African Field Epidemiology Network (AFENET)

Annual Report

September 2006 – December 2007

Prepared by
EmSam Systems (U) Ltd
for the AFENET Secretariat

CDC
Centers for Disease Control and Prevention

USAID
FROM THE AMERICAN PEOPLE

Acknowledgement

We offer our deepest thanks to the following institutions for the continued technical and financial support to AFENET and our member programs which enable us to carry out this work.

- Ministries of Health in the member countries
- Centers for Disease Control and Prevention (CDC)
- United States Agency for International Development (USAID)
- World Health Organisation (WHO)
- Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET)

Dedication

We dedicate this report to the field epidemiologists and public health laboratorians, who work tirelesslessly sometimes under life threatening conditions, for the improvement of the health of the people in Africa.

Plot 23 Mackenzie Vale, Kololo
P. O. Box 12874
Kampala, Uganda
Tel:+256-414 542 352; +256-312 265 595
Fax:+256-414 542 352
www.afenet.net

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Acronyms

ABU	Ahmadu Bello University
AIDS	Acquired Immune Deficiency Syndrome
AFENET	African Field Epidemiology Network
AFRO	African Regional Office
CDC	Centers for Disease Control and Prevention
CFR	Case Fatality Rate
CPHL	Central Public Health Laboratory
DESCD	Division of Epidemiology and Surveillance Capacity Development
DoH	Department of Health
DRC	Democratic Republic of Congo
EIS	Epidemic Intelligence Service
EPI	Expanded Program on Immunization
EPIET	European Programme for Intervention Epidemiology Training
EVHF	Ebola Viral Hemorrhagic Fever
FETP	Field Epidemiology Training Program
FELTP	Field Epidemiology and Laboratory Training Programme
FIMS	Field Information Management System
GAP	Global AIDS Program
GMC	Ghana Malaria Centre
GOARN	Global Outbreak Alert and Response Network
GoSS	Government of South Sudan
GPHCD	Global Programme for Health Capacity Development
HHS	US Department of Health and Human Services
HIV	Human Immuno-deficiency Virus
ICRC	International Committee of the Red Cross
IDSR	Integrated Disease Surveillance and Response
IHR	International Health Regulations
JKUAT	Jomo Kenyatta University of Agriculture and Technology
MDSC	Multi Disease Surveillance Centre
MoH	Ministry of Health
MoHSW	Ministry of Health and Social Welfare
MSF	Médecins sans Frontières
MUSPH	Makerere University School of Public Health
NCID	National Institute for Communicable Diseases
NGO	Non Governmental Organisation
NHLS	National Health Laboratory Services
NIMR	National Institute for Medical Research
NTBLTC	National Tuberclosis and Leprosy Training Centre
NVRI	Nigeria Virus Research Institute

PEPFAR	Presidential Emergency Plan for AIDS Relief
PHSWOW	Public Health Schools without Walls
PPE	Personal Protective Equipment
PRSP	Poverty Reduction Strategy Papers
RVF	Rift Valley Fever
SAFELTP	South Africa Field Epidemiology and Laboratory Training Program
SHSPH	School of Health Systems and Public Health
SMDP	Sustainable Management Development Program
SHTP	Sudan Health Transformation Program
SMoH	State Ministry of Health
TEPHINET	Training Programs in Epidemiology and Public Health Interventions Network
TFCSD	Task Force on Child Survival and Development
UBOS	Uganda Bureau of Statistics
UI	University of Ibadan
UNICEF	United Nations International Children's Fund
UPDF	Uganda Peoples' Defense Force,
URCS	Uganda Red Cross Society
USAID	United States Agency for International Development
UVRI	Uganda Virus Research Institute
VHF	Viral Hemorrhagic Fever
WFP	World Food Program

Foreword

David O. Mukanga
EXECUTIVE DIRECTOR

Where we started

Established in 2005, the African Field Epidemiology Network (AFENET) is a non-profit organization and networking alliance dedicated to helping Ministries of Health in Africa build strong, effective, sustainable programs and capacity to improve public health systems in Africa.

At AFENET, we are committed to ensuring effective prevention and control of epidemics and other priority health problems in sub-Saharan Africa. Our goal is to strengthen Field Epidemiology and Public Health Laboratory Capacity and effectively contribute to addressing Public Health problems in sub-Saharan Africa.

Propelled by the need to cooperate systematically to address the common and unique needs of Africa, the idea of forming a networking alliance was mooted in October 2004 in Kampala Uganda, where the first directors meeting was held. The following year at the 2nd Directors meeting, AFENET was born and later in that year incorporated. In September 2006, AFENET was awarded a 5 year Cooperation Agreement by the US Centers for Disease Control and Prevention (CDC).

AFENET was born out of national Field Epidemiology Training Programs (FETPs), which had been sharing experiences, staff, teaching materials and other resources. The founding programs are the Zimbabwe FETP established in 1993, the Uganda and Ghana FETPs established in 1994 and 1995 respectively with support from the Rockefeller foundation, and the Kenya Field Epidemiology and Laboratory Training Program (FELTP) setup in 2004.

With the admission of the South African FELTP in March 2007, AFENET currently has five member Programs in Ghana, Kenya, South Africa, Uganda and Zimbabwe. The Ministries of Health of Nigeria, Tanzania, South Sudan and the Multi-Disease Surveillance Center out of Burkina Faso are associate members.

To realize our goal, we have defined our priorities as follows:

- Develop Field Epidemiology Capacity so as to achieve a critical mass of well trained field epidemiologists, ensuring effective prevention and control of epidemics and other public health problems;
- Develop Public Health Laboratory Capacity so as to have well equipped, staffed, linked and functional Public Health laboratory infrastructure;
- Institute Public Health Disease Surveillance and Effective Response facilities which can provide early detection, timely and effective response and lead to reduced mortality from epidemics and other major public health problems;
- Strengthen Networking and Collaboration and enable Field epidemiologists and laboratories to effectively engage in value adding partnerships and;
- Promote institutional development through AFENET, demonstrating good management systems and processes.

Where we have reached

We set up the AFENET secretariat in Kampala, Uganda in September 2006 and developed a memorandum of understanding between member programs which was signed by the leadership of those programs. We hired ACLAIM Africa Limited, to manage AFENET funds and submit financial reports to CDC and USAID on all our activities. AFENET dedicated bank accounts have been opened in Accra, Harare, Nairobi, Kampala and Ouagadougou. To ensure the full participation in the planning and implementation of the cooperative agreement by our member programs, we have maintained regular communication with country coordinators.

We are proud to say that there are currently 111 field epidemiologists and laboratorians in the three FETPs and two FELTPs. AFENET has developed a training curriculum and training materials for an in-service epidemiology and management course for public health laboratorians. We have supported in service training courses for Public Health Laboratorians at which 20 were trained in Uganda, 18 in Zimbabwe, and 22 in Tanzania. In addition to these courses we have strengthened Laboratory capacities through development and provision of Outbreak Laboratory Kits – 1 year supply to 4 countries. We also provided technical assistance to Tanzania, Nigeria, and French West Africa (Burkina Faso, Togo, Mali and Niger) to develop FELTPs.

AFENET funded 5 immunization research projects in Ghana, Kenya, Uganda and Zimbabwe, in which trainees conducted demonstration projects to develop novel interventions to raise immunizations in hard to reach areas. Stimulating results were shared at the recent AFENET regional scientific conference held in Kampala Uganda in December 2007. The final reports will be published on our website. We supported 8 fellowship positions within the Ministries of Health in Ghana, Uganda and Tanzania. AFENET has also renovated and equipped the National Bacteriology Reference Laboratory in Kenya which has now created space for practical sessions and a data management facility (See pictures in the Kenya country program report).

To enhance surveillance systems, weekly Integrated Disease Surveillance and Response bulletins are now produced in Kenya, Ghana, Tanzania, Uganda and Zimbabwe. AFENET is a member of WHO's Global Outbreak Alert and Response Network. AFENET sponsored teams have participated in epidemic outbreak response activities, including Marburg & Ebola in Uganda; Aflatoxin in Kenya; RVF in Kenya & Tanzania; Meningitis in Ghana, Sudan and Uganda, Cholera in Uganda and Zimbabwe and the H5N1 Avian flu alert in Ghana. 2007 was crowned with our hosting of the second Regional AFENET Scientific Conference which attracted participation from 10 African countries in Kampala in December 2007.

Where we are going

AFENET's success has precipitated demand for field epidemiologists and public health specialists trained through this model in other African countries. AFENET is now seen as the mechanism through which applied epidemiology capacity will be expanded and strengthened in Africa. During our first year, we have established an AFENET Newsletter and website (www.afenet.net). We have started to build ICT Infrastructure for real time networking among members and plan to develop an Africa Journal of Field Epidemiology.

In addition to what we are already doing AFENET will in 2008, support the publication of research through a writing workshop. We shall contribute to strengthening national AI preparedness and promote International Health Regulations (IHR). This will be done through advocating for the incorporation of IHR into FE(L)TP training, support to cross-border meetings and the strengthening of surveillance at ports of entry. The secretariat will continue to provide outbreak investigation kits to member programs and we will promote multi-country collaborations in research and outbreak investigation. In 2008, we will begin a 1-year resident advisor fellowship based in Harare to join resident advisors for the new program. The 4 fellows will spend 2-3 months of the year outside their home countries working with a mentor and the rest at their local FE(L)TP.

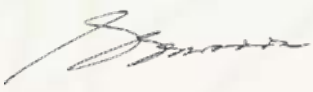
A regional FELTP for French speaking West Africa is being established in partnership with WHO and CDC. This program will train field epidemiologists and public health laboratorians from Burkina Faso, Mali, Niger and Togo and will expand to other French speaking countries in the region. A short course is planned for May in Ouagadougou and a two year curriculum has been developed. New FELTPs shall be set up in Tanzania and Nigeria. We shall continue to support GoSS MOH, where we have a Medical Epidemiologist providing training including in IDSR.

In response to the Millennium Development Goals priority problems, AFENET on December 1, 2007, in collaboration with the Task Force on Child Survival Strategy and Development and Emory School of Medicine, started an Immunization and Child Survival program with 4-year funding from the Merck Foundation.

David O. Mukanga
EXECUTIVE DIRECTOR

Dr. Frederick Wurapa
CHAIR, AFENET

Prof. David Serwadda
PRINCIPAL INVESTIGATOR
AFENET CDC CoAg



Introduction

The African Field Epidemiology Network was established in the fall of 2005 with a mission to improve the health of people in Africa, through the strengthening and expansion of applied epidemiology and laboratory capacity in Africa, in partnership with Ministries of Health, non-governmental agencies, international agencies, the private sector and other public health agencies. This report covers the period September 2006 to December 2007.

AFENET Genesis

AFENET's objectives are to:

- Strengthen capacity in field epidemiology and laboratory training and practice,
- Promote sharing of expertise within member programs in Africa,
- Promote and support applied public health research activities of field-based training programs in response to public health problems and threats in Africa,
- Engage in advocacy for better health for Africa, targeting African public health programs and health service providers in both public and private sectors.
- Mobilize resources for current and new member programs,
- Promote new field epidemiology and laboratory training programs in African countries,
- Link public health professionals participating in the network to organizations responding to public health situations that require competencies in field epidemiology.

The applied epidemiology training programs of the African Field Epidemiology Network (AFENET) have a 16-year history of collaboration. In 1992, with support of the Rockefeller Foundation and under the umbrella of Public Health Schools without Walls (PHSWOW), the Zimbabwe, Uganda, and Ghana programs were established. Between 1992 and 1997 under PHSWOW, these programs networked, shared training materials and staff, and undertook joint projects. Since 1997, the programs have continued to network under the Training Programs in Epidemiology and Public Health Interventions Network. In 2004, the Kenya Field Epidemiology and Laboratory Training Program joined the network. Because of their extensive and close collaboration, the four programs decided in 2005 to form AFENET. In June 2006, AFENET applied for its 1st grant to the United States Department of Health and Human Services (HHS) Centers for Disease Control and Prevention (CDC). On 1st September 2006, AFENET received the notification of award letter for this grant and a 5 year Cooperation Agreement and started activities in October, 2006. The South Africa FELTP joined AFENET in March 2007 and today these five countries provide the only competency-based applied epidemiology training in sub-Saharan Africa. Nigeria, South Sudan, Tanzania and the Multi Disease Surveillance Centre that coordinates the West Africa FELTP initiative comprising of Burkina Faso, Mali, Niger and Togo have joined AFENET as associate members. AFENET and its partners recognise that the laboratory component is critical in complementing field epidemiology and therefore all its associate and prospective members are being encouraged to develop FELTPs.

AFENET MEMBER PROGRAMS AS AT DECEMBER 2007

Potential members: Francophone West Africa (Burkina Faso, Mali, Niger, Togo), Ethiopia, Mozambique, and Rwanda
Associate members: MDSC (Burkina Faso), Nigeria, South Sudan, Tanzania
Members: Ghana, Kenya, South Africa, Uganda, Zimbabwe

Dr. Mark White (CDC Atlanta) and
Dr. Fredrick Wurapa (AFENET Chair).

