AFENET Newsletter

Issue 2—September 2007

News from the African Field Epidemiology Network

Editorial

Collaboration Between Public Health and Clinical Care

Collaboration between public health practitioners cannot be said to be the best. It is well known in Ghana that this is the case and we believe strongly that the same situation pertains in other AFENET countries.

At a recent review meeting for Surveillance and Expanded Programme on Immunization (EPI), participants expressed worry that many clinicians query diseases without referring them for investigations. For example, a clinician would only query malaria where fever and headache is reported. Again, diarrheal diseases are lumped together without any laboratory investigations to ascertain the etiology.

The result of this inability to refer cases for laboratory investigations is that diseases such as cholera, meningitis, and viral hemorrhagic fevers such as Ebola, Lassa fever and Rift Valley fever would pass unnoticed, and so proper diagnosis cannot be performed.

It is our considered opinion that health authorities would evolve strategies that aim at ensuring closer collaboration between public health professionals and clinicians. This can be done along peer lines, where public health practitioners would engage their peers in health facilities on informal basis. Again, policy makers in health facilities could be invited to public health reviews.

To some extent, factsheets on various disease conditions could be laminated and hanged in consulting rooms to serve as a constant reminder to take cognizance of case definitions and thereby refer cases for laboratory investigations.

AFENET Extends its Reach in Africa

At the meeting of AFENET board members, held from 29–30 March 2007 in Kampala, Uganda, it was disclosed that Tanzania, South Africa, Nigeria Sudan, and Burkina Faso are far advanced to join the continental body. The representatives from Tanzania, Sudan, Ethiopia, Nigeria, and Burkina Faso which have all applied for membership were at the meeting.

The assessment programme for Nigeria was read at the meeting whilst Burkina Faso is scheduled to begin the FELTP for the West African Regional Francophone countries (comprising Burkina Faso, Mali, Niger, and Togo).

An assessment was expected to have been conducted in collaboration with the World Health Organization (WHO). Plans are also far advanced for Ethiopia to start the curriculum planning in September 2007 and start the programme in 2008. Tanzania is in an advanced planning phase and fund raising activities have commenced.

Abstracts for TEPHINET-AFENET Conference

The Fourth TEPHINET African Regional and Second AFENET Scientific Conference is scheduled

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to take place on December 3–7, 2007, in Kampala, Uganda, at the Speke Resort and Conference Center. The theme for the conference is "From Science to Action—Using Field Epidemiology to Improve Public Health."

The conference is being organized by the Training Program in Epidemiology and Public Health Interventions Network (TEPHINET) and AFENET, together with the Public Health Schools Without Walls (PHSWOW).

The conference will include invited keynote presentations, workshops, juried oral and poster presentations, roundtable discussions and an opportunity to network with colleagues from Africa and around the world.

In this regard, trainees and graduates of field-based training programmes in applied epidemiology and public health practice are invited to submit abstracts for either oral or poster presentations on investigations or projects undertaken during training and completed within the past two years.

AFENET is interested in abstracts describing outbreak investigations; development, implementation, and evaluation of public health surveillance activities or disease control programme (e.g., avian influenza, HIV/AIDS, malaria, tuberculosis); or other areas in field epidemiology or public health practice which are linked to the conference theme.

The best oral and poster presentation will be recognized with an award during the conference.

Abstracts are to be submitted by 31st August 2007 through programme directors online or by way of e-mail to sec@afenet.net, with copies to the chair of organizing committee Dr. George Pariyo (phone: 256 772 587 457; e-mail: gpariyo@iph.ac.ug) and the chair of the scientific committee Professor Fred Wabwire-Mangen (phone 256 772 732 206; e-mail: fwabwire@iph.ac.ug).

For more information, visit the conference website at www.tephinet-afenet-conference.com/index.html

For further information and details of guidelines, procedures, and deadlines, please contact Mr. David Mukanga at the AFENET Secretariat (phone: 256 414 542 352; e-mail: dmukanga@afenet.net). More information is also available on the conference website at www.tephinet-afenet-conference.com/index.html.

Perspectives on Surveillance and Response in Africa

Peter Nsubuga, Chief, Capacity Development Branch, Division of Global Public Health Capacity Development (DGPHCD), Centers for Disease Control and Prevention (CDC), Atlanta

Dr. Peter Nsubuga has said the mission of DGPHCD is to work with partners to strengthen capacity of countries around the world to improve public health.

Making a presentation at the AFENET partners' meeting in Kampala, he said the vision of DGPHCD is to "create effective public health systems that support the well-being of communities around the world."

