



IN THIS ISSUE

1. Feature story: Country applications to GAVI
2. 2008 application deadlines for GAVI new vaccines support
3. GAVI application workshops
4. Supply update on Hib containing vaccines
5. New Hib vaccines in India
6. Hib Initiative's India team visits Delhi
7. Recent research and surveillance activities
8. New cost effectiveness tool for Hib vaccine
9. Advocacy workshop for prevention of childhood pneumonia
10. 16th Annual Pediatric Association of Tanzania Scientific Conference
11. International conference on meningitis and septicemia in children and adults
12. IVI and DPR Korea collaboration on Hib and JE vaccines introduction
13. Impact of Hib vaccine against purulent meningitis in Rwanda
14. Updates on the Hib Initiative Web site:
 - Research and surveillance activities
 - Roundtable on child survival

NOTE FROM THE DIRECTOR

The last GAVI application round in September 2007 marks the end of the first year since GAVI phase II co-financing guidelines have been available to countries, and wraps up a lot of new experience and progress. For GAVI eligible countries, this year took us from 13 (17%) who had Hib vaccine in 2004, to almost 54 (74%) that could have access if all recent applications would be approved! These numbers testify to the importance of GAVI-supported efforts to accelerate decisions regarding vaccine introduction through projects like the Hib Initiative and the ADIPs. The increase in demand, together with the increase in supply particularly from emerging manufacturers as illustrated here by the launch of an additional Indian Hib vaccine, is bound to lead to a decline in prices soon. As we start a new year, it's time to take stock of all what we learned over the last two years and continue to intensify our efforts to ensure that remaining GAVI as well as non GAVI eligible middle income countries make informed decisions about introduction of Hib vaccine and other new vaccines soon. As the Holiday season nears, we are always reminded that the gift of good health with its future promises is the best gift for children all over the world, but especially in developing countries. We thank you, our partners and colleagues, for all your efforts and wish you and your loved ones happy and healthy Holidays and New Year.

Rana A. Hajjeh, MD

Events

November 7-8
[Meningitis Research Foundation International Conference: Meningitis and Septicaemia in Children and Adults](#)
London, UK

November 11-14
[Developing Country Vaccine Manufacturers' Network Annual Meeting](#)
Rio de Janeiro, Brazil

November 27-30
Joint GAVI Alliance & Fund Board Meetings
Cape Town, South Africa

December 11-14
AFRO Task Force on Immunization
Antananarivo, Madagascar

January 17-20, 2008
[Pedicon 2008, 45th National Conference of the Indian Academy of Pediatrics](#)
Bhubaneswar, India

March 16-19, 2008
[International Conference on Emerging Infectious Diseases](#)
Atlanta, Georgia USA

