved to deal with emerging challenges first and avoid unnecessary expenses in changes at this point in time.
- When reporting causes of errors, the reasons should be clearly indicated by participating laboratories, for example no reagent or equipment. Space for providing this information will be given in the reporting form.
- Provide for cross tabulation of results in the subsequent reports.
- The reference values were challenged based on the methods used, for example in the determination of haemoglobin levels. It was agreed that AMREF is ensuring that internationally accepted methods are used when setting reference values. .
- Detailed reports of laboratory performance are currently not provided to the central public health laboratories. This information is needed to advise governments on policy formulation. The level of data analysis on given in the RCC presentation should be provided in each composite report.
- Turnaround time and low response rate: the district laboratory focal persons should be re-sensitised on this issue. Any MOH meetings or programmes can be used to disseminate this information, not necessarily specially convened EQA meetings. This will also help to reduce the cost of the programme.

- Educational materials: the process of producing learning materials should be continued. Draft educational materials should be provided to the Committee members for review before being submitted to participating laboratories. Educational materials for each survey will be sent to participating laboratories with the materials of each subsequent survey.
- Tracking forms should not be used as they are hard to complete. Instead, date of receipt of samples and submission of reports will be added to the documents sent to the participating laboratories.
- The RCC should reduce the number of documents sent to participating laboratories by merging the Information Sheet, Question Sheet and Answer Sheet.

DAY TWO: 20 February 2009

Discussions continued

Data base for the scheme

It was identified that the scheme lacks an appropriate data base system which can aid efficient management of data as it accumulates. As part of REQAS system strengthening, an appropriate database system should be identified and if necessary, modified to fit the scheme. This data should be informative and provided to the line ministries to assist with planning and management. Dr. Aisu clarified that WHO AFRO uses EPI info 2000 software which can export data from Excel and there is a data unit which could assist with the development of an appropriate data base. **Action:** The RCC is to explore various data bases and develop an appropriate one. .

Validation of pathological material produced

The reference laboratories must perform a 10% quality check before shipping materials to RCC, as indicated in the SOPs for material production. The RCC should develop a QC template which is filled in and returned together with the samples. The second validation should be done by the RCC and similarly documented. **Action:** the RCC to develop the QC templates.

Participation in the Scheme

Participation in the scheme is still too low and this requires MOH support. The Scheme should be a mandatory requirement by the MOHs and it is important that MOHs impart this information to the participating districts.

MOH composite report expectations

The REQAS programme has implications for the quality of health care even at primary level facilities and there is great need to have policy makers on board. It was agreed that policy makers should know the findings and plans for remedial actions, so that the scheme can seek their further support as necessary.

The MOHs need simple, clear, succinct and precise reports, pointing out areas needing action. The country QA advisory committees should read the reports and brief the MOHs. Country QA advisory committees should have capacity to statistically transform and translate the reports in their presentations to the national MOHs.

Plans for expansion of REQAS activities to other countries

It was unanimously agreed that it is necessary to extend REQAS activities to Rwanda and Burundi. However, of the two countries, Rwanda was considered more likely to come on board because they had already participated in EQAS meetings convened by WHO. Rwanda has also been receiving WHO funding for QA, as well as Uganda. The best platform for inviting the two countries will be by using the WHO AFRO representative to link with the contacts he has worked with on EQAS. In addition, these countries should be invited to attend the next EA-REQAC meeting as "observers". Although these countries have already received funding for sensitisation and are along the way to developing their own EQA programmes, it was agreed that any new country joining the scheme should go through the pilot phase.

WHO funding support

WHO is willing to mobilise funding support for the expansion of the scheme to Rwanda and Burundi after initial discussions. For funding support, the WHO will require a proposal detailing the level of participation, for example, Rwanda has about 20 laboratories and 2 good national laboratories that are already participating in EQAS. There is need to inform these countries of the Scheme and if they show interest, the Scheme can plan to mobilise the necessary resources. The meeting felt that it was an oversight that Rwanda and Burundi had not been invited to this meeting at least as observers.

Reference laboratories for preparation of *Borrelia* reference samples

Dodoma Regional Laboratory has been identified as the reference laboratory for the preparation of *Borrelia* samples for the Scheme. A team from the coordinating centre will need to visit the reference laboratory at Dodoma, Tanzania, to evaluate its capacity and status to prepare the *Borrelia* reference samples. An MoU will be signed with the MoH and relevant authority there.

Linkages with other EQAS

The scheme should be evaluated for possible accreditation by international bodies. This will enhance recognition of EA-REQAS and ease linkages with other established EQAS for exchange of information or material to help to strengthen the Scheme. Delegates learnt that laboratories which are to be accredited by WHO go through a formal application to the WR. Each scheme may take its own preliminary actions of linking up with other sister schemes and WHO is not involved at this stage. It is recommended that the local laboratory or scheme wishing to be accredited starts the process of improving quality and seeking accreditation before thinking of benefiting from mentorship by international bodies.

Publication of SOPs produced by REQAS

The coordinating centre put forward a proposal that SOPs on Material Preparation and other materials developed by the scheme should be reviewed with a view to publishing them in future. The centre urged that since all materials have been developed from scratch, that it would be good for other people to know about them and use them. The SOPs should be published for reference since much of the material is not available from WHO or other recognised sources.

Control Health Facilities (HFs)

These were described as HFs with similarities to the current participating HFs but which have not had the benefit of sensitisation. The inclusion of control health facilities will help to

define ways of rolling out the REQAS fully, and determine the role of sensitisation, which is an expensive and lengthy process. It was agreed to have 1:2 ratio (for every 2 participating HFs have 1 control HF) included in the fourth survey. The countries will each nominate the control health facilities by end of July 2009.

Preparation for scaling up

There was a recommendation to add other types of samples/ materials after the pilot phase. Uganda is currently rolling out an ART programme and this will necessitate essential tests that were not originally performed at lower health facility levels. This will most likely affect the range of the panel tests and it would be good to plan to include both liver function tests (LFTs) and renal function tests (RFTs) in the QA panel tests. Tanzania has a similar scenario, where ART has already been rolled out to lower health care facility levels and the team from Tanzania also proposed to introduce chemistry tests into the Scheme. The countries will nominate the laboratories that would be able to handle these tests. It was agreed that the initial chemistry tests will include:

1. Creatinine
2. Blood glucose
3. Bilirubin, Blood Grouping and Blood Urea to be considered later

Owing to the frequency with which some tests are requested and the impact of HIV/AIDS, it was recommended that the RCC should include the following parameters in every survey starting with the 3rd survey: **Haemoglobin, HIV, Malaria,** and **AFB.** The possibility of preparing "mixed samples" containing more than one parameter or pathology should be explored.

It was agreed that countries should review their capacities and resources before expansion starts in 2010 and specify what roles and responsibilities each country will take over. Countries need to assess the capacity of their reference laboratories, and the capability of countries to distribute materials, and submit proposals to the RCC on how best the country will handle the expansion. It was felt advisable to start expanding participation by a proportion in 2010 (doubling the number of participating laboratories). The RCC currently has capacity to sustain a doubled number of participating facilities.

Country MOHs should consider setting aside funds for the scheme to ensure its sustainability. The pilot phase was supposed to be donor funded and countries start to contribute during expansion and roll out. The RCC should write a proposal on roll out and forward to the country QA advisory committees by end of April 2009 to assist them in decision-making. The proposal should include a questionnaire for countries to explore their current systems and constraints.

Members asked the countries to consult and give a feed back to the RCC by one month on issues relating to transportation of samples.

It was also agreed that the next regional meeting should involve Ministry officials and a wide variety of delegates similar to the Arusha meeting in order to report on the progress of the REQAS and secure pledges to contribute towards supporting the REQAS roll out and sustainability. This meeting should be held in August/September 2010. The results of the pilot phase should be well documented including remedial actions taken to win donor support. It was strongly pointed out that the Scheme should not be decentralised to country

level but rather retain its unity as an East African institution to promote regional cooperation. The scheme should expand its recognition on an international level.

WHO-AFRO Presentation and Summary – Dr Thomas Aisu

Dr Thomas Aisu (WHO-AFRO) explained that there is an article about External Quality Assurance (EQA) in the International Health Regulations (IHR) revised in 2005 and affected in 2007. Most laboratory personnel are not familiar with IHR, but it has important implications in decision making. WHO has placed a lot of emphasis on laboratory quality assurance. He explained that the infectious diseases are now termed "Health events", and there is a participatory approach between the WHO and member states to detect, report and respond to public health events of international concern (PHEIC), with a strong emphasis on laboratory activities. He informed delegates that WHO recognises that the best way to prevent global spread of diseases is to detect public health threats early and implement effective responses when the problem is still at a manageable stage. WHO believes in early detection of unusual disease and events which requires laboratory support. There is therefore a core requirement of countries to achieve laboratory external quality assurance.