Dr. Nsubuga mentioned some key long-term system building

products which include

- Assessment and monitoring surveys
- Surveillance to detect and respond to new acute health problems
- Timely and valid reports to programme managers, politicians, donors, and international agencies
- New or strengthened systems

According to Dr. Nsubuga, the critical outcomes of FELTPs and FETPs should be to contribute to

- Functional and robust public health surveillance systems (e.g., Integrated Disease Surveillance and Response [IDSR])
- Timely and effective outbreak investigations and response (including other public health threats)
- Evidence-based decision making in public health
- Strengthened human capacity for public health
- Reduction in morbidity and mortality from priority diseases

Dr. Nsubuga advised that beyond the traditional FETP, a laboratory component should be added to provide a joint training for field epidemiologists and public health laboratorians. He also proposed the addition of the veterinary component.

This will provide joint training for field epidemiologists, public health laboratorians, and veterinary epidemiologists. He encouraged Nigeria, which is due to commence its FELTP in 2008, to consider this new approach.

Ghana to Start FELTP

Simon Q. Yaw Kwadje, Information Officer, DSD

The School of Public Health (SPH) at the University of Ghana is set to introduce the Master of Applied Epidemiology and Disease Control during the next academic year.

Professor Edwin Afari disclosed this at a meeting of the AFENET Ghana Advisory Committee held recently at the Malaria Center in the University. He told the committee that the curriculum for the above course at the SPH has been developed and is waiting final approval by the School of Graduate Studies and Research.

Professor Afari said the lesson plans and timetable have also been developed with support from CDC. SPH has proposed that 4 to 6 residents will form the initial intake when the course commences next academic year.

The course is a 2-year post-Master of Public Health (MPH). An MPH qualification is therefore a prerequisite. Professor Afari indicated that there are funds for the first year of the programme and that it should start as early as possible.

Professor Afari said the AFENET component would run for 5 years and it is important that MOH/GHS show strong commitment to the programme since they would be the end users.

Professor Isabella Quakyi, Director of the School, said that a budget on the new course has already been submitted to the Finance Office for their consideration and incorporation into the university budget.

The expectation of SPH, she said, is that the Board of Research and Graduate Studies would deliberate on the school's request for accreditation after which the Dean of the School of Graduate Studies and Research will make appropriate recommendations to the Academic Board of the university for final approval and commencement of the Ghana programme this year.

Improving Disease Notification and Reporting in Tanzania

J. Mghamba[1, 2], M.A. Mohamed[1], P. Mmbuji[1, 2], S. Rumisha[2]

Affiliations: [1]FELTP-Tanzania; [2]National Institute for Medical Research

Recent global challenges of various outbreaks occurring in the world have raised concerns about a nation's preparedness to manage a disease outbreak or bioterrorism event on time.

In many developing countries immediate notification of outbreaks has not been effective due to lack of reliable communication means.

Through integrated disease surveillance strategy approach of involving the community, one of Tanzania's districts has tried to initiate its own district local mechanisms to improve performance in quick outbreak response.

A mapping exercise and participatory appraisal was conducted in the Mpwapwa district in April 2004 to identify appropriate means of communication and improving submission of weekly and monthly epidemiological reports.

Health workers from 42 health facilities participated in identifying feasible and possible ways available for relaying information.

Records review of reports submitted to the district before the exercise and 4 weeks after the exercise were then used to compare the performance of timeliness and completeness of reports sent to the district. Completeness was defined as proportion of expected reports received (completeness) and timeliness as proportion of expected reports received on time.

While there were only three radio calls which were identified as able to serve only 15 out of 42 (35.7%) of the health facilities, mapping identified local public buses to be used which could serve 24 health facilities (57.1%), missionary radio calls at four health facilities (9.5%), and police radio calls at three health facilities (7.1%). Use of this approach after 4 weeks has resulted in improved weekly timeliness from 5% to 63% and completeness from 18% to 73%. Monthly timeliness and completeness both improved to 75% from 48% (timeliness) and 60% (completeness).

Linking the IDSR beyond the health sectors involving various stakeholders is likely to improve disease surveillance implementation in the country. However, sensitization of these "other" stakeholders is mandatory for the success.

Avian Influenza Outbreak in Ghana

Dr. Lawson Ahadzie, Deputy Director (Public Health) and Head of Disease Surveillance Department (DSD) of the Ghana Health Service has confirmed that the avian influenza (AI) virus (H5N1) has been detected on some farms in three districts in as many regions in Ghana.

In a presentation at an AFENET Ghana advisory committee meeting, Dr. Ahadzie, who is also the chair of the health subcommittee of the national task force on AI, said so far, there have been outbreaks in Tema in the greater Accra region, Sunyani in the Brong Ahafo region, and Aflao in the Volta region.