L-R: Mr. Eric Gogstad (CDC Atlanta),
Dr. Pascale Krumm (CDC Atlanta) and Dr. Olivia Namusisi (AFENET Secretariat).

The challenge

Improving data utilisation

Epidemiological information and the ability to interpret and utilize data appropriately are essential to identifying health problems and to making informed decisions and priorities. The quality of national data systems in most Sub-Saharan African countries is dismal and even where good data exists, it is often poorly disseminated and used. Better availability and coordinated use of data in Africa, on a number of important world development indices therefore, can achieve impact in at least three areas:

- **Policy making** - better government decisions and improved effectiveness in their implementation;
- **Political accountability** - more effective means for citizens to hold their governments to account
- **External investment** - create a more transparent environment which attracts private companies and development agencies.

In 1999 the WHO/AFRO with support from CDC and USAID launched the integrated Disease Surveillance and Response Strategy which has been implemented with reasonable success in a number of African countries. There is however, a weak link between the production of data and the ability to convert it into useable information for initiating appropriate public health action.

A recent World Bank external review of Poverty Reduction Strategy Papers noted that "Available information is generally not linked to decision making". There is therefore, a need to promote a culture of evidence based decision making, whereby those with the responsibility for taking decisions actively seek data, analyse it and assess the impact of the different policy options they are considering. Such analyses should be available to all stakeholders in order to enable them take an intelligent part in the policy process.

Without strong capacity in field epidemiology, countries in Africa will not be able to build and use disease surveillance systems that serve their broad array of needs. They will remain highly dependent on external assistance and vulnerable to disease threats because of inability to set and execute their own health priorities. It is therefore critical, that a deliberate link between the data and the policy/decision spheres is developed. In order to meet this need, professionals must be nurtured, who understand the workings of the policy and planning arenas and are equipped with sound epidemiological skills and competencies. They must be able to translate complex epidemiological data into user friendly information for policy-makers and planners at all levels of government.

What are FETPs and FELTPs?

The Field Epidemiology Training Program and the Field Epidemiology and Laboratory Training Program (which offers an added laboratory component), are applied epidemiology programs that help countries develop, set up, and implement dynamic, cost-effective public health strategies to improve and strengthen their public health systems and infrastructure.

FETPs are modeled after the CDC's Epidemic Intelligence Service, which monitors epidemic outbreaks and offers competence based training to health staff. CDC's Division of Epidemiology and Surveillance Capacity Development helps countries set up FETPs and FELTPs.

AFENET Secretariat, Kampala, Uganda.

The first FETPs were established in Zimbabwe (1993), Uganda (1994) and Ghana (1995) followed in 2004 by the Kenya FELTP. The programs network, share training materials, staff and undertake joint projects.

Global linkages

Funders and partners

Over the past 25 years, Field Epidemiology Training Programs have been established in over 33 countries worldwide. AFENET works in close partnership with several African Ministries of Health, academic institutions, as well as international agencies and non-profit organizations. These partners offer financial and, programmatic support, training expertise, and technical assistance to help it accomplish its mission. AFENET receives the bulk of its technical and financial support from the Centers for Disease Control and Prevention and the United States Agency for International Development.

Other partners include:

- Ministries of Health in member and non-member program countries
- WHO/AFRO and WHO/Lyon
- TEPHINET
- Task Force for Child Survival and Development
- Emory School of Medicine
- Merck Foundation
- EPIET

CDC Technical Support

CDC started in the late 1940's as the United States Public Health Service. It is based in Atlanta from where it was set up to fight malaria in the South of the USA. It has grown over time and is now composed of multiple centers for disease prevention and control. One of these centers, the Division of Global Public Health Capacity Development (GPHCD) has provided technical support that has led to the establishment of FETPs and FELTPs. GPHCD is working with AFENET and Dr. Peter Nsubuga from this division is a member of AFENET's Advisory committee.

AFENET and CDC have carried out assessments in Burkina Faso, Ethiopia, Mali, Niger, Nigeria, Tanzania and Togo and provided technical assistance to the ministries of health on how to fulfill the requirements for establishing a program. They have also assisted the countries to identify the necessary funding and to

network with national, regional and international organizations.

CDC has assisted in designing and developing curriculums and evaluation instruments for the Ghana, Kenya and South Sudan programs. These programs have resulted in accreditation with universities in Kenya and Ghana and have enrolled and or graduated over 25 field epidemiologists and over 10 laboratory epidemiologist residents since 2004. The laboratory management specialization in the Kenya program was the first of its kind and in 2006 graduated the first 3 laboratory epidemiologists in the world. The Kenya program has been used by alumni as a starting point and foundation for the development of the South Africa and Tanzania FELTPs.
CDC has supported AFENET develop a technical course curriculum, field manuals, start a newsletter and the auto generation of the IDSR weekly bulletins in Kenya.

As AFENET continues to grow both in membership and program content, it will continue working with CDC to address the new challenges. In 2008, CDC will through training, give national focal points the skills required for day to day responsibilities to take their country programs forward. A centre of excellence for public health and epidemiology management is to be set up and hosted by Ghana in Accra. The centre will provide skills in leadership, quality control for technical and management excellence.

USAID support to AFENET

Ms. Angela Weaver, Technical Advisor for Immunization and Surveillance - USAID, Washington

USAID has a long history of support to FETP's in countries like Ghana and Zimbabwe and currently supports a Leadership Initiative at the Makerere University School of Public Health (MUSPH) in Uganda and is increasing its level of involvement in Tanzania. USAID has no direct grant relationship with AFENET but channels its funding through an inter-agency agreement with CDC.

The early concept was to bring together and strengthen the existing Field Epidemiology Training Programmes in Africa and to build capacity to address infectious diseases through networking.

In its short existence, AFENET has been able to solidify its mission and has a sound potential. This was evident at the 4th TEPHINET and 2nd AFENET Conference in December 2007 in Kampala, Uganda, by the very good response, turn up, participation and growth of the network.

AFENET has also been able to respond to emerging needs such as the need to have a veterinary component. The Nigeria program will be the first with this component to deal with Avian Influenza in addition to EPI, laboratory services and other public health issues.

There is still a long way to go but AFENET has so far done a tremendous job. AFENET's niche is in capacity building. While USAID advocates globally, AFENET will need an advocacy component for the network. The secretariat needs to grow and this will require increased human resource capacity.

An Avian Influenza specialist for instance will be needed, now that the Nigeria program has a veterinary component. The major challenges AFENET will face will be to seek new funding options and mobilize resources for expansion and long term sustainability.

AFENET Secretariat

In September 2006, following the award of a 5-year cooperative agreement to AFENET by CDC, AFENET established a secretariat office in Kampala, Uganda. The offices were initially hosted at the Makerere University School of Public Health, but have since moved as the secretariat has grown to their own location.

I am proud to see that AFENET in the last two years has established itself on the ground. We have established a secretariat in Kampala and are effectively and actively working in Burkina Faso, Ghana, Kenya, South Africa, South Sudan, Uganda and Zimbabwe. In addition, AFENET has worked very successfully with partners such as CDC and USAID, who provide technical and financial assistance in its effort to increase its capacity to manage epidemics in the region. We look forward to working with more countries and increasing our funding base, in order to make a significant impact on epidemics in the region.

Prof. Serwadda, February 14, 2008

Creating inter-institutional relationships

Following the award of the Cooperative Agreement to AFENET, Wayne Brown from the Division of Epidemiology and Surveillance Capacity Development of CDC and AFENET Executive Director, David Mukanga, visited each of the four member programs in order to ensure their full participation in the planning and implementation of the Agreement. AFENET and CDC jointly assessed and provided technical assistance to countries that aspired to start their own FE(L)TPs.

Assessments were carried out for 3 new programs including Tanzania, Nigeria, and French speaking West Africa (Burkina Faso, Niger, Mali and Togo), which have since joined the network. AFENET together with CDC are working to identify funding for these new programs.

Prof. David Serwadda
Dean Makerere University School of Public Health and Principal Investigator AFENET-CDC Coop Agreement.

CDC and USAID participated in the first and second annual AFENET board of directors' meetings held in November, 2006 in Brasilia during the TEPHINET global scientific meeting and in March 2007 in Kampala Uganda. At the Kampala meeting, the South African Field Epidemiology and Laboratory Training Program was admitted to AFENET.

Wayne Brown (CDC) and David Mukanga (AFENET)

Advocacy

The Chair of the AFENET Board, Dr Fred Wurapa, and the Executive Director together with CDC made advocacy visits to the USAID and the World Bank in April 2007, to explore possible areas of cooperation between AFENET and these 2 institutions. AFENET

has since extended its collaboration within CDC and are in discussions to undertake joint fundraising with the CDC Foundation. CDC/ GPHD and USAID participated in the review of the laboratory curriculum and training.

Collaboration in the Network

There are now multi-country investigations of outbreaks and the sharing of expertise across the network. The Secretariat supported teams of epidemiologists and trainees of its members from the Uganda, Kenya, South Africa and Zimbabwe Programs to evaluate response of a meningitis outbreak that occurred in the Karamoja and West Nile regions of Uganda. AFENET also supported teams that participated in investigating Rift Valley Fever outbreaks in Kenya and Tanzania, the Ebola outbreak in Uganda and meningitis and avian influenza in Nigeria.

AFENET also supported teaching staff exchanges between member programs. Dr. Tshimanga from Zimbabwe trained students in epidemiology at a short course in Nigeria. Dr. Fausta Mosha, a Tanzanian trainee of the Kenya program participated in teaching laboratorians during the Uganda laboratory course. AFENET has, with CDC technical assistance developed a monitoring and evaluation framework for FETPs and FELTPs in Africa.

Laboratory support

Laboratories remain a weak link in the health system response to disease threats in Africa. The AFENET laboratory working group developed an Outbreak Investigation Laboratory Kit to enable the timely investigation and response to diseases of epidemic potential in Africa.

AFENET has strengthened Laboratory capacities through development and provision of one year's supply of Outbreak Investigation Laboratory Kits to four program countries that will be used by the MoH in responding to outbreaks in a timely manner. AFENET has also renovated and equipped a bacteriology laboratory in Kenya.

Outbreak Investigation Lab Kit boxes shipped to Ministries of Health.

Mr. William Lali carrying out a laboratory investigation to establish a suspected meningitis outbreak in Arua, Uganda.

Outbreak Investigation Lab Kit

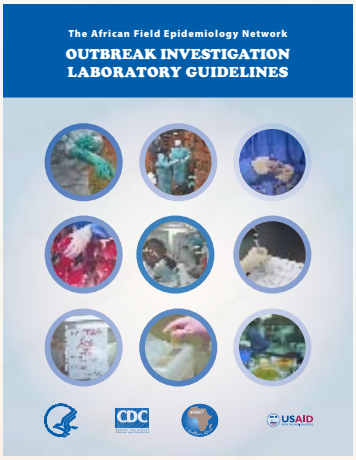
The kit is made up of personal protective equipment, disinfectants and materials for collection, packaging, storage and transportation of specimens to referral laboratories for

confirmation. In addition, the kits contain rapid test kits for meningitis and plague which provide quick and reliable preliminary diagnosis that can guide public health interventions before confirmation of disease outbreaks.

The kit has user friendly guidelines, developed to provide relevant information during outbreaks of any of the commonly occurring diseases in Africa.

The guidelines are composed of an assortment of requirements that are necessary both in the field and laboratory during an outbreak investigation. They promote standard performances by reminding health workers what laboratory procedures need to be one during the outbreaks, including tests that need to be performed. The guidelines provide an elaborate list of items that may be required for isolation and identification of the prioritized diseases of epidemic potential.

The Kit is primarily intended for use during outbreaks of cholera, dysentery, meningitis, plague, typhoid, measles, viral hemorrhagic fever, yellow fever and anthrax. A one-year supply of outbreak laboratory kits has been provided to Ghana, Kenya, Uganda and Zimbabwe. In Uganda they were used during the Ebola and Menengitis outbreaks.



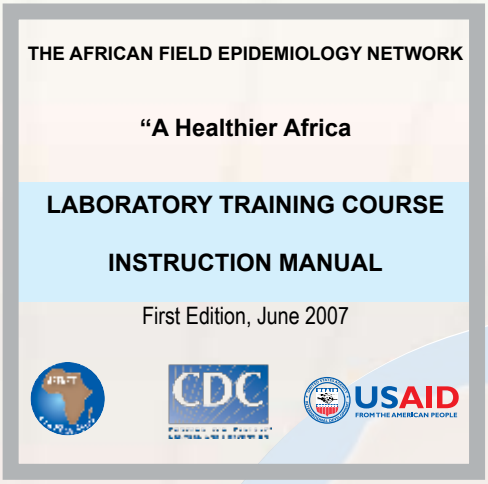
Laboratory Training Course and Materials

AFENET together with epidemiologists and laboratory experts from member programs developed a curriculum and training materials for an in-service laboratory training course. The materials were reviewed by an instructional designer and laboratory experts from CDC, WHO/AFRO and WHO Lyon. The training course and materials are designed to equip mid-level laboratory managers at district, provincial and national levels with skills in laboratory data management, principles of laboratory management, disease surveillance, scientific report writing and computer skills in order to improve public health laboratory services.