Announcements & Deadlines

February 8th, 2008
Upcoming deadline for applications to GAVI for NVS, ISS, INS

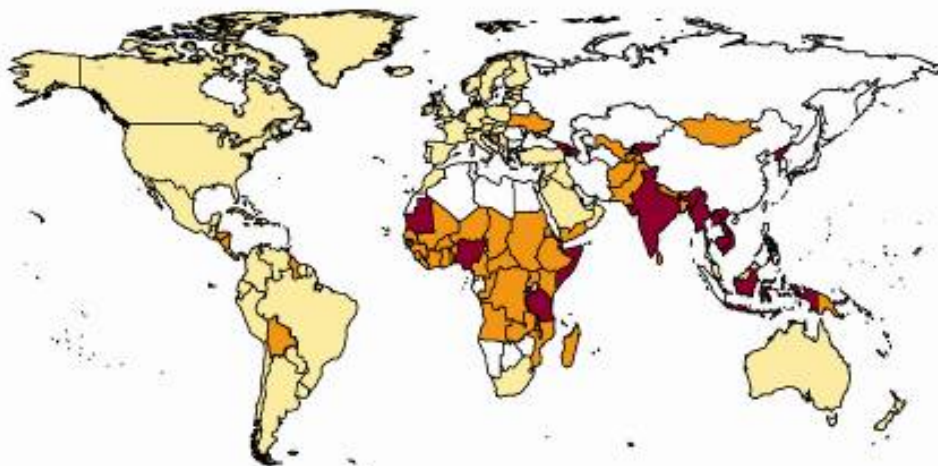
COUNTRY APPLICATIONS TO GAVI

A banner year toward prevention of Hib pneumonia and meningitis

September 28, 2007, marked the third and final deadline for 2007 for countries to submit applications to GAVI for co-financing to support the introduction of Hib vaccines. GAVI received nine new applications, bringing the total for new applications in 2007 to 26 countries. The results from the review of these applications will be announced in late November, and if approved will bring Hib vaccines to an additional 20.5 million children every year.

Although Hib vaccine has been available for more than 17 years, in 2004, the year prior to the start of the Hib Initiative, only 13 (17%) of GAVI-eligible countries had adopted Hib vaccine. With the September round of application, this number could potentially increase to 54 (74%). Comparatively, 85% of the highest-income countries in the world have use Hib vaccines. Although income and regional disparities persist, disparities in the use of Hib vaccines between rich and poor countries is decreasing largely due to the intensive acceleration efforts of GAVI and the Hib Initiative and the coordinated global and local effort of the child health community.

Countries introducing Hib vaccine 2007: over 140 countries including 54 GAVI countries



- Introduced/plan to introduce – GAVI countries
- No GAVI application made – eligible for GAVI co-financing
- Introduced – non-GAVI countries

Source: WHO/Hib Initiative databases
Data as of October 2007

2008 GAVI application deadlines for new vaccines support

Applications deadlines for new vaccines (NV)*

February 8

May 2

September 25

* Immunization Services Support (ISS) and
Injection Safety Support (INS) deadlines are the same

GAVI application Workshops

Two workshops were held in September by the WHO Regional Office for Africa (AFRO) to help countries prepare their GAVI applications for pentavalent vaccine. The workshops were designed to assist countries complete application to GAVI for new vaccine support and to assist countries that had already applied to GAVI but needed to respond to questions concerning their application. Workshop facilitators included members from WHO, providing expertise in immunization services, financial analysis, cold chain analysis, and health sector planning; members of the Hib Initiative provided additional assistance. Earlier this summer WHO AFRO conducted a workshop designed to assist five countries in West and Central Africa that needed to resubmit their application in order to provide more clarification to GAVI.



The first workshop was held in Maputo, Mozambique for four countries: two countries were resubmitting their application to meet application requirements (Mozambique and Madagascar) and two countries were applying for the first time (Comoros and Lesotho). The second workshop was held in Dakar, Senegal for 13 countries: five countries were resubmitting their application (Cameroon, Central Africa Republic, Côte d'Ivoire, Niger and Togo) and three countries were applying for the first time (Congo Republic, DR Congo and Chad). In addition, three countries (Mauritania, Guinea and Sao Tome and Principe) that attended the workshop were advised to wait until the April application deadline so that they could strengthen their applications. Also, two countries (The Gambia and Senegal) will wait until next April to apply for pneumococcal vaccine.



To prepare for the workshop, countries were asked in advance to bring a comprehensive list of necessary documents. Most countries required assistance with updating of their comprehensive Multi Year Plans (cMYP), financial analysis, cold chain analysis, and ensuring consistency of information between application documents. Countries that were well prepared and who had brought all necessary documents progressed faster than those that did not. Some countries did not realize the importance of updating the cMYP annually and therefore needed to spend quite a bit of time on this before they could start filling out the application form.

The WHO used a peer review system during the workshop with the intention that each country would receive the application materials of another country and review them for consistency and content. As countries knew that their application would be reviewed by another country they would be motivated to provide clear and complete application forms. However, due to time constraints not all countries had finished their applications by the end of the workshop and therefore there was insufficient time for a full peer review.



Overall, the workshops were determined successful by both facilitators and by participants who reported that they learned a great deal from facilitators and from each other during the workshop. Participants enjoyed interacting with colleagues from other countries. Facilitators found the workshops helped identify weaknesses in country planning processes that can be addressed in the future. The workshops in Maputo and Dakar were successful in part due to being offered in both English and French. After the workshops WHO staff spent several weeks following up with countries to assist them with finalizing their application documents.