The index case was detected by the Veterinary Services (Vet) on 24 April 2007. The Veterinary Department conducted initial tests on samples collected and they proved positive. The DSD was informed on 28 April 2007. Further samples tested by Noguchi on 29 April 2007 were also confirmed.

In accordance with international standards, samples were sent to the Naval Medical Research Unit in Cairo, Egypt, and the Organization for Animal Health Reference Laboratory in Padova, Italy. These too were confirmed.

The Minister for Food and Agriculture briefed the press in May 2007 to announce the initial outbreak and measures that had been put in place to manage it.

In the meantime, the following measures have been taken:

- Active surveillance by the Vet in collaboration with other sectors such as Health
- Curling of all birds on the farm and destruction of all poultry products
- Sequencing of the AI cases to determine whether they were linked with others
- Ban on poultry and poultry products in and out of the affected districts
- Monitoring the health of staff of affected farms
- Case management: the drug Tamiflu has been procured and distributed to all regions in Ghana
- Personal protective equipment has been procured and distributed to regional hospitals and identifiable institutions
- Training has been conducted for health workers in Tema and Accra
- All 10 regional hospitals, Korle-Bu and Komfo-Anokye teaching hospitals, the police and 37 military hospitals have been identified for provision of equipment for isolation units to be established
- Rapid response teams have been formed for national and regional levels, and include members from DSD and Disease Control Unit. Vet has also formed a rapid response team but there is active collaboration between the health teams.

Dr. Ahadzie said that in addition to these, seven sentinel sites, where specimens from patients with influenza-like illness will be taken and tested, have been identified. The sites are in Mamobi, Tema, Ridge, Achimota, 37, Police, Legon, all in the greater Accra region. In this regard, Noguchi Memorial Institute for Medical research (NMIMR) of the College of Health Sciences, University of Ghana hosted an orientation workshop from 17–18 May 2007.

So far, five suspected human cases investigated by the laboratory were negative.

The NMIMR, which has been designated as the National Influenza Center, has assured the nation that it has the capacity to detect and confirm any avian and human cases in the country.

AFENET Advocacy Trips: Washington and Atlanta

David Mukanga, Executive Director, AFENET

In April 2007, the AFENET Board Chair Professor Fredrick Wurapa, and the Executive Director Mr. David Mukanga, travelled to Washington DC to visit the United States Agency for International Development (USAID) and the World Bank. The visiting team made presentations at both institutions;

the presentations were well received and precipitated lots of interest and meaningful discussions and potential new partners. The following week the Executive Director visited Atlanta for more advocacy meetings.

USAID

The avian influenza (AI) Group at USAID expressed interest in working with AFENET on AI preparedness efforts in the coming year. The USAID AI group pledged to support AFENET to undertake activities toward AI preparedness in the region.

Some of the areas will include AI surveillance, outbreak investigation, and response and capacity development. AFENET and USAID agreed to explore ways of using veterinarians for early warning of AI threats from the animal side. Others issues discussed include

- Bringing together veterinarians and public health practitioners to develop a systemic way to respond and control epidemics of zoonotic nature
- Engaging with the Ministries of Agriculture to obtain a mandate to train veterinarians within their workforce in epidemiology, including outbreak response
- Developing and field testing non-pharmaceutical interventions for pandemic influenza

Professor Ronald Waldman has recently joined USAID to lead efforts for pandemic planning and humanitarian response. He indicated that the USAID humanitarian response plan to pandemic influenza might prioritize Africa. The two sides agreed to work on issues of training and mapping of available resources in the region.

Development Associates Inc., (DAI) based in Bethesda, has been contracted to implement a project called STOP AI (Stamping Out Pandemic and Avian Influenza) by USAID. This is a $35.8 million 3-year project from March 2007 to February 2010. This group and its sub-contractors, including Management Sciences for Health based in Boston, attended the presentation and expressed the desire to partner with AFENET particularly in training for AI preparedness.

One of the possible areas proposed is the addition of AI to the AFENET Laboratory Kit. Another area was the strengthening of foodborne disease surveillance. The U.S. Department of Agriculture, which also attended the meeting, would like to explore ways of advancing this with AFENET.

The World Bank

The World Bank has an Africa AI team, and AFENET received names of the key persons on the team for follow-up and possible collaboration. Several participants at the presentation who work closely with African governments and Ministries of Health expressed a desire to join AFENET.

The World Bank team also pledged to link AFENET to their country teams so that some of AFENET's ideas and plans can get incorporated into country level grant and loan applications to the World Bank.

Meetings at CDC

The Executive Director had a meeting with the Sustainable Management Development Program (SMDP) at CDC, and they pledged to put some funds into the cooperative agreement for fiscal year 2007–2008 for management training. One area of particular interest to SMDP was developing a short management course in Africa working with one FELTP as a pilot, and then expanding to others. The SMDP-AFENET collaboration is moving forward and is part of the application submitted in July 2007 for the next budget period.

