NETWORK FOR EDUCATION AND SUPPORT IN IMMUNISATION

SAVING CHILDREN’S LIVES THROUGH IMMUNISATION

ANNUAL REPORT 2011
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<tr>
<td>AEFI</td>
<td>Adverse Events Following Immunisation</td>
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<td>AFR</td>
<td>African Region</td>
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<td>AMP</td>
<td>Agence Médecine Préventive</td>
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<td>ARCI</td>
<td>Annual Regional Conference on Immunisation</td>
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<td>ARIICC</td>
<td>African Regional Inter-Agency Coordinating Committee</td>
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<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>CHAI</td>
<td>Clinton Health Access Initiative</td>
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<tr>
<td>cMYP</td>
<td>Comprehensive Multi-Year Plan</td>
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<td>DFID</td>
<td>Department of International Development</td>
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<td>DoV</td>
<td>Decade of Vaccines</td>
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<td>DRC</td>
<td>Democratic Republic of Congo</td>
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<tr>
<td>DTP</td>
<td>Diphtheria-Tetanus-Pertussis</td>
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<tr>
<td>ECTS</td>
<td>European Credit and Transfer Accumulation System</td>
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<td>EMR</td>
<td>Eastern and Mediterranean Region</td>
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<td>EPI</td>
<td>Expanded Programme on Immunization</td>
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<td>EvTool</td>
<td>Evaluation Tool</td>
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<td>FGD</td>
<td>Focus Group Discussion</td>
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<td>FICA</td>
<td>Flemish International Cooperation Agency</td>
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<td>GAVI</td>
<td>Global Alliance for Vaccines and Immunization</td>
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<td>GIVS</td>
<td>Global Immunisation Vision and Strategy</td>
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<td>GVAP</td>
<td>Global Vaccine Action Plan</td>
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<td>HepB</td>
<td>Hepatitis B</td>
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<tr>
<td>Hib</td>
<td><em>Haemophilus influenzae</em> type b</td>
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<td>HPV</td>
<td>Human Papillomavirus</td>
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<td>MCHIP</td>
<td>Maternal and Child Health Integrated Program</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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<td>MLM</td>
<td>Mid-Level Management</td>
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<td>MNT</td>
<td>Maternal and Neonatal Tetanus</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<td>MoPHS</td>
<td>Ministry of Public Health and Sanitation</td>
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<td>MPH</td>
<td>Master of Public Health</td>
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<td>Msc</td>
<td>Master of Science</td>
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<td>NESI</td>
<td>Network for Education and Support in Immunisation</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<td>NITAG</td>
<td>National Immunisation Technical Advisory Group</td>
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<td>NUVI</td>
<td>New and Under-utilised Vaccine Introduction</td>
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<td>PCV</td>
<td>Pneumococcal Conjugate Vaccine</td>
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<td>RED</td>
<td>Reaching Every District</td>
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<td>RTAG</td>
<td>Regional Technical Advisory Group</td>
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<td>SAGE</td>
<td>Strategic Advisory Group of Experts</td>
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<td>SAVIC</td>
<td>South African Vaccination and Immunisation Centre</td>
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<td>SIA</td>
<td>Supplementary Immunisation Activities</td>
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<td>TNA</td>
<td>Training Needs Assessment</td>
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<td>TT</td>
<td>Tetanus Toxoid</td>
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<td>UA</td>
<td>University of Antwerp</td>
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<td>UAE</td>
<td>United Arab Emirates</td>
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**LIST OF ABBREVIATIONS**

<table>
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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>UNICEF/ESARO</td>
<td>UNICEF Eastern and Southern Regional Office</td>
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<td>UNICEF/HQ</td>
<td>UNICEF Headquarters</td>
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<tr>
<td>WCARO</td>
<td>UNICEF Western and Central Regional Office</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>WHO/AFRO</td>
<td>WHO Regional Office for Africa</td>
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<td>WHO/EMRO</td>
<td>WHO Regional Office for the Eastern Mediterranean</td>
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<tr>
<td>WHO/HQ</td>
<td>WHO Headquarters</td>
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<td>WHO/IVB</td>
<td>WHO Department on Immunisation, Vaccines and Biologicals</td>
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<td>WHO/IST</td>
<td>WHO Inter-country Support Team</td>
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Dear colleagues,

We are pleased to present hereby our annual report on the activities implemented during 2011 by the Network for Education and Support in Immunisation (NESI). This report summarizes the achievements of the Network in the area of capacity building in immunisation, focusing on the African and Eastern Mediterranean Regions of the World Health Organization.

Vaccination is one of the most successful and cost-effective ways of preventing childhood morbidity and mortality against an increasing number of infectious diseases. Vaccines prevent more than 2.5 million child deaths every year. In 2010, 109 million children under the age of 1 year received three doses of DTP3. However, still 19 million children under 1 year of age did not receive DTP3. Every year, more than 1 million infants and children die from pneumococcal disease and rotavirus infection, which can be prevented by vaccination. Introduction and widespread use of new and under-utilized vaccines can contribute significantly to achieving MDG 4 of reducing global childhood mortality by two-thirds by 2015.

Human resources are key to providing good quality healthcare services to the population. A national immunisation programme relies on the support of well-trained medical and nursing staff. Both pre- and in-service training are key to achieving sustainable capacity and competence for current and future healthcare workers. Therefore, health training institutions play a crucial and active role in the implementation of the activities of the Network. Our main focus during 2011 was on pre-service training. In collaboration with WHO/AFRO, we conducted an evaluation at pre-service training institutions in nine selected African countries on the status of the immunisation curriculum. Special attention was also given to the development and adaptation of training materials for in-service training on new vaccine introduction, including the development of audio-visual materials.

The Annual Report 2011 summarizes the highlights of NESI’s activities during the year 2011 in capacity building in immunisation. Our achievements were made possible thanks to close collaboration with many partners in immunisation, including universities, governments, multilateral and bilateral organisations, industry, non-governmental organisations and alliances. We would like to take this opportunity to extend our sincere thanks to all our partners for their continued support to NESI and for making immunisation training and education a priority on their respective agendas.

Sincerely,

Dr. Carine Dochez, programme manager

Prof. em. André Meheus, senior advisor
The Network for Education and Support in Immunisation (NESI) was established in 2002. NESI was built on the experience of the International Network for Eastern and Southern Africa on Hepatitis B Vaccination, which was established in 1999 by five universities in Eastern and Southern Africa (Kenya, Tanzania, Zambia, Zimbabwe and South Africa), Ministries of Health in Africa and the University of Antwerp. The purpose of this network was to translate research on hepatitis B through capacity building and advocacy into universal access to hepatitis B vaccination in the partner countries.

With the development of new vaccines and increased commitment by development partners and private sector initiatives to strengthen vaccine supply and immunisation services, there are more opportunities to prevent more diseases in more children. This led to the establishment of NESI, which is a collaborative network of capacity building for the strengthening of existing immunisation systems and introduction of new vaccines with a broad technical scope and wide geographical focus.

NESI closely coordinates its activities with the World Health Organization (WHO), the United Nations Children’s Fund (UNICEF), the Global Alliance for Vaccines and Immunization, Non-Governmental Organisations (NGOs), the private sector, and other immunisation stakeholders.

Due to its links with universities and other health professional training institutions, which are vital to achieving sustainable capacity and competence building in the field of vaccinology, NESI is unique in its attention on pre-service training, particularly on the development of curricula and training for nurses, medical doctors, pharmacists, public health specialists and other related health professionals.

A Memorandum of Understanding between NESI and the WHO Regional Office for Africa (WHO/AFRO) clearly defines the overall goals and actions of NESI in the area of capacity building. With the Eastern Mediterranean Region of WHO (WHO/EMRO), NESI works on the basis of a detailed annual joint plan of action for key areas of capacity building. This validates the position of NESI as an integral partner in capacity building within the WHO African and Eastern Mediterranean Regions.