Supply update on Hib containing vaccines

Over the last year, 40M doses of Hib containing vaccines have been distributed to GAVI-eligible countries. With the addition of a number of new countries in 2008, depending on timelines for approval of countries that applied, demand could increase to nearly 75M doses. By 2009, demand is expected to increase to 140M doses – and that level would be significantly surpassed with decisions to adopt by some of the largest GAVI countries, such as India and Nigeria.

Available products:

There are currently 2 pre-qualified DTP-HepB/Hib (pentavalent) products:

Hib vaccine is currently in sufficient supply to meet the demand of GAVI eligible countries.						
Manufacturer	Form	Presentation	Storage space cm ³ /dose	Vaccine vial monitor	Co-financing/dose* (US\$)	2008 UNICEF Price*
GSK	Liquid – Lyophilized	2 dose vial	9.7	Yes	\$0.15 to \$0.30	\$3.50
Berna Biotech	All liquid	1 dose vial	12.8	Yes	\$0.15 to \$0.30	\$3.60

Other vaccine formulations, including DTP-Hib and Hib monovalent, are also available in both all liquid and liquid-lyophilized formulations.

Efforts to predict the demand/supply landscape:

A considerable amount of work has been accomplished by WHO, UNICEF and GAVI to ensure that there is sufficient supply to meet demand and there are choices for product. The three global organizations have been working with countries and manufacturers to understand the situation. As timelines have accelerated and additional emerging country manufacturers are nearing the reality of having their products pre-qualified, the Hib Initiative is working to provide an integrated view of the supply and demand landscape for Hib-containing vaccines globally as well as conducting a specific assessment in India to support decision making regarding the introduction of Hib containing vaccine. The assessment will provide forecasts and supply projections considering both GAVI and middle income country demand. The India analysis will consider both domestic use and export. A model will be generated to look at various roll-out scenarios and timing of various formulations given regulatory timelines and investments in capacity. Applied Strategies, a consulting group who has worked to develop previous demand models and supply landscape projects including that of pneumococcal vaccine, will conduct the assessment. Results should be available early next year.

Future Outlook:

Over the next several years, additional pre-qualified pentavalent products from emerging country manufacturers should be available, with some manufacturers already submitting dossiers to WHO. Experience with DTP-HepB combinations has shown when the majority of countries are using a vaccine and capacity increases, prices also decline.

Additional information can be found in the Product Menu for Vaccines Supplied by UNICEF for GAVI:

http://www.unicef.org/supply/index_gavi.html

The list of WHO pre-qualified vaccines is available at:

http://www.who.int/immunization_standards/vaccine_quality/pq_suppliers/en/index.html

New Hib vaccines in India

On September 3, Bharat Biotech International Limited announced the launch of India's first indigenously developed Hib conjugate vaccine. The biotechnology company has completely developed all processes required to manufacture BioHib in-house. The company has made substantial investments toward the development and manufacture of the vaccine and reports that BioHib has proven its safety and efficacy in multi-centric trials. The company also launched its tetravalent combination vaccine, Comvac4-HB, containing diphtheria, Pertussis, tetanus and Hepatitis B. These new vaccines, BioHib and Comvac4-HB, provide the ability to immunize children against multiple diseases with one injection.

This announcement comes on the heels of the announcement from the Serum Institute of India Ltd earlier this year of the institute's development of monovalent and pentavalent vaccines, with the pilot process technology coming from the Netherlands Vaccine Institute (NVI). The Serum Institute obtained licensing for the vaccines from the Government of India and is currently in various stages of development.

Bharat, Biological E, Panacea Biotec, Serum Institute and Shantha Biotechnics are expected to have pentavalent vaccines pre-qualified by WHO. A more comprehensive analysis of timing and potential impact of these introductions will be conducted with the supply-demand landscape assessment (see related article on supply, above)

Hib Initiative's India team visits Delhi

In late September, members of the Hib Initiative's India Team visited key stakeholders and opinion leaders in Delhi, India. Two days were spent with staff and researchers at the Indian Council of Medical Research – India's national-level health research institution – to provide technical support and consulting. Meetings were held with local WHO affiliates from both the WHO India and South-East Asia Region (SEARO) offices to coordinate Hib activities in the country. In light of recent discussions within the central government, Rana Hajjeh, Director of the Hib Initiative, led a discussion with key stakeholders and opinions leaders on potential activities and strategies in India including how to best provide technical and policy support to national decision makers.