CDC Foundation

DGPHCD arranged a meeting with the CDC Foundation. The Foundation facilitates resource mobilization for CDC (e.g., funding for the Kenya FELTP comes from the Foundation).

They offered to support AFENET with a platform for resource mobilization, and AFENET will be following up with specific individuals on these issues. Talking with DGPHCD staff after this meeting, the AFENET team felt it might be a good idea for the establishment of its own foundation as an NGO purely to do resource mobilization for AFENET in the future, and have AFENET as a technical organization. Ms. Julie Rodgers, in charge of public-private partnerships, will be joining AFENET at the December conference to share how best AFENET can position itself to attract funding.

Other Possibilities

Another area of collaboration is that of FELTPs hosting guest lecturers from USAID. If AFENET can put together a programme teaching schedule, the secretariat will liaise with USAID to have USAID staff traveling to AFENET countries

to make presentations, give lectures to faculty or trainees about subjects of interest to the programmes and the visiting USAID staff.

This will help strengthen networking with this organization and open new doors for collaboration and support. The same could apply to CDC staff visiting African countries within the AFENET network.

Community-Based Surveillance: The Need and the Experience

Simon Nyovuura Antara, District Director of Health Service, Berekum/Ghana, FELTP Resident, Kenya

The Need

The concept of community involvement and participation has long been identified as an effective and efficient tool in the delivery of health service. Indeed, most interventions worth their while recognize the important corporate role of communities.

It is an ethical requirement that policies and programmes for communities should be developed and evaluated through processes that ensure input from community members. Community ownership enhances the sustainability of programmes.

It is also important to note that the producers of health and ill health are the households in the various communities. Whether those with ill health would report to health facilities or not depends on the health-seeking behavior of the communities concerned. The health-seeking behavior is in turn influenced by a number of factors. Paramount among these are the ability to pay for healthcare and the perception of what causes diseases.

If a person understands that ill health is caused by evil forces and spirits it is very unlikely that they would visit the orthodox health facility. The most likely destination for such a person would be the prayer camp, church, mosque, traditional healer, or herbalist.

The challenge for the surveillance system is to innovate to capture persons who might be visiting these alternative healthcare providers with notifiable diseases. People in poor communities who are unable to pay for healthcare visit the health facility only when their condition is critical. The implication for surveillance is late detection of priority diseases–a recipe for epidemics.

Another important predicament of the health system in Africa is the shortage of health workers (including surveillance officers). Obviously, dependence on the orthodox health system alone will result in ineffective and inefficient surveillance.

The above principles and circumstances underscore the importance of community participation in disease surveillance in Africa. In the operation of the Integrated Disease Surveillance and Response (IDSR), community-based surveillance volunteers (CBSVs) play a very important role in the day-to-day surveillance activities in their respective communities.

A CBSV is an individual living in a community, identified by the health system in the district and the community and trained for the purpose of reporting on specific health events.

A well-motivated community-based surveillance volunteer is an asset in expanding the geographic coverage and ensuring a sensitive surveillance system. By their training CBSVs improve their understanding of diseases. By their integrity and new knowledge, they are better placed to positively influence their communities to take decisions to improve their health and by their activities they prevent the spread of outbreaks (by notifying the responsible authorities early so that they can act).

Finally, by their link between the district health authorities and the communities, they facilitate collaborative efforts to improve the health of communities.

Clearly, a comprehensive surveillance system must have as a component a motivated and a vigilant community-based surveillance that is cherished by all as a tool for improving health.

The CBS Experience from Berekum District of Ghana

The Berekum District Health Directorate embarked on a number of activities to improve and expand the scope of community-based surveillance. The district has 44 health communities each with a CBSV.

In 2005, four CBSVs relocated outside their communities. In collaboration with the affected communities, new ones were identified and trained to ensure that every community has a volunteer. To expand the scope of community-based surveillance and to ensure that the occurrence of any of the 22 priority diseases in the district is captured, we went beyond community-based surveillance volunteers to include some existing institutions (formal and informal).

All the 38 licensed chemical sellers and 42 herbalists were trained to report on some priority diseases In addition, 9 out of the

15 prayer camps in the district were trained. All these categories of people attend to sick people in their own way some of which may be suffering from some reportable conditions.

The result is that the coverage and sensitivity of the district surveillance system has increased. We are confident that the occurrence of any of the priority disease in the district would be detected.

Field Epidemiology Training in South Africa

The Field Epidemiology and Laboratory Training Programme for South Africa (SAFELTP) started in 2007.