**MISSION**

The mission of NESI is to improve the quality and sustainability of immunisation programmes and services in low- and middle-income countries through education and training, technical support and building international networks. NESI aims to build the capacity of Ministry of Health managers and staff working in the Expanded Programme on Immunization (EPI) in their respective countries as well as to improve pre-service and post-graduate training at the different faculties of health training institutions involved in immunisation, which include medicine, nursing, pharmacy, and public health.
To accomplish its mission, NESI engages in a number of activities, which are grouped into three main areas: education and training, technical support, and networking and advocacy. NESI offers the following in each area:

1. EDUCATION AND TRAINING
   - Organises training events in collaboration with other organisations;
   - Monitors and evaluates currently implemented education and training programmes;
   - Validates the content of educational and training materials;
   - Develops up-to-date, high-quality training materials for different audiences involved in immunisation programmes; and
   - Provides support to universities to improve the curriculum of health professionals involved in immunisation and advises on regular refresher courses in collaboration with Ministries of Health (MoH).

2. TECHNICAL SUPPORT
   - Performs training needs assessments in collaboration with academic and other partners;
   - Assists countries in developing comprehensive training plans as part of their Multi-Year Plans;
   - Provides support to country staff to implement training activities; and
   - Improves national and regional capacity to deliver education and training.

3. NETWORKING AND ADVOCACY
   - Facilitates a forum to discuss and coordinate actions related to education, training, and support for immunisation programmes in low- and middle-income countries;
   - Maintains a network of specialists drawn from international organisations, universities in both industrialised and developing countries, national immunisation programmes, NGOs, industry, and other relevant stakeholders, to deliver high-quality training in all aspects of immunisation and at different stages of implementation of immunisation programmes;
   - Collaborates with local, regional, and global training initiatives to advocate for better education and training; and
   - Offers a website that houses training materials and links to other relevant sites.
STRUCTURE

NESI is a public-private partnership between the University of Antwerp and the private sector. An Executive Secretariat coordinates and implements activities for the network. The Executive Secretariat is based at the Department of Epidemiology and Social Medicine, University of Antwerp, Belgium.

The Executive Secretariat reports to a 12-member Oversight Committee, which advises on strategy and budget allocation, and reviews outcomes. The Oversight Committee is composed of representatives from the public-private partnership, representatives of partner universities and international health organisations and alliances, and international vaccinology experts.

NESI has full operational and scientific independence.

FUNDING

NESI is currently supported by an unrestricted educational grant from GlaxoSmithKline Biologicals and by funds from bilateral governmental university collaboration. The University of Antwerp provides infrastructure, IT and administrative support. Additional funding, participation or support from other national or international agencies or partners is actively pursued.
CHAPTER 1 EDUCATION AND TRAINING

Human resources are key to managing and delivering health care to the population. This requires a high priority to be given to both in- and pre-service education and training. National immunisation programme reviews and training needs assessments indicate that serious bottlenecks exist between in-service and pre-service training: e.g. EPI content was either not outlined in the pre-service curricula or it was incomplete or outdated; reference materials and demonstration equipment were often lacking; inadequate time allocation for EPI theory; some lecturers were not updated on new EPI issues. There is a high need to link professional education and academics with service realities.

1. IN-SERVICE TRAINING

To be effective, a national immunisation programme relies on the support of well-informed medical, nursing and support staff. To provide immunisation services of good quality it is essential to have a workforce that is sufficient in numbers, well educated and trained, adequately deployed and motivated. Evaluation of Mid-Level Management (MLM) courses has clearly shown that the performance of healthcare workers improves after in-service training.

1.1. VACCINOLOGY COURSES

In-service vaccinology courses are key to build national vaccinology expertise by strengthening the capacity of academics in vaccinology (who are already involved in teaching/research related to infectious diseases, mother and child health care, vaccines and immunisation) and to guide policy makers and programme managers to make evidence-based decisions on: (1) immunisation policies and strategies; (2) introduction of new vaccines and technologies; (3) sustaining routine immunisation; (4) adjustments of existing immunisation programmes (e.g. adolescent vaccination); (5) adjustments to vaccination schedules; (6) conducting phase 1 to phase 3 clinical trials, and post-marketing surveillance (phase 4 studies).

The target audience of vaccinology courses are: (1) teachers at health schools from the different faculties involved in immunisation: medicine, nursing, public health and pharmacy; (2) EPI managers; (3) MoH support staff; (4) staff of multilateral (WHO, UNICEF) and bilateral organisations, and of NGOs; and (5) MSc/MPH students.

The general objective of the vaccinology course is “to master the basic principles and specificities of a vaccine, how it is developed, produced and utilised, including its use within the EPI programme”.
The vaccinology courses are in principle built around 8 themes:

(1) The scientific basis of vaccinology;
(2) Vaccine development and evaluation;
(3) Routine EPI vaccines and optimising the impact of immunisation;
(4) New vaccines;
(5) Future vaccines;
(6) Vaccine safety and the value of vaccination;
(7) Prequalification, registration, production and control; and
(8) Programmatic issues.

Lecturers in the vaccinology courses are leading international vaccinology experts from universities, WHO, UNICEF, GAVI Alliance, Ministry of Health and industry.

1.1.1. “TROPED” ADVANCED VACCINOLOGY COURSE, BERLIN, GERMANY, JANUARY 2011

The TropEd Advanced Vaccinology Course was organised by the Institute of Tropical Medicine and International Health, Berlin, and NESI/UA, from 10 to 14 January 2011 in Berlin, Germany. The course is an accredited module (2 ECTS credit points) in the TropEd Masters Programme in International Health. TropEd is a network of institutions for higher education in International Health, including European and non-European institutions.

Twenty three students from 19 different countries attended the course: Argentina (1), Austria (1), Bosnia-Herzegovina (1), Burkina Faso (1), Germany (1), Ghana (1), India (1), Indonesia (4), Mexico (2), Myanmar (1), The Netherlands (1), Nigeria (1), Pakistan (1), Russia (1), Rwanda (1), Spain (1), Thailand (1), Uganda (1), United Kingdom (1).

Lecturers came from the Universities of Cape Town, Pretoria and Limpopo (South Africa), GAVI Alliance, International Vaccine Institute (Seoul, South Korea), Ministry of Health of Ghana, London School of Hygiene and Tropical Medicine (United Kingdom), Terumo Europe N.V. (Belgium), Max Planck Institute for Infection Biology (Berlin, Germany), Robert Koch Institute (Berlin, Germany), Institute of Tropical Medicine and International Health (Berlin, Germany) and NESI/UA (Belgium).

Teaching methods included seminar-style and interactive lectures, and group work on specific target diseases. Students had to write a 5-page assignment on a self-defined topic relevant to vaccines and immunisation, which was evaluated by the course organisers.
NESI staff gave lectures on the following topics: Global Immunization Vision and Strategy (GIVS); Immunisation and Millennium Development Goals (MDGs); The decision-making process for new vaccine introduction; HPV vaccines; Adolescent vaccination; Cold chain; and Registration and WHO prequalification. NESI also co-facilitated the group work and chaired several sessions.

In addition to the TropEd Advanced Vaccinology Module, NESI is also involved since 2011 in lecturing at the TropEd Core Course in Berlin, Germany, which runs from September till December each year. NESI was invited to lecture on “Basic Vaccinology”, which is a one-day session during the Core Course.

1.2. MID-LEVEL MANAGEMENT COURSES

Mid-Level Management (MLM) courses aim to contribute to the reduction of morbidity and mortality due to vaccine preventable diseases through the improvement of management of immunisation programmes in the African Region. More specifically MLM courses aim to create awareness of participants on new roles and responsibilities as EPI managers in line with the current global and regional immunisation policies and strategies within the context of health system strengthening; and to update and strengthen managerial knowledge and skills related to problem solving, decision making/leadership, effective communication, strategic or operational planning, immunisation programme costing, budgeting and resource mobilization, cold chain and vaccine management, immunisation safety management, human and financial resources management, new vaccine introduction management, conducting quality supplementary immunisation activities, integrated disease surveillance and response management, EPI monitoring and data management, supervision, EPI coverage survey and evaluation.

The target audience of in-service MLM courses include: (1) EPI managers; (2) MoH support staff; (3) staff of multilateral (WHO, UNICEF) and bilateral organisations, and of NGOs; and (4) teachers at health schools from the different faculties involved in immunisation: medicine, nursing, public health and pharmacy.

