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# netSPEAR

PROVIDING REGIONAL SURVEILLANCE DATA ON PNEUMOCOCCAL DISEASE AND OTHER CAUSES OF MENINGITIS THAT KILLS LARGE NUMBERS OF AFRICAN CHILDREN EACH YEAR

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

netSPEAR 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.

## *Hib Vaccine saves hundreds of childrens' lives in Kenya and Uganda every year*

NetSPEAR's annual network meeting in Kilifi in November 2005 was a forum for international experts to share their research results and experiences, information and surveillance data with delegates interested in the prevention of Pneumococcal and Hib diseases in the East African region. These delegates represented all netSPEAR surveillance Hospitals, countries' Ministries of Health, WHO country officers, UNICEF, the donor community, the media/press and other stakeholders.

In two presentations, one from Kenya and one from Uganda the effect of introduction of Hib vaccine into the routine EPI schedule was discussed. In both countries the vaccine has been extremely successful, with about a 90% reduction in cases of Hib meningitis in each country.

Dr. Samba Sow from the Ministry of Health in Mali, a doctor well used to the terrible consequences of Hib meningitis, shared his country's experiences in the introduction of the Hib vaccine. By working with carefully

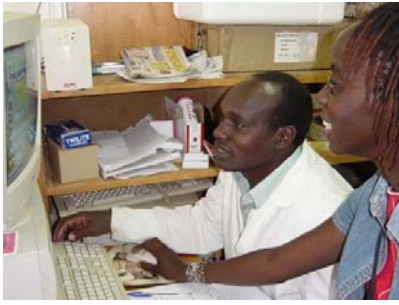
collected local data and after personal visits to both the Minister for Health and the President himself, Dr. Sow and his colleagues managed to persuade the Malian Government to introduce Hib vaccine.

In the case of Pneumococcal disease Dr. Thomas Cherian of WHO Geneva presented the results of the Pneumococcal conjugate vaccine trial in The Gambia, West Africa, and described a dramatic reduction in cases of Pneumococcal meningitis and pneumonia and most importantly a 16% fall in the mortality rate among children who received the vaccine.

Dr. Cyndey Witney from The Centres for Disease Control in the USA then went on to share the experience of introducing the Pneumococcal vaccine in that country. Amazingly there have been large declines in the frequency of Pneumococcal disease (notably pneumonia) in adults and the elderly who have never received the vaccine. The explanation seems to be that there is less spread of the disease if you vaccinate children—a so called 'herd effect'.



In her presentation, Angela Akumu of Kemri/Wellcome Trust explained the reduction of hib disease incidences using data collected at the Kilifi District Hospital before and after the introduction of the vaccine. Reviewing from the viewpoint of the public sector, for the 2004 birth cohort, it was estimated that the Hib vaccine has averted 5,070 invasive Hib disease cases and 2,568 deaths in Kenya. To derive this numbers, the number of deaths was obtained by multiplying the Case Fatality Rate by the number of cases while the number of cases was obtained by multiplying the birth cohort by hib disease incidences. It therefore can be deduced that the introduction of the Hib vaccine has saved and continues to save hundreds of children's lives in Kenya and Uganda.



# Empowerment through Training

Training provides Knowledge, Skills and Confidence needed for surveillance activities.

## Serotyping and Data Management Software

Surveillance laboratory personnel from Kenya, Uganda and Tanzania were trained in serotyping of pneumococci, assessing the antibiotic resistance level of bacteria using E-test strip MICs, laboratory safety, basic bench skills and Quality Control. To help them monitor their data collection and make it easier to generate surveillance reports both for the hospital and for the network, they received onsite training in the use

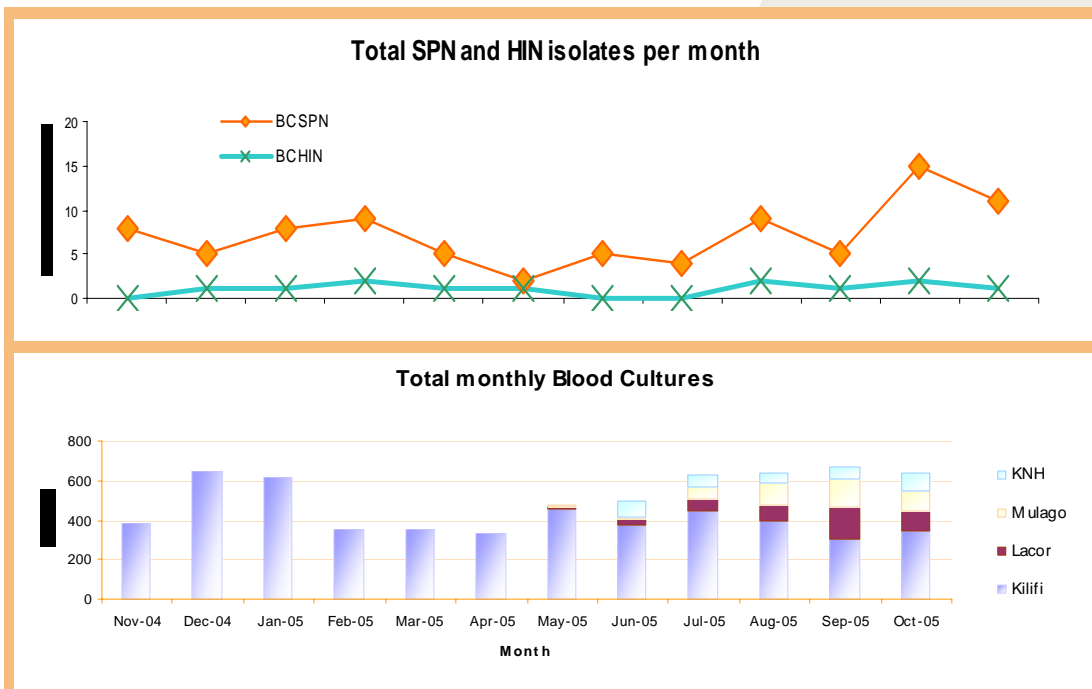
**'Trainings improves the quality of our microbiology work.'**

of the netSPEAR's data management software that was first piloted at Kenyatta Hospital in Nairobi. Peter Karuiki, a laboratory technologist at the Nakuru Provincial General Hospital, Kenya commented, 'The trainings improves our quality of microbiology work as it enabled us to know more about the importance of diagnosing and giving relevant results for the better treatment of our patient'.

## Progress of Surveillance Sites carrying out Blood Culture

In June 2005, three Bactec® machines for blood culture tests were put into operation at three new sites in addition to the site at Kilifi District hospital, Kenya, to assist in the surveillance of Pneumococcal diseases. The new blood culture sites were Kenyatta National Hospital in Kenya, Mulago National Referral Hospital and St Mary's Hospital Lacor in Uganda.

Below is the graphical data representation of the blood cultures collected and analyzed from **November 2004 to October 2005**.



Feel free to ask for more information or send netSPEAR your news to:

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## HIGHLIGHTS:



- Conference discussions on the Hib vaccine saving life in Kenya and Uganda
- Training in Laboratory, Serotyping and data management .
- Progress at the Blood Cultural sites.

netSPEAR is funded by: -



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