In a presentation to the AFENET partners meeting in Kampala, Uganda in March of this year, Mr. Wayne Brown of CDC disclosed that plans have been completed, trainees and staff have been recruited, and training started.

Giving the highlights of the SAFELTP the programme director, Dr. Bernice Harris, said the programme was officially launched in May 2006. The programme is co-sponsored by the Department of Health, (South Africa equivalent of the Ministry of Health), the Department of Health Laboratory Service, the National Institute for Communicable Diseases and CDC.

Dr. Harris listed the broad objectives of the SAFELTP:

- Improving and strengthening public health systems
- Developing a self-sustaining institutional capacity to train public health leaders in field epidemiology and field oriented public health laboratory practice
- Providing epidemiological services to the public health system at national and sub-national levels

Dr. Harris said the specific objectives of the SAFELTP are the training of field epidemiology and laboratory fellows for leadership positions in the South African public health services, including the National Health Laboratory Services.

In addition, the programme is managed and supported by a number of staff:

- Track coordinator Dr. Elizabeth Prentice for Epidemiology and Laboratory
- Resident advisors, Dr. Chris Tetteh for the Epidemiology Track and Dr. Faustine Ndugulile for the Laboratory Track

This is a 2-year full-time residency programme comprising 25% of classroom work and 75% field placement, during which trainees are supported and supervised by a mentor and a resident advisor. The programme trains field epidemiology fellows for positions as national and provincial epidemiologists, surveillance officers, and other relevant positions in the South African public health and laboratory systems.

Eliminating Maternal and Neonatal Tetanus in Ghana

Dr. Afisah Yakubu Zakariah
Disease Control and Prevention Department, Ghana Health Service, Accra, Ghana

Objective

Our study aimed at assessing the tetanus toxoid (TT) vaccination coverage of women during supplementary immunization activity (SIA) and to identify factors affecting TT vaccination coverage.

General Objective

The main objective was to estimate the TT supplementary immunization coverage in this region and to identify factors contributing to low TT vaccination coverage among females of reproductive age.

Introduction

Maternal mortality ratios are still unacceptably high in many developing countries. In many of these countries, deliveries take place under unhygienic conditions.

Apart from the risk for various infections for mother and child, there is a serious risk for the mother and child to get infected by tetanus. Once infected, mortality rates are extremely high, especially in areas where appropriate medical care is not available. However, these deaths can be easily prevented by improving the hygienic conditions of the delivery as well as immunizing the mothers against tetanus.

Maternal mortality strikes young women indiscriminately in developing countries during pregnancy and child birth. Most of these women die because they are poor and are exposed to diseases and other risk factors of procreation.

A case of maternal or neonatal tetanus represents a failure of a country's public health system in terms of the routine immunizations, antenatal care, and clean delivery and cord care services. Elimination of maternal and neonatal tetanus (MNT) is a global goal and was adopted by WHO in 1988 and by the World Summit for Children in 1990. The goal of MNT elimination by 2005 has been declared jointly by UNICEF,

WHO, and UNFPA, along with the establishment of a global fund for MNT elimination resulting in a renewed momentum to achieve MNT elimination in 57 countries which have not yet achieved this objective (including Ghana).

There are established strategies being used to achieve this goal. These are routine immunization, SIAs, clean delivery and surveillance. Although there is no operational definition for the elimination of maternal tetanus (MT), it is assumed that a country automatically achieves MT elimination when it has achieved neonatal tetanus elimination.

In 1988, the Ministry of Health of Ghana adopted the five doses schedule of TT vaccine for women of child-bearing age and a lot of efforts have been made in increasing TT coverage in pregnant women.

In 2000, the number of women who received two or more doses of TT has risen to 73% from 35% in 1992 and supervised delivery rate has increased from 37% in 1992 to 52% in 2000. Reported antenatal care coverage has increased from 83% in 1992 to 99% in 2000.

The number of children who received the five-in-one vaccine against diphtheria, tetanus, pertussis, hepatitis B, and haemophilus influenzae type b has shown remarkable increase over the years in Ghana. The improved immunization coverage has been reflected in a drop of neonatal tetanus cases.

In 1998, an assessment of the situation of MNT in the country by the Ministry of Health of Ghana revealed the following:

- Only 5–8% of neonatal tetanus cases were reported but not investigated except in the context of special hospital studies
- Pregnant women who received two or more doses of TT vaccine was around 64% and may be higher according to survey results
- Only 15% of pregnant women do not have access to Antenatal Care and 56% of deliveries are supervised
- Women in Fertile Age Group are not routinely immunized
- Maternal deaths in (health) institutions are reported without stating cause of death

Based on the findings, the Ministry of Health of Ghana identified high-risk districts in the country and conducted TT immunization in these districts for women of child-bearing age (ages between 12–49 years old).