MLM courses can be organised as regional/inter-country courses or as national courses. MLM courses organised at the country level, are key to building national capacity in efficient management of immunisation programmes.

In 2011, NESI contributed to two MLM courses, one regional and one national course.
1.2.1. REGIONAL EPI MID-LEVEL MANAGEMENT COURSE FOR ANGLOPHONE COUNTRIES, NAIROBI, KENYA, OCTOBER 2011

The regional MLM course for Anglophone countries was organised from 3 to 12 October 2011 by WHO/AFRO in collaboration with the Ministry of Public Health and Sanitation (MoPHS) of Kenya, UNICEF, USAID, AMP and NESI. A total of 27 facilitators and 35 participants attended the course. The participants were from health training institutions and public health EPI programmes from the following countries: Eritrea, Ethiopia, Ghana, Kenya, Liberia, Malawi, Namibia, Nigeria, Rwanda, Sierra Leone, Tanzania, Uganda and Zimbabwe.

The MLM modules, updated or developed during the workshop to revise the AFR EPI MLM modules in Accra (13-17 June 2011) were tested during this course.

The following pedagogical methods/techniques were used during this MLM training: individual pre-reading, short presentations, plenary and group discussions, case studies, application and practical exercises, and role playing. NESI contributed to the following modules: Cold chain management; Disease surveillance; Immunisation safety; New vaccine introduction; and Vaccine management.

**FIGURE 1:** PARTICIPANTS AT THE REGIONAL MID-LEVEL MANAGEMENT COURSE FOR ANGLOPHONE COUNTRIES, NAIROBI, KENYA, OCTOBER 2011
1.2.2. NATIONAL MID-LEVEL MANAGEMENT TRAINING COURSE, MOMBASA, KENYA, AUGUST 2011

The Ministry of Public Health and Sanitation through the Division of Vaccines and Immunisation, in collaboration with WHO, Moi University and other partners organised a national Mid-Level Management training course from 11 to 20 August 2011, in Mombasa, Kenya. NESI gave technical assistance and supported the in-country MLM training, in the framework of national capacity building on immunisation.

The MLM training course targeted the District Health Managers from Central and Nairobi Provinces to update their knowledge and skills as part of capacity strengthening for optimal vaccination service delivery. A total of 66 participants attended the course, including 46 District Health Managers.

The facilitators were drawn from WHO, Moi University, Indiana University, Wisconsin University, Ministry of Public Health and Sanitation, and Kenya medical training colleges.

Organising national MLM courses are important as the regional/inter-country MLM courses can only accommodate a limited number of participants per country. Therefore, to create national capacity in efficient management of immunisation services, it is important to organise national MLM courses.
1.3. DEVELOPMENT OF TRAINING MATERIALS

1.3.1. DEVELOPMENT OF VACCINOLOGY MODULES

Standard training materials for vaccinology courses are currently being developed. These training materials will facilitate the learning process during vaccinology courses. In addition it will enable participants of these courses to use the modules in their lectures at health training institutions or to organise national vaccinology courses.

In 2009 and 2010, two workshops were organised to develop generic training materials and handouts for vaccinology courses. During these workshops, a list of 40 vaccinology modules was developed and key facilitators for each module were identified.

Each module should be developed according to the reference format:

- Objectives (general, intermediate and specific objectives)
- Table of content
- Text of 2500-3000 words
- PowerPoint presentations with explanatory notes
- Exercises
- List of references

During 2011, each facilitator continued to work individually on their respective module(s) in order to produce a final draft. A peer technical review meeting will be planned in the course of 2012 to finalise the vaccinology training materials and hand-outs.

1.3.2. WORKSHOP TO REVISE THE AFRICAN EPI MID-LEVEL MANAGEMENT MODULES AND HANDOUTS, ACCRA, GHANA, JUNE 2011

In May 2003, a first workshop was organized by WHO/AFRO to develop generic training modules and hand-outs for EPI Mid-Level Management courses. In total 14 MLM modules and a facilitator’s guide were developed and finalised in March 2004. These standardised training materials are used to train national EPI managers, teachers, WHO/UNICEF focal points and other key immunisation partners at central, provincial and district levels. The problem-solving approach is the basic teaching method used in all the modules. These modules have facilitated the learning process during various inter-country and in-country MLM courses conducted from May 2004 to March 2011. In addition, these MLM modules have been regularly used by health professors/teachers in their lectures at health training institutions.
As new vaccines, policies and technologies become available, there was a need for updating the MLM modules in order to incorporate this new information (GIVS, revised RED guidelines, etc.) that has come in after the 2004 edition. Therefore a workshop was organised by WHO/AFRO in Accra, Ghana, from 13 to 17 June 2011 with the objective to update the AFR EPI MLM modules and to discuss the processes of validation, testing and distribution of the revised modules.


At the end of the workshop, all MLM modules were revised and two new modules were developed. NESI contributed to the revision of the modules on New Vaccine Introduction, Cold Chain Management and Vaccine Management.

1.3.3. DEVELOPMENT AND EVALUATION OF AUDIO-VISUAL MATERIALS

1.3.3.1. DEVELOPMENT OF TRAINING DVD FOR INTRODUCTION OF PNEUMOCOCCAL CONJUGATE VACCINE

The Federal Ministry of Health of Ethiopia in collaboration with partners planned to introduce pneumococcal conjugate vaccine (PCV10) in the national routine immunisation programme in 2011. New vaccine introduction demands intensive and high quality training for healthcare workers at different levels of profession and health facilities to avoid any mishandling of the vaccine that could potentially lead to adverse events following immunisation (AEFI).

Pneumococcal disease is a group of diseases caused by a bacterium called *Streptococcus pneumoniae*, also called pneumococcus. Exposure to pneumococcus can result in severe diseases like pneumonia, meningitis and bacteraemia, as well as milder diseases such as middle ear infection, sinusitis and bronchitis. Over 800,000 children under 5 years of age die from pneumococcal disease each year. In Ethiopia, pneumonia accounts for 28% of under-five mortality. Given the high burden of under-five mortality, pneumonia prevention and control efforts are crucial to achieving the Millennium Development Goal 4.

Pneumococcal vaccines protect against several forms of pneumococcal disease, such as meningitis, pneumonia and bacteraemia. The recommended schedule to administer the vaccine is at 6, 10 and 14 weeks, at the same time as pentavalent vaccine (DTP-HepB-Hib). This pneumococcal vaccine is presented in a liquid form in a two-dose vial without preservative. This implies that an opened vial must be discarded at the end of each immunisation session or after 6 hours from first opening, whichever comes first.
An opened vial of PCV10 cannot be stored in the refrigerator for use in subsequent immunisation sessions. This is not in line with the WHO policy on the use of opened multi-dose vials of vaccine in subsequent immunisation sessions. Therefore, specific training on the use and storage of this new two-dose pneumococcal vaccine was felt needed.

In order to achieve high quality training, the National Coordination Committee for new vaccine introduction welcomed the idea of using a DVD as part of the training materials to enhance the quality of training activities. The DVD would cover all aspects necessary for the introduction in order to increase the knowledge and skills of healthcare workers in handling and administration of the vaccine, as well as communication to caretakers, within the local context of Ethiopia.

To facilitate the production of the DVD, a local DVD producer/editing agency (Halleta) with a good previous record of high quality filming, editing and production was identified to undertake the task. Technical Support was provided by the National Communications Working Group for PCV10 introduction and NESI. The experience of NESI and its team based on the development of the Kenyan DVD in 2010, was crucial in the cost-efficient development of the Ethiopian DVD.

**FIGURE 2:** RECORDING STUDIO AT HALLETA OFFICE, ADDIS ABABA, ETHIOPIA
The team received approval to film at Addis Ababa University, College of Health Sciences; Black Lion Hospital; Pharmaceutical Fund and Supply Agency (central vaccines store); Lideta Health Center. Prof. Tilahun Teka, Paediatrician, Professor at Addis Ababa University, College of Health Sciences, Chairman of Paediatric Association, agreed to be the main character in the DVD. Filming took place during the last week of May 2011.