Courses Conducted

Pilot training was conducted in three countries. In Uganda it was conducted at the Makerere School of Public Health from the 23rd of July to the 10th of August 2007 and 20 mid-level laboratory managers were trained and awarded certificates at the end of the training. Dr. Fausta Mosha from Tanzania was invited to facilitate some sessions in the pilot training in Uganda so that she could share her experience during the training in Tanzania. The training in Zimbabwe was conducted from the 29th of October to the 2nd of November 2007 at the Zimbabwe school of Public Health and 20 participants trained. In Tanzania the training was conducted at the Ministry of Health and Social Welfare from the 19th to the 29th of November 2007, 22 laboratory managers were trained.

The courses lasted on average two to three weeks and were mainly participatory. Trainees were given a project which they were required to implement and present their findings at the end of the course before being awarded certificates.



Ebola task force meeting in Bundibugyo. Facing camera is Kenya expert Dr. Patrick Nguku.

Outbreak Investigation and Response Activities

AFENET was part of the national taskforce that investigated the Marburg and Ebola outbreaks in Ibanda, Kamwenge and Bundibugyo districts of western Uganda and also supported a training workshop for health workers in the affected districts on preparedness, response activities and case management. AFENET also supported investigations of plague in Masindi, anthrax in Kasese and cholera in Kampala, Aflatoxin in Kenya, Rift Valley Fever in Kenya and Tanzania and Avian Influenza (H5N1) in Ghana. (www.afenet.net/english/news.html) (www.who.int/csrdisease/marburg/en/index)

Responding to media reports that Kampala piped water was faecally contaminated, surveillance of piped water in Kampala city was done by the MoH and MUSPH.

Immunization Projects

Since the launch of the Expanded Program on Immunization in 1974, unacceptable low coverage rates persist in sub-Saharan Africa, where it is estimated that only about 50% of children are immunized during their first year of life. Additionally, about 20% of children who begin the vaccination schedule do not complete it, limiting the effectiveness of doses that they have received and of immunization on a larger population scale.

Clearly, the benefits of immunization do not reach all African children and there is an urgent need to develop new and innovative strategies to fully immunize more children, especially in hard-to-reach and vulnerable areas.

As an initial mitigation measure AFENET issued a call for proposals to support efforts towards developing novel and effective strategies and interventions that would help raise routine immunization coverage in recipient countries. Eligible applicants had to be trainees of FETPs in Africa working with an academic supervisor and all applicants were required to obtain endorsement for the study from their national EPI managers.

With funding from the USAID Bureau for Global Health and in collaboration with the CDC Office for Global Health, AFENET supported five research projects to improve routine immunization coverage for childhood illnesses in hard-to-reach and vulnerable areas in Ghana,

Kenya, Uganda, and Zimbabwe. Provisional findings of the research were presented at the 4th TEPHINET and 2nd AFENET Conference in December 2007 and are available at (www.afenet.net/english/projects.html). (See country program reports)

L-R Drs Jared Omolo (Kenya FELTP), Nicholas Ayebazibwe (Uganda FETP) and Addmore Chadambuka (Zimbabwe FETP).

Mothers have gathered several times and the EPI team never turned up. They now do not believe when we tell them about the team's next visit. They start gathering when they see the EPI vehicle on site.

Village health worker in Gokwe, Zimbabwe

To improve timely intervention and enable immunization staff arrive on time, Addmore Chadambuka advocated for fuel-free Scort carts which since then became available.

Human Resources Surveillance Support

AFENET has locally hired and posted medical epidemiologists (AFENET fellows) to back-up the skeleton staff in the MOH's surveillance units in Ghana, Tanzania and Uganda. These fellows assist the MOH strengthen their surveillance systems, investigation and response to acute health events and supervision of FELTP trainees.

Voices of AFENET fellows

Ghana Health Service

Mr Simon Kwadje, AFENET fellow and Editor AFENET newsletter.

I sit on Ghana's FELP Advisory Committee where among other things we also receive visitors to the program. At the MoH, I am in Diseases Surveillance Department where we monitor and supervise the districts. We hold weekly surveillance review meetings and make reports of all visits made to the districts which we then consolidate into an annual report.

I edit the weekly bulletins and the AFENET newsletter which we hope to produce every quarter. We have so far produced only two editions and plan to come out with the third edition by the end of April 2008, To stimulate the network programs to subscribe articles to the newsletter, we shall need a strategy for interaction articles to the newsletter for interaction perhaps once a year, with each country program and at an annual meeting.

Mr. Simon Kwadje

Tanzania Ministry of Health

Dr. Janneth Mghamba, Epidemiologist, MoH Tanzania

Dr. Muhamed A. Muhamed, Epidemiologist
MoH Tanzania

We are setting up the Tanzanian FELTP which should be launched in October 2008 and where we shall be on the staff.

As part of the task force to establish the Tanzania FELTP, we had to convince the Ministry of Health that Tanzania required experts in Field epidemiology and laboratarians. The government was very responsive and currently the Chief Medical Officer, Dr. Deo Mtasiwa is the chairperson of the FELTP steering committee. We prepared the curriculum for the program, liaised with Muhimbili University of Health and Allied Sciences to make sure all university requirements are met and talked to several possible partners for cooperation.

We have received tremendous support from David Mukanga of AFENET and Wayne Brown of CDC who not only assessed our viability to start an FELTP but also organized funding for training courses and materials. AFENET has particularly widened our networking scope through linking us to other countries and organizations.

In the meantime, we have already started outbreak investigations and were part of the team which responded to Rift Valley Fever outbreak which affected North, Central and East Tanzania. We have also started conducting short courses for field epidemiologists.

Dr. Muhamed A. Muhamed, Epidemiologist MoH Tanzania.

L-R: Dr. Muhamed Ally Muhamed (AFENET Fellow), Dr. Faustine Ndugulile (SAFELTP), Mr. David Mukanga (ED-AFENET), Dr. Peter Nsubuga (CDC).

Uganda Ministry of Health

Mr. Luswa Lukwago

I teach at the Makerere University School of Public Health where I supervise and mentor undergraduate and post graduate students. I am currently attached to the Ministry of Health, Epidemic Surveillance Department, where I coordinate the surveillance and response to mainly communicable diseases like Ebola and cholera and supervise junior fellows. We develop epidemic outbreak early warning systems, manage data and provide appropriate information of stakeholders.

We have carried out community based surveillance in five districts, namely Apac, Kabarole, Luwero, Nakapiripirit and Pallisa. I coordinated the response activities during the Ebola outbreak in November 2007 and the Meningitis outbreak in Karamoja in the same year. With my team, we planned and designated the cholera response activities. We have also carried out Investigations of Cholera in Masindi, Plague and Meningitis in Arua and Nebbi districts.

Outbreak investigation in a Kampala suburb.

AFENET has provided fast and timely financial support to MPH students and Ministry of Health staff teams that go out for outbreak investigations.

AFENET has also contributed money to enable MPH students to participate in hands on training. Such funds have been used for surveillance activities, personal allowances while in the field, community mobilization and specimen collection and transportation.

Mr. Luswa Lukwago
Uganda Ministry of Health

Dr. Monica Musenero

I am an AFENET fellow placed at the Ministry of Health in Uganda in the Epidemiological Surveillance Division. My main responsibilities are to investigate and respond to epidemic outbreaks from the Ministry and out in the field.

At the Ministry, we receive and compile surveillance data into a one page report which we then send out as a weekly surveillance bulletin to over 500 recipients at district, national and international levels.

I am on a one year fellowship whose objectives are to acquire experience and skills under supervision; support ministry

Staff in department which is understaffed and consisting mainly of recent graduates and while not employed by the Ministry. I operate like its member of staff. As an AFENET fellow, I am getting very good field experience in prompt outbreak investigations and response. I have also received invaluable experience through visiting the CDC in Atlanta and getting first hand experience of latest practices and technologies. It would be good if the Ministry of Health develop a channel through which to absorb these highly experienced people.

Dr. Monica Musenero MoH Uganda

Field rats breeding in hut behind Dr. Musenero; caused the death of three people through plague in Vurra, Arua district, Uganda.

Inside of hut

Protected hut to prevent plague outbreak.

Dr. Elizeus Rutebemberwa, Field Epidemiologist, Uganda FETP

I design, arrange and coordinate the field program studies of the MPH students. In the field we impart to them the necessary competences, manage and evaluate their activities. The findings of the studies on outbreak investigation are passed on to the ministry of health. We sent five of our trainees to Bundibugyo during the Ebola outbreak, two went to Kasese to investigate an anthrax outbreak and we sent one each to three districts where there was a cholera outbreak. Through this exposure to field investigations, we are happy to report that we have now produced a small but highly experienced and field hardened crop of epidemiologists.

We have also taken over a big percentage of public health management in the country. Over 50% of all district health officers and most HIV/ AIDS program officers have gone through the MUSPH. This is because we have managed to show effectiveness in surveillance, in a decentralized dispensation, in spite of the meager resources available to us. The net result is that most of our graduates remain to work within the country where they can find rewarding opportunities, thereby contributing to making the country a healthier place to live in.

Information about outbreaks normally comes late and is often not indicative enough of the kind of possible outbreak. We are working on developing a more effective outbreak response and are also advocating for the strategic management of information communication methods so that findings on outbreaks reach a wider audience. We plan to mentor people to do follow up studies as cohorts of field surveillance instead of ad hoc studies.

Uganda Laboratorian

Mr. William Lali analyzing specimen for suspected meningitis in Arua, Uganda.

Mr William Lali is a Ugandan alumnus of the Kenya FELTP and is attached to the central public health laboratory of the Ministry of Health Uganda. He has participated in outbreak investigations in Uganda and has been one of the trainers of mid-level laboratorians.

Financial support and management

AFENET's robust financial mechanisms allow the organization to provide financial support in real time to MOHs for disease outbreak investigations and response across the network. To sustain this support, AFENET has improved the secretariat business process by instituting an accounting and operational manual in all the programs and is developing a resource mobilization plan for AFENET to ensure sustainability of the programs.

Communication Systems

An efficient communication system is the lifeline of a vibrant network. With the help of Health System 20/20, a USAID funded project, a consultant was hired to improve the communication system of the network.

The consultant has completed conducting a survey to identify the communication and IT needs of all the programs and the Secretariat and will recommend ways of improving the system.

In the spirit of moving from Data to Action, the Secretariat has developed a pool of resource persons in the network who can be contacted at short notice to provide their expertise. A catalogue of all the program staff, current trainees in the program and all the alumni with their contact addresses and areas of expertise has been put together. This is meant to track experts/resource persons whenever they are needed to manage acute health events. The data base is complete and details on how it can be accessed through a Virtual Private Network (VPN) will be availed to authorized users by the end of March 2008.

Dr. Pascale Krumm from CDC/Atlanta trained two AFENET staff, Dr. Simon Antara and Mr. Simon Kwadje on In-Design Software for the production of the AFENET quarterly Newsletters in Ghana in July 2007.

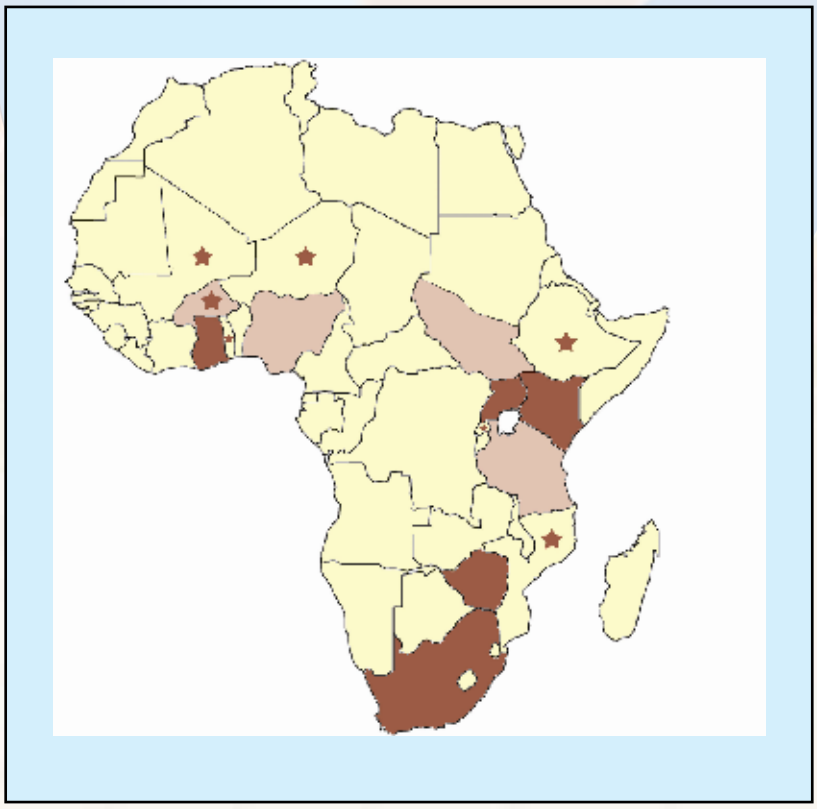
Countries and Programs in Network

Members

Ghana
Uganda
Zimbabwe
Kenya
South Africa

Associate Members

Nigeria
Tanzania
South sudan
West Africa (Burkina Faso)



Country Reports

**"From Science to Action:
Using Field Epidemiology to improve Public Health".**

This theme was selected to bring to our attention the need for all our Programs to generate science that produces positive change in the health secter of our respective countries and region.