A high-risk district was defined as a district with

- Supervised delivery coverage under 70%
- TT2+ coverage under 80%
- MNT rate of more than 1/1000 live births

All 18 districts in the northern region were among the identified high-risk districts in the country. In 2006, TT SIA was carried out in these districts for women in their child-bearing age. Rapid assessment was carried out in the region after the second round of TT SIA.

Methods and Materials

This study was carried out in all districts in the northern region. A pre-tested structured questionnaire was administered to the females from April 29 to May 3, 2006 when the first round of the MNT campaign was conducted in all 18 districts.

The second round took place from May 29 to June 2, 2006. At the end of the second round, a rapid assessment of the coverage was carried out in the region. The assessment took the form of house-to-house interview of women between the ages of 12–49 years of age. The houses were randomly selected. Only one person from each household between this age group was interviewed.

Results

At the end of the second round of the TT SIA, 160 women between the ages of 12–49 years from 160 households were assessed. Out of these, 143 (89.4%) were vaccinated, 133 (83.1%) had received the vaccine for the second time, and 10 (6.3%) for the first time during the second round of the TT supplementary immunization campaign while 17 (10.6%) were not vaccinated.

Out of the 17 women who did not receive the TT vaccine during the second round, 7 (4.4%) had received one dose during the first round while 10 (6.3%) did not receive any dose. The mean age of the women sampled was 26 years and a standard deviation of 9 years. The minimum age was 12 years and maximum 47 years.

Among other reasons given for not receiving the TT vaccine during the second round were that the TT vaccine was perceived as an anti-fertility drug among 10 of the women who refused to be vaccinated, 3 were not allowed by their husbands, 1 was due to fear of pain from injection, 1 had no prior information about the campaign while 2 had no reason for not vaccinating.

Discussion

In 2000, it was estimated that over 529,000 maternal deaths were reported worldwide, of which 95% occurred in Africa

and Asia whilst less than 1% occurred in developed countries.

The wide gap between the developed and developing world in maternal deaths demonstrates that most of these deaths are preventable.

In many developing countries, deliveries take place under unhygienic conditions. Many of these women stand the risk of getting a variety of infections, such as tetanus. Once infected, mortality rates are extremely high, especially in areas where appropriate medical care is not available. These deaths can however be easily prevented by either improving the hygienic conditions of delivery and/or by immunizing the women against tetanus.

Immunizing women in their child-bearing age and pregnant women as well as promoting more hygienic deliveries can reduce or even eliminate MNT (which has the indicator at less than 1 case of neonatal tetanus per 1,000 live births in every district). Our assessment revealed that during the TT supplementary immunization in the northern region, 89.4% of women received two doses of TT vaccine. This implies that the number that will receive the third dose during the third round of the campaign will drop since all 89.4% of the women might not turn out for the third dose.

Reasons such as TT vaccine being perceived as an anti-fertility drug among 10 of the women who refused to be vaccinated, husbands exercising complete authority over wives (N=3) and therefore not allowing them to be vaccinated as well as fear of pain from injection and lack of prior information about the campaign while two had no reason for not vaccinating, could mar future campaigns and the need for an effective mass media campaign as proposed by authors before subsequent campaigns.

Conclusion

Elimination of MNT in Ghana can be achieved when misconceptions about vaccines are addressed through effective social mobilization as well as adequate health education.

AFENET Trainees' Immunization Projects

Background

Despite significant increases in routine immunization coverage since the launch of the Expanded Programme on Immunization (EPI) 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 one-fifth 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 those in hard-to-each and vulnerable areas.

The reasons why almost one-fifth of African children who begin the vaccination schedule do not complete it may differ from place to place, and there are no simple solutions for attaining and sustaining high coverage rates. Consequently, there is a need to use local data to identify local problems and develop and implement different strategies to improve routine immunization coverage.

AFENET, with funding from USAID, Bureau for Global Health, and in collaboration with CDC, Coordinating Office for Global Health, issued a competitive 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 were current trainees of FETPs in Africa working with an academic supervisor. All applicants were required to obtain endorsement for the study from their national EPI managers.

This project is intended to create a unique opportunity for field epidemiologists in training to focus their research projects on improving routine immunization coverage. It requires recipients to share their results with local and national level policy makers and advocate for broader adoption of their proven intervention or strategy through changes in immunization policy and programming.

A review committee included members from USAID, CDC, and AFENET who reviewed the proposals and five applicants were selected and awarded grants to demonstrate the efficiency of a locally innovated strategy in raising and sustaining high coverage rates and reduced drop-out rates in hard to reach areas.