The DVD is outlined in five chapters (Table 1). After each chapter, a question and answer section is included. The DVD was produced in the main local language, Amharic.

**TABLE 1: OUTLINE OF TRAINING DVD ON PNEUMOCOCCAL VACCINE**

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<th>Opening statements:</th>
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<td></td>
<td>Dr. Kesetebirhan Admassu, Minister of State, Federal Ministry of Health, Ethiopia</td>
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<tr>
<td></td>
<td>Dr. Fatoumata Nafo-Traoré, WHO representative, Ethiopia</td>
</tr>
</tbody>
</table>

| Chapter 1       | Pneumococcal diseases |
| Chapter 2       | Pneumococcal vaccine  |
| Chapter 3       | Storage and handling  |
| Chapter 4       | Immunisation session  |
| Chapter 5       | Communication         |

**FIGURE 3: PROF. TILAHUN TEKA GIVES AN INTRODUCTION IN FRONT OF THE COLLEGE OF HEALTH SCIENCES, ADDIS ABABA, ETHIOPIA**
With support from GAVI, Ethiopia launched the pneumococcal conjugate vaccine on 16 October 2011. Preceding the launch of the new vaccine, all health care workers were trained on the use and storage of the new vaccine, using the training DVD as part of an intensive training programme.

1.3.3.2. EVALUATION OF TRAINING DVD ON PNEUMOCOCCAL CONJUGATE VACCINE, KENYA, SEPTEMBER – OCTOBER 2011

Kenya introduced the new pneumococcal conjugate vaccine (PCV10) into its routine immunisation schedule in February 2011. PCV10 is a liquid vaccine, presented in a two-dose vial without preservative. Intensified training of healthcare workers was required before the introduction of the vaccine into the national immunisation programme. As part of the training materials for the introduction of the new pneumococcal conjugate vaccine, a training DVD was developed. A training DVD ensures that the same training messages are received by all, minimizing the risk of the messages being diluted or distorted in the cascaded process of training.
The DVD was shown during face-to-face training which was conducted at all levels (national, provincial, district and health facility level) in December 2010 and January 2011. The trainers/facilitators were available during the training sessions to respond to any questions that the trainees raised regarding the content of the DVD.

It was the first time that a DVD was used during the training programme on new vaccine introduction in Kenya. Therefore, it was important to receive feedback on the use and usefulness of the DVD, from both the facilitators and the trainees, and whether the content of the DVD was appropriate, well packaged, and relevant in order to make recommendations on areas for improvement.

The evaluation included both quantitative (structured questionnaire) and qualitative (key informant interviews and focus group discussions) methods. The target group for the evaluation were healthcare workers who had previously attended training on the introduction of PCV10 vaccine including the training DVD. Key informant interviews were held with the Director of Public Health and with health management teams at different levels of healthcare (national, provincial and district levels). The evaluation was conducted in 8 counties across Kenya.

Table 2 lists some of the advantages indicated by trainees of using a DVD during training sessions on new vaccine introduction.

**TABLE 2: ADVANTAGES OF USING A DVD DURING TRAINING SESSIONS**

<table>
<thead>
<tr>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>“It is practical and easy to understand as one can see how things are done”</td>
</tr>
<tr>
<td>“DVD is available for later reference”</td>
</tr>
<tr>
<td>“Can pause and discuss/reflect on the content”</td>
</tr>
<tr>
<td>“Information is delivered without distortion”</td>
</tr>
<tr>
<td>“Message is conveyed clearly”</td>
</tr>
</tbody>
</table>

Participants suggested to distribute the DVD to every health facility, so that every healthcare worker can benefit of the training. This, however, requires that reliable power supply and a functional DVD player and TV are available in all health facilities. Participants also recommended to use both English and Kiswahili in the narrations.

In conclusion, the healthcare workers found the DVD very useful and recommended that the DVD be used as part of the face-to-face training.
2. PRE-SERVICE TRAINING

The incorporation of EPI into undergraduate medical education, nursing/midwives, and other health professional training programmes is important towards improving and strengthening immunisation service delivery, logistics, surveillance, communication and management practices. Clinical and public health training that incorporates the learning objectives of EPI will enable students to develop a firm basis of core knowledge and skills.

The rapid development of innovations and new technologies in immunisation programmes requires that graduated students, as tomorrows' staffs, are updated regularly if they have to cope with strategic changes and technical advancements.

Training needs assessments conducted in various countries of the WHO African Region during the last decade pointed out several challenges in pre- and in-service training of immunisation theory and practice at medical and nursing schools. Some of these challenges presented below required concerted action by the schools and national immunisation services to deal with deficiencies in immunisation teaching:

- Harmony between pre-service and in-service training was lacking;
- EPI content was either not outlined in the curricula or it was incomplete or outdated;
- Reference materials and demonstration equipment were lacking;
- Time allocation to EPI theory was inadequate and the practical sessions were not adequately supervised;
- Some lecturers and tutors lacked modern EPI training.

This situation prompted a systematic revision of EPI curriculum for both medical and nursing/midwifery schools. To facilitate this exercise, two EPI prototype curricula for medical and nursing/midwifery schools were developed in 2006 by NESI and WHO/AFRO, and are available in English and French.

The general objective of the prototype curricula is to strengthen the teaching and learning of immunisation within the existing curriculum for pre-service education programmes for medical doctors, nurses/midwives and other health professionals.
2.1. EVALUATION OF PRE-SERVICE TRAINING IN THE AFRICAN REGION

At the end of 2006, a consensus workshop was organised in Douala on the pre-service EPI curricula for medical doctors and nurses. The workshop was attended by 49 participants from 22 countries: Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Cote d’Ivoire, DRC, Ethiopia, Ghana, Kenya, Mali, Madagascar, Niger, Senegal, South Africa, Tanzania, Togo, Uganda, Zambia and Zimbabwe.

Following the Douala consensus workshop on EPI prototype curriculum, many health training schools have updated their curricula making efforts to incorporate EPI into their teaching agendas. To measure the level of introduction, WHO/AFRO and NESI carried out an evaluation to assess the status of the introduction of immunisation curriculum in the training institutions of the African Region and its impact on the quality of training of medical and nursing school students.

DEVELOPMENT OF TOOLS FOR THE EVALUATION OF PRE-SERVICE TRAINING

The first step in the evaluation process, was the development of tools to conduct the evaluation. Different questionnaires were developed for interviews and focus group discussions with lecturers, tutors at field attachment and practical sites, deans and principals, national EPI managers, students and EPI partners.

The following evaluation tools were developed:

- **EvTool-1**: Detailed questionnaire to be completed by EPI lecturers “Status of the introduction of the curriculum on immunisation in the medical and nursing schools of the African Region”
- **EvTool-2a**: Interview with tutors at student’s field attachment site
- **EvTool-2b**: Interview with tutors at student’s practical visit site
- **EvTool-3**: Interview with the Dean/Principal/Coordinator of training programmes
- **EvTool-4**: Focus group discussions (FGD) with EPI teachers
- **EvTool-5**: Focus group discussions with students
- **EvTool-6**: Interview with National Immunisation Programme Manager
- **EvTool-7**: Interview with EPI partners
EVALUATION OF PRE-SERVICE TRAINING IN NINE SELECTED AFRICAN COUNTRIES

Specific Objectives

- To determine the extent of revision of the immunisation curriculum;
- To assess the technical knowledge and skills of teachers/tutors responsible for teaching EPI topics;
- Ensuring whether:
  - appropriate time is allocated to the course topics;
  - a sound balance exists between theoretical and practical sessions;
  - appropriate training materials in sufficient quantities are available in health training institutions;
  - appropriate supplies and demonstration equipment are available in health training institutions and practical attachment sites;
  - adequate learning and programme evaluation is conducted.

