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○ VOL. 08

○ DECEMBER 2006

netSPEAR

The network for Surveillance of Pneumococcal Disease in the East African Region

IS AN INDEPENDENT PROJECT HOSTED BY THE KEMRI/WELLCOME TRUST COLLABORATIVE RESEARCH PROGRAMME IN NAIROBI, KENYA. NETSPEAR IS FUNDED BY THE PNEUMOADIP AND GAVI AND WORKS CLOSELY WITH THE WHO/PBMS PROJECT AND WHO REGIONAL OFFICES TO PROVIDE REGIONAL SURVEILLANCE DATA ON PNEUMOCOCCAL DISEASE AND OTHER CAUSES OF MENINGITIS THAT KILL LARGE NUMBERS OF AFRICAN CHILDREN EACH YEAR.

Preventing Pneumococcal Diseases using Cost—Effective Vaccines

Contributed by Dr. Wamae Maranga

The annual netSPEAR surveillance meeting, held in Nairobi, Kenya, on 9th to 10th November 2006 was attended by representatives from all participating surveillance sites, from Expanded Programmes on Immunization within the 7 Ministries of Health, from national public health laboratories, sub-regional WHO collaborators, and WHO country surveillance officers, scientific and operational staff from the PneumoADIP, the Hib Initiative, UNICEF and CDC.

In the plenary session Dr. Maria Deloria Knoll of PneumoADIP reported on a cost-effectiveness analyses showing that the pneumococcal vaccination meets WHO criteria of a “very cost-effective” health intervention even in low-income countries. Cost-effectiveness analysis is a commonly used tool for evaluation of health investments. One useful way to evaluate the cost-effectiveness of an intervention is to compare its cost-effectiveness (e.g. cost per DALY averted) against a predefined benchmark for cost-effectiveness. The World Health Organization established benchmarks for “Very cost-effective.” health interventions as investments with a cost per disability-adjusted life years (DALY) saved of less than a country’s per capita Gross Domestic Product (GDP). There is an increasing awareness of pneumococcal disease within the international media compared to 2003. However in many developing countries pneumococcal disease is still not recognized as a priority and there is a need for sustained donor commitment and improving health budgets for many developing countries for the sustainability of vaccination and other new programs.

Dr. Ros O’Loughlin of CDC & Hib Initiative and Dr. Karen Edmond of LSHTM & Hib Initiative reported that 11 out of 36 GAVI eligible countries in the WHO AFRO region are currently using conjugate Hib vaccine and another 2 non-GAVI eligible countries have introduced the vaccine on their own. This

translates to approximately 20% of all children in Africa. They next plan to include targeted surveillance support to PBM and netSPEAR, and an impact assessment for Ethiopia, Burkina Faso and Mozambique. The Hib Initiative is providing technical support for countries who wish to use the rapid assessment tool to evaluate their in-country Hib burden. They also provide financial assistance for research projects and help with the preparation of GAVI applications. Finally they support an evidence-based decision making model on Hib conjugated vaccine in an expedited manner for countries yet to implement Hib vaccine to decide on its value.

The laboratory practical session was planned as a joint activity for both clinical and laboratory staff to contribute in teams building effort and peer networking to address some of the challenges that cut across the entire network. The session’s objectives were to illustrate the importance of correct disinfection of skin puncture sites for the collection of blood for culture and to determine the effects of sloppy or quick scrub of skin prior to collection of blood for culture.



Surveillance site representatives who attended the laboratory practical and interactive session during the conference

Presentation and key research findings featured at this annual network meeting can be viewed and downloaded from [www.netspear.org/Conference Presentations.htm](http://www.netspear.org/Conference_Presentations.htm). The conference was generously supported by an unrestricted educational grant from GlaxoSmithKline (GSK).

GAVI Approves Funding for New Vaccines

GAVI Approves Funding for New Vaccines On 29th November 2006, the GAVI Board announced its support of an initial investment of US\$200 million for the introduction of vaccines against pneumococcus and rotavirus. These diseases kill an estimated 1.5million children every year in the world’s poorest regions. GAVI is committing funds to help purchase approved vaccines for rotavirus vaccine in 13 countries in Latin America

