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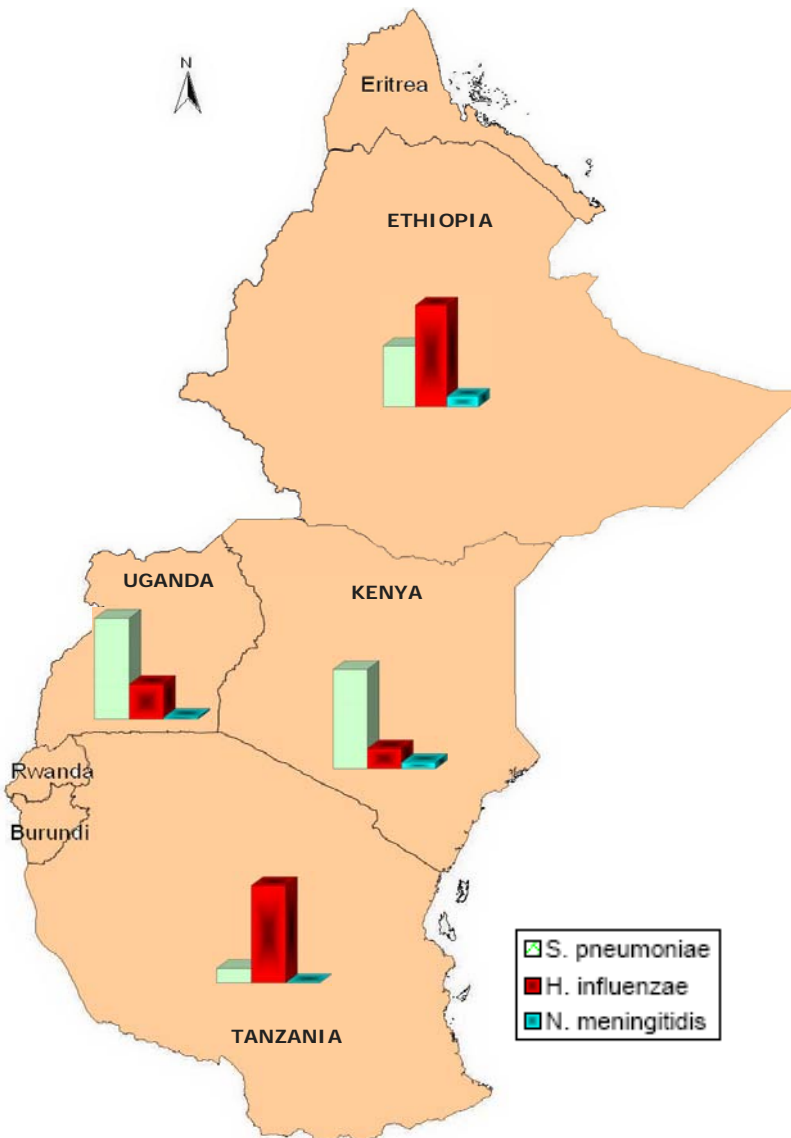
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netSPEAR

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.

Haemophilus Influenzae Type B Conjugate Vaccine Effectiveness in Kenya.



Headlines such as this one have recently made the news in local newspapers and scientific journals. *Haemophilus influenzae type B* vaccine was introduced into the childhood immunization schedule in Kenya in 2001. Before, Hib was the commonest cause of bacterial meningitis in children a significant cause of death and long term disability. Surveillance in Kilifi, Kenya has shown a reduction of 88% in the incidence of Hib disease over the four years after the vaccine program began. The Kenya Medical Research Institute-Wellcome Trust Research Programme (KEMRI-WT) working together with the Kenyan Ministry of Health, presented their research in the Journal of American Medical Association. To read more the website on <http://jama.ama-assn.org> Vol. 296 No. 6.