WHO uses various mechanisms to check long TAT (AFRO TAT is 30 days) that REQAS may want to borrow from, including:

1. Follow up with e-mails and telephone calls
2. Talk to the MOH
3. If three consecutive responses are not received, follow up and if there is still no further response, drop that facility from the list. Although this may raise political issues, it is important that action is taken. HF should write back and state their hindrances in order to get re-instated. Poor performers should be followed up with on-site visits and refresher training. Laboratories should be expected to perform above 80%.

WHO has not yet fully explored issues to do with serology or biochemistry. There is need to collect data on performance of the various methods and recommend them appropriately.

WHO on EQA organisation
Global and regional levels can subcontract with international or regional reference laboratories or external quality assurance agencies. WHO supports individual laboratories in the continuous strengthening of their services.

WHO on Funding
WHO funding priorities have changed to provide for neglected tropical diseases and other issues. Discussions are underway for increased programmatic funding for the next 5years but the HIV contribution (covering capacity building, provision of anti-retroviral drugs) is continuous. The EA-REQAS should strategise to tap into prospective funding opportunities like the Global Fund. About 10% of Global Fund money has been set aside for laboratory programmes.

The WHO summary presentation is given in **Appendix 7.**

AOB

- The RCC agreed to develop a short/brief information sheet/brochure for REQAS by end of February 2009.
- REQAS should develop its own logo rather than using the countries banners/flags.
- REQAC members should spare some time to visit participating HFs in their host countries.

Dr Thomas Aisu (WHO-AFRO representative) giving a summary of the deliberations and recommendations.

Closing remarks

The meeting was closed by Dr Denis Lwamafa, Commissioner for Health Services, National Disease Control (NDC) under whose department Health Laboratories in the Ministry of Health in Uganda fall. In his closing remarks, Dr Lwamafa paid a glowing tribute to the laboratory professionals, AMREF, WHO, and MoHs from Tanzania, Kenya, Zanzibar and Uganda for setting time aside to discuss and strengthen laboratory services. He was pleased to have participated in the deliberations and encouraged delegates to take time off and tour some important historical sites in the country. He was privileged to have attended the Arusha meeting in 2003 where he benefited a lot from the deliberations. He observed that the number of privately owned laboratories has increased and there is need to involve them in the Scheme. He recommended that the Scheme should make sure that all laboratory staff appreciate the value of quality control systems and should integrate QA activities into their day to day work.

Dr Lwamafa advised each member country to dedicate more resources and efforts together in order tap support for improvement of the Scheme. He noted that the Scheme has benefited East Africa by being able to identify poorly performing health facilities, identifying remedial approaches and increasing awareness on laboratory quality assurance.

The Commissioner asserted the need to:

- Roll out the scheme to cover all laboratories but in a systematic manner
- Expand the range of tests as the current range of tests does not satisfy all needs
- Integrate other schemes into REQAS, avoiding running parallel QA systems

- Find a mechanism of sharing experiences learnt at country level

He singled out AMREF for the great work it is doing as a partner of the government. He declared the meeting officially closed.

Appendix 1: TIMETABLE
EA-RQAC MEETING, FEBRUARY 18th – 19th 2009, AT SPEKE RESORT, MUNYONYO, KAMPALA-UGANDA

Time/Date	**Wednesday 18th February**	**Thursday 19th January Chairman- Dr. Mpairwe**	**Friday 20th February Chairman - Mr. Guma**	**Saturday 21st February**
0830 – 10.30		1. Registration 2. Introductions 3. Welcome remarks – MO Uganda 4. Recap TORs of EA-RQAC	Country presentation discussions (continued)	Departure home
10.30 – 11.00		TEA	TEA	
11.00 – 13.00		**Coordinating Centre presentation & discussions** Progress of the EA-REQAS	**General issues for discussion** 1. Reference laboratory for *Borrelia* samples 2. Control health facilities 3. Plan for expansion of EA-REQAS to other countries in future	
13.00 – 14.00		LUNCH	LUNCH	
14.00 – 15.30		**Country presentations & discussions** **1. Uganda** **2. Zanzibar** **3. Tanzania**	4. Establish linkages with other International Laboratory External Quality Assessment Schemes 5. SOPs of material preparation – to be published? 6. Next steps before expansion: next four surveys / major meeting of MOH? 7. Summary of major issues: WHO AFRO	
15.30 – 16.00		TEA	TEA	
16.00 – 17.00	Arrival in Kampala	**4. Kenya**	Way Forward & Timeline **AOB**	

Appendix 2: Particulars of delegates who participated in the EA-REQAC meeting

	NAME OF DELEGATE	COUNTRY	INSTITUTION	DESIGNATION
1	Dr Kenya Mugisha Nathan	Chief Guest	Ministry of Health Uganda	Director Health Services (Clinical & Community Health)
2	Dr Lwamafa Denis K. W.	Technical Advisor	Ministry of Health Uganda	Commissioner of Health Services (NDC)
3	Dr Mwoga Joseph	WHO Representative	WHO Uganda	Programme Officer World Health Organization - Uganda
4	Dr Aisu Thomas	WHO Representative	WHO Afro	Medical Officer For WHO AFRO
5	Dr Jamilla Rajab	Kenya	University of Nairobi - School of Medicine	Pathologist/Haematologist
6	Mr Laban Onono	Kenya	MELQAAB	Chairman
7	Ms Fiona Cassidy	Kenya	AMREF/Pfizer Ireland	Quality Assurance Specialist Pfizer Drug Product Plant-Ireland
8	Mr Enock O. Marita	Kenya	AMREF- KCO	Project Officer - REQAS
9	Dr Jane Carter	Kenya	AMREF	Director-Clinical And Diagnostic Services
10	Mr Rodgers Dena	Kenya	AMREF	Snr. Laboratory Technologist
11	Prof Ephata E. Kaaya	Tanzania Mainland	Muhimbili University. College of Health Allied Scientists	Director Continuing Professional Development & President Association of Pathologists of Tanzania
12	Mr Vincent Y. Mgaya	Tanzania Mainland	MOHSW-Dar Es Salaam	Head Health Laboratory Services
13	Dr Shaali Ame	Zanzibar	MOHSW- Zanzibar	Head of Pathology Laboratory
14	Mr Mohamed S. Juma	Zanzibar	Mnazi Mmoja Hospital	Head of Laboratory
15	Mr David Ocheng	Tanzania	AMREF TZ	Project Manager
16	Mr Sagamo Mattaro	Tanzania	AMREF TZ	Project Officer
17	Mr Guma Gaspard	Uganda	MOH	Chief Lab Technologist & Head Central Public Health Laboratories
18	Dr Yusuf Mpairwe	Uganda	Naguru Medical Laboratory Ltd (Namela)	Director- Namela
19	Dr Juma Nabembezi	Uganda	AMREF UG	Represented Country Director
20	Mr Mashate Silver	Uganda	AMREF UG	Project Assistant - Lab Strengthening
21	Mr Mbaziira Paul	Uganda	AMREF UG	Project Officer - Lab Strengthening
22	Mr Ebitu Emmanuel	Uganda	AMREF UG	Project Assistant- Lab Strengthening
23	Dr Mukisa Rose	Uganda	AMREF UG	Project Officer- Lab Strengthening
24	Ms Rose Barugahare	Uganda	AMREF UG	Administrative Assistant
25	Mr Munafu Charles	Uganda	AMREF UG	Manager Laboratory Services

Appendix 3: Summary of action points

AGREEMENTS FROM REQAC 2ND MEETING - MUNYONYO- KAMPALA, UGANDA ; FEB 2009

	ACTION AGREED UPON	RESPONSIBLE OFFICER(S)	TIME FRAME
1	To increase the types of QA materials starting in 2010 to include chemistry (glucose & creatinine)and mixed parameters (parasites and serological parameters)	Countries to provide a list of health facilities which will participate in chemistry testing	By the end of June 2009 (Three months)
2	The Coordinating Centre prepares a simplified tracking form, possibly on the envelopes. Information, question and answer sheets should all be combined.	Coordinating Centre	To be ready by next distribution
3	The coordinating centre will visit the reference laboratory at Dodoma, Tanzania, to evaluate its capacity/status to prepare *Borrelia* samples and sign a MoU with the relevant authority there.	The Coordinating centre liaises with MoH & AMREF - Tanzania to arrange for this visit	The visit should happen by the end of July 2009
4	As part of REQAS system strengthening, an appropriate database system should be identified	WHO/AFRO (Dr Thomas Aisu) to support in identifying a suitable option	Feed back expected from Dr Aisu by end of March
5	As a strategy for scaling up support to more facilities in 2010, the scheme should plan to double the participating health facilities in each member country	Each MOH to provide additional list of health facilities to participate	List sent by the end of October 2009
6	There is need to revise the reporting format for the composite MoH reports to make them more informative. Reports should contain all the data presented in the Coordinating Centre report. Reports will present results of other country's performance in coded format. Each country should get a focused report.	Coordinating centre	By the next reporting (2nd survey)
7	Adjustments should be made on the marking keys to include a negative mark for clinically dangerous results. Participants should be requested to give reasons for lack of answers. The reporting form should include a place for clinicians to sign off. The CC should employ services of a statistician to sort out error margins. Standard deviations of the target mean should be used for Hb to replace absolute values. When reporting errors, specify reason e.g. lack of reagents, no response etc. and provide for cross tabulation of results. Identify & compare areas of concern regarding the methodology and performance of different techniques.	Coordinating Centre	Immediate