Methodology

The following nine countries were visited by the evaluation teams (composed of WHO/AFRO and NESI staff, African Vaccinology Experts and National Experts) for data collection and analysis:

- English speaking countries: Ethiopia, Ghana, Kenya, Republic of South Africa, Uganda and Zimbabwe
- French speaking countries: Democratic Republic of Congo, Madagascar and Niger

The evaluation teams undertook the following tasks in the respective countries:

- Review of curricula of pre-service training institutions;
- Interviews with:
  - EPI training coordinators/lecturers
  - Field attachment and practical site tutors
  - Deans/principals of the training institutions
  - National EPI managers
  - Partners supporting immunisation programmes
- Focus group discussions with teachers and students;
- Review of EPI training materials used;
- Review of training materials used for in-country MLM training courses.
Findings

The most common unmet training need was to have the curricula reviewed to incorporate modern EPI theory and practice. Operational areas for which training needed to be strengthened included vaccine needs assessment and forecasting, new vaccines and injection technology, immunisation safety, etc.

Training schools generally lacked demonstration equipment for EPI practical lessons. Current EPI reading and didactic teaching materials were often unavailable or the available materials were not adequate. Some institutions used the AFR EPI MLM modules as reference material.

The range of theoretical hours for EPI topics varied widely depending on type of training programme and level of tuition, but generally was between one and 10 hours. Although practical sessions are an integral part of pre- and in-service programmes, their duration on immunisation also varied widely, ranging between 1 and 12 weeks.

A few tutors and lecturers received recent EPI training, but most have not attended EPI workshops and, as a result, they lack knowledge on current EPI theory and practice.

Specific recommendations based on the assessment findings were made to pre-service training institutions, Ministries of Health and EPI units and partners.
Introduction of the updated Immunization Curriculum in the Pre-Service Training Institutions in the African Region

An Evaluation Report

2011

FIGURE 5: COVER PAGE OF THE EVALUATION REPORT ON “THE INTRODUCTION OF THE UPDATED IMMUNIZATION CURRICULUM IN THE PRE-SERVICE TRAINING INSTITUTIONS IN THE AFRICAN REGION”
FIGURE 6: EVALUATION TEAM MEETS WITH THE PRINCIPAL AND EPI TEACHING STAFF AT "KENYA MEDICAL TRAINING COLLEGE", NAIROBI, KENYA

FIGURE 7: EVALUATION TEAM MEETS WITH THE DIRECTOR OF TRAINING PROGRAMMES AT "INSTITUT PRATIQUE DE SANTÉ PUBLIQUE", NIAMEY, NIGER
CHAPTER 2 TECHNICAL SUPPORT

NESI is committed to support initiatives for strengthening National Immunisation Programmes, including support to National Immunisation Technical Advisory Groups, Annual Vaccination Weeks, support for regional and national workshops addressing the basic and operational programme components.

1. MEETINGS AND EVENTS

1.1. SECOND VACCINATION WEEK IN THE EASTERN MEDITERRANEAN REGION, APRIL 2011

In 2005, WHO/EMRO adopted the regional vision that “No child should die from vaccine-preventable diseases”. Since then, the Eastern Mediterranean Region has made remarkable progress in reducing morbidity and mortality due to vaccine-preventable diseases.

Vaccination coverage with three doses of DTP3 has increased from 18% in 1980 to 87% in 2009. Twenty countries maintained their polio-free status. The 90% measles mortality reduction target was reached three years ahead of schedule. An increasing number of countries are introducing new and under-utilised vaccines.

However, despite this substantial progress, the Region still faces many challenges: in 2009, approximately 1.9 million children did not receive DTP3 by their first birthday; Afghanistan and Pakistan are still polio-endemic countries; maternal and neonatal tetanus are still not eliminated; and the success of measles mortality reduction needs to be sustained.

To address both the opportunities and challenges, WHO/EMRO coordinated the second Vaccination Week in the Eastern and Mediterranean Region during the week of 24-30 April 2011. The Vaccination Week in the Eastern Mediterranean Region is an annual region-wide initiative promoting the value of immunisation through advocacy, education and communication activities. The theme for the 2011 Vaccination Week was “partnership for immunisation”.

THE OBJECTIVES OF THE IMMUNISATION WEEK INCLUDED:

1. Increasing stakeholder awareness of the value of immunisation;
2. Promoting and maintaining immunisation as a priority for policy- and decision-making;
3. Advocating for and mobilising human and financial resources; and
4. Improving access to immunisation for high-risk populations and hard-to-reach areas in the Region.
Strategies used included: targeted advocacy and education; communication and media activities; and expansion of immunisation services.

The Regional Launch of the Vaccination Week took place in Cairo, Egypt, on 21 April 2011. Dr. Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean, addressed senior officials from the ministries, local organisations and the media. The ceremony was followed by a panel discussion with members of academia, media, governmental and non-governmental organisations. Twenty countries in the Eastern and Mediterranean Region participated in the second Vaccination Week. Almost all countries in the Region organised a national launching ceremony. All participating countries implemented advocacy, education and communication activities. Implemented activities included: mass media campaigns; social mobilisation: awareness events, public meetings, activities in schools; training of health professionals, and medical and nursing students; meetings: round-table, seminars; exhibitions and awards. Countries set their own objectives based on national priorities and epidemiological situation.

The second Vaccination Week in the Eastern Mediterranean Region was a successful event in increasing awareness on the importance and benefits of immunisation in the Region.

1.2. MEETING ON REVIEW AND EVALUATION OF THE 2ND VACCINATION WEEK AND PLANNING OF THE 3RD VACCINATION WEEK, DUBAI, UAE, OCTOBER 2011

A meeting on review and evaluation of the second Vaccination Week and planning of the third Vaccination Week was organised by WHO/EMRO in Dubai, UAE, on 20 October 2011.

The meeting was attended by MoH representatives from 19 countries (Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Republic of South Sudan, Syrian Arab Republic, Tunisia and United Arab Emirates), as well as RTAG and NITAG members, WHO, UNICEF and NESI.

THE OBJECTIVES OF THE MEETING INCLUDED:

- To share experiences and best practices of the region in the second regional vaccination week in 2011
- To agree on common regional or sub-regional theme and slogan for the third regional vaccination week in 2012
Participants at the meeting shared their best practices of the second Vaccination Week. It is important that the events are nationally focused but have regional relevance. A regional theme should be developed to encourage focused Vaccination Week efforts. Early coordination among countries is crucial for joint launching ceremonies and activities at border areas. Strong involvement from partners (NGOs, media, leaders, academic institutions, etc.) is essential to the success of the Vaccination Week. It was suggested that the next Vaccination Week should explore possibilities to reach the most marginalised and hard-to-reach populations.

The overall objectives and strategies for the third Vaccination Week will be similar to those of the second Vaccination Week. Specific topics were discussed for the 2012 Vaccination Week, taking into account the lessons learnt and best practices of 2011: target audiences; potential activities to be organised; cross border activities; media products and activities; evaluation; key messages; visual representation; regional launching ceremony.

**1.3. 27TH REGIONAL TECHNICAL ADVISORY GROUP MEETING, DUBAI, UAE, OCTOBER 2011**

WHO/EMRO organised the 27th Regional Technical Advisory Group (RTAG) meeting on 20 October 2011 in Dubai, UAE.

In addition to the RTAG members and WHO/EMRO, the meeting was attended by the NITAG chairs of Afghanistan, Islamic Republic of Iran, Kuwait, Lebanon, Oman, Palestine, Qatar, Somalia, Sudan, Syrian Arab Republic, Tunisia, and by NESI.

Participants were briefed by WHO/EMRO on the resolution of the 58th Session of the Regional Committee for the Eastern Mediterranean “Scaling up the Expanded Programme on Immunisation to meet global and regional targets”. An update was also provided on the measles elimination validation process.

NESI was invited by WHO/EMRO to give a presentation on the “Role of academic institutions in strengthening EPI”. The presentation initiated a detailed and important discussion on the pre-service training needs and activities and on the possibility of establishing centres of excellence for training in immunisation in the WHO/EMRO Region. Conducting training needs assessment at selected universities and other health training institutions in EMR countries will be a first step in establishing a training strategy for the Eastern Mediterranean Region. The NITAG chairs could play a potential role of driving the immunisation training and education activities in their respective countries.
2. COUNTRY SUPPORT

2.1. LAUNCH OF PNEUMOCOCCAL CONJUGATE VACCINE, KENYA, FEBRUARY 2011

Kenya was the first African country that introduced the new pneumococcal conjugate vaccine, PCV10, in their national immunisation programme. The vaccine protects children against pneumococcal diseases like pneumonia, meningitis and bacteraemia. The roll out of the vaccine in developing countries is possible through a novel financing mechanism, the Advanced Market Commitment.

