

Fact Sheet

Haemophilus influenzae type b (Hib)

Haemophilus influenzae type B (Hib) and *Streptococcus pneumoniae* are the two primary causes of life-threatening pneumonia in children under 5 years of age. Hib is also the leading cause of endemic bacterial meningitis in infants and young children in countries where the Hib vaccine is not routinely used and one-third to one-half of children with Hib meningitis either die or suffer permanent disability such as deafness, paralysis or mental retardation. Other important causes of deadly bacterial meningitis include pneumococcus and meningococcus.

Hib remains a significant problem in young children worldwide

- Globally, one of every 25 children under 5 years of age is estimated to die from Hib disease.¹
- The vast majority of child illness and death due to Hib occurs in developing countries.
- According to the World Health Organization, Hib bacteria are responsible each year for approximately 3 million serious cases of illness and 400,000 deaths in children under 5 years of age.
- In most pre-vaccine studies Hib caused approximately 20% of severe pneumonia and was the leading cause of bacterial meningitis.

Hib pneumonia and meningitis are difficult to detect and burden is often significantly underestimated

- Surveillance often captures only a very small portion of the true burden of disease:
 - Hib is a fastidious organism making it difficult to detect; lab infrastructure is not always sufficient; prior use of antibiotics may mask the existence of the bacteria; lumbar punctures (for meningitis) are not always done; or children with Hib never reach a healthcare facility.
- Hib vaccine studies demonstrate that the preventable burden of Hib disease is many times higher than what was previously thought.
 - A Bangladesh case-control study showed that the Hib vaccine prevented over 1/3 of hospitalized pneumonias and over 80% of hospitalized probable bacterial meningitis cases.²
 - A Hib vaccine trial in Lombok, Indonesia³ detected Hib meningitis incidence rates greater than 70/100,000 in children under 5 compared to previous surveillance data from Asia showing an incidence of less than 10/100,000.

The World Health Organization recommends Hib vaccine for all countries, without delay

- "In view of their demonstrated safety and efficacy, conjugate Hib vaccines should be included in all routine infant immunization programmes...Lack of local surveillance data should not delay the introduction of the vaccines..."⁴ (2006)

Hib vaccine is safe, effective and shown to be a highly cost-effective intervention

- Hib vaccine has been available for over 17 years.
- Studies in The Gambia⁵, Chile⁶, Brazil⁷, Colombia⁸ and Bangladesh² showed that Hib vaccine prevented a significant portion of x-ray confirmed pneumonia.
- A study in Lombok, Indonesia³ showed that Hib vaccine prevented a statistically significant portion of clinical pneumonia.
- Kenya⁹, Malawi¹⁰ and The Gambia¹¹ surveillance studies all showed Hib vaccine drastically reduced Hib disease following routine use.
- A recent impact study of Hib vaccine effectiveness against Hib meningitis in Uganda showed a drop in Hib meningitis by 85% within 4 years of vaccine introduction and fell to zero in the fifth year. Inclusion of Hib vaccine in the Ugandan immunization programme annually prevents almost 30,000 cases of severe Hib disease and 5,000 deaths in children under 5 years of age.¹¹
- Recent studies in Kenya¹² and Indonesia¹³ corroborated evidence in other developing countries showing that Hib vaccine is highly cost effective.

Hib vaccine can be given as part of the routine immunization schedule

- Hib vaccine can be given at 6, 10 and 14 weeks and given at the same time as the other routine infant immunizations
- It can be given in combination with DTP and Hepatitis B therefore not requiring an additional shot.

There is an affordable supply of Hib vaccine for the world's poorest children

- Funding from the GAVI Alliance enables eligible countries to purchase vaccine at a subsidized price through 2015.
- Pentavalent combinations (DTP-Hepatitis B-Hib) which can be integrated into current EPI schedules, are currently available in fully liquid form and liquid-lyophilized form.
- Additional pentavalent suppliers, including those from emerging markets, are expected in 2007 and beyond.

GAVI Co-Financing

**Minimum co-financing levels per dose (US\$)
Single or combination**

Vaccine	COUNTRY GROUPINGS			
	Poorest	Intermediate	Least Poor	Fragile States
1 st new vaccine	0.20	0.30	0.30 (+15% annual increment)	0.10
each additional vaccine	0.15	0.15	0.15 (+15% annual increment)	0.15

2008 GAVI applications deadlines: February 8, May 2 and September 25, 2008

The Hib Initiative

- The Hib Initiative aims to guide countries in making informed decisions regarding introduction or continuation of Hib vaccine programs in the context of other health problems and offers technical assistance and support in the following areas:
 - Research and surveillance, planning coordination in decision making and implementation, and advocacy and communication support for GAVI-eligible countries.
- The Hib Initiative unites experts from Johns Hopkins Bloomberg School of Public Health, the London School of Hygiene and Tropical Medicine, the World Health Organization, and the Centers for Disease