8	All member countries should review the Terms of References for their National Quality Assurance Committees and harmonise the membership constitution. National QA Committees should act in an advisory capacity only.	All participating countries	Before next meeting
9	Since the scheme has implications on the quality of health care delivery up to primary health care level, there is great need to have all policy makers on board. There should be a major meeting involving Ministries of Health of member countries and country REQAS committees to plan for synchronization and integration of REQAS activities and agree on remedial actions. In addition, funding support for sustainability needs to be addressed.	Regional Coordinating centres	Between Sept-October 2010
10	Member country schemes should explore the possibility of an integrated transport and communication system within the existing MoH activities to reduce TAT and improve participation.	All member Countries	Ongoing but updates expected
11	Standard Operating Protocols (SOPS) for material production that were originally developed as part of this scheme should be reviewed with a view to publication after feedback has been obtained from the reference labs using them for material preparation.	Coordinating centre and reference laboratories, then share with REQAC	Ongoing but update expected next meeting
12	The final (fourth) distribution of the pilot scheme should include control laboratories. Nominated control laboratory facilities should be forwarded to the Coordinating Centre. If possible, control health facilities will include those in existing participating districts, or those outside participating districts with close similarities with the participating ones.	All countries to provide lists of control laboratories before the 4th distribution	By June 2009
13	Efforts should be made to encourage expansion of REQAS to Rwanda and Burundi through the respective WHO-R country offices but any new country joining should go through the pilot phase	WHO/AFRO (Dr AISU) working with the coordinating centre should liaise with the respective WHO country offices on inviting the Rwanda and Burundi to join the scheme	Update expected by March/April 2009

14	The scheme should seek means of accreditation with UN & WHO bodies as a means of getting recognition	Coordinating Centre networks with WHO/AFRO to explore possibilities	Updates by June 2009
15	A Proposal for the expansion of REQAS activities should be developed. The scheme should take advantage of Global Funding especially for what WHO calls "Neglected Tropical Diseases and HIV". WHO should be invited to mobilize funding if there is need. WHO will require details in the proposal of whom/which laboratories are to participate and what remedial action has been taken so far. Member Country MoHs should also consider ongoing contributions to the scheme for its sustainability in the prospect of 100% rollout.	The Coordinating Committee should invite input from member countries using a questionnaire.	The coordinating centre should come up with a draft proposal within 2 months. Member countries should submit inputs within one month (total 3 months)
16	It was agreed that the next (3rd) REQAS meeting takes place in Kenya. Rwanda and Burundi should be invited to participate as observers in this meeting.	Coordinating Centre/MoH Kenya	Between February and March 2010
17	REQAS requires a logo to identify it.	Coordinating Centre to circulate the available logos for members to give their options or modify	By end of February 2009
18	Develop a short/brief information sheet or brochure on REQAS	Coordinating Centre	By end of February 2009
19	Prepare a reporting form on QC to be performed by the reference laboratories, to be returned with specimens after preparation	Coordinating Centre	By next survey
20	Review budget to see if funds not used by countries for district-level orientation can now be used for district sensitisation visits. Issues to be discussed with districts include importance of participation (mandatory participation) and remedial action.	Coordinating Centre	Updates by June 2009

Appendix 4: Introduction by Dr. J. Carter

East African Regional External Quality Assessment Scheme EA - REQAS

Introduction

Speke Resort, Munyonyo
Kampala, Uganda
19 February 2009

First meeting of EA-RQAC
Zanzibar, April 2006

- 1 pathologist & 1 laboratory technologist from MOH Kenya, Tanzania, Uganda and Zanzibar
- 2 staff from AMREF Kenya, Tanzania and Uganda
- Consultant, Ivo de Carneri Foundation, Milan
- Representative from WHO Tanzania

Mission and Purpose

- **Mission:** To establish and operate a well coordinated regional laboratory quality assessment scheme (EA-REQAS) through participation of country health care providers and development partners, aimed at improving laboratory services to enhance quality health care delivery
- **Purpose:** A scheme for establishing standards of laboratory operation and for sharing resources and experiences across the three East African countries (Tanzania, Kenya and Uganda) with the aim of improving the quality of health laboratory services.

Achievements

- Terms of Reference for EA-RQAC
- Reference laboratories & pathological materials defined
- SOPs for material preparation developed
- Participating districts & facilities identified
- Plans for distributions for Years 1 and 2
  - 2 distributions per year
- Procedures for sensitising participating districts, health facilities, supervisors
- Scheme logistics & reporting reviewed

Terms of Reference…

To support the development and operation of the EA-REQAS including:

- Selection of tests and techniques
- Selection and monitoring of operations of the reference laboratories for quality material production
- Selection and monitoring of the performance of the Regional Coordinating Centre (RCC)
- Monitor scheme activities through quarterly reports from the RCC including number of facilities reached, questions prepared and laboratory performance.
- Review of impact of scheme activities through review of reports from national administrations/regions/districts.
- Create ideas for innovative methodologies and approaches in order to establish best practices for the operation of the EA-REQAS.
- Promote operational and scientific research within the activities of the EA-REQAS.

Terms of Reference…

- Ensure documentation and dissemination of experiences and best practices, including preparation of technical papers and presentations.
- Ensure regular communication between members of the EA-RQAC in partner countries.
- Enhance relationships with the Ministries of Health, World Health Organization, East African Community, other international and regional organisations, development and technical partners to promote awareness and ensure sustainability.
- Establish linkages with international laboratory REQAS.
- Develop plans for expansion of the EA-REQAS within the three East African countries and to other countries, as appropriate.
- Hold meetings at least twice a year to review progress and future plans.

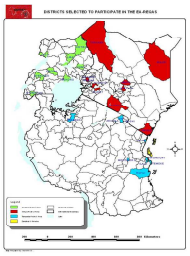
Reference laboratories & materials

Country	Selected laboratory	Materials
Zanzibar	Pemba Public Health Laboratory Mnazi Mmoja National Laboratory	Stool helminths *Schistosoma haematobium* ova Blood films for microfilaria (*Wuchereria bancrofti*)
Tanzania Mainland	National Reference Laboratory CPL and MUCHS Mbeya Referral Laboratory AMREF	Blood slides for malaria parasites Syphilis serology Blood slides for *Borrelia* HIV serology
Kenya	NPHLS University of Nairobi AMREF	Smears for Gram stain Peripheral blood films Preserved lysate Haemiglobinocyanide standard
Uganda	TB Central Laboratory, Kampala Livestock Research Institute (NALIRI), Tororo	Sputum smears for AFB Blood films for trypanosomes

Distributions

#1	Haemoglobin HIV serology Blood films for malaria parasites (thick & thin) AFB Gram stain
# 2	Haemoglobin HIV serology Blood film for Trypanosomes Stool for parasites Thin film for WBC differential count, cell morphology and comments
# 3	Haemoglobin HIV serology Blood film for Borrelia Syphilis serology Worst performed samples in the previous distributions
# 4	Haemoglobin HIV serology Blood films for Microfilaria Two worst performed samples in the previous distributions

Selected districts



200 facilities
60 Tanzania
60 Uganda
60 Kenya
20 Zanzibar

5 – 8 facilities per district
District hospital
Sub-district hospital
2-3 health centres (government)
1-2 faith-based
1-2 private

Sensitisation workshops
Clinical & laboratory district supervisors
Remedial action

Way forward…

- Debriefing of MOH (All)
- Final Report of Proceedings (All)
- Review of Health Facility Assessment Form (All)
- Review of SOPs (All)
- Consent Form prepared (Dr. Rajab)
- Visits to Reference Laboratories (AMREF & MOHs)
- Identification of participating laboratories (All)
- Review transportation/shipment of biohazard material within countries and across country borders (All)

Way forward…

- Review of MOU with country legal support (All)
- Letters from MOH to the Reference Laboratories (All)
- Signing of MOUs (MOH/AMREF)
  - PS level for signatory
- Workshops and advocacy (All):
  - District-level workshops for supervisors
  - Visit to districts & application of health facility assessment form
- Next EA-REQAC meeting, venue: Uganda
- AMREF to establish an electronic database for the scheme

Thank you!