Isolation of *S. pneumoniae*, *H. influenzae* and *N. meningitidis* from CSF in 2005

Contributed by Sandra Mudhune

Data collected from the various PBM/netSPEAR surveillance sites in East Africa present a noteworthy trend in the cause of Hib disease. The map shows the proportions of *S. pneumoniae*, *H. influenzae* and *N. meningitidis* isolated from CSF in the 13 sites in Kenya, Uganda, Tanzania and Ethiopia. In Ethiopia and Tanzania, where the conjugate vaccine against HIB has yet to be introduced, HIB is the pre-dominant bacterial cause of meningitis and pneumonia among young children. In Kenya and Uganda where the Hib vaccine is routinely used in child immunization, *S. pneumoniae* is the leading cause of bacterial meningitis, bacterial pneumonia and sepsis among young children. Very few, if any cases, of *N. meningitidis* are isolated from the sites in the four countries.

How useful is 7-valent pneumococcal conjugate vaccine in East Africa ?

Contributed by Dr. Anthony Scott

The 7-valent pneumococcal conjugate vaccine (PCV7) was designed to prevent invasive pneumococcal disease (IPD) in American children. Pneumococcal disease in East Africa is completely different from America and is caused by different serotypes. How useful then would PCV7 be here? PCV7 consists of polysaccharide fragments from the capsules of pneumococci of serotypes 4, 6B, 9V, 14, 18C, 19F and 23F each individually conjugated to a mutant diphtheria toxoid protein. As well as protecting against diseases caused by these types they also provide some protection against related serotypes, that is serotypes within

the same serogroup. In Kenya PCV7 would cover well over half of all cases of IPD in the target age group for vaccination. We don't yet have enough data to answer the same question in other countries in East Africa but this illustrates the importance of collecting - and serotyping - isolates of *S. pneumoniae* responsible for IPD in our paediatric wards. Surveillance informs public health decisions. However, the actual public health questions is: how useful is PCV7 now? Better, higher valency vaccines are unlikely to be available to us for 5 or more years. PCV7 is available now.

HIGHLIGHTS:



- Success of *H.1 influenzae* type b vaccine in Kenya.
- Are African Serotypes prevented by PCV7 in East Africa?
- netSPEAR Annual Network Meeting in November.

Fourth Annual Network Meeting

We have the pleasure of holding the Fourth Annual Network meeting in Nairobi, Kenya at the KEMRI headquarters on the 9th and 10th November 2006. Included in the excellent program, a practical and interactive session will be held for the invited laboratory representatives and the surveillance focal paediatricians from all netSPEAR/PBM surveillance sites in Kenya, Uganda, Tanzania and Ethiopia at the KEMRI laboratories in Nairobi. These will provide opportunity for interaction and discussion on areas that need improvement with regards to the surveillance of Pneumococcal disease.

News from the field

Introduction of Hib vaccine in Ethiopia

Haemophilus influenzae type B is a serious threat to the Ethiopian children as it is the major cause of meningitis and pneumonia. In late 2005, Ethiopia started training and social mobilization activities in preparation for the implementation of pentavalent vaccine. WHO reported that, to enhance the regional vaccine storage capacity, two prefabricated cold rooms were installed in Addis Ababa and Kekelle and two additional cold rooms will be installed in DireDawa and Nekempt. The target for the introduction of the DPT-HepB-Hib vaccine in the routine childhood vaccination was to begin in July 2006. Visit the WHO website read more about this issue.

netSPEAR staff members

We would like to welcome, Caroline Mate as our new Data and Supplies Assistant. She will be taking on Sandra Mudhune's duties of obtaining data and providing surveillance sites with logistics support. Sandra is moving on to writing up the experiences of netSPEAR as a surveillance program and reporting the data derived from the various sites.

Vaccine Advocacy

With the aim of creating awareness for the need of immunization of children against Hib diseases, pneumoADIP has provided funding for contracting a consultant to liaise with the media, bilateral AID organizations and EPI Programs.

Meeting on Surveillance for Vaccine Preventable Meningitis and Pneumonia

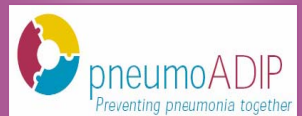
The Ministry of Health, through Kenya Expanded Programme on Immunization (KEPI) has planned the above review meeting to take place in September 2006. The meeting's objective is to reinforce good clinical and laboratory practices for the management of very sick infants and young children. This will strengthen the commitment to the Hib surveillance initiative and aid in achieving targeted goals set by the Kenya government to reduce the Hib cases in young Kenyan children.

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