The government has expressed interest in introducing Hib vaccine and has requested a Hib Technical Advisory Group be formed to review available data and make a formal recommendation. The Hib Initiative is working closely with the Indian Ministry of Health, the country WHO office and other local stakeholders to provide technical support for the meeting and additional efforts to raise awareness about the impact of Hib vaccine on meningitis and pneumonia.

Recent research and surveillance activities

The Hib initiative is focusing on studies in various parts of the world to document the impact of Hib vaccine on pneumonia and meningitis. Technical support was provided in Mongolia for an enhanced population level surveillance system in Ulaanbaatar. This system has grown from bacterial meningitis surveillance to now include all invasive Hib and pneumococcal diseases, including pneumonia and septicemia. A paper documenting the impact of Hib vaccine on bacterial meningitis in Mongolia is also expected to be submitted. Site visits in the South-East Asia Region (SEARO), included the four WHO sponsored Hib meningitis surveillance sites in Nepal and two sites that are part of the South Asian Pneumococcal Alliance (SAPNA) surveillance network for invasive disease caused by *S. pneumoniae* and Hib. Other visits included sites in the urban slums of Karachi as well as rural sites for a study protocol to assess impact of radiologically confirmed pneumonia and meningitis, similar to studies in Mozambique and Ukraine where site visits were also done. The study in Manhica, Mozambique will also measure vaccine effectiveness in HIV positive children and look at mortality trends.

New cost effectiveness tool for Hib vaccine

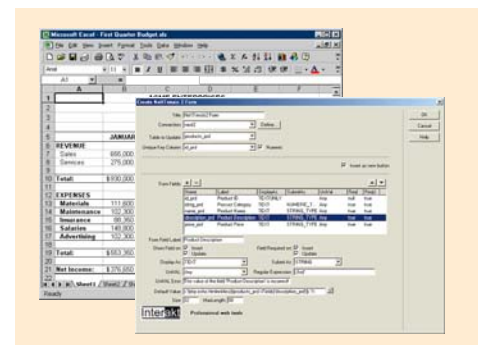
During the past year Ulla Griffiths and Andrew Clark at London School of Hygiene and Tropical Medicine have worked on developing a user-friendly tool that can be used for estimating the cost-effectiveness of Hib vaccine at the country level for low and middle-income countries. The tool is designed using Excel with Visual Basic so as to provide users with a friendly and easy-to-use interface. Users of the tool can get automatic cost-effectiveness estimates by simply entering data into a number of input forms. Users also have the option to work in Excel, that is, to go “behind the interface” and input the data and work directly with the formulas.

In line with the WHO Global Burden of Disease estimates, it is assumed that a birth cohort has a certain probability for contracting Hib pneumonia, Hib meningitis and Hib non-pneumonia non-meningitis disease. These probabilities differ depending on whether the cohort has been vaccinated or not.

To generate justifiable cost-effectiveness estimates the user must enter data on Hib disease incidence in children less than five years, case fatality ratios, utilization of treatment and cost data related to treatment of Hib disease and Hib vaccine delivery. The model will estimate the number of cases and deaths averted and Disability Adjusted Life Years (DALY)* with Hib vaccine introduction. It will present cost-effectiveness estimates from the health sector perspective (treatment cost data only) or societal perspective which includes costs incurred by patients and their families and/or community for a societal perspective.

The model has been designed for collaborative use with local partners and provides transparent steps that outline the basic requirements of a full cost-effectiveness analysis. Early versions of the tool have been used for analysis in Moldova and Tunisia. In the near future there are plans to use the tool in India and Ethiopia.

The model will estimate the number of cases, deaths and DALYs averted from Hib vaccine introduction and provide users with cost-effectiveness estimates.