Appendix 5: RCC presentation by Mr. Rodgers Dena

East African Regional External Quality Assessment Scheme EA - REQAS

Regional Coordinating Centre Report

Munyonyo Resort
Kampala, Uganda
19 February 2009

First 2 surveys

	Clinical scenario	Materials
Survey 1 1107001	Malaria & anaemia in pregnancy	2 BS; 2 Hb lysates
	HIV in the workplace	Preserved serum for HIV
	Pulmonary TB	2 stained (ZN) sputum smears
	Meningitis	1 fixed unstained smear for Gram stain
Survey 2 0908002	Trypanosomiasis	1 stained thin blood film
	Anaemia in a malnourished child	1 Hb lysate; 1 thin blood film; 1 preserved stool sample
	PMTCT	1 Hb lysate; 1 preserved serum for HIV

Quality of prepared materials: 1107001

Reference laboratory	Materials	Reference lab report	CC quality report
Survey 1			
MUCHS	2 sets thick & thin BS	?	60/600 (10%) Fair
AMREF Kenya	2 Hb lysates	?	9.0 g/dl 11.0 g/dl
AMREF Tanzania	Preserved serum for HIV (negative)	?	25/250 cryovials Good
AMREF Kenya	2 sets stained sputum smears	?	3+ 30/300 1+ 30/300 Good
AMREF Kenya	1 set fixed unstained smears for Gram stain	?	25/250 Rapid HIV & Elisa Good

Quality of prepared materials: 0908002

Reference laboratory	Materials	Reference lab report	CC quality report
Survey 2			
NALIRRI	1 set stained thin blood film for trypanosomiasis	?	30/300 Good
AMREF Kenya	2 Hb lysates	?	5.2 g/dl 12.0 g/dl
KNH	1 set stained thin blood film	?	25/250 Fairly good
Pemba PH Laboratory	Preserved stool samples	?	30/300 All > 1 parasite 2 samples 3 parasites
AMREF Tanzania	Preserved serum for HIV (positive)	?	30/300 Rapid HIV & Elisa Good

Setting target values: 1107001

Reference lab	Date sent	Lysate L107001	Lysate L207001	Blood slide B107001	Blood slide B207001	HIV rewing S107001	Gram stain G107001	Ziehl leisen Z107001	Ziehl leisen Z207001
LAB 1	10-03-08	9.5g/dl	11.7g/dl	60/200WBC	P.falciparum	Negative	+ve diplococci pus cells 2+	AFB 3+	AFB 1+
LAB 2	10-03-08	9.9g/dl	12.2g/dl	55/200WBC	P.falciparum	Negative	+ve diplococci few pus cells	AFB 3+	AFB 1+
LAB 3	10-03-08	9.3g/dl	11.1g/dl	68/200WBC	P.falciparum	Negative	+ve diplococci few pus cells	AFB 3+	AFB 1+
LAB 4	10-03-08	-	-	70/200WBC	P.falciparum	Negative	+ve diplococci and pus cells	AFB 3+	AFB 1+
LAB 5	10-03-08	9.4g/dl	10.8g/dl	62/200WBC	P.falciparum	Negative	+ve diplococci few pus cells	AFB 3+	AFB1+
Means		9.5 g/dl	11.3 g/dl	62/200WBC					

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Quality of materials: feedback from the field 1107001

Type of specimen	Zanzibar	Kenya	Tanzania	Uganda
2 sets BS	3/33	15/77	7/82	16/104
2 Hb lysates	6/18	16/55	16/84	29/94
Preserved serum for HIV	1/16	0	0	0
2 sets stained sputum smears	2/34	15/77	6/86	18/104
1 set fixed unstained smears for Gram stain	1/8	4/28	2/32	5/45

6

Quality of materials: feedback from the field 0908002

Type of specimen	Zanzibar	Kenya	Tanzania	Uganda
1 BS for tryps	1/10	4/41	0/28	1/45
2 Hb lysates	2/20	2/41	1/28	5/45
1 thin blood film	1/10	3/41	0/28	6/45
Stool sample	0/10	0/41	0/28	0/45
Preserved serum for HIV	0/10	0/41	1/28	1/45

7

Storage results at AMREF: 1107001

Temperature	2nd April	2nd May	4th June	2nd July	2nd Aug	Sept 08
Lysate						
Room temperature	9.4g/dl 11.3g/dl	9.8g/dl 11.3g/dl	9.6g/dl 11.3g/dl	9.4g/dl 11.3g/dl	9.8g/dl 11.3g/dl	Sample diluted due to faulty equipment
4° C	9.4g/dl 11.3g/dl	9.4g/dl 11.3g/dl	9.4g/dl 11.3g/dl	9.4g/dl 11.3g/dl	9.4g/dl 11.3g/dl	
37° C	9.6g/dl 11.3g/dl	9.8g/dl 11.5g/dl	9.8g/dl 11.7g/dl	9.7g/dl 11.7g/dl	9.7g/dl 11.7g/dl	
HIV Rapid test						
All temperatures	Negative	Negative	Negative	Negative	Negative	Negative
ZN stain for sputum						
All temperatures	3+, 1+	3+, 1+	3+, 1+	3+, 1+	3+, 1+	3+, 1+(fading)
Fixed unstained smears for Gram stain						
All temperatures	Gram Negative diplococci	Gram Negative diplococci	Gram Negative diplococci	Samples run out		
Blood films						
Thick & thin blood film	Positive	Positive	Positive	Positive	Positive	Positive (Thick film fading)

Storage results at AMREF: 0908002

Temperature	October	November	December	January 09	February 09	March 09
Lysate						
Room temperature	5.0g/dl 11.8g/dl	5.0g/dl 12.3g/dl	5.0g/dl 11.9g/dl	5.0g/dl 12.1g/dl		
4° C	5.0g/dl 11.8g/dl	5.0g/dl 12.3g/dl	5.0g/dl 11.9g/dl	5.0g/dl 12.1g/dl		
37°C	5.0g/dl 12.3g/dl	5.4g/dl 12.5g/dl	5.6g/dl 11.9g/dl	5.4dl 12.5g/dl		
HIV Rapid test						
All temperatures	Positive	Positive	Positive	Positive		
Stool sample						
All temperatures	*Ascaris Lumb, T.trichuria, Hookworm*	*Ascaris Lumb, T.trichuria, Hookworm*	*Ascaris Lumb, T.trichuria, Hookworm*	*Ascaris Lumb, T.trichuria, Hookworm*		
Blood slide						
All temperatures	Tryps seen	Tryps seen	Tryps seen	Tryps seen		

Documentation

- Instruction sheets
  - Adjustments made
- Questions sheets
  - Questions and correct answers established by CC team prior to sending out surveys
- Answer sheets
  - Now combined with question sheet

10

Packaging

Triple packing

IATA standards

Consider re-sealable plastic bags

11

Turnaround time

	Average days per country				Overall Average
	Tanzania	Kenya	Zanzibar	Uganda	
First survey 1107001	62	60	28	56	**52**
Days at health facility	8	10	-	-	
Second survey 0908002	77	84	103	59	**81**
Days at health facility	-	12	6	8	

Use of Tracking Sheets

Survey 1	No response	No useable data	Some useable data	Blank forms	Total
Zanzibar	15	0	3 (17%)	0	18
Tanzania	17	20	4 (10%)	0	41
Uganda	7	19	23 (44%)	0	52
Kenya	8	10	25 (58%)	0	43
Total	47	49	58 (60%)	0	154

Survey 2	No response	No useable data	Some useable data	Blank forms	Total
Zanzibar	8	2	0 (0)	0	10
Tanzania	7	20	1 (4%)	0	28
Uganda	0	22	23 (51%)	0	45
Kenya	9	26	2 (5%)	3	41
Total	24	75	27 (22%)	3	124

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Responses: 1107001

	Tanzania	Kenya	Zanzibar	Uganda	Total
Materials sent	60	60	20	53	**193**
Responses received	41 (68%)	43 (72%)	18 (90%)	52 (98%)	**154** (80%)
Government	18	34	11	46	**109**
Faith-based	13	6	7	4	**30**
Private	10	3	0	2	**15**

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Responses: 0908002

	Tanzania	Kenya	Zanzibar	Uganda	Total
Materials sent	60	60	20	53	**193**
Responses received	28 (47%)	41 (68%)	10 (50%)	45 (85%)	**124** (64%)
Government	15	32	7	41	**95**
Faith-based	7	7	2	3	**19**
Private	6	2	1	1	**10**

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Marking keys: qualitative

RCC team established best answers & key points

3 marks	Correct clinically relevant answer
2 marks	Incomplete but acceptable response
1 mark	Inadequate answer
0 mark	Clinically dangerous, irrelevant, no answer