NESI was invited by the Ministry of Public Health and Sanitation (MoPHS) of Kenya to attend the official launch of the pneumococcal conjugate vaccine on 14 February 2011 in Nairobi, Kenya. NESI received enormous visibility being acknowledged on all advocacy and training materials (Fig. 8). It clearly shows that NESI is a full partner in the introduction process of this new pneumococcal conjugate vaccine in the EPI programme in Kenya. More specifically, NESI provided core technical input and finishing touches on the development of the training materials on pneumococcal conjugate vaccine, particularly for the training DVD.

The Official Launch was moderated by the Permanent Secretary, Ministry of Public Health and Sanitation, Mr. Mark Bor. The launch was attended by the following official authorities:

- President Mwai Kibaki
- Dr. Beth Mugo: Minister of Public Health and Sanitation
- Dr. Matshidiso Moeti: WHO Assistant Regional Director
- Mr. Simon Bland: Deputy Director DFID
- Ms. Helen Evans: interim CEO GAVI Alliance

“The introduction of the pneumococcal vaccine in Kenya is an historic step towards improved health for children in Kenya and in other developing countries. The global introduction of pneumococcal vaccination is a milestone in global health and will help us reduce child mortality.”

Dr. Beth Mugo – Minister of Public Health and Sanitation, Kenya
In 2009, a training needs assessment (TNA) covering EPI key operational and support areas was performed in Mozambique in collaboration with WHO/AFRO. Teachers and personnel of health training institution (pre-service) and of health centres (in-service) in 6 out of 11 provinces were interviewed. For in-service training, main conclusions of this TNA were: (1) core EPI service personnel at facility level was left out for training (leading to poor knowledge and skills in surveillance, data management and vaccine supply); (2) supportive supervision was very poor; (3) there was hardly any up-to-date EPI training material available in both the in-service and pre-service institutions; and (4) a weak link was observed between qualification and job. For pre-service training, following observations came out: (1) EPI teachers did not benefit from national training activities and were not sufficiently updated on EPI; (2) EPI content in training institutions was outdated and inadequately covered; (3) there was a lack of synchronization between theory and practice; (4) there was almost no interaction between teachers and service providers; and (5) formal education alone did not fully meet professional requirements of EPI staff in terms of function.
As follow-up of the 2009 TNA, a mission to Maputo was undertaken by NESI between 16 and 19 May 2011. Prioritizing the pre-service needs, training requirements and future collaboration were discussed with identified stakeholders. Meetings were held with key persons from WHO (Focal points of EPI and Human Resources), the Ministry of Health (Deputy Director of Public Health and Director of the National Institute for Health), the University of Eduardo Mondlane (Department of Microbiology), UNICEF, the Flemish International Cooperation Agency (FICA) and the University of Ghent (International Centre for Reproductive Health and the DESAFIO programme, which is an Institutional University Cooperation Programme with the University of Eduardo Mondlane).

The following topics emerged during the discussions:

- a strong need for training of nurses and midwives on practical immunisation techniques;
- the importance of the Mozambican NITAG in decision making;
- a lack of up-to-date training documents, especially in Portuguese;
- a general need to prepare the country for new vaccine introduction.

To cover the identified needs, the following is proposed:

- the organisation of a short lusophone vaccinology course/MLM course for teachers involved in the EPI topic theoretical or practical training, EPI managers and MoH staff, focusing on new vaccines;
- the organisation of a course on immunisation in practice for nurses and midwives;
- in-service training upon introduction of new vaccines;
- technical support for the development of lusophone teaching/training materials.

The University of Ghent, through the DESAFIO programme, implements an Institutional University Cooperation Programme with the University of Eduardo Mondlane. A short course on sexual and reproductive health is organized annually. Adding a vaccinology course would allow to cover Mother and Child Health more comprehensively, which approach will be further explored.
CHAPTER 3 NETWORKING AND ADVOCACY

1. NESI WEBSITE

NESI is committed to providing up-to-date information on vaccines and immunisation. Related training materials can be found on the website under “Training materials”, including training modules for different types of courses (e.g. Mid-Level Management and Vaccinology Courses), as well as audio-visual materials. Upcoming courses will be announced in the section “News and Events”.

The NESI website received a complete make-over in 2011 making it more user-friendly and accessible. Visitors of our website can subscribe for regular news updates.
2. ALUMNI DATABASE

A human resources and alumni database has been established in Access. This database includes the contact information of all our partners. In addition, it includes detailed information of our courses and lists the details of each facilitator and participant in the respective courses. Each participant can be traced back to a specific course.

The database also includes the contact information of lecturers and EPI staff who are part of our pre-service training network. The pre-service training network is organised by country.

A mailing list linked to the database will be developed in order to send out regular updates on immunisation training materials to the alumni of our courses and to the pre-service training network.
3. MEETINGS

Participating in networking activities is an important opportunity for NESI to discuss and plan collaborative activities, to share experiences with other immunisation partners, and to receive the latest updates and recommendations on vaccines and immunisation, which can immediately be incorporated in our training/teaching activities.

3.1. EPI MANAGERS MEETING FOR EASTERN AND SOUTHERN AFRICA, HARARE, ZIMBABWE, MARCH 2011

The Annual EPI Managers meeting for Eastern and Southern Africa was organised by the WHO/Inter-Country Support Team from Eastern and Southern Africa from 22 to 23 March 2011, in Harare, Zimbabwe.

The meeting was attended by more than 140 participants, including National EPI managers, WHO, UNICEF, members of the Task force on Immunisation, and other immunisation partners (American Red Cross, CHAI, MCHIP, NESI, PATH, Bill and Melinda Gates Foundation, USAID, CDC and Rotary International). All the 19 countries of the Eastern and Southern Africa sub-region participated in the meeting.

The overall objective of the meeting was to assess the performance of the immunisation programme in the respective countries, and to map the way forward. The meeting provided a forum for exchange of experiences between countries in the Eastern and Southern Africa sub-region and immunisation partners, to discuss current issues and challenges related to vaccine preventable diseases and their solutions, and to update all participants on global and regional policies and guidelines.

The meeting was officially opened by the Deputy Minister of Health of Zimbabwe, Dr. Douglas Mombeshora.

The meeting was organised around five sessions: (1) routine immunisation service delivery; (2) data quality issues; (3) new vaccines and immunisation financing; (4) polio eradication: interrupting transmission in AFR; and (5) accelerated disease control – sustained surveillance and moving to measles and Maternal and Neonatal Tetanus (MNT) elimination.

Action points and main recommendations for 2011 for the Eastern and Southern Africa sub-region included:

- **Routine Immunisation**: implementing the integrated RED approach; implementing Enhanced Routine Immunisation Activities; implementing the first African Vaccination Week in 2011; reviewing and developing a communication and social mobilization strategy for behaviour change that covers all areas of immunisation.
- **Data Quality Issues**: institutionalizing Data Quality Self-Assessment; organizing meetings between the laboratory personnel, MoH, UNICEF and WHO focal persons at least once a month for data harmonization; implementing the EPI Data Management Tool; conducting an Effective Vaccine Management Assessment every three years.

- **New Vaccines and Immunisation Financing**: conducting Post Introduction Evaluation within 6-12 months post introduction; mobilizing local resources for implementation of integrated immunisation services with other child health interventions; documenting the process and experience in mainstreaming cMYP into National Budgeting; conducting analytical work in immunisation financing to provide information on trends of EPI funding and impact of co-financing of new vaccines on the funding of National EPI programmes.

- **Polio Eradication**: ensuring the interruption of on-going transmission; implementing rounds of synchronized preventive Supplementary Immunization Activities (SIA) in countries at risk of importation of the wild polio virus.

- **Accelerated Disease Control**: monitoring drop-out rate of measles-containing vaccines; mobilizing local resources for countries that plan measles follow-up SIAs; for concerned countries, conducting risk assessment of Yellow Fever; sustaining the gains of MNT elimination by improving clean deliveries, strengthening surveillance and data reviews; for countries yet to achieve MNT elimination, conducting tetanus toxoid (TT) SIAs and ensuring strong routine TT for women of child-bearing age.