Dr Fredrick K. Wurapa, Chair, AFENET Board of Directors
at the opening of the fourth TEPHINET African Regional and Second AFENET Scientific Conference in Kampala, Uganda, December 3 to 7, 2007

Ghana

Ghana FETP established: 1994
Affiliation: University of Ghana, School of Public Health, Accra.

Ghana School of Public Health

Director: Dr. Fred Wurapa
Ghana School of Public Health

The Ghana School of Public Health was established in 1994 with the primary objectives of responding to the professional manpower needs of the Ministry of Health and to address the numerous existing and emerging health care challenges facing the country, through the conduct of research and the training of a wide range of skills in various public health disciplines.

The Mission of the school is to train public health practitioners who will be leaders and change agents for health development in Ghana in particular and the wider African context. The school's philosophy is firmly predicated on the concept of Public Health Schools without Walls - an approach that combines classroom work and field practice.

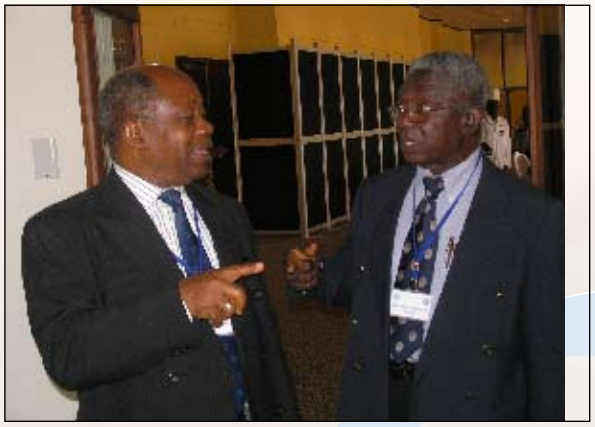
The school has five departments: Epidemiology, Biostatistics, Population, Family and Reproductive Health; Biological Basis of Public Health; Environmental and Occupational Health; Social and Behavioural Science; Health Policy, Planning and Management. It offers courses leading to MPH, M.Phil and PhD degrees.

Master of Public Health Programme

The School admitted its first batch of students for the MPH Program in October 1994. The school has had 192 graduates with backgrounds in medicine, dentistry, nursing, pharmacy, veterinary medicine, and sociology.

The Ghana FETP activities

The Ghana FETP has developed a 2 year M.Phil Program which is fully funded by AFENET. In February 2007, Denise Traicoff from CDC/ Atlanta visited the Ghana School of Public Health to support the program prepare for the M.Phil in Applied Epidemiology and Disease Control course. A proposal was developed and submitted to the Academic Board, College of Health Sciences, University of Ghana, which approved the program. Space was identified and renovations of classrooms and administrative offices done.



L-R: Prof. Edwin Afari, Project coordinator and Dr. Fredrick Wurapa Director FETP Ghana

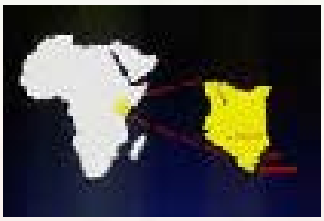
A pre-course workshop for the Ghana M.Phil in Applied Epidemiology and Disease Control program was organized from August 14th -15th 2007 to review the curriculum of the program, semester timetables and to develop and produce training materials. Trainee registration started and Alumni of the MPH program at the School of Public Health were encouraged to enroll in the M.Phil program. Five residents were selected, for the epidemiology, laboratory and veterinary tracks and the course was launched in September 2007.

In the presence of the Minister, AFENET handed over to the Ghana MoH Outbreak Investigation Laboratory kits at a function organized by the FETP. Two staff of the Ghana FETP and two trainees of the Kenya FELTP resident in Ghana were part of the national committee on H5N1 Avian Influenza outbreak investigation and alert in the Tema Metropolis 2007. Ms. Irina Ofei, one of the trainees on the AFENET immunization project, carried out a study on community problem solving and immunization strategy development approach in Asuogyaman District, an island community with difficult access by health workers.

In view of the increased responsibilities there is need to strengthen capacity at the School of Public Health for coordination of project activities. Support will be required to sustain the position of the project coordinator, hire an administrative secretary and to acquire equipment and supplies.

Dr. Maurice Ope (Kenya), Dr. Simon Antara (Ghana), Dr. Martha Muthami, Kenya at the AFENET conference in Kampala.

Kenya



The Kenya Field Epidemiology and Laboratory Training Program

The Kenya FELTP is a field-based program offered through the Institute of Tropical Medicine and Infectious Diseases of theJomo Kenyatta University of Agriculture and Technology and the Kenya Medical Research Institute. The Program established in 2004, is a partnership between the Kenya Ministry of Health and CDC. Funded by the Ellison Medical Foundation through the CDC Foundation, it runs a unique course in applied epidemiology and laboratory management for laboratorians at master's level.

In the first two years, the program took in seven students per year and they were all Kenyans. In 2006, it became a regional course taking in a total of 13 candidates with 6 from Kenya, 1 Uganda, 2 Tanzania and 4 from South Sudan. In 2007, it took in 13 again but instead of 6 Kenyans, 2 Ghanaians were brought in.

The laboratory networks in sub-Saharan Africa are some of the weakest links in the national healthcare systems. Currently the program offers two full-time masters degree courses leading to an award of MSc in Applied Epidemiology and MSc in Laboratory Management and Epidemiology.

The program works closely with the Ministry of Health in undertaking outbreak investigations, training in needs assessments, as well as conducting short training courses tailored to the needs of the Ministry of Health.

The program has taken the lead in investigating and responding to large outbreaks of Aflatoxin poisoning and is currently coordinating response to the Rift Valley Fever outbreak on the Kenyan coast.

Dr. Eric Muchiri
Director Kenya FELTP

Kenya FELTP Activities

The FELTP includes a laboratory track and with funds channeled through AFENET has renovated a bacteriology laboratory and stocked it with new equipment. The data section has been fully renovated and 2 desktop and a laptop computer have been purchased. The lab is also equipped with a fax machine, printer, photo copier and an internet link has been established.
The program is in the process of building a national micro-biology reference laboratory which is needed for practicals with support from GAP.

Dr. Joseph Oundo, Deputy Director, FELTP; Dr. Kariuki Njenga, Head of Dept of Biochemistry, JKUAT and Dr. Joseph Gikunji, JKUAT - the academic supervisors of the two FELTP Kenya trainees resident in Ghana; Dr. Simon Antara and Mr. Dramani E. Kwesi (RIP), visited Ghana in August 2007 as part of the requirements for awarding of the degree to the trainees. The purpose of their visit was to meet with other supervisors to discuss the progress of the residents, assess the data collection sites of the

residents, interact with other field supervisors, review work done by residents of FELTP and review progress of students' research projects.

AFENET supported the investigation of Aflatoxin and Rift Valley Fever outbreaks in Kenya.

Renovations and purchases for the bacteriology laboratory

Renovated office

Photocopier and printer

New workstation

Improving Immunisation Coverage in Siaya District, Kenya, 2006: A case for innovative strategies.

Under the Immunization Research Projects supported by AFENET and USAID, Dr. Jared Omolo from the Kenya FELTP researched on poorly motivated and hostile frontline health workers.

Dr. Jared Omolo at AFENET Conference in Kampala.

His selected interventions included providing customer care training to health workers that have for a long time been unfriendly to clients, particularly mothers bringing their children for immunization, as was happening in Siaya district. Weekly meetings were introduced to discuss staff challenges and a free cup of tea was provided during the meetings.

Dr Omolo presented his provisional research findings to the Fourth TEPHINET African Regional and Second AFENET Scientific Conference in Kampala, Uganda December, 2007.

Proposed Activities

The Kenya program will strengthen the field supervision of FELTP residents, including support for their participation in outbreak investigations. As a starting point, the program will conduct 2-day orientation workshops for supervisors. This will be followed up with monthly field supervisory visits by academic and FELTP program staff. Trainees will be sent out to the field to investigate suspected epidemics and personnel support to enhance field supervision will be enhanced.

The program will seek support to strengthen the public health bacteriology laboratory and will renovate a new classroom and computer room.

The Kenya FELTP will support production of the epidemiological bulletin.

South Africa

FELTP: SAFELTP established in May 2006 and became the 5th member of AFENET in March 2007.

Affiliation: National Institute for Communicable Diseases & School of Health Systems and Public Health, University of Pretoria

Director: Dr. Bernice N Harris

South Africa launched its Field Epidemiology and Laboratory Training Programme (SAFELTP) in May 2006, the second programme to have a laboratory component, Kenya being the other FELTP. Two additional FELTPs will be starting soon in Nigeria and Tanzania.

The South African Department of Health, the National Institute for Communicable Diseases, National Health Laboratory Services, the US Centres for Disease Control and Prevention and the University of Pretoria, established this programme to build epidemiological capacity and strengthen public health laboratory practice in the South Africa.

The programme's main output is graduates with a Masters in Public Health (MPH) and two years supervised work experience and training aimed at strengthening practical skills and knowledge. The students participate in several core modules at the University of Pretoria and NICD and work under a supervisor for the remainder of the two years at a field placement site at national, provincial or district level within the Department of Health and the NHLS. On completion of all the requirements of the training programme, the field epidemiology fellows could take up positions as national and provincial epidemiologists, public health laboratorians, surveillance officers or other relevant positions in the South African public health system.

Mr Dick Ramutshatshani processing outbreak specimens

A limited number of short courses are also presented based upon needs identified by the Department of Health and NHLS.

Activities, highlights and achievements

- Assisted in 11 outbreak investigations
- Undertook 10 surveillance system evaluations
- Conducted 10 analysis of large databases

- Mr. Brett Archer participated in the AFENET *Evaluation of Preparedness and Response to Meningitis Epidemics within West Nile region, Uganda*
- Drs Tetteh and Prentice assisted the Nigerian FELTP programme with the development and teaching of an outbreak short course adapting the SAFELTP course material
- An Advisory Committee meeting was conducted attended by stakeholders from universities, Department of Health, the research community and CDC
- Dr Harris coordinated the Diploma in tropical Medicine and Hygiene for the University of Pretoria
- Dr Harris lectured on managing outbreaks during the SHSPH of the University of Pretoria's "Introduction to Disease Prevention and Control" MPH module.
- Dr Harris assisted Mpumalanga with inter-campaign evaluation of the Measles and Polio campaign
- Dr Elizabeth Prentice and Dr Faustine Ndugulile coordinated a laboratory track curriculum development workshop together with Eric Gogstad, Public Health Advisor, Division of Global Public Health Capacity Development, Coordinating Office of Global Health, CDC, Atlanta. The purpose of the workshop was to further develop the curriculum for the laboratory track of the 2 year residency SAFELTP course.
- Dr Harris participated in the School of Public Health, Wits University's assessment of research protocols for the fulltime MSc Epidemiology and Biostatistics and the MSc Field Based Epidemiology students.
- Dr. Elizabeth Prentice attended the Wellcome Trust Summer School in Bioethics funded by Wellcome Trust.

Collaborations

- The South African National and Provincial Departments of Health
- NHLS
- Other units in the National Institute for Communicable Diseases
- CDC
- University of Pretoria
- American Society for Clinical Pathology

Capacity building

10 residents were enrolled in the MPH accredited programme

320 laboratory managers and technologists in 2 provinces (KwaZulu-Natal and Eastern Cape) were trained in *Quality in Laboratory Practice for Chemistry and Haematology Tests used in the CCMT* at 18 one day workshops.

Presentations

The Fourth African Regional TEPHINET and Second AFENET Scientific Conference, 3-7 December 2007 in Kampala, Uganda

Poster

Archer BN, Crisp N, Tetteh. C Outbreak of wide spread pharyngitis within rural communities of the Kheis municipality, Northern Cape, South Africa, March-May 2007.

Oral presentations

- Nkosi D, Gouws A, Morgan B. Evaluation of the Acute Flaccid Paralysis Surveillance System in Mpumalanga Province, South Africa, March to May 2007.
- Wongama F, Dlamini T, Maimela E.Evaluation of Rabies Surveillance System in Eastern Cape, South Africa, April 2007.
- Gummow B, Hesterberg UW, Roefs YAA, Harris BN. It Takes Two – Practical

examplesof how combining recent South African veterinary and human disease control studies could lead to improved zoonoses control and awareness. 2nd FIDSSA Congress 2007, Cape Town.