16

Marking keys: quantitative (1)

Reporting Haemoglobin results

	First scale	Adjusted scale
3 marks	± 0.5 g/dl	± 0.5 g/dl
2 marks	> 0.5 ≤ 0.8 g/dl	> 0.5 ≤ 1.0 g/dl
1 mark	> 0.8 ≤ 1.0 g/dl	> 1.0 ≤ 2.0 g/dl
0 mark	> 1.0 g/dl	> 2 g/dl

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Marking keys: quantitative (2)

Reporting malaria parasite detection and counts

3 marks	Malaria parasites seen, correct species (if *P. falciparum*, ±25% of correct count/200 WBC); or correct negative result
2 marks	Malaria parasites seen (if *P. falciparum*, ± >25% ≤ 50% of correct count/200 WBC)
1 mark	Malaria parasites seen, wrong/no species, (if *P. falciparum* ± >50% of correct count /200 WBC or no count)
0 mark	False positive or false negative, no result, other result

18

Marking keys: quantitative (3)

Reporting AFB results

3 marks	Correct result & quantification
2 marks	Quantification error: ± 1+ difference
1 mark	Quantification error: more than ±1+ difference
0 mark	False positive, false negative, no result, other result

19

Marking process

- Marking process
  - 2 independent markers
    - necessary?
    - time consuming
  - Use of independent assessors
    - From REQAC?
- Review by clinician
- Addition of comments and suggestions for improvement on every report

20

Health facility performance by type: 1107001

Health facilities (type)	Zanzibar	Kenya	Tanzania	Uganda
Government health facilities	43%	48%	52%	56%
Faith-based health facilities	32%	59%	55%	55%
Private health facilities	-	58%	54%	67%
Average	**39%**	**51%**	**54%**	**55%**

21

Health facility performance by type: 0908002

Health facilities (type)	Zanzibar	Kenya	Tanzania	Uganda
Government health facilities	42%	53%	55%	58%
Faith-based health facilities	62%	52%	62%	62%
Private health facilities	47%	51%	54%	69%
Average	**50%**	**52%**	**57%**	**63%**

22

Health facility performance by level: 1107001

Health facilities (level)	Zanzibar	Kenya	Tanzania	Uganda
Hospitals	41%	54%	55%	58%
Health centres	34%	48%	35%	55%

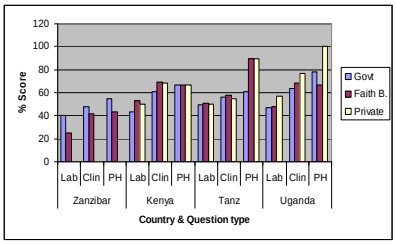
23

Health facility performance by level: 0908002

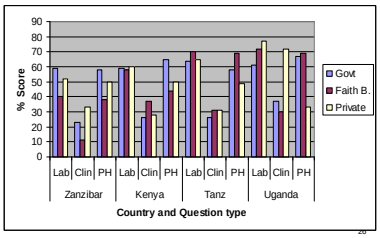
Health facilities (level)	Zanzibar	Kenya	Tanzania	Uganda
Hospitals	45%	59%	56%	63%
Health centres	59%	48%	64%	55%

24

Country performance by question type: 1107002



Country performance by question type: 0908002



Major laboratory errors: 1107001

Laboratory tests	Uganda HF	Kenya HF	Tanzania HF	Zanzibar HF
1. Haemoglobin estimation *Too low or too high (± 3 g/dl)*	27 52%	14 32%	12 30%	6 33%
2. Malaria parasites *Positive slide called negative*	3 6%	12 28%	6 15%	3 2%
3. HIV Rapid test *Negative HIV test called positive*	5 10%	5 12%	1 3%	4 22%
4. ZN stain for sputum *Positive slide called negative*	6 12%	6 14%	22 55%	10 56%
5. Gram stain (bacteria staining) *Wrong results or no reagent*	22 42%	35 81%	23 58%	17 94%

27

Major laboratory errors: 0908002

Error	Uganda	Kenya	Tanzania	Zanzibar
1. Trypanosomiasis *Positive slide called negative or another blood parasite*	2 4%	8 20%	1 4%	2 20%
2. Haemoglobin estimation *Too low or too high (± 3 g/dl)*	52 58%	50 61%	19 34%	13 65%
3. HIV Rapid test *Positive HIV test called negative*	3 7%	2 5%	3 11%	0
4. Stool for parasites *0-1/3 parasites identified*	15 33%	17 41%	10 36%	1 10%
5. Thin blood film for morphology *Key diagnostic features missed*	38 84%	35 85%	25 89%	9 90%

Potential reasons for major errors: 0908002

- A preliminary basic analysis of major laboratory errors in **Survey 2** was conducted
- Questions with correct answer rates of < 30% within each MOH were reviewed
- The analysis was limited to laboratory questions with marks of ≤ 2
- The potential impact of the following were reviewed:
  - Staffing
  - Equipment
  - Methods/reagents

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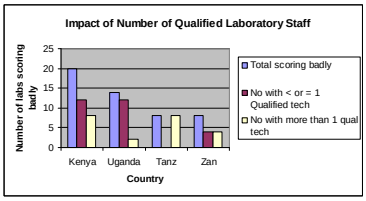
Potential reasons for major errors: 0908002

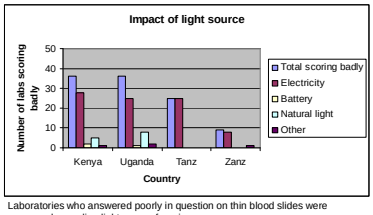


Laboratories who answered poorly in three lab-specific questions were compared between those who had only one or less qualified technical staff, and those with greater than 1 technologist.

(Qualified was defined as Certificate level and above)

30

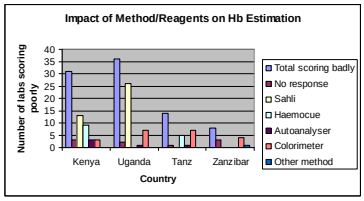
Potential reasons for major errors: 0908002



Laboratories who answered poorly in question on thin blood slides were compared regarding light source for microscopes

31

Potential reasons for major errors: 0908002



Laboratories who answered poorly in question on Hb quantification were compared regarding estimation method and reagents used.

32

Reporting & Feedback

- Preliminary feedback reports to each participating laboratory:
  - Copies to district supervisor
  - Suggestions for improving performance
- Composite report to each MOH
  - Revised format to show areas of difficulty
  - Results of all laboratories in that country
  - Coded results of all laboratories in other countries

33

Educational materials

- Educational materials on two selected topics in each survey:

Survey 1

- Haemoglobin estimation
- Gram stain to diagnose meningitis

- Reviewed by AMREF staff (K, T, U)
- Sending out with next Preliminary Response

34

Reference documents

- SOPs for essential laboratory tests
- SOPs for laboratory utilisation by clinicians
- SOPs for care and maintenance of lab equipment
- Quality manual for clinical and lab diagnostic services
- Distribution
  - To participating health facilities first

35

Data base

- Currently in Excel format
- We are exploring:
  - South African data base
  - Nepalese data base
  - Clinton Foundation data base
- Defining process of data base entry
- We need a programme that can perform analyses & generate reports automatically
- Analyses required ?

Need to confirm type of data required by each Ministry

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Costs of running REQAS

	Kenya		Tanzania/Zanzibar		Uganda		TOTALS
	S1	S2	S1	S2	S1	S2	
Staff costs	15,160	15,160	3,134	3,134	3,134	3,134	
Material preparation:							
AMREF	2182	2182	250	250			
KNH		131					
MUCHS			303				
NALIRRI						?	
PEMBA PHL				602			
Packing & Transport	419	419					
Support to National QA Committees		63					
Communication	683	683					
Stationery	1004	1004					
TOTALS	**19,447**	**19,641**	**3,687**	**3,986**	**3,134**	**3,134**	**49,894**
REQAC meeting Zanzibar							**9,262**
REQAC meeting Kampala (budget)							**24,776**

Lessons learnt

- EQAS may be used as an assessment tool for diagnostic services
- There are major problems in performance of peripheral laboratories that need urgent action
- Scheme identifies basic areas that require corrective action
- EA – REQAS is a form of distance learning
- EQAS may influence policy change

39

Constraints

- Failure of reference labs to produce materials
- Some supplies from overseas, e.g. Polymorphprep®
- Long turnaround times
- < 100% response
- Lack of appropriate data base

38

Acknowledgements

- Ministry of Health, Uganda
- Ministries of Health and Social Welfare, Tanzania and Zanzibar
- Ministry of Medical Services, Kenya
- National QA Committees of Kenya, Tanzania & Uganda
- Izumi Foundation, USA
- World Health Organization
- AMREF Country Offices:
  - Kenya: Rodgers Dena, Enock Marita, Jane Carter
  - Tanzania: David Ocheng, Sagamo Mattaro
  - Uganda: Charles Munafu, Rose Mukisa, Silver Mashate

40

Thank you

Appendix 6: Country presentations

Zanzibar

East African Regional External Quality Assessment Scheme
EA-REQAS

Zanzibar Presentation.
Date: 19-20 Feb 2009.
Kampala-Uganda.