Three trainees are currently implementing the demonstration phase (phase II) of their projects, on average lasting 6 months. Three trainees' exploratory phase (phase I) reports are available

on the AFENET website (www.afenet.net/english/reports.html).

Highlights of the Projects

Trainee: **Dr Jared Omolo**
Programme: **Kenya FELTP**
Project Title: **Improving immunization coverage in Siaya District through customer care training for healthcare workers**

Phase I of this project conducted in the Western Kenya district of Siaya sought to identify reasons for the low vaccination coverage in the district and to apply the findings to design an appropriate intervention.

The key findings were that healthcare workers at immunization posts were unfriendly or hostile to mothers; and there were unfriendly opening hours for provision of immunization services.

Dr. Omolo's intervention has focused on changing healthcare worker attitudes and practices in a selected sub-district of Siaya (Wagai division). Healthcare workers were trained about how to provide services to mothers in a friendly manner including talking to them nicely, ensuring that mothers do not wait for long hours before they are attended to, and providing information.

During the training, video clips of interviews Dr. Omolo held with mothers expressing their perceptions of the services were shared with the healthcare workers.

Dr. Omolo organizes bimonthly meetings for the healthcare workers at each immunization post. During these meetings, the healthcare workers discuss challenges faced during service provision, and how they can overcome them. Dr. Omolo and his team reminded the staff about the importance of customer care during these meetings.

Dr. Omolo has trained and is using primary school teachers and children to reach out to the community around each immunization post to inform them about the project and how it has helped change the attitudes and practices of the healthcare workers. The information is relayed at market centers, to neighbors, friends, and relatives. The project has provided some textbooks to each of the schools that are participating in the project.

To measure success, Dr. Omolo undertook a baseline study to collect data on key immunization indicators; a post intervention survey will be conducted in October to collect data on the same indices. Over the last 4 months of the intervention, the immunization posts have recorded sharp increases in attendance. The majority of mothers at the posts report that the healthcare workers are friendlier and more caring than they used to be.

Trainee: **Addmore Chadambuka**
Programme: **Zimbabwe FETP Project**
Title: **The effectiveness of lobbying local health authorities to prioritize immunization services in Gokwe South District, Zimbabwe**

Phase 1 of Mr. Chadambuka's project established that low immunization coverage was attributed to low staffing levels at health facilities as a result of high attrition, large populations that are hard to reach, and the absence of regular outreach service for such communities.

Mr. Chadambuka designed a strategy that uses locally made motorbikes, bicycles, and scotch-carts for outreach services. Ten motor bikes were already available in the district and these only required fueling and routine service. Bicycles or scotch-carts were used at facilities where the bikes are not available and in cases where bikes develop problems.

Mr. Chadambuka lobbied the local health authorities to prioritize immunization services and provide fuel for outreach services. Access to fuel in Zimbabwe's economic crisis is no simple task. After protracted discussions, the authorities were convinced about the viability of Mr. Chadambuka's plan and agreed to ensure that there would be fuel every week for the bikes.

This strategy has enabled the EPI team to extend immunization services beyond fixed health centers to reach the unreached children and women in child-bearing age without depending on the outreach from the district. Where appropriate, the strategy brings to the hard-to-reach populations multiple interventions in addition to immunization: chloroquine, SP, bed nets, vitamin A and condoms.

If shown to make a difference, this strategy could become a model that can be cascaded to other areas as it has the potential of being effective in resource-constrained situations such as the current one.

Supportive visits have been done to the district and the facilities to assess progress. It is during these visits that gas for cold chain maintenance to the facilities is supplied.

The final evaluation of this strategy will be done after 6 months from the start of the intervention to compare results with the findings from the situation analysis. So far, health workers report an increase in

the number of children being immunized in the outreaches due to the introduction of motorbikes, bicycles, and scotch-carts. It is evident from routine data in Gokwe that drop-out rates are declining.

The trainees will present their Phase I and Phase II (detailed) findings at the TEPHINET-AFENET regional scientific conference in December 2007.

Trainee: **Dr Nicholas Ayebazibwe**
Programme: **Uganda FETP**
Project Title: **Using the tickler system to improve immunization coverage in Rakai**

During Phase I it was established that poor community mobilization and low community awareness were major contributing factors to the low immunization coverage rates.

Dr. Ayebazibwe designed a tickler (reminder/recall system) with a health education component to address the poor community awareness on immunization. Mobilizers were provided with basic information on immunization and asked to use opportunities in communities like social functions to educate their communities in addition to the defaulter tracking and mobilization of mothers for routine and outreaches services.

Support supervision visits are done twice a month in each health facility in the sub-counties under study. So far there is a tremendous increase in the number of children turning up for immunization at both the static and outreach centers as evidenced by the records at these centers.