Symposia and meetings

- Harris BN. Infectious Diseases Surveillance. The Epidemic-Prone Infectious Disease Symposium of the National Department of Health, Johannesburg
- Harris BN. The Surveillance of Infectious Diseases. Emerging & Re-Emerging Infectious Diseases Conference, Midrand.
- Harris BN. Current status of HIV, Malaria & TB in Sub-Saharan Africa. The European Action in Global Life Sciences (EAGLES) Workshop in Pretoria
- Dr Prentice presented at 'The Global Challenge of Vaccination' an international meeting regarding vaccinology, public health law and ethics in Philadelphia, USA

Visitors to NICD

- USCDC - GPHCD
  Mr. Eric Gogstad
  Dr. Pascale Krumm
  Dr. Tom Chiller
- Dr. Olive Shisana
- Dr. Neil Cameron
- Dr. Stephen Knigh
- Professor John Matjila
- Dr. Lindiwe Makubalo
- Dr Kathleen McEnerney
- Mrs Pat Ellinger

Staff and student achievements

- Mrs Lulu Khumalo, Ms Mmampedi Huma and Ms Phumzile Zondo were awarded the runner up price for their poster presentations at the AFENET conference
- Dr. Elizabeth Prentice is a member of the University of the Witwatersrand Ethics Committee
- Dr. Harris is a member of the National EPI Task Group
- Dr. Faustine Ndugulile is a member of the working group for the Centre for Integrated
- Laboratory training

Funders – The SAFELTP is funded from a combination of different sources:

- PEPFAR
- The South African National and Provincial Departments of Health
- NHLS
- NICD
- CDC
- United States Health and Human Services Pandemic Influenza Fund

Participants, supervisors and facilitators of the first official SA FELTP short course on Outbreak Investigation and Response, May 2006.

SAFELTP residents and representatives of the national, provincial, district and sub-district health teams, WHO and NICD investigating a rift valley fever outbreak in Mpumalanga province.

L-R: Ms Phumzile Zondo (2nd year resident), Ms Thembi (Env. Health Practitioner, Tonga Sub-district, Mpumalanga DoH), Ms Lulu Khumalo (2nd year resident), Mr Mandla Zwane (Provincial Communicable Disease Control Coordinator, Mpumalanga DoH), Ms Christina Nkoane (Communicable Disease Control Coordinator, Ehlanzeni District, Mpumalanga DoH), Dr Lucille Blumberg (Head: Epidemiology Unit, NICD), Mr Wayne Ramkrishna (Communicable Disease Control Directorate, National DoH), Dr Charles Mugero (WHO AFRO).

Uganda

UGANDA FETP Established: 1994
Affiliation: Makerere University School of Public Health, Kampala
Dean: Prof. David Serwadda
Director FETP: Dr. George Pariyo


Prof. David Serwadda


Dr. George Pariyo

MASTER OF PUBLIC HEALTH TRAINING PROGRAMME

The challenge of the Health System in Uganda is to promote, improve and maintain the health of Ugandans equitably and to the optimum level possible with the resources available. Following the introduction of decentralisation in 1993, demand for public health practitioners has continued to grow in health sub-districts now numbering about two hundred. In 1994 Makerere University Institute of Public Health, the Ministry of Health and the Rockefeller Foundation, assumed a joint commitment to implement a Master of Public Health Degree Program, under the auspices of the Public Health Schools Without Walls, in response to this challenge. The two-year MPH Program's methods of teaching emphasize problem-based learning and development of field competencies during students' placements in the districts under the direct supervision of the District Directors of Health Services.

The philosophy of this program has and continues to be the development of high quality and sustainable training strategies that will produce public health leaders and workers prepared to address public health challenges at the national, district and community levels in Uganda. So far more than 150 public health specialists have graduated from courses offered at the School. Graduates have been consultants of the WHO-STOP teams in several African countries. The major strength of the Uganda Program is its institutional autonomy with 22 full-time and over 100 part-time lecturers from governmental, non-governmental organizations, private sector, and international agencies.

MPH by distance learning

In spite of the high number of students graduating every year, the full-time MPH program has been unable to match the growing demands of the sector for public health professionals. MUSPH launched the MPH by distance education in 2004 to further address the challenges of inadequate health professionals. This innovative program enables interested candidates to undertake training while they remain at their work posts.

Makerere University School of Public Health

In 2000, Makerere University Institute of Public Health (MUIPH) was granted full autonomy and in June 2007, the institute was converted into the Makerere University School of Public Health (MUSPH). Initially Public health was under the department of preventive medicine. Its evolution into an institute and now a school of public health caters for growth and development. The school can now have centers and institutes and now has the autonomy to make administrative, financial and technical decisions. The School offers epidemiology and biostatistics; health policy, planning and management; community health and behavioral science; disease control and environmental health. It houses the Regional Centre on Quality of Health Care. MUSPH's main responsibility is training in public health, carrying out research, and providing practical solutions to problems associated with healthcare delivery.

MUSPH Capacity

For a long time, MUSPH has been involved in a number of collaborative research projects with Universities like the Karolinska Institute, Columbia, London School of Hygiene and Tropical Medicine, Harvard, Johns Hopkins, Case Western Reserve University, and other reputable institutions around the world. The teaching and collaborative activities have enriched the experience of the staff at MUSPH. The school manages both research and interventional projects which currently include: The HIV Vaccine Trial, Bridging Gaps; The Academic Alliance for AIDS Care and Prevention in Africa and the Gates Grant for HIV. MUSPH works with the MoH and all those that provide health and medical care in the country, in collaboration with local and international partners.

Health Workers' Training

To achieve its commitment to train health personnel, MUSPH offers a wide range of undergraduate, graduate and short courses. The undergraduate courses are for Medical students who include medicine, pharmacy, dental and nursing and a bachelor's course in environmental health sciences.

Program Activities

Outbreak Investigations

The AFENET Secretariat supported trainees and faculty from the Uganda FETPs and teams of epidemiologists from the Uganda MoH to investigate and respond to outbreaks. Outbreaks investigated include; plague in Masindi District, anthrax in Kasese District, Cholera in Kampala District, evaluation of Meningitis outbreak preparedness and response activities in the Karamoja and west Nile regions, Marburg outbreak in Ibanda and Kamwenge Districts, testing of piped water for faecal contamination in Kampala District Uganda and the Ebola outbreak in Bundibugyo District. Reports of the outbreaks investigated are available at (www.afenet.net/english/news.html) (www.who.int/csrdisease/marburg/en/index)

Multi-country collaboration: Evaluation of Meningitis outbreak investigation and response in Uganda

Uganda experienced two waves of meningococcal meningitis epidemics. The first wave was from April to July 2006 and the second wave from January to March 2007. Response efforts were mounted by the MoH, Makerere University Institute of Public Health, WHO, MSF, UNICEF and many other agencies in health. This was essentially through initial investigations, case management and community sensitization. An evaluation of the preparedness and response

activities to these outbreaks in the affected districts was organized by AFENET, WHO and the MoH to assess the gaps and identify areas of improvement. The whole exercise was co-sponsored by AFENET and WHO Uganda office.

The AFENET Secretariat requested FE(L)TP directors of the five programs under AFENET to select trainees from each Program to attend this evaluation exercise that was to take place in July 22nd to the 28th 2007. We had six trainees from the Uganda program, two from the Kenya program, one from Zimbabwe and one from South Africa. All their expenses were covered by the AFENET Secretariat.

The team comprised of epidemiologists from AFENET, WHO Uganda office, CDC-Uganda, the Uganda MoH, and faculty from the Uganda FETP who carried out the evaluation. Each team was assigned trainees to work with. Reports of the outbreaks investigated and the trainees' experiences in the field are available at(www.afenet.net/english/news.html) (www.who.int/csrdisease/marburg/en/index)

Kampala conference

AFENET together with the Makerere University School of Public Health hosted the regional scientific conference from December 3rd to 7th, 2007 in Kampala, Uganda. The conference was co-sponsored by AFENET, TEPHINET, CDC, USAID, WHO, and other local and international partners. The theme for this year's conference was **"From Science to Action: Using Field Epidemiology to Improve Public Health."** (www.tephinet-afenet-conference.com)

Support to Ministry of Health

- In January 2002 MUIPH with support from CDC)/Department of Health and Human Services (HHS), undertook a commitment to develop HIV/AIDS management and research capacity in Uganda. The aim of the program is to build capacity for high quality HIV/AIDS prevention, care, and treatment and support services.
- AFENET availed funds to the Uganda MoH for the production of IDSR's. The bulletins are printed and circulated to the MoH, the districts, MUSPH and to AFENET partners.
- 4 AFENET Fellows at the Ministry of Health.
- Marburg hemorrhagic fever in Uganda - August 2007: An international team, including experts from WHO, CDC, MSF,UVRI, AFENET and local NGOs supported the Uganda MoH, to strengthen active surveillance, contact tracing, infection control, logistics and social mobilization activities to contain this outbreak.

Support to trainees

- The AFENET secretariat together with MUSPH assisted trainees to make presentations at the TEPHINET and AFENET Conference

Program Planned Activities

1. Improve district and sub-district capacity to investigate and respond to outbreaks of IDSR priority diseases
2. Carry out focused surveillance in Internally Displaced People's Camps in Northern Uganda and Karamoja region
3. Strengthen the use of data for decision making at different levels of health care
   - Support the production of the MOH/IDSR quarterly bulletin
4. Enhance knowledge and skills of MPH students and health workers for outbreak investigations and response
   - Conduct short courses in epidemic mapping and field mapping of epidemics

Cross-cutting activities

1. Support coordination of activities at MUSPH and support for personnel
2. Field Supervision and training of rapid response teams at District and Health Sub-district level by MUSPH/MOH personnel.

Zimbabwe

Zimbabwe FETP: Established 1993
Affiliation: University of Zimbabwe Department of Community Medicine (DCM), Harare
Director: Dr. Mufuta Tshimanga


Director: Dr. Mufuta Tshimanga

MPH program

Through the support of the Rockefeller Foundation Public Health Schools Without Walls Initiative, the MPH program was launched in 1993. The MPH program is a joint collaboration with the DCM and the Ministry of Health and Child Welfare (MoHCW). It is currently the only masters level public health training program in the country. Zimbabwe was the first to develop such a program, and drawing upon its experience, subsequent programs were launched in Uganda, Ghana and Vietnam. The MPH program has subsequently trained over 90% of the current public health leadership in the country.

Centre for evaluation of public Health Informatics

The centre for the Evaluation of Public Health Informatics (CEPHI) and the Health Informatics Unit were Set-Up in the DCM with support from the CDC in 2001 – 2004. The centre has a state of the-art computer training room, with 36-networked PCs. The CEPHI has undertaken an evaluation of Total Control of the Epidemic (TCE) intervention, supported by the Development AID People-to-People.

In partnership with the German Agency for Technical Cooperation (GTZ) it mounted a training course in 2002 on monitoring and evaluation for GTZ's grantees. Also in partnership with CDC and the National AIDS Council (NAC), CEPHI organized a workshop on the development of national indicators for monitoring the HIV/AIDS epidemic. CEPHI has begun to work with the NAC to provide HIV/AIDS training in relation to monitoring and evaluation.

University of Zimbabwe

The University of Zimbabwe is the oldest and most well established of the 7 universities in the country. A public university founded in 1953, is also the largest in the country. The University's Medical School, renamed the College of Health Sciences, which started in 1963 is the largest faculty in the university with over 18 Departments.

The Department of Community Medicine at the University of Zimbabwe houses the community medicine and public health disciplines. Its academic disciplines include biostatistics, epidemiology, environmental health and occupational medicine, maternal and child health, health economics, health management and

planning, health education and health promotion, and general public health. While the DCM has been affected by staff resignations, as is the case across the University and the country, it is one of the better-staffed departments in the College of Health Sciences, with 9 of its 13 posts currently filled with full-time faculty.

Faculty members are actively involved in research, and the DCM is associated with one of the largest research programs in the College of Health Sciences. One of the studies is a multinational collaborative trial, the Community Popular Opinion Leader Model being tested in the prevention of HIV in rural African settings.

Partnerships with other Universities in Zimbabwe

The University of Zimbabwe still retains the highest status of training in public health by virtue of being the base of the Medical School offering courses in public health. There are however immense benefits for the Global Fund efforts to be spread to encompass activities in place and planned by other universities in the field of public health training and research. Already, Africa University and the National University of Science and Technology (NUST) are offering public health and related courses (Environmental Health) and this could increase the supply of public health practitioners.

Centre for Public Health Research and Training (CPHRT)

The Centre for Public Health Research and Training is an initiative of specialists in a variety of public health disciplines of relevance to improving the public health profile of Zimbabwe. It is intended to develop and provide relevant research and training to health workers in Zimbabwe, Southern Africa and the SADC region. It particularly focuses on research and training for technical expertise in linking research to policy in public health.

Zimbabwe FETP Activities

The program hired a full time Laboratory epidemiologist, an administrative secretary and a field coordinator for the financial year September 2006 to August 2007. A laboratory training course for 18 mid level laboratory technicians was piloted in September 2007.

As part of the Immunisation Research Projects supported by AFENET and USAID, Addmore Chadambuka presented a paper at the TEPHINET and AFENET conference in Kampala on: *Situational Analysis of Factors that affect Immunisation coverage in Gokwe, South Zimbabwe.* He examined how outreach programs to areas with poor access to health services had collapsed due to lack of transportation for frontline health workers. The Selected Intervention was the lobbying of health officials to prioritize fuel allocations to EPI activities, allowing frontline health workers to undertake regular outreach services and to use bikes and scotch-carts rather than vehicles. 10 bikes are already available in the district.