Zanzibar REQAS

Composition of Technical Committee

- Mohammed S. Juma - Chair Person
- Omar J. Kidua - Secretary
- Shaali M Ame - PHL-Pemba
- Mohammed Nassor - Member
- Omar Z. Salim - Equipment Engineer
- Ishaq H. Tuwani - RLT South Region?
- Asmaa H. Nassor - RLT North Region?

Zanzibar REQAS

Technical Committee Cont..

- Representative from Medical Store.
- Mwanaisha H. Jumbe - Course Coordinator School of Medical Laboratory Technology - Zanzibar.
- Laboratory representatives from:
  - Private Hospital Board?
  - Research Council?
  - DHMT?

Zanzibar REQAS

Activities of National QA Technical Committee

- Prepare and submit report on QA activities to the NACLQS regularly.
- Provide oversight and guidance on issues pertaining to implementation of QA program in the country.
- Advise the NACLQS on implementation of the National QA program.

Zanzibar REQAS

Cont…

- Review internal QC and EQA performance results and recommend corrective actions.
- Develop the QA action plan.
- Review the QA action plan on a half yearly basis.

Zanzibar REQAS

Reference laboratory activities.

- Two reference labs were proposed:-
  - Mnazi Mmoja Hosp Laboratory
    - ✓ preparation of BF for MPs and LF
    - ✓ distribution of EQC materials
  - Public Health Laboratory- Ivo de Carneri
    - ✓ preparation of stool concentrate for Intestinal parasites
    - ✓ distribution of EQC materials

Zanzibar REQAS

Sensitization workshop & Visit to districts.

- No sensitization meeting conducted
- No visits

Zanzibar REQAS

Country performance

S/n	Participating health Facilities			
	Unguja	District	Pemba	District
1	Makunduchi (G)	South	A. Mzee (Mkoani) (G)	Mkoani
2	Kivunge (G)	Noth A	Chake-chake (G)	Chake
3	Raha leo (G)	Urban	Wete (G)	Wete
4	Marie Stopes (P)	Urban	Micheweni (G)	Micheweni
5	Zanzibar Medical Group (P)	Urban	Vitongoji (G)	Chake
6	St. Lukes (Machuwi) (P)	Central	Bogoa (G)	Mkoani
7	Bambi (G)	West	Bahja (P)	Chake
8	Dunga (G)	West	Mkoroshoni (P)	Chake
9	Hankly (P)	Urban		
10	Sanasa (P)	West		
11	Bububu Military Hospital (G)	West		

Zanzibar REQAS

Facility Performance

- Overall performance was not satisfactory ~ 37%
- Some facilities had very low marks.

Zanzibar REQAS

Transportation of survey and reports Challenges

- Minimum knowledge of Quality issues among lab staffs.
- No fund allocation for communication and transportation.
- Delaying of receiving results.
- Staff transfer from facility X to Y.

Zanzibar REQAS

Way forward

- Strengthen LQS committees
- Regular meeting with REQAS implementers.

Zanzibar REQAS

Remedial Action.

- Feedback of the previous REQAS exercise was given
- Emphasis was put on involvement of clinicians/doctors in questions related to clinical issues.

Zanzibar REQAS

National QA issues.

- Chake-chake is under process of acreditation

Zanzibar REQAS

Overall perception of the scheme

- Questions asked
- Good
- Should continue
- Improves service delivery
- Build capacity
- "Uncertainty with clinicians"
- Burden

Zanzibar REQAS

Tanzania

East African Regional External Quality Assessment Scheme EA - REQAS

Ministry of Health and Social Welfare
Tanzania Mainland

Activities of National Sub Committee on Laboratory Quality Systems (NSCLQS)

- **Composition:**
  - Head of Laboratory Services - Chairperson
  - Laboratory Quality Systems Coordinator - Secretary
  - Laboratory Manager – National Public Health Laboratory
  - Laboratory Coordinator (NACP)
  - Laboratory Coordinator (NTLP)
  - Laboratory Coordinator (NMCP)
  - Executive Secretary from APT and MeLSAT (2)
  - Laboratory Technologist nominated from APHTA
  - HLTC Representative

Composition Cont'd……2

- HCTS Coordinator (MOHSW)
- Laboratory Information Coordinator (MOHSW)
- Laboratory Coordinator (Training) (MOHSW)
- Zonal Laboratory QA Officers (4)
- PHLB Representative
- NBTS QS Coordinator (NBTS)
- Laboratory Technologist from MSD
- Mortuary Manager Muhimbili National Hospital
- NIMR represented

Composition Cont'd……3

- **Co-opted members:**
  - Representative from WHO
  - Representative from CDC
  - Representative from Clinton Foundation
  - Laboratory Project Manager – AMREF
- **Frequency of meetings** - Biannually

Responsibilities (Issues addressed)

- Develop and review policy guidelines on Laboratory Quality Assurance including Operational Plans for approval by the NACDS.
- Advice the NACDS on issues pertaining to implementation of the National LQA program
- Provide oversight and guidance on issues pertaining to implementation of LQA program.
- Review Internal QC and EQA performance data and recommend corrective actions.
- Review implementation of the Action Plan on a half yearly basis

Ethical approval issues

- NHLQATC will apply ethical approval procedures for REQAS produced materials, material transfer agreements and MOUs in line with GOT, IATA, Posts and Customs regulations

Reference laboratory activities

- Visits to reference laboratories
  - Not done
- Agreements/signing of MOUs
  - Not done
- Agreements on SOPs for material preparation
  - Produced according material production SOPs
- Material production:
  - Performance - Good

Reference laboratory activities

- **Strengths**
  - NHLQATC infrastructure
  - Diagnostic Unit
  - Baseline Human Resources
  - Training
  - Laboratories
  - Equipment
  - Supplies

Reference laboratory activities

- **Challenges (Constraints)**
  - Visits to reference laboratories
  - Agreements/signing of MOUs
- **Way forward**
  - Perform above activities through AMREF in the interim
  - Involve the NHLQATC management in the EA-REQAS activities
  - NHLQATC takes over responsibility of coordinating EA-REQAS in Tanzania

Sensitisation workshop & visits to districts

- **Workshop**
  - Districts covered
    - Unguja and Pemba = 7
    - Mainland Tanzania = 19
  - Content
    - Module 1: Background of REQAS presented by Mr. Sadiki and Mattaro.
    - Module 2: Test, techniques and pathology presented by Mr. Sadiki and Mattaro
    - Module 3: Introduction of reference documents for the scheme presented by Mr. Sadiki
    - Module 4:Organisation of EA-REQAS was presented by Mr. Sadiki/Mattaro
    - Module 5:Role of Supervisor was presented by Dr. Izhaka S. Kimaro
    - Module 5a Clinical Supervisor activities by Dr.Maryam Seif
    - Module 5b Laboratory Supervisor Activities by Mr. Hurbert Swai

Sensitization workshop & visits to districts

- Orientation/development of checklists
  - Not done
- **Visits to districts**
  - Persons met
    - Not done due:
      - National Testing Campaign
      - Create management systems (NACDS, NSCLQS, ZASCDS, ZSCLQS)
  - Issues covered
    - NA
- **Health Facility Assessments**
  - Reports
    - Only reference laboratories for production of materials were visited
    - PHL, Pemba
    - MNH, Ilala, Dar es Salaam

Sensitization workshop & visits to districts

- **Way forward**
  - Conduct sensitization workshop
  - Visit the participating districts with feed back on panel 1 performance

Country performance

- **Participating facilities**
  - Districts: 19
  - Number: 60
  - Type: Public and Private
- **Transportation of surveys and reports:**
  - **Tracking form**
    - Inadequate filling
    - Few not returned
  - **Means of transport**
    - AMREF vehicle
      - Direct to site
      - Regional for Morogoro and Pwani
    - EMS

Country performance

- **Challenges**
  - Response is inadequate
  - Availability of funds to post back results
  - Weak in-country monitoring of REQAS activities
- **Way Forward**
  - Conduct sensitization meeting
  - Hold quarterly monitoring meetings
  - Orient NHLQATC staff on material preparation
  - Mentor NHLQATC to take over the coordination of REQAS activities
  - NHLQATC should be included as a material preparation centre

Responses of first REQAS survey February 2008

	Tanzania
Materials sent	60
Responses received	41 (68%)
Government	18 (30%)
Faith-based	13 (22%)
Private	10 (17%)