NESI participated also in the country side meetings of Ethiopia, Mozambique and South Africa.

Attending the EPI Managers meeting was an excellent opportunity for NESI to discuss and plan joint activities with EPI staff and other immunisation partners in specific countries.

### 3.2. GLOBAL NEW AND UNDER-UTILISED VACCINES IMPLEMENTATION MEETING, MONTREUX, SWITZERLAND, JUNE 2011

The fifth Global Meeting on Implementing New and Under-utilized Vaccines (NUVI) was organized by WHO/HQ from 22 to 24 June 2011 in Montreux, Switzerland. The meeting was attended by 125 participants including representatives of Ministries of Health from 18 countries, WHO, UNICEF, partner agencies, universities, NGOs and manufacturers.

The main objective of the meeting was to create a forum for immunisation partners working at global, regional and country levels, both in the private and public sectors, to discuss issues related to the introduction of new and under-utilized vaccines, and to review the progress in...
the implementation of the Global Plan of Action for New and Under-Utilized Vaccines Implementation. The overall theme of the 2011 NUVI meeting was “Sustaining the gains of new vaccine introduction”.

The meeting started with a plenary session, setting the stage for the discussions throughout the meeting. Work group discussions focused on six key subject areas.

The following topics were addressed during the plenary sessions:
- Programmatic achievements including progress with implementation of Hib, pneumococcal, rotavirus, epidemic meningococcal and HPV vaccines and prioritizing activities for the next 12 months, including a review of recommendations from last year's workshops;
- An update from GAVI and other partners on the status of funding available for new vaccines as well as new policies;
- Review of lessons learned from Pneumococcal, Rotavirus and Meningitis A vaccine introductions.

Working group sessions focused on the following topics:
- Prioritization of vaccines at country level;
- Review of immunisation schedules for pneumococcal and rotavirus vaccines;
- The vaccine supply and pricing situation;
- Delivery strategies for HPV, Typhoid, Japanese Encephalitis and Rubella vaccines;
- Communication and advocacy for new vaccines introduction;
- Human resource needs for new vaccines implementation.

It was concluded that rotavirus and pneumococcal vaccine introductions should be prioritised, followed by preparations for HPV introduction and support for the introduction of underused regional vaccines such as Yellow Fever, Japanese Encephalitis, Meningitis A, Typhoid and Cholera vaccines. In a final voting session, participants prioritized the following supportive tasks for 2012: make vaccines more affordable, strengthen immunisation delivery systems, increase national ownership and financing of NUVI, improve human resources for immunisation and improve surveillance data quality.
3.3. STRATEGIC ADVISORY GROUP OF EXPERTS MEETING, GENEVA, SWITZERLAND, APRIL AND NOVEMBER 2011

The Strategic Advisory Group of Experts (SAGE) Meetings were organised by WHO from 5 to 7 April 2011, and from 8 to 10 November 2011, in Geneva, Switzerland. SAGE advises WHO on overall global policies and strategies, ranging from vaccine research and development, to delivery of immunisation services and linking immunisation with other health interventions. SAGE usually meets twice a year and reports directly to the Director-General of WHO.

The first session of SAGE usually covers the reports from WHO/IVB and the GAVI Alliance. This is followed by regional reports. Other topics addressed by SAGE during 2011 are summarized in Table 3.

SAGE is for NESI an excellent opportunity for networking but also for understanding the rationale underpinning most of WHO’s recommendations on vaccines and immunisation. These evidence-based arguments subsequently can be rapidly included in NESI’s training/teaching activities enriching discussions with the most recent information, especially relevant for vaccinology courses and immunisation management courses.
## TABLE 3: TOPICS ADDRESSED BY THE STRATEGIC ADVISORY GROUP OF EXPERTS DURING 2011

<table>
<thead>
<tr>
<th>Topics discussed at SAGE April 2011</th>
<th>Topics discussed at SAGE November 2011</th>
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<tbody>
<tr>
<td>Report from WHO/IVB</td>
<td>Report from WHO/IVB</td>
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<tr>
<td>Report from GAVI Alliance</td>
<td>Report from GAVI Alliance</td>
</tr>
<tr>
<td>Regional reports (Africa, Eastern Mediterranean, South East Asia)</td>
<td>Decade of Vaccines (DoV)</td>
</tr>
<tr>
<td>Reports from other Advisory Committees in Immunisation:</td>
<td>Reports from other Advisory Committees on Immunisation:</td>
</tr>
<tr>
<td>o Initiative for Vaccine Research</td>
<td>o Global Advisory Committee on Vaccine Safety</td>
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<td>o Global Advisory Committee on Vaccine Safety</td>
<td>o Immunisation Practices Advisory Committee</td>
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<td></td>
<td>o Quantitative Immunisation and Vaccines Related Research</td>
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<td></td>
<td>o Expert Committee on Biological Standards</td>
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<tr>
<td>Pandemic and seasonal influenza vaccines</td>
<td>Global Vaccine Safety Blueprint</td>
</tr>
<tr>
<td>Tick-borne encephalitis</td>
<td>Monitoring national immunisation coverage: WHO and UNICEF estimates of national immunisation coverage</td>
</tr>
<tr>
<td>Meningococcal meningitis vaccines</td>
<td>Reinforcing surveillance</td>
</tr>
<tr>
<td>Rubella vaccination</td>
<td>Review of serotype replacement in the setting of PCV7 use and complications for the PCV10/PCV13 era</td>
</tr>
<tr>
<td>Polio eradication</td>
<td>Optimizing immunisation schedules for conjugate pneumococcal vaccines</td>
</tr>
<tr>
<td>Update on evidence-based review process and GRADing of quality of scientific evidence</td>
<td>Polio eradication</td>
</tr>
<tr>
<td>Cholera vaccine: feedback on implementation of SAGE recommendations</td>
<td>Tuberculosis vaccines</td>
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<tr>
<td></td>
<td>Evidence and recommendations for use of hepatitis A vaccines</td>
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3.4. INTER-COUNTRY MEETING ON MEASLES CONTROL/ELIMINATION, DUBAI, UAE, OCTOBER 2011

An inter-country meeting on measles control/elimination was organised by WHO/EMRO from 17-19 October 2011 in Dubai, UAE.

The meeting was attended by participants from the following countries: Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Republic of South Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Republic of Yemen; as well as by RTAG and NITAG members, CDC, UNICEF and NESI.

The objectives of the meeting included:

- To review and follow up on the progress in implementing the strategic plan for measles elimination;
- To review achievements of measles surveillance indicator targets;
- To review measles elimination validation process in the countries near elimination;
- To review and update the national plans for strengthening measles/rubella elimination and control programmes.

The meeting was organised around plenary sessions, but countries were also tasked with group work to review their respective situation of measles elimination in relation to population immunity and towards achieving the target of measles surveillance performance indicators.

The Eastern Mediterranean Region has set 2015 as target for measles elimination from all countries in the Region. Measles mortality reduction target is 90% mortality reduction by 2012 compared to 2000 levels. Strategies to achieve measles control/elimination include: achieving high population immunity, strong case-based laboratory surveillance and case management.

The reported vaccination coverage is improving and measles surveillance is progressing well. The commitment of EMR countries towards measles elimination was renewed in the 58th session of the Regional Committee for the Eastern Mediterranean “Scaling up the Expanded Programme on Immunisation to meet global and regional targets”.

In 2011, there was no Regional EPI Managers meeting organised for the Eastern Mediterranean Region. Therefore, attending the Measles control/elimination meeting was an excellent opportunity for NESI to discuss potential activities in specific countries with EPI staff and other immunisation partners.
3.5. THIRD ANNUAL REGIONAL CONFERENCE ON IMMUNISATION; DECADE OF VACCINES COLLABORATION CONSULTATION; AND 18TH AFRICAN REGIONAL INTER-AGENCY COORDINATION COMMITTEE, WINDHOEK, NAMIBIA, DECEMBER 2011

The third Annual Regional Conference on Immunisation (ARCI), organised by WHO/AFRO, took place from 5 to 7 December 2011 in Windhoek, Namibia, followed by the Decade of Vaccines (DoV) Collaboration Consultation, and the African Regional Inter-Agency Coordination Committee (ARICC), on 8 December 2011.