The program encountered a number of unexpected administrative and personnel setbacks, which constrained implementation of activities as planned. Mitigation measures to reduce the bottlenecks and ensure smooth running of the program are being instituted.

Proposed activities

The program will strengthen national surveillance of emerging and re-emerging infections through provision of guidelines and laboratory support.

It will carry out regular and timely dissemination of surveillance data through production and e-mailing of weekly surveillance bulletins. Support will be given to students' projects on surveillance and for outbreak investigations by students. Students will get support to hold monthly meetings and a short course on excellence in reporting science and the production of an epidemiological bulletin will be funded. The program will support health workers to deal with disease outbreaks through equipping MPH trainees and district staff with appropriate skills, to competently investigate and document an outbreak investigation and response.

To improve the capacity of laboratories to participate in surveillance and outbreak response, a short course in laboratory techniques and management will be conducted. Field supervision visits by academic and program staff to support MPH and laboratory trainees will be made and laboratory management and surveillance course materials developed. The program plans to run short courses in laboratory management and surveillance for Laboratory scientists.

Nigeria

Nigeria FELTP

Nigeria FELTP: Being established
Affliation: University of Ibadan has a field epidemiology training program.

Opening a stakeholders workshop.

The objectives of the Nigeria FELTP is to strengthen capacity to respond to public health emergencies, improve laboratory participation, strengthen linkage between veterinary epidemiology and public health, provide evidence for decision makers, train public health leaders with emphasis on problem solving and provide epidemiologic service to federal, state, and local government health authorities. At the beginning, the program will therefore, require a Program Director, an Epidemiology Resident Advisor (FELTP/EIS graduate), a Public Health Laboratory Resident Advisor, a Veterinary Epidemiology Consultant an Epidemiology Training Coordinator, a Public Health Laboratory Training Coordinator and administrative Support.

A 2-year FELTP with 25% didactic, 75% field and leading to an MPH in Field Epidemiology and an MPH Laboratory Management and Epidemiology commenced in October 2007. The first intake has 7 field epidemiologists, 4 public health laboratorians and 2 veterinary epidemiologists.

Several short courses for the current health personnel have been introduced in surveillance (IDSR) and outbreak investigations, HIV interventions and Quality Laboratory Systems among others. Field Epidemiology and Public Health Laboratory Management and Epidemiology are offered for Federal or State MOH Employees with 2 years prior relevant experience, while Veterinary Epidemiology is offered to Federal or State Employees.

Assessment Methodology

In March 2007, an assessment team visited Nigeria to evaluate Nigeria's needs for establishing an FELTP and joining AFENET. Assessment and planning were done through a stakeholders' workshop and field visits. A steering committee was launched and the key next steps mapped out.

Prior to the visit a scoping mission for advocacy went to WHO, DFID and USAID. Assessment tools were sent to the Federal and 4 State Ministries of Health, the Central Public Health Laboratory, the National Institute for Medical

Research and 4 Universities. During the visit the team assessed the organization of the Public Health System, the epidemiologic capacity, surveillance systems and laboratory support for surveillance, communication, veterinary component, training programs and logistics for the FELTP. The team made a courtesy call on the Minister of State for Health and conducted a stakeholders' workshop.

The workshop evaluated public health surveillance and response systems in Nigeria at all levels, public health laboratory structure and function, university courses in public health and epidemiology, structure and function of veterinary public health systems and analysed the objectives and design of an FELTP. Two field teams were formed with team one visiting ABU, Jos SMoH, NVRI and NTBLTC and Team two visiting CPHL, NIMR, and UI. Sensitization visits to partners were made and the Minister of Health inaugurated the steering committee at the end of the trip. A time line of key next steps and a draft proposal were prepared.

Participants at the Stakeholders' workshop were drawn from the Federal MoH, Universities -ABU, UDUS, UI, UNN, Office of the Head of Service, Public Health Directors from SMOH, Anambra, Kano, Lagos, Yobe, the , Federal Ministry of Education, CPHL, National Arbovirus and Vector Research Center, Veterinary, NVRI, FMAWR, Veterinary Public Health Department, Development Partners, WHO, USAID and CDC.

Achieved Consensus

It was agreed that there was urgent need for field epidemiology, public health laboratory epidemiology, and linkage with veterinary epidemiology in Nigeria.

The key characteristics of the Nigerian FELTP, its likely candidates, likely structure, service components and the key concerns that need to be addressed were identified. Terms of reference were developed and initial membership agreed upon.

Need for Field and Laboratory Epidemiologists

It was found that whereas many public health professionals are trained the current type of epidemiological training is predominantly academic. Only the University of Ibadan had a field epidemiology training program. Four-year post medical training residency programs exist in public health, run by public health schools and medical universities which lead to a community/public health specialization that is well recognized in Nigeria and West Africa. This training however, has limited applied, field-oriented public health. CPHL is facing challenges as it tackles its large mission. No postgraduate programs produce laboratory epidemiologists, despite the need and the Laboratory system is weak and below the federal level.

Although there are strong national, academic and research laboratories, there is a need to strengthen laboratory capacity and networks at lower levels. There is an unmet need to develop a cadre of Field Epidemiologists (medical and veterinary) to spearhead the investigation of outbreaks and other acute health conditions and guide the health services in Nigeria. There is an unmet need to develop Public Health Laboratory Epidemiologists and Managers that will administer the laboratory services in the country, improve and implement quality systems, and strengthen linkages with public health.

Program Activities

In March 2007 a mission from AFENET visited Nigeria and in April a proposal for the establishment of an FELTP was finalized. The next three months were dedicated to resource mobilization and curriculum development, In June a short course on Outbreak Investigation was conducted and a Steering Committee Meeting held.

With the approval of the curriculum in August, the program was set to start in September/ October 2007. However, this was pending funding for the selection and recruitment of key staff, preparation of office space, training space, and Fellows accommodation. Selection and recruitment of Fellows, development of field sites and the formal launch of Nigeria FELTP are still to take place.

Stakeholders' meeting

Laboratorians

South Sudan

The Sudan Health Transformation Program (SHTP) was conceived and designed as a broad program under which the USAID/SFO and partnering organizations and agencies would improve the health conditions of Southern Sudan populations. The SHTP would essentially follow the national health policy of the SPLM Secretariat of health.

The mission of the SHTP is: To contribute to the improvement of the quality of life of the community by promoting good health through universal, comprehensive and community based health care.

CDC was tasked to implement one of the focus areas: Technical Support to the National Health Secretariat and county health departments through strengthening communicable diseases surveillance and improving disease outbreaks.

Southern Sudan adopted the WHO/AFRO strategy for IDSR in June 20007, which emphasizes that the epidemic prone and other priority diseases are reported using a common approach.

IDSR aims at improving early detection and reporting: strengthening capacity to confirm cases; improving promptness of reporting for timely action; increasing the value and strengthening data use for decision making, ensuring regular feedback and dissemination of information; enhancement of knowledge and skills of health workers and improving the quality of surveillance performance through improved quality of support supervision.

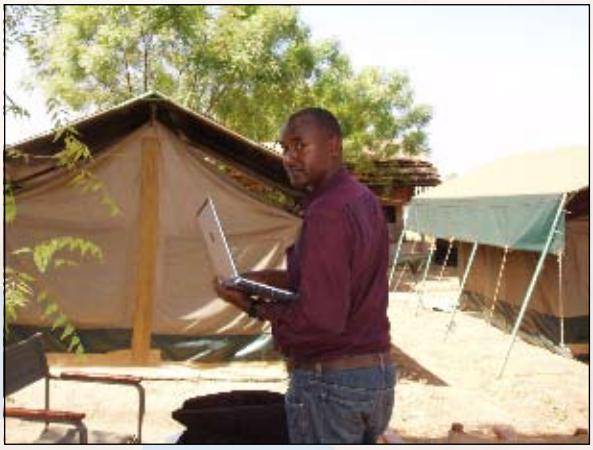
Objectives

1. Strengthening applied epidemiology and laboratory management
2. Strengthening communicable disease surveillance system
3. Improving the disease outbreak investigation and response.

Achievements of AFENET in Southern Sudan

1. Recruiting and posting an epidemiologist in the MoH to give Technical support and advice to the MoH Epidemiology Surveillance Division regarding the implementation of integrated disease surveillance.
2. Responded to outbreaks in collaboration with WHO mandate Ministries of Health. Recently responded to a suspected meningitis outbreak in Torit County, Equatoria State.
3. Supported the development of the epidemic and preparedness plan for the MoH and the states.
4. Participated fully in the Epidemic preparedness and rapid response (EPR) team planning meetings at the central level and member of EPR.
5. Mentoring of the students who are under the FELTP and are based in the epidemiology surveillance division.
6. Currently in the process of developing strategies and methods to improve the quality of data collected and disseminated after analysis.

7. The first issue of the monthly surveillance bulletin will be available at the end of February 2008.



Dr. Allan Mpairwe, AFENET Epidemiologist in South Sudan.

Ms. Sarah Nakendo and Dr. Allan Mpairwe from AFENET Secretariat, with Dr. Majok, Undersecretary MoH GoSS; and Charles Okello, Kenya FELTP, in Juba, South Sudan.

Ms. Sarah Nakendo, AFENET Administrator at staff office/quarters in Juba.

Dr. Mugo Mwita, CDC Technical Advisor to South Sudan Program.

Tanzania

Tanzania Field Epidemiology and Laboratory Training Program (TFELTP); An Assessment and a Proposal

FELTP Established: TFELTP will be established in October 2008
Affiliation: Muhimbili University of Health and Allied Sciences, National Institute for Medical Research, Ministry of Health and Social Welfare and CDC
Director: Dr. Peter Mmbuji

Team setting up the Tanzania FELTP

Establishing the FELTP in Tanzania

Preparations to start an FELTP in Tanzania began in 2004. In 2005, Tanzania sent its first cohort of 3 students to enroll in the FELTP program in Kenya with the aim of building a core training team ready for an FELTP in Tanzania. In January 2006, Dr. Chris Tetteh, Kenya Regional FELTP Coordinator, during a supervisory visit to the three Tanzanian MoH trainees in the program, further promoted the idea. This was well received and boosted efforts to revive the proposal. Subsequently, a working group was organized to further develop the idea and develop a plan. This working group was composed of representatives of the Ministry of Health and Social Welfare (MoH SW), including the Department of Prevention Services, the Diagnostics Services Unit (laboratory service), NIMR, the WHO Country Office; CDC-Tanzania representative and the three Tanzania FELTP Residents.

Capacity Assessment for Project Management

In October 17-20, 2006, the Executive Director of AFENET, Mr. David Mukanga and Mr. Wayne Brown of CDC, met with the members of the working group in Dar es Salaam, to participate in an assessment of the potential for an FELTP and to develop an appropriate proposal. Assessment focused on topics known to be important for a successful program: needs and outcomes desired by the Ministry of Health and Social Welfare; accreditation; responsibilities of the program manager/course director and staff; recruitment and class size; career paths for graduates; competencies to be developed and the training curriculum; host site/organizational

location of program; field work sites and the placement, and supervision of trainees; integration of the program into the Ministry and its long-term sustainability; budget and funding. The findings showed that an FELTP is needed and there were many capable staff with the will to make it a success.

Public health in Tanzania

Tanzanians suffer from many diseases commonly occurring in the region, as well as recurrent outbreaks of severe yet preventable diseases such as cholera, bacterial meningitis and measles. Since the late 1990's, responsibility for provision of health services has been devolving to the districts and are directed by local governments. Disease surveillance is coordinated at both the national, regional and district levels, however much of the technical assistance in outbreak investigation and control is provided by the national level. All levels lack adequate health professionals, including the epidemiology section, which has only one qualified person. Tanzania has no national public health laboratory and similar needs exist for laboratory personnel trained in epidemiology to be effective members of surveillance and outbreak investigation teams at the national and regional levels.

TFELTP

The Tanzanian Field Epidemiology and Laboratory Training Program (TFELTP) is a 2-year in service training program in applied epidemiology and public health laboratory practice, created to be a long-term ongoing program within the Ministry of Health and Social Welfare. It trains Field Epidemiology and Public Health Laboratory Fellows for leadership positions in the Tanzanian health service.

The fellows will provide service to the Ministry of Health and Social Welfare during their training. The program is co-sponsored by the MOHSW, NIMR and CDC. The field epidemiology component is modeled after the CDC 2-year EIS training program.

TFELTP Goals and Objectives

The TFELP has two pre-eminent goals namely: to develop a self-sustaining institutionalized capacity to train public health leaders in field epidemiology and field-oriented public health laboratory practice; and to provide epidemiological services to the public health system at national, provincial, district and local levels.

The primary objectives are to train leaders in applied epidemiology and public health laboratory practice with emphasis on solving problems of public health concern and to provide field epidemiologic services in Tanzania. TFELP has five secondary objectives namely to: strengthen capacity to respond to public health emergencies such as outbreaks, natural disasters, and other unusual public health events including those that could be a result of chemical or biological terrorism; strengthen surveillance systems; strengthen laboratory participation in surveillance and field investigations; conduct research activities on priority public health problems; improve communications and networking within the country and throughout the region and strengthen affiliations with international organizations, such as TEPHINET and AFENET.