Country performance

- **Facility performance:**
  - Marks
    - Poor performance indicated
  - Comments
    - Results presented in the 6th MOHSW/Laboratory Development Partners meeting
    - NTLP used result during recent supportive supervision

Major errors on the first REQAS survey

Laboratory tests	HF Tanzania Mainland
1. Haemoglobin estimation *Too low or too high (± 3 g/dl)*	12 30%
2. Malaria parasites ***Positive slide called negative***	6 15%
3. HIV Rapid test ***Negative HIV test called positive***	1 3%
4. ZN stain for sputum ***Positive slide called negative***	22 **55%**
5. Gram stain (bacteria staining) *Wrong results or no reagent*	23 58%

Remedial action

- Feedback from district supervisors
  - No feed back received
- Remedial activities undertaken
  - Planned for after dissemination
- Comments on educational materials
  - Good

Costs incurred

- Transport
  - Couriers
  - AMREF project vehicles
- Communication
  - Contacting sites (phone) when shipment is dispatched
  - Faxing results
- Remedial action
  - NA
- Others
  - NA

National QA issues

- **Harmonization with other national schemes**
  - Newly established NHLQATC under CDC/PEPFAR support is the National Coordinating Laboratory
    - Monitoring Quality Systems of other laboratories in the country
    - Prepare and distribute PT materials to participating laboratories
    - Confirm disease cases and surveillance of epidemic prone diseases
    - Conduct laboratory training programmes
    - Perform HIV Early Infant Diagnosis and other laboratory tests to support HIV and AIDS care and treatment

National QA issues…..2

- **Harmonization with other national schemes**
  - Perform HIV Early Infant Diagnosis and other laboratory tests to support HIV and AIDS care and treatment
  - AFB smear microscopy under NTLP
  - Rapid HIV testing under NIMR
  - CD4 Count under QUASI Canada
  - HIV ELISA under MPEP/CDC
- **Linkage with registration/accreditation**
  - 4 zonal laboratories are in the process of registration to ISO15189 compliance under CLSI mentorship

Overall perceptions of the scheme

- **Usefulness/benefit**
  - Very useful
  - Detection of errors
  - Rating of performance
- **Challenges**
  - Compliance in participation
  - Response from participating laboratories
  - Communication
  - Perception that its an AMREF activity
  - Lack of in-country coordination meetings

Overall perceptions of the scheme

- **Recommendations**
  - Dissemination meeting
  - Supportive supervision to poor performing sites
  - Orientation on Laboratory Quality System
  - Mentoring programmes on Quality System
- **Next steps**
  - Expansion of participating sites from 60 to 120
  - Expansion of panel
  - Conduct dissemination
  - REQAS activities should take centre stage in National Sub Committee on Laboratory Quality Systems

Overall perceptions of the scheme

- Usefulness/benefit
  - Very useful
  - Detection of errors
  - Rating of performance
- Challenges
  - Compliance in participation
  - Response from participating laboratories
  - Communication
- Recommendations
  - Conduct dissemination meeting
- Next steps
  - Plan for remedial action

Asanteni sana, Mungu atubariki

Uganda

2nd Annual General Meeting of the East African Regional External Quality Assessment Scheme (EA – REQAS)

Speke Resort Munyonyo
Kampala
UGANDA

19th-20th February 2009

Uganda Country Presentation

Activities of National QA Committee

- **Composition of committee**
  - MoH, Private Sector & AMREF
- **Frequency of meetings**
  - 3 consultative meetings held
- **Issues addressed**
  - MoU
  - Budget for preparation of Q.C materials
  - REQAS results for the 1st cycle
- **Ethical approval issues**
  - No ethical issues involved

Reference Laboratories Activities (1)

- Visits to reference laboratories;
  (NaLiRi & NTRL)
- Agreements/signing of MOUs;
  (NaLiRi signed; NTRL in process)
- Agreements on SOPs for material preparation;
  (yet to be resolved)

Reference Laboratories Activities (2)

- Material production;
  (NaLiRi prepared; NTRL yet to prepare)
  - Performance **(evaluation results awaited)**
- Constraints;
  (Have had no opportunity to agree on budget)
- Way forward;
  Follow up signing of MoU and budget issues with NTRL & NaLiRi; Pursue process on agreement on SOPs preparation at monthly interval

Sensitisations workshop & visits to districts

- **Workshop**
  - **Districts covered**
    Lira, Ntungamo, Kiboga, Kumi, Nebbi, Kotido, Mukono, Kyenjojo)
  - **Content**
    Sensitized on purpose, implementation modalities & roles of stakeholders (Meeting Held on 11th-13th July 2007 at Grand Imperial)
  - **Orientation/development of checklists**
    Reviewed & customized the checklists
- **Visits to districts**
  - Not done due to limited time
- **Health Facility Assessments**
  - Reports

Country performance (1)

Participating facilities

- **Districts** = 8
- **Number** = 53 participating Health Units
- **Type/Level** = 21 HC IIIs; 18 HC IVs; 13 General hospitals & 1 Reg. Ref. Hospital
- **Ownership** = 37 Government; 13 PNFP; 3 PFP

Country performance (2)

Transportation of surveys and reports:

- **Tracking form**
  (filled by AMREF staff, DLFPs, Lab In Charges of the participating H/U laboratories and sent back in the reverse order)
- **Means of transport**
  (Cars, Motor Cycles & Boats)
- **Challenges** (Transportation costs were higher than expected, Over committed field staff).
- **Way Forward** (To incorporate EA-REQAS samples into referral CPHL specimen referral system- April/May 2009)

Country performance (3)

Facility performance

- **Marks:** Response rate = 98 % ; Turn around time = 56%; Average performance rate = 55%
- **Comments:** Private Health facilities performed best (67%); Government (56%); Private Faith Based (55%); Poorest test results (Hb determination)

Remedial action

- **Feedback from district supervisors**
  - Not received because all responses from participating labs were confidential between labs and coordination centre
- **Remedial activities undertaken**
  - CPHL has identified the poorly performing laboratories (score of <50%) and is mobilizing resources to improve their performance
- **Comments on educational materials**
  - CPHL, AMREF & Other partners have distributed SOPs, Guidelines, Text books

Remedial action (2)

- **Constraints**
  - All feedback is sent to the coordination centre without being checked by district supervisors)
- Recommendations
  - Explore ways of raising early feedback from district Supervisors

Costs incurred

- **Transport & Communication**
  - No cost to the REQAS project because deliveries by DLFPS integrated in other lab activities
- **Remedial action**
- **Others**

National QA issues

- **Harmonization with other national schemes**
  - There is need for all agencies/partners running QC/QA assessment programs/schemes to meet and agree on how to harmonize the system
- **Linkage with registration/accreditation**
  - Uganda is in the process of developing a National Health Laboratory Policy in which the registration/accreditation issues will feature

Overall perceptions of the scheme

- **Usefulness/benefit**
  - It includes QC assessment at PHC level HC IIIs to Reg. Ref. Hospitals
- **Challenges**
  - **As stated in the above slides**
- **Recommendations**
  - **As stated in the above slides**
- **Next steps**
  - **As stated in the Forward of above slides**

Kenya

EAST AFRICAN REGIONAL EXTERNAL QUALITY ASSESMENT SCHEME [EA-REQAS]
KENYA

NATIONAL QA COMMITTEE-MLQAAB

- COMPOSITION-KMLTTB-CHAIR
  - -AKMLSO
  - -KEMRI
  - -KACP
  - -NPHLS-SECRETARY
  - - AMREF
- MEETINGS-Dictated by need [averange every 2months]
- ISSUES DISCUSSED-identification of ref. labs
  - -MOU with ref labs
  - -Planning and execution of pilot NQAS
  - -Ethical clearance-Not necessary
  - -Capacity building of NPHLS

SENSITISATION WORKSHOP AND VISITS TO DISTRICTS

- 18th-22nd feb 2007
- Participants- Pmlts from 8 provinces
  - -Dmlts from 9 districts
  - - Dco from 9 districts
- Content of sensitisation

-Background of REQAS
-Organization of REQAS
-Roles of supervisors
-SOPS-Essential tests
  -Lab utilization for clinicians
  -Care and maintaince of equipment
  -Quality manuals
-Administrative issues

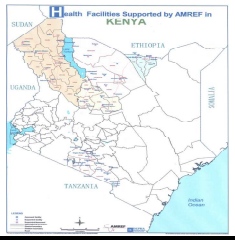
Sensitization cont.

- District visits

-one supervisor per district
-the supervisors were to meet MOH,DMLT,then physically inspect the labs.