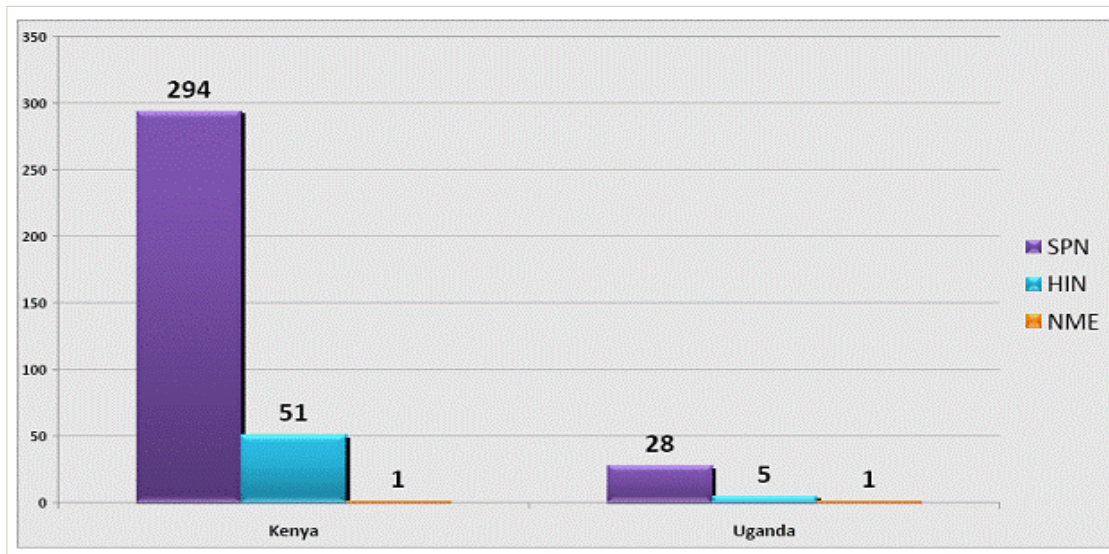
and Eastern Europe and the pneumococcal vaccine in 10 GAVI eligible countries in Africa and South Asia over the next few year. GAVI’s investments will increase over time as more experience is gained and an increasing number of countries adopt the vaccine. To read more on this, visit the GAVI website: http://www.gavialliance.org/Media_Center/Press_Releases/berlin2006

Regional Data from Surveillance Sites

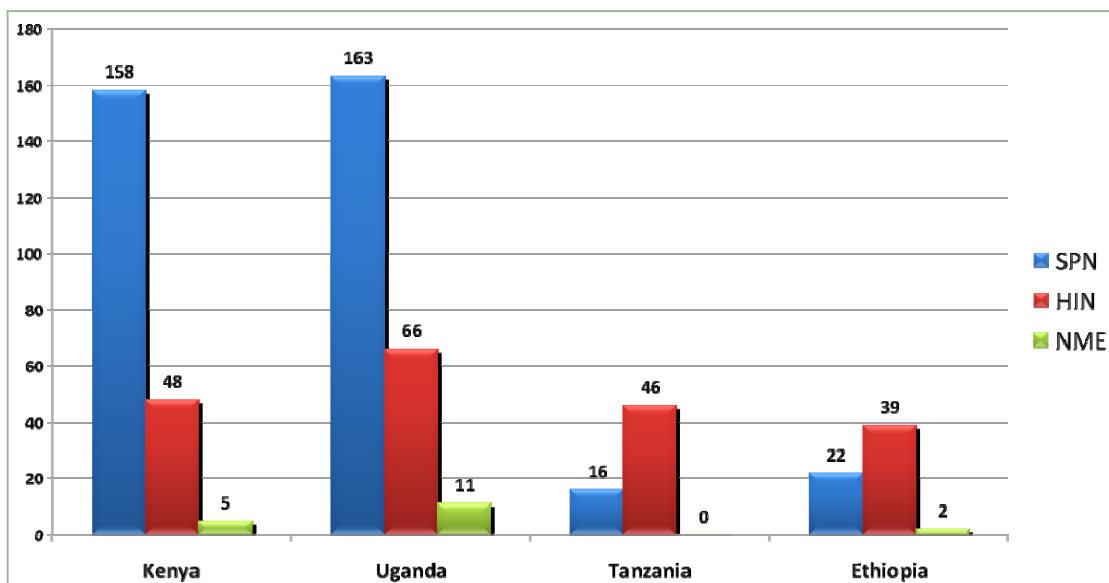
Contributed by Sandra Mudhune

During the previous 12 months (Sept.05—Oct.06) netSPEAR surveillance recorded a total of 7,000 CSF cultures in 13 hospitals carrying out surveillance on suspected meningitis and a total of 8,000 blood cultures from 4 hospitals also carrying out blood cultures for severe pneumonia, very severe pneumonia and sepsis. This translates to approximately 600 CSF cultures and 670 blood cultures carried out per month in the region. There is marked variation in the proportion of acute admissions getting LPs indicating that adherence to the clinical case definition is still not as expected in some of the participating hospitals. Various measures have been taken to support hospitals to identify cases and to improve laboratory analysis of the CSF so as to close the gap between expected and the actual performance.

The chart below illustrates the number of *S. pneumoniae* (SPN), *H. influenzae* (HIN) and *N. meningitidis* (NME) reported by sites carrying out blood cultures (BC) in Kenya since August 2003 and Uganda since May 2005.



The chart below illustrates the number of *S. pneumoniae* (SPN), *H. influenzae* (HIN) and *N. meningitidis* (NME) reported by sites carrying out CSF in Ethiopia, Kenya, Tanzania and Uganda since initiation of the surveillance. It is worth noting that the difference in numbers is due to the number of surveillance sites in each country. There are six surveillance sites in Kenya, four in Uganda, two in Tanzania and one in Ethiopia.



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HIGHLIGHTS:



- 'Very cost-effective' pneumococcal vaccination for low-income countries
- GAVI funds vaccines against pneumococcus and rotavirus
- Update of surveillance data

netSPEAR is funded by:



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