TFETLP Course

The course is a two-year, full-time program involving approximately 25% class room

attendance and 75% field placement, during which fellows are assigned to positions directly involved in providing epidemiologic and laboratory assistance to the MOHSW. The fellows will have frequent travel to all regions of Tanzania for supervised investigations and special projects.

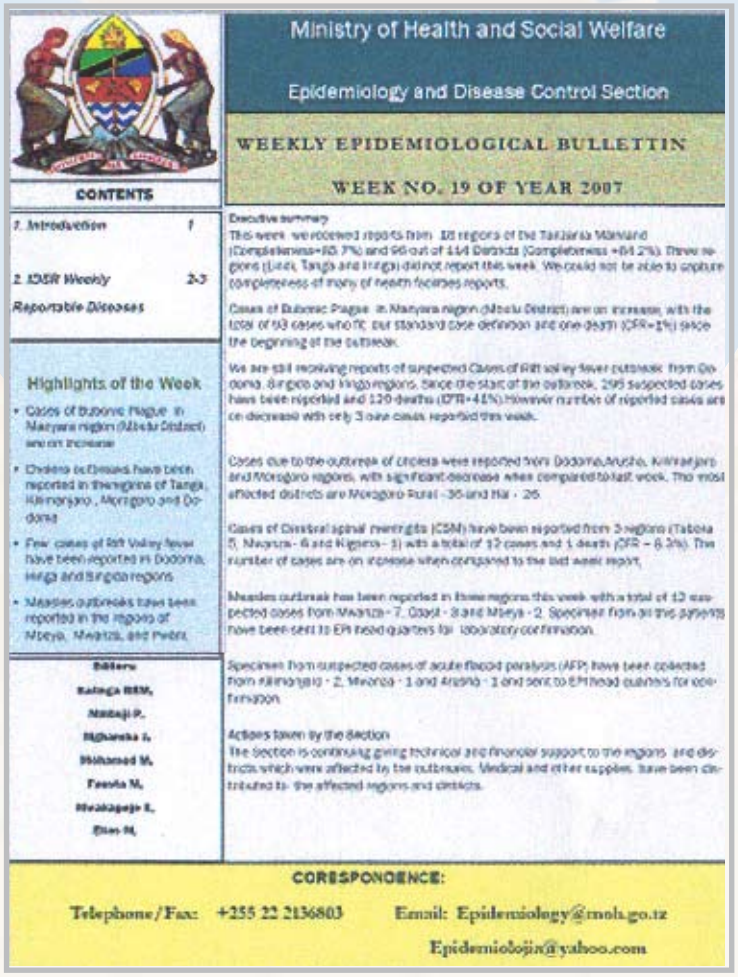
The program begins with an intensive classroom course to review basic concepts of biostatistics, epidemiology, field investigations, and public health laboratory techniques. Since the Tanzania program contemplates university accreditation, with an MSc being awarded upon successful completion, the length of the classroom training will correspond to an academic term or other standard. The applied epidemiology fellows will then be assigned to work in the MOHSW, in a section that is responsible for the collection and analysis of surveillance data, and for responding to requests for epidemiologic assistance that come from regional and local health authorities. The public health laboratory fellows will be assigned to work in a laboratory such as the National Institute for Medical Research, the National Public Health Laboratory or a zonal laboratory. Laboratory fellows might rotate through more than one laboratory during their two years. The laboratory personnel, while in their field assignments, will participate fully in surveillance, outbreak investigations and special studies that are a part of the field experience. Fellows will have a mentor/technical supervisor to guide them in this educational process. During the two-year training period, the trainees will also participate in up to five additional specialized courses of one or two week's duration each.

Ms. Angella Weaver (USAID) and Dr. Peter Nsubuga (CDC) congratulate a participant at the Outbreak Investigation and Laboratory Management course in Dar es Salaam.

Dr. Mohamed A. Mohamed investigates Rift valley fever outbreak investigation in Manyara region, Tanzania, 2007.

- At the invitation of the MoH in Tanzania, AFENET in collaboration with CDC undertook a needs assessment in October 2006 for the establishment of an FELTP in Tanzania. Funds for the program have been identified and the program will start in October 2008.
- AFENET supported the investigation of Rift Valley Fever outbreaks in Tanzania, and piloted a laboratory training course for mid-level laboratory technicians in November 2007.

AFENET and CDC technical advisors meet officials of the proposed Tanzania FELTP and MOH officials.



Ministry of Health and Social Welfare

Epidemiology and Disease Control Section

WEEKLY EPIDEMIOLOGICAL BULLETTIN

WEEK NO. 19 OF YEAR 2007

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2. IDSR Weekly Reportable Diseases 2-3

Highlights of the Week

- Cases of Bubonic Plague in Manyara region (Mbulu District) are on increase
- Cholera outbreak have been reported in the regions of Tanga, Kilimanjaro, Morogoro and Dodoma
- Few cases of Rift Valley fever have been reported in Dodoma, Iringa and Singida regions
- Measles outbreaks have been reported in the regions of Mbeya, Mwanza, and Pwani

Editors

Ratnga BBM,

Mmbuji P.

Mghamba J.

Mohamed M.

Faonia M.

Mwakagenja E.

Elias M.

Executive summary

This week we received reports from 20 regions of the Tanzania Mainland (Completeness=80.7%) and 96 out of 144 Districts (Completeness =84.2%). Three regions (Lindi, Tanga and Iringa) did not report this week. We could not be able to capture completeness of many of health facilities reports.

Cases of Bubonic Plague in Manyara region (Mbulu District) are on increase, with the total of 93 cases who fit our standard case definition and one death (CFR=1%) since the beginning of the outbreak.

We are still receiving reports of suspected Cases of Rift valley fever outbreak from Dodoma, Singida and Iringa regions. Since the start of the outbreak, 295 suspected cases have been reported and 120 deaths (CFR=41%).However number of reported cases are on decrease with only 3 new cases reported this week.

Cases due to the outbreak of cholera were reported from Dodoma,Arusha, Kilimanjaro and Morogoro regions, with significant decrease when compared to last week. The most affected districts are Morogoro Rural - 36 and Mvi - 26

Cases of Cerebral spinal meningitis (CSM) have been reported from 3 regions (Tabora 5, Mwanza - 6 and Kigoma - 1) with a total of 12 cases and 1 death (CFR = 8.3%). The number of cases are on increase when compared to the last week report.

Measles outbreak has been reported in three regions this week with a total of 12 suspected cases from Mwanza - 7, Dodoma - 3 and Mbeya - 2. Specimen from all the patients have been sent to EPI head quarters for laboratory confirmation.

Specimen from suspected cases of acute flaccid paralysis (AFP) have been collected from Kilimanjaro - 2, Mwanza - 1 and Arusha - 1 and sent to EPI head quarters for confirmation

Actions taken by the Section

The section is continuing giving technical and financial support to the regions and districts which were affected by the outbreaks. Medical and other supplies have been distributed to the affected regions and districts.

CORESPONDENCE:

Telephone/Fax: +255 22 2136803 Email: Epidemiology@moh.go.tz

Epidemiologia@yahoo.com

This bulletin was developed with technical support from fellows Drs Peter Mmbuji, Mohamed Ally Mohamed, and Janneth Mghamba.

West Africa

West Africa - Multilateral Participation

West Africa Field Epidemiology and Laboratory Training Program (WAFELTP): Burkina Faso, Mali, Niger and Togo
Established: December 2007

Affiliations: WHO Multi Disease Surveillance Centre (MDSC) and the University of Ouagadougou, UFR/SDS, Ouagadougou, Burkina Faso.

Interim Coordinator Dr. Sennen Hounton

The MDSC was created in 2003 by WHO AFRO whose main objective is to serve as a lab based reference center for surveillance and response to epidemic prone diseases in the West Africa region.

The MDSC has 4 main pillars

1. Regional Enhanced Surveillance in the framework of integrated Disease Surveillance and Response (IDSR), including epidemic prone disease, Information Sharing & Network Communication;
2. Reference Laboratory with Quality Assessment/Quality Control comparative advantage including Bio Security;
3. Capacity Building based on Research & Training; strengthening of countries in disease surveillance and response;
4. Operation's Hub for Epidemic Alert & Response with support to country for IHR implementation.

The centre is at the forefront of the development, evaluation of impact and introduction of a new meningitis conjugate vaccine Men A in partnership with WHO, PATH, CDC, through the Meningitis Vaccine Project which aims to "eliminate epidemic meningitis in Sub Saharan Africa".

WA FELTP

MDSC, in partnership with the US Centers for Disease Control and Prevention (CDC), has started a regional Field Epidemiology and Laboratory Training Program (FELTP). This program will train field epidemiologists and public health laboratorians to work in teams to identify and respond to outbreaks and other public health emergencies, as well as provide service to the Ministries of Health in participating countries and ultimately strengthen public health systems within these countries.

The program will focus on the first four countries, **Burkina Faso, Mali, Niger and Togo** and will

expand to other French speaking countries in the region. It will contribute to the control of epidemic prone diseases including Meningitis, Cholera, Avian Influenza etc, by providing countries with services-the percentage change in knowledge scores from pre and post tests; the presence of IDSR bulletins and improvements in IDSR core indicators.

In short, the WA FELTP has just been established, it is affiliated to MDSC and the University of Ougadougo (Burkina Faso), it involves universities and MoH from participating countries and the curriculum development for the full two years course is under way.

Curriculum Development

A short course curriculum has been developed on Field epidemiology and Outbreak Investigations. The first course will commence in March/April 2008.
www.afenet.net/english/est_africa.html

Key events during year

Uganda and Africa at large continues to face numerous health challenges, epidemics, and humanitarian disasters. These epidemics and disasters affect entire regions, and not individual countries alone; these epidemics do not respect man-made boarders. Networking of our public health institutions, Ministries of Health and other health agencies across countries is key to the control of these disasters.

Networks like the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET), and the African Field Epidemiology Network (AFENET) help us bring us together as countries to address threats to the health of our populations.

AFENET has also been providing financial support in real time to the Ministry for disease outbreak investigations and response. Examples include the recent Marburg and meningitis outbreaks, as well as the current Ebola outbreak in the west of the country.

Dr. Emmanuel Otalla , Minister of State for Primary Health Care at the Opening of the 4th TEPHINET and 2nd AFENET Regional Scientific Conference, Kampala, Uganda.

1 The Fourth African Regional TEPHINET and Second AFENET Conference were held on 3-7 December 2007 in Kampala, Uganda. The theme for this conference was: **"From Science to Action – Using Field Epidemiology to Improve Public Health"**. The conference included invited keynote presentations, workshops, juried oral and poster presentations, round-table discussions and an opportunity to network with colleagues from Africa and around the world.

2 The AFENET Trainees' Immunisation projects.

3 Marburg haemorrhagic fever outbreak in Uganda - August 2007. Laboratory tests on blood samples from Kampala and Kamwenge performed by the (CDC), Atlanta, USA confirmed Marburg virus infection. An international team supported MoH, Uganda to strengthen active surveillance, contact tracing, infection control, logistics, and social mobilization activities to contain this outbreak.

4 Ebola VHF Outbreak in Bundibungyo District Uganda, November 2007.

Ebola Viral Hemorrhagic Fever (EVHF) is a severe often fatal disease in humans and in nonhuman primates such as monkeys, gorillas and chimpanzees. The disease is caused by infection with Ebola Virus (named after a river in the Democratic Republic of Congo). Ebola Virus is a single strand RNA virus of the *Filoviridae* family, *Ebolavirus* genus. Clinical manifestation of the disease consists of nonspecific symptoms such as fever, weakness, muscle/joint pains, headaches, conjuctival injection, vomiting, diarrhea and more specific symptoms such as internal and external bleeding tendencies. Isolation of Ebola virus requires Bio-safety Level 4 containment.

Transmission of EVHF is by direct contact with body fluids from infected individuals. The Case Fatality Rates (CFR) of Ebola virus ranges from 41 – 89%. There is no definitive treatment for EVHF and treatment is mainly supportive revolving around rehydration, electrolyte balance and intensive care. Isolation of symptomatic

cases, proper and consistent use of personal protective gear and close follow up of contacts are the main ways of controlling spread of EVHF.

Since 1976, when the Ebola virus was first recognized, sporadic outbreaks have been reported in a number of countries. Confirmed human outbreaks of EVHF have been reported in the DRC (1976/1995), Gabon (1996/1997, Sudan (1976) and Uganda (2000). In 2007, two EVHF outbreaks were reported in the DRC in Kampungu and in Uganda in Bundibungyo. The major EVHF outbreaks were the Ugandan (2000) with 426 cases (223 deaths, CFR 52%) the DRC outbreaks where over 300 cases were reported in each of the outbreak with a CFR of over 80%.