* A DALY is the number of healthy years lost due to premature death and disability due to a particular disease

Advocacy workshop for prevention of childhood pneumonia

October 23-25, 2007
Dar es Salaam, Tanzania

Over twenty prominent child health experts gathered together in Dar es Salaam, Tanzania to participate in the first *Africa Regional Advocacy Workshop for Childhood Pneumonia Prevention*. The pilot workshop was designed to engage participants—key stakeholders—in developing their knowledge of advocacy or in expanding their current work in advocating for child health and vaccines. Participants benefited from both the training and each other as they worked in groups to develop an implementation/action plan which included conducting a situation analysis, identifying audiences, customizing messages and materials, and identifying champions and forging partnership.



Participants included pediatricians, child health researchers, and representatives from ministries of health, WHO and UNICEF from eight African countries (Kenya, Uganda, Malawi, Zimbabwe, Democratic Republic of Congo,

Nigeria, Ethiopia and Tanzania). Specialists from both the Hib Initiative and PneumoADIP as well as from the GAVI Alliance also attended the workshop. The three-day workshop was designed and facilitated by the Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (CCP) and jointly sponsored by the Hib Initiative and PneumoADIP as part of country-level communication efforts.

Response from the participants was highly positive and plans to continue with similar workshops in other global regions are currently underway.

“[The workshop] will be very useful in various advocacy activities for child health.”

“This will help me as an advocate for reduction of child mortality through use of vaccines.”

“I personally found this useful to learn and reinforce [advocacy skills] as well as to network with others.”

“This will increase my confidence in advocating [for] Hib and pneumococcal vaccines.”

—comments from workshop participants

16th Annual Pediatric Association of Tanzania Scientific Conference

August 15-17, 2007

Dar es Salaam

Historically, the Pediatric Association of Tanzania (PAT) has vigorously pursued a mandate of advising the government on pediatric health issues and this meeting proved to be no exception. With support from the Hib Initiative, an annual meeting was organized. Pediatricians from across Tanzania attended the three-day conference, which had as its primary focus prevention through immunization. Participants had the opportunity to hear presentations on the regional Hib experience, experience of Hib vaccine introduction in Kenya, new vaccines, HIV/AIDS and vaccines, malaria and vaccines, and financing and sustainability of new vaccines, including information presented by GAVI on financing policies.

Pediatricians in Tanzania recognize that the leading cause of child mortality in Tanzania is due to pneumonia, caused by Hib and Pneumococcus. Recognizing the need to advocate for a solution to this threat to the country’s children, at the conclusion of the conference members made a strong recommendation to the Government of Tanzania to introduce both pentavalent and pneumococcal vaccine.

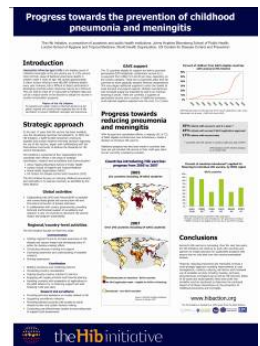


The Pediatric Association meeting was covered by the Tanzanian press

International Conference on Meningitis and Septicaemia in Children and Adults

The Hib Initiative's poster abstract was accepted for presentation at the Meningitis Research Foundation's two-day *International Conference on Meningitis and Septicaemia in Children and Adults* from November 2-8, 2007, at the Royal Society of Medicine in London.

Dr. Karen Edmond from the Hib Initiative (and lecturer at London School of Hygiene and Tropical Medicine) will attend the conference and be on hand to present the Hib Initiative poster entitled "Progress towards the prevention of childhood pneumonia and meningitis." In addition, Dr. Kate O'Brien from PneumoADIP, based at the Johns Hopkins Bloomberg School of Public Health in Baltimore, will speak on the WHO global burden of Hib and pneumococcal disease in children.



IVI and DPR Korea collaborate on Hib and JE vaccines introduction

The International Vaccine Institute (IVI) and the Democratic People's Republic of Korea (DPRK) have come together to address the country's disease burden of young children from Hib disease and Japanese encephalitis (JE). Meetings were held in August 2007 between IVI and DPRK officials to begin planning the roll out of a Hib and JE pilot vaccination campaign which will help DPRK assess the feasibility of introducing these two vaccines into their routine vaccination programs for children.