The theme for the third ARCI meeting was “Towards a polio-free Africa”.

Participants received an update on attaining the polio eradication milestones in Africa, as well as highlighting the need to continue to strengthen health and surveillance systems. The meeting emphasised the importance of routine immunisation and reaching the unreached to better control and prevent unnecessary deaths and suffering.

The following items were addressed during three plenary sessions: (1) Achieving polio eradication milestones; (2) Strengthening immunisation systems; and (3) Accelerating the control of vaccine-preventable diseases.

In addition to the plenary sessions, two parallel sessions were organised. The first parallel session discussed: (1) Interrupting wild polio virus transmission in priority countries; (2) Polio eradication, the remaining challenges. The second parallel sessions were built around: (1) Reaching the unreached; (2) New vaccines and their impact on disease burden; (3) Immunisation financing challenges.

Throughout the three sessions on “poster presentations and video clips”, the training DVD developed by the Ministry of Public Health and Sanitation of Kenya, WHO and NESI, on “The introduction of Pneumococcal Conjugate Vaccine in Kenya” was shown.

The ARCI meeting was organised back-to-back with the Decade of Vaccines Collaboration.

The Decade of Vaccines Collaboration is an effort under the leadership of WHO, UNICEF, the Bill & Melinda Gates Foundation, and the United States National Institute of Allergy & Infectious Diseases that will further define the DoV vision and develop a Global Vaccine Action Plan (GVAP).

**Decade of Vaccines Vision**

“We envision a world where children, families, and communities enjoy life protected from the threat of disease... Access to safe and effective vaccines is a human right that is currently not enjoyed by everyone, particularly in low- and middle-income countries.”
More than 180 participants including Ministry of Health representatives, EPI managers, WHO and UNICEF staff, Civil Society Organizations, donors and academics/researchers took part in the briefing session and small group discussion session. Discussions were built around the following themes: (1) Needs and opportunities in immunisation for the countries over the next decade; (2) Countries commit to immunisation as a priority; (3) Equity of service delivery; (4) Integration of immunisation systems into strengthened health systems; and (5) Operational and implementation research needs at country level.

NESI contributed to the discussions in the group on “Integration of immunisation systems into strengthened health systems” and recommended that the section should be aligned with the Health Systems Building Blocks. The consultation made recommendations on how to improve the GVAP draft document: increase emphasis in the document on capacity building for both health training institutions and health care workers, coordination and public private partnerships; include reference to MDGs; align sections with Health Systems Building Blocks.

The last meeting in Windhoek was the ARICC meeting, which gathered a wide group of donors to international immunisation efforts, development banks and national governments to discuss the financial sustainability of immunisation programmes in Africa. WHO, UNICEF and GAVI presented their 2011 financial reports. WHO/AFRO presented the strategic directions for the immunisation programme, as well as the plan of action for 2012. Contribution statements were made by donors and partners. NESI pledged continued technical and financial support for capacity building activities in the African Region.
NESSI OVERSIGHT COMMITTEE MEETING

SEVENTH NESI OVERSIGHT COMMITTEE MEETING, GHENT, BELGIUM, APRIL 2011

NESSI is a public-private partnership between the University of Antwerp and the private sector. An Executive Secretariat coordinates and implements activities for the network. The Executive Secretariat reports to the Oversight Committee, which advises on strategy and budget allocation, and reviews outcomes. The Oversight Committee is composed of representatives from the public-private partnership, representatives from partner universities and international health organisations and alliances, and international vaccinology experts (Table 4).

Specifically, the committee:
- shapes a strategic vision and direction for NESI;
- advises on the strategy to follow and defines priorities;
- stimulates/fosters participation of GAVI partners and others in the implementation of NESI activities;
- reviews the plans, evaluates the postulated goals and endorses the work plan and the related budget allocation;
- facilitates networking and collaboration with other bilateral and multilateral stakeholders engaged in the area of capacity building for immunisation programmes;
- ensures the academic freedom of NESI in planning and implementing its activities;
- verifies the independency of the activities organised by NESI in relation to its sponsors.

The 7th NESI Oversight Committee Meeting was organised in Ghent on 5 April 2011.

The Executive Secretariat reported to the Oversight Committee on the implementation of the Plan of Action and the financial report for the year 2010. After the discussion of the reports, the secretariat presented the work plan for 2011. Based on the discussions of the report for the year 2010 and the work plan for the year 2011, the members of the committee formulated recommendations and approved the NESI work plan and the related budget allocation for the year 2011.

Upon request of the previous NESI Oversight Committee meeting, a draft of the long-term strategy and vision of NESI was presented. This draft opened the doors for further brainstorming on how to achieve our mission of improving the quality and sustainability of immunisation programmes in low- and middle-income countries through education and training. This long-term strategy and vision will be further fine-tuned in the next year.

It was recommended that NESI establishes a more formal relationship with its partners, through e.g. a Memorandum of Understanding. This recommendation has been taken up and discussions with the South African Vaccination and Immunisation Centre (SAVIC), which is hosted at the University of Limpopo, Medunsa Campus, South Africa, were initiated during 2011 on how to formalise the long-standing collaboration between SAVIC and NESI. The Agreement was finalised at the end of 2011 and will come into action as from 1 January 2012.
**TABLE 4: MEMBERS OF THE NESI OVERSIGHT COMMITTEE**

<table>
<thead>
<tr>
<th>Members</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Prof. Paul-Henri Lambert – Chairman</td>
<td>Professor, CMU Centre of Vaccinology, University of Geneva, Switzerland</td>
</tr>
<tr>
<td>Dr. Bernd Benninghoff</td>
<td>Director Global Medical Affairs, GlaxoSmithKline Biologicals, Belgium</td>
</tr>
<tr>
<td>Prof. Mohammed Bouskraoui</td>
<td>Professor and Head Paediatrics, CHU Mohammed VI, Morocco</td>
</tr>
<tr>
<td>Prof. Tandakha Dieye</td>
<td>Head Immunology Unit, Le Dantec University Teaching Hospital, University Cheikh Anta Diop, Senegal</td>
</tr>
<tr>
<td>Dr. Carine Dochez</td>
<td>Programme Manager, Department of Epidemiology and Social Medicine, University of Antwerp, Belgium</td>
</tr>
<tr>
<td>Prof. Anwar Hoosen</td>
<td>Professor and Head Medical Microbiology, University of Pretoria, South Africa</td>
</tr>
<tr>
<td>Prof. Najwa Khuri-Bulos</td>
<td>Professor and Chairman Paediatrics Department, Jordan University Hospital, Jordan</td>
</tr>
<tr>
<td>Dr. Raj Kumar</td>
<td>Senior Programme Officer, GAVI Alliance Secretariat, Switzerland</td>
</tr>
<tr>
<td>Dr. Heidi Larson</td>
<td>Senior Lecturer, London School of Hygiene and Tropical Medicine, UK</td>
</tr>
<tr>
<td>Prof. André Meheus</td>
<td>Senior advisor NESI, Department of Epidemiology and Social Medicine, University of Antwerp, Belgium</td>
</tr>
<tr>
<td>Dr. François Meurice</td>
<td>Vice President, Global Medical Affairs - Paediatric Vaccines, GlaxoSmithKline Biologicals, Belgium</td>
</tr>
<tr>
<td>Dr. Afisah Zakariah</td>
<td>Deputy Director, Policy, Planning, Monitoring and Evaluation Directorate, Ministry of Health, Ghana</td>
</tr>
</tbody>
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NESI
Network for Education and Support in Immunisation
Department of Epidemiology and Social Medicine

University of Antwerp
Campus Drie Eiken
Building R, 2nd Floor
Universiteitsplein 1
BE-2610 Antwerp
Belgium

Telephone  +32 (0)3 265 25 15
Telephone  +32 (0)3 265 28 91
Facsimile  +32 (0)3 265 28 75
E-mail  nesi@ua.ac.be
Website  www.nesi.be