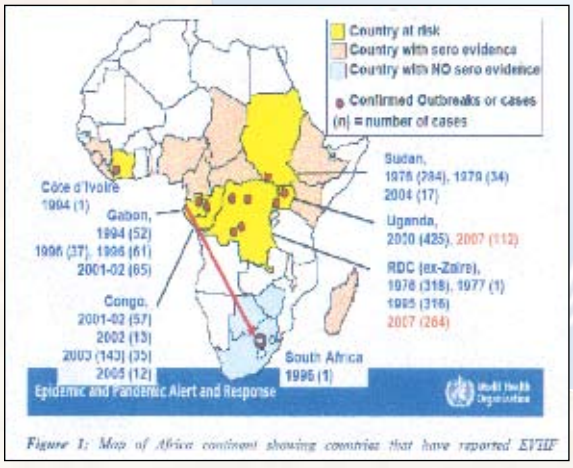

Figure 1: Map of Africa continent showing countries that have reported EVHF

www.afenet.net/english/news.html

Background

In early November, 2007, health officials of the Bundibugyo district of Uganda, bordering the DRC, notified the MoH-Uganda, of an outbreak of a febrile disease in the district. Initial reports indicated that the disease had caused 20 deaths. On November 29th 2007 the Ugandan MoH confirmed that there was an EVHF outbreak. By the time of confirmation 51 suspected cases had been recorded with 16 deaths a fatality rate of 31%. In August 2007 a major EVHF outbreak was reported in the Kampungu area in the DRC, which is over 600miles South West of Bundibugyo, across the dense equatorial forest. Bundibugyo district has a total population of 253,493 (UBOS, 2005). The district has one hospital, three major Health Centers and 5 minor health facilities.

Following the confirmation of EVHF outbreak in Bundibugyo the MoH Uganda formed a multi-disciplinary National and District task forces to spearhead outbreak investigation and response. The task forces at the national and district levels consisted of 5 sub-committees namely Coordination, Epidemiology and Surveillance, Case Management, Social Mobilization, Logistics and Supplies.

AFENET involvement

AFENET was invited by the Ugandan MoH to offer technical expertise in outbreak investigation and response. It joined other national and international organizations including, WHO, CDC, MSF, WFP, UPDF, URCS and UNICEF, that participated in the outbreak investigation under the coordination of Ugandan MOH.

AFENET was represented in all aspects of the investigation and response to the outbreak at the national and district task forces by four Epidemiologists, namely Dr Patrick Mboya Nguku, Dr Allan Mpairwe, Dr David Mutonga and Dr Olivia Namusisi and one Laboratory Scientist Mr John Mwihia. AFENET was actively involved in daily planning and review meetings and contributed to preparing the response plan and managing information for the public and news media.

Epidemiology and surveillance

AFENET, aided by village health teams, was particularly involved in active case search and contact tracing and follow ups, critical in stopping EVHF chains of transmission. This exercise was perhaps the single most significant factor that limited the spread of the outbreak. The AFENET team created the Epi-info database for cases and contacts, which provided timely information on current chains of transmission and key risk factors for the spread of the outbreak.

EPI-INFO Centre MUSPH

They constantly updated the task force members on preliminary descriptive epidemiology as the outbreak evolved. This was particularly crucial in hypothesisizing on possible risk factors of this outbreak. The contact database was based on WHO/FIMS and provided real-time transmission chains of the outbreak, thus enabling prioritizing of the areas that the contact tracing teams were to visit to search for and monitor contacts.

Lessons learnt

Coordination is key in achieving timely control of an outbreak. The mandate and roles of each of the various committees should be clear and all agencies should work under an operational structure to avoid duplication of efforts.

Strengthened surveillance is an important activity in control of Ebola and continuous consultation between the surveillance, ambulance and burial teams is required in Ebola control. Isolation of symptomatic cases, supervised burials for deceased cases and follow-up of contacts are key interventions.

Timely and well coordinated mobilization and release of funds for control activities would ensure smooth operation of various activities. Make preparedness plans and contingency funds and Strengthen infection control in health facilities. A significant number of cases and fatalities are found among the health care workers. Strengthen capacity in infection control through training and supply of necessary protective equipment. Use Universal standard precaution measures when handling persons with infectious diseases, even when the diagnosis of VHF is remote.

Mr. Mrema, Arusha Regional Lab Technologist.

Involve the community in Ebola control because response activities need total buy in and acceptance by the community members. Village health teams can be instrumental in contact tracing and follow up as well as active case search. Early education minimises misinformation and reduces fear by the community and health care workers, during an outbreak.

Plan, clarify and harmonize the content, channel and methods of delivering messages to the community for social mobilization. Incorporate deliberate efforts to address Ebola related stigma against affected persons and families.

Timing of collection of samples and real time laboratory results are important in outbreak management.

Pictorial

The fourth TEPHINET African Regional and Second AFENET Scientific Conference in Kampala, Uganda December 3-7, 2007

Dr. Donna Jones and Dr. Peter Nsubuga (CDC)

L-R: Dr. Elizabeth Prentice and Dr. Faustine Ndugulile (South Africa)

Dr. Emmanuel Otaala, Minister of State for Health, Uganda opening conference

Above L-R: Dr. Mark White (CDC) Mr. David Mukanga (ED AFENET), Hon. Dr. Emmanuel Otaala.
Left: Delegates visit Kasubi tombs historic site.

Foreground: Ms. Juliette Mannie and
Ms. Jennifer Scharff.

Ms. Michelle Evering Watley and
Ms. Juliette Mannie (CDC Atlanta).

Dr. Wurapa (AFENET Chair) shares a point with
Dr Ebenezer Kofi Appiah-Denkyira, Director, Health
Resources, Ghana Health Services.

Dr. Patricia Nkansah-Asamoah and
Dr. Kofi Nyarko (Ghana).

Prof. Edwin Afari (Ghana).

L-R: Nkansah-Asamoah (Ghana), Dr. Martha
Muthami (Kenya), Dr .Idrissah Florence (Ghana)
Dr. Wurapa.(Ghana) Dr. Idrissa Sow (Zimbabwe).

L-R Dr. Allan Mpairwe (AFENET South Sudan)
Dr. Mugo Muita (CDC South Sudan)
Dr. Djingarey (Burkina Faso).

Mr. Raymond Wamalwa (2nd Right) MUSPH IT expert guides delegates on way forward.

South African delegates at the conference.

Mr. Simon Kwadje, (Ghana), Dr. Ebenezer Kofi Appiah-Denkyira,(Ghana) Dr. Fredrick Wurapa.

Dr. Patricia Simone, Director Division of Global Public Health Capacity Development.

AFENET Plans 2008

The success of the programs has precipitated demand for field epidemiologists and public health specialists trained through this model in other African countries. **AFENET is now seen as the mechanism through which applied epidemiology capacity will be expanded and strengthened in Africa. It plans to build onto the goodwill and enthusiasm shown by expanding on coverage and activities in 2008.**

- Support the non-communicable disease surveillance (Cancer and CVDs)
- AFENET will award 4 Resident Advisor Fellowships.
- In 2008, AFENET will begin a 1-year resident advisor fellowship based in Harare to join resident advisors for the new program.
- Strengthen multi-country collaborations in research, and outbreak investigation.
- Address Millennium Development Goals priority Problems: On December 1, 2007 an Immunization and Child survival program was started to expand into malaria, Tuberculosis and HIV/AIDS.
- Support publication of research: A training workshop is planned for May 2008 and an Africa Journal of Field Epidemiology is planned.
- Support IDSR in South Sudan: We have already filled a 2-year position for medical Epidemiologist and training GoSS MoH staff in IDSR started.
- Contribute to strengthening of national AI preparedness.
- Promote International Health Regulations (IHR): AFENET will advocate for incorporation into FE(L)TP training, support cross-border meetings and strengthen surveillance at ports of entry.
- Build ICT infrastructure for real time Networking among members
- Expand Immunization project experience to other PH fields
- Management of FETPs: starting March in collaboration with SMDP/CDC
- New programs in Tanzania, Nigeria, Ethiopia and West Africa FELTP.

AFENET has approached the CDC's Sustainable Management Development Programme with a proposal seeking assistance in strengthening programs to develop public health leaders and managers in year 2. The objectives of the support are to:

1. **Enhance Management Capacity of Ministry of Health staff from the Planning and Surveillance Units** - by improving on the synergy between the units and focusing on teamwork. Specifically, establish ways in which the Planning units can make better use of available health management and surveillance data and the Surveillance staff can provide more useful information for planning purposes.
2. **Enhance Management Capacity of AFENET National Focal Points** - the focal points are MoH staff whose leadership skills are critical for the success of their national programs. Consequently their capacity building focuses on topics such as advocacy, grant writing, leading change for results, leadership and managing training.
3. **Enhance Management Capacity of Selected Leaders and Managers from the MOH, NGOs and FETPs** - improved leadership and management skills can greatly enhance public health effectiveness in the targeted organizations. Needs assessments identify specific topics to be addressed such as leadership, leading change for results, team building, program planning, budgeting and process improvements.
4. **Develop a Center of Excellence for Management** - to serve as a hub for the management capacity building program. This center has been set up in Ghana. www.afenet.net/english/news.html

AFENET Management Structure

AFENET is governed by a Board of Directors, an Advisory Committee to the Board and a Secretariat to run the day to day functions of the network, based in Kampala, Uganda. AFENET's Constitution specifies the rules and regulations governing the network. ACLAIM - Africa Limited, an independent private firm handles AFENET's Financial Management. This enables the secretariat to focus on the technical components of its portfolio. FE(L)TP Directors in each country, in liaison with their MoH counterparts are responsible for country level coordination and implementation of activities.

The Board of Directors gives policy guidance and has representation from the full member programs. Below are the current 10 members on the Board.

AFENET Board Members

Dr. Fred K. Wurapa
Chair, AFENET
Director, Ghana FETP
wurapa@aol.com

Prof. David Serwadda
Principal Investigator
and Dean MUSPH
dserwadda@musph.ac.ug

Dr. Mufuta Tshimanga
Director, Zimbabwe FETP
tshimanga@ecoweb.co.zw

Dr. Eric Muchiri
Director Kenya FELTP
dvbd@wananchi.com

Dr. George Pariyo
Director Uganda FETP
E-mail: gpariyo@musph.ac.ug

Mr. David O. Mukanga
Executive Director
(ex-officio/Board Secretary)
dmukanga@afenet.net

Prof. Simbarashe Rusakaniko
Chair Department of Community Medicine,
University of Zimbabwe
srusakaniko@medsch.uz.ac.zw

Dr. Marion Mutugi Kenya FELTP
intromid@kjuat.ac.ke

Dr. Bernice Harris
Director South Africa FELTP
Bharris@nicd.ac.za

Prof. Fred Binka (Ghana)
Dean, School of Public Health
fred.binka@indepthnetworking

The Principal Investigator provides leadership and technical support to the project implementation process and represents the interests of the board on a day to day basis. He is Prof. David Serwadda, the Dean of the Makerere University School of Public Health in Kampala, Uganda.

The Advisory Committee serves the AFENET Board of Directors in an advisory capacity, and currently has the following members:

1. **Dr. Peter Nsubuga** - Division of Epidemiology and Surveillance Capacity Development, CDC
2. **Dr. Murray Trostle** - USAID
3. **Ms. Angela Weaver** - USAID
4. **Ms. Susan Mawemuku** - Program Administrator IPH/CDC HIV/AIDS Fellowship Program

The Secretariat manages the day-to-day activities of the network, under the supervision of the Board. Headed by **Mr. David O. Mukanga,** the Executive Director, the Secretariat staff has:

Dr. Olivia Namusisi, Program Officer Training, Surveillance and Laboratory Capacity Development. She coordinates technical assistance to countries, development of training materials, design and implementation of a monitoring and evaluation framework and support for the use of continuous quality improvement tools by FELTPs.

Dr. Olivia Namusisi,
Program Officer,
namusisiolivia@afenet.net

Ms. Sarah Nakendo, Administrator
snakendo@afenet.net

With the expansion of the programs in the network and the resultant increase in activities, AFENET has hired **Ms. Sarah Nakendo** to manage its operations as administrator.

Dr. Nicholas Ayebazibwe, Program Officer
nayebazibwe@afenet.net

Dr. Nicholas Ayebazibwe has joined the secretariat as Program Officer - Immunisation and Child Survival, based in Kampala.

Dr. Allan Mpairwe was seconded to Juba for two years, to assist the Government of South Sudan strengthen applied field epidemiology.

Dr. Allan Mpairwe,

Dr. Mpairwe gives technical support and advice to the MoH Epidemiology Surveillance Division regarding the implementation of integrated disease surveillance.

Country Coordinators are responsible for Country level implementation, preparing and submiting activity and financial reports to the secretariat and the accouting firms. They are assisted by national focal points (program oficers from within the MoH or FELTP).

Mr. Simon Kwadje from Ghana, is Editor of AFENET Newsletter and he is responsible for soliciting news articles from all project countries, editing production and dissemination of articles of the quarterly AFENET newsletter in both print and electronic formats.

Mr. Simon Kwadje
simon@afenet.net

ACLAIM and AFENET Staff

L-R: Dr. Olivia Namusisi, AFENET; Ms. Betty Mabisi, ACLAIM; Mr. David Mukanga, AFENET; Mr. Hope Katongole, ACLAIM.