In addition to the vaccination campaign, the IVI-DPRK project will involve a series of activities designed to strengthen laboratory diagnosis of Hib and JE with the refurbishing of a diagnostic reference laboratory to assist with care of children with these diseases. In addition, activities include enhancing the capabilities of health workers. These efforts should help improve clinical management of children with these infections and also provide DPRK health authorities with better estimates of the burden from these diseases.

While the DPRK government has made its national routine immunization program a priority, it has not yet introduced HIB and JE vaccines into its EPI program. This collaboration with IVI puts the country on the way toward nation-wide adoption of these life saving vaccines.

Impact of Hib vaccine against purulent meningitis in Rwanda

A recent study published by Muganga *et al.* in the journal *Vaccine* demonstrates the impact of Hib conjugate vaccine against childhood purulent meningitis in Rwanda. Surveillance data from a Pediatric Bacterial Meningitis surveillance site at the Centre Hospitalier Universitaire de Kigali show a 52% vaccine effectiveness of two or three doses of Hib vaccine against purulent meningitis (95% CI: 5-75%). Cerebrospinal fluid (CSF) samples were considered purulent with a white blood cell count of at least 100 mm⁻³.

The government of Rwanda introduced Hib vaccine in a pentavalent formulation in 2002, and this study presents laboratory-based meningitis data from 2002 to 2006. While the



authors cite a number of limitations that prevented them from isolating more than eight Hib cases, they observed a statistically significant downward trend in all purulent meningitis. While 26% of CSF samples were purulent in 2002, this proportion had fallen to 9.3% by 2006.

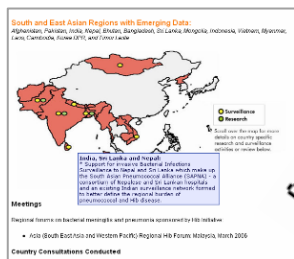
This study provides powerful support for purulent meningitis surveillance. In countries where laboratory supplies and funding are limited, and pre-lumbar puncture antibiotic usage is commonplace, purulent meningitis surveillance can still be a useful tool to demonstrate the impact of Hib vaccine.

WWW.HIBACTION.ORG

Updates to the Hib Initiative Web site

The Hib Initiative has updated and continues to update the Web site with recent activities. The Research and Surveillance section now offers interactive maps, a new feature. The News section continues to stay up to date with recent news items of interest to users. A description of and presentations from a recent roundtable on child survival can be accessed from the home page.

Research & surveillance activities



The Web site provides users with an up to date description of activities conducted by the Hib Initiative. Interactive maps provide users with an easy way to review activities country by country for each region. A list of activities for each Hib Initiation region includes country consultations, in-country meetings and regional forums, and other country-specific activities.

Roundtable on Child Survival: Interventions and Challenges in the New Millennium



The Hib Initiative and PneumoADIP projects brought together leading researchers in the global child/neonatal health for a roundtable discussion on the leading causes of childhood mortality, the areas of the world worst affected, treatment and interventions, and evaluation of interventions. Featured on the Web site are the presentations from each researcher.



The Hib Initiative unites experts from Johns Hopkins Bloomberg School of Public Health, the London School of Hygiene and Tropical Medicine, the U.S. Centers for Disease Control and Prevention and the World Health Organization to advance evidence-informed decision-making regarding the introduction and use of Hib vaccination in the developing world.

Hib Focus newsletter

Rana Hajjeh
Director, the Hib Initiative

Lois Privor-Dumm
Director, Communication,
Strategy

Judy Heck
Editor

Subscribe

Subscribe to the Hib Focus newsletter:
www.hibaction.org/news/newsletter/index.php

We would like to hear from you

What topics would you like us to address in this newsletter? We appreciate your feedback, questions or suggestions. Please contact: Judy Heck at jheck@jhucpp.org

Thanks

Photos courtesy of Rosalyn O’Laughlin and Michelle Moncrieffe-Forman