Feedback from district visit
-concept generally accepted
-All pilot districts visited
-high expectations especially on extra financial support
-Health facility assesment forms were user friendly
-The reference materials well recived

MAP OF PILOT DISTRICTS



Pilot districts

- **BUTERE MUMIAS DISTRICT**
- Butere District Hospital-G
- Manyala Sub-District Hospital-G
- Makunga Rural Health Demo Centre-G
- Kwisero Health Centre-G
- Bukaya Medical Centre-P
- St. Mary's Hospital-FBO
- Mumias Sugar Company-P

- **Selected Districts and health facilities for Kenya (54 sites)**
- **NYANDO DISTRICT**
- Nyando District Hospital-G
- Ahero Sub-District Hospital-G
- Masogo Health Centre-G
- Sigoti Health Centre-G
- Nyabondo Mission hospital-FBO
- Chemilil Sugar Company H.C-P.
- Muhoroni Sub-District Hospital-G

Pilot districts

- **KAJIADO DISTRICT**
- Kajiado District Hospital-G
- Loitokitok Sub-District Hospital-G
- Ngong Health Centre-G
- Isinya Health Centre-G
- Namanga Health Centre-G
- Magadi Soda Hospital-P-
- Rombo Mission Hospital-FOB

- **TURKANA DISTRICT**
- Lodwar District Hospital-G
- Katilu Health Centre-G
- Lokori Mission Health Centre-FOB
- Lokichoggio AIC Health Centre-FOB
- Kakuma Mission Hospital-FOB
- IRC Refugee Camp-G

Pilot districts.cont

- **TURKANA DISTRICT**
- Lodwar District Hospital
- Katilu Health Centre
- Lokori Mission Health Centre
- Lokichoggio AIC Health Centre
- Kakuma Mission Hospital
- IRC Refugee Camp

- **MERU DISTRICT**
- Meru District Hospital
- Kanyakine Sub-District Hospital
- Timau Healh Centre
- Kibirichira Health Centre
- Ruiri Rural Demonstration H.C.
- Milimani Nursing Home (pte)
- Nkubu Mission Hospital

Pilot districts

- **BURETI DISTRICT**
- Kapkatet District Hospital
- Cheptalal Sub-District Hospital
- Roret Health Centre
- Sotik Health Centre
- AIC Litein Mission Hospital
- Arroket Health Centre
- Kisonoi Health Centre
- Kipwastuya Health Centre

- **KWALE DISTRICT**
- Msambweni District Hospital
- Kwale Sub-District Hospital
- Samburu Health Centre
- Kikokeni Health Centre
- Diani Catholic dispensary
- Diani Beach Hospital
- Kinango Sub-District Hospital

Pilot districts

- **WAJIR DISTRICT**
- Wajir District Hospital
- Habasweni District Hospital
- Giriftu Health Centre
- Khorof Harar Sub-District Hospital
- A.I.C Wajir Clinic

REFERENCE LABORATORIES

- *NPHLS[microbiology lab]-Gram stain
- *U.O.N[Heamatology lab]-PBF-MOU
- *AMREF LABS-Hb

-All labs sent letters and project concept paper.
-NPHLS-dropped and task shifted to AMREF
-SOPS on QA material preparation agreed on
-validation of QA material -*Nairobi hosp
-*Agakhan hosp
-*Mater hosp
-validation report -accepted

REMEDIAL ACTION

- The comments on performance already communicated to participants-folow up not yet

COUNTRY PERFORMANCE

- Refer to hand out-survey report 1107001 and 908002

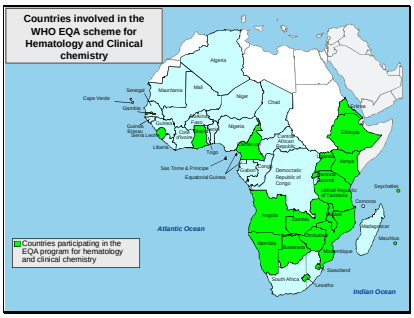
OVERALL PERCEPTION OF THE SCHEME

- Aceptance is increasing with time-TAT of reports from facilities.
- More sensitization to MOH officials to fully understand this their project not amref.

NATIONAL QA ISSUES

- Harmonization with other national schemes-Not yet done
  -TB QA-Only national QA
- ACREDITATION-Not yet done
  -Next on agenda

Appendix 7: WHO presentation



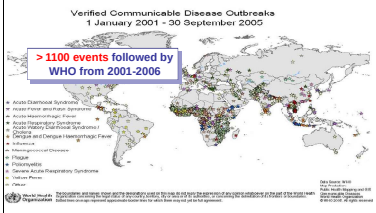
Country
Angola
Tanzania
Uganda
Seychelles
Mauritius
Ghana
Sierra Leone
Rwanda
Ethiopia
Eritrea
Cameroon
Mozambique
Malawi
Zimbabwe
Lesotho
Zambia
Botswana
Swaziland
Kenya
Namibia
Gambia

WHY IHR (2005)

Marburg Viral Haemorrhagic Fever in Angola, 2005

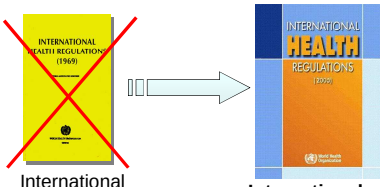
- **322 cases and 284 deaths (CFR 88%)**
- **Wide area affected**
  - **5 provinces Including Luanda)**
  - **17 municipalities**

Each Day New Outbreak is Declared



Limitations of the IHR (1969)

- Limited scope: Only 3 notifiable diseases (cholera, plague and yellow fever)
- Dependence on official notification from Member States before formal measures could be taken
- Lack of incentives for Member States to notify
- Out of date technical / public health requirements
- Limited compliance and the need for a global approach



International Health Regulations

International Health Regulations (2005)

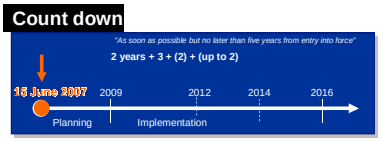
What is New in the IHR (2005)

- Broadens scope to include *any* event of international public health concern and not limited to communicable diseases
- Use of unofficial information sources and reports to trigger verification process
- Notification to WHO marks the beginning of a confidential dialogue between a State and WHO to assess potential serious public health implications of the event

What is New in the IHR (2005)

- Confidential and collaborative consultation on early events, if necessary, before formal notification.
- Transparent and consistent WHO process for event assessment and response
- Lists examples of applicable measures to be taken corresponding to the assessed risk

Implementation of IHR (2005) timeline



Each country has committed to develop and maintain core public health capacities for surveillance and response.

These capacities encompass outbreaks of infectious diseases and diseases of chemical, radiological and food origin.

Health services and facilities are also to be developed at important international ports, airports and ground crossings.

Summary of Major Issues

FUNDING

- Funding Partner priorities changed to neglected tropical disease and others
- Discussions under way for the next 5-year
- Hib contribution continues (goods, training - APW)
- Take advantage of prospects for funding from Global Fund in Geneva
- Funds for HIV, Hepatitis B/C expected for Blood Banks in countries

Standardisation of methods

- Standards have been set (Ref SOPs)
- Hemoglobin estimation
- HIV testing
- Operating conditions differ in countries to allow for adoption of one single method or equipment
- Need to collect data on performance of the various methods

Increase challenges/disciplines (AST and one other specimen)

- TB – culture; labs to be identified, with their lab methods
- Malaria – for RDTs, consult with David Bell on the way forward
- AST testing
  - recommended antibiotics; include control strains as mandatory (ATCC restrictions); ?maintaining seed stocks; ?WHO to procure them – WHO/Lyon consulting with ATCC at least for 2009
- Rotavirus
  - ELISA test used and QC (rechecking some specimens) in SA, Ghana and Kenya.
- Others (some labs protested receiving some specimens)
  - other general bacteriology specimens (Salm typhi in blood culture; Salm spp in CSF; Cryptococcus; Anthrax with plague) – Ali to write letter/QES to participating labs before specimens are dispatched. There will be need for extra referee labs.

Refresher Training/Remedial actions

- More analysis of results to determine priority areas for training, and targeting of countries/districts
- Updates related to recent outbreaks or challenge samples

Management and Policy Issues

- Scoring system – turn-around time; suggestion if after 30 days score 0 points.
  - Non responders – (Uganda-Lacor), Equatorial Guineau, Mauritania, Gambia, Namibia, DRC, Guinea Bissau, Madagascar, Sierra Leone, Sao Tome et Principe.
  - Late responders – transportation and communications isues
- High Health Worker Turnover
  - Need for alternate/2nd contacts

Database Issues

- Need to empower and encourage countries (and Coordinating Centre) to analyse data source – by provision of tools and training - explore with DMTAFRO

Other Issues

- Methodology of expanding to other members of EAC
- Process of accreditation of REQAS
  - Improve existing performance
  - AFRO to explore possibility (recognise REQAS and advocate)

Thank you