A baseline study was conducted at the beginning of the intervention phase that involved reviewing records to find the exact coverage rate for all the antigens and the drop out rates at the time. At the end of 6 months of the intervention an evaluation will be done using the same methods to assess the impact of the intervention.

Guidelines for AFENET Membership

Description of the Types of Membership

AFENET has the following types of membership:

- **Member Programme:** This is an FETP based in Sub-Saharan Africa or the World Health Organization Africa Region (WHO AFRO). This programme MUST be a competency-based field epidemiology training programme (i.e., meet the minimum expectations of didactic sessions and field placement of trainees).
- **Member Country:** Refers to a Ministry of Health (MOH), university or country in the process of developing its own FE(L)TP in Sub-Saharan Africa or WHO AFRO. This process should be evidenced by plans for assessments, completed assessments, or involvement of AFENET and its partners in discussions with such countries to begin an FE(L)TP. This kind of membership can also be extended to countries that do not host an FE(L)TP, but are part of a regional programme through active trainee participation and field placement.
- **Associate Member:** It is an organization in Sub-Saharan Africa or WHO AFRO involved in field epidemiology or laboratory capacity development. This involvement may be evidenced by running of short courses in field epidemiology or public health laboratory practice; support to MOHs in disease surveillance, outbreak investigation, laboratory/diagnostic infrastructure and human resource support; or other areas of integrated disease surveillance and response.

Additional Information Required for each Type of Membership

If applying to become a member programme, provide the following:

- Year the programme started
- Number of trainees on the programme/graduates
- Duration of the programme in months (including the number of months trainees spend in class and number of months trainees spend in the field)
- Type of award offered trainees upon completion (if any)
- Number of faculty working with the programme and their qualifications
- Curriculum (as an attachment)
- Partners (local and international)
- Ownership of the programme
- Any other information that might be useful in helping us understand/assess your programme structure, management, quality, as relates to the minimum tenets of an FETP

If applying to become an associate member, provide the following:

- Brief description (200 words maximum) of field

epidemiology capacity development activities your organization is involved in
- Reason(s) why you would like to become a member of AFENET
- Brief description (500 words maximum) of plans (if any) to develop an FE(L)TP
- Country profile (700 words maximum)
- Any information on known needs for field epidemiology and laboratory capacity development in-country (based on MOH or any other needs assessments conducted in the country)

If applying to become a member country, provide the following:
- Country profile (700 words maximum)
- Detailed description (1,500 words maximum) of plans underway to develop an FE(L)TP
- Ownership of the proposed FE(L)TP
- FE(L)TP assessment report (if an assessment has been completed)

If the country is part of a regional FE(L)TP, provide information on:
- Number of trainees/graduates from your country
- Names of field sites where trainees are attached
- Names of field supervisors for the trainees and their qualifications

Submitting Articles to the AFENET Newsletter

Scope and Editorial Policy

The A*FENET Newsletter* is an international newsletter of public health with special focus on applied field epidemiological and laboratory practice in Africa.

Anyone can submit a paper to the newsletter free-of-charge.

Being a relatively young newsletter, there are no hard and fast rules regarding submission of articles by authors, who are advised to read the Uniform Requirements for Manuscripts Submitted to Biomedical Journals, (available at www.icme.org) but a few reminders would be helpful.

Articles on any topic that is meant to disseminate public health information that is of national and international significance, and designed to enable policy makers, researchers, and public health practitioners to be more effective are most welcome.

The *AFENET Newsletter* is available online at www.afenet.net/english/news.html.

Types of Manuscripts

Types of manuscripts for the *AFENET Newsletter* may include
- Field lessons
- Policy and public health practice reviews
- Editorials
- Commentaries

The text for observational and experimental articles should be (though not necessarily) divided into sections with these headings: Introduction, Methods, Results, and Discussion, in line with the IMRAD structure.

Measurements

Measures of length, height, weight, and volume should be in metric units or their decimal multiples. Temperatures should be in degrees Celsius.

Abbreviations

Authors are advice to use standard abbreviations and symbols. The full term for which an abbreviation stands should precede its first use in the text unless it is a standard unit of measurement.

Ethics

Results of research involving human subjects must be done in full accordance with ethical principles outlined under the provisions of the World Medical Association Declaration of Helsinki (as amended by the 52nd General Assembly, Edinburgh, Scotland, October 2000; see www.wma.net/e/policy/b3.htm).

Additional requirements, if any, of the country in which the research was carried out must be adhered to.

Submission

Authors should submit their manuscripts stating name, address and telephone number(s) of the corresponding author(s), and e-mail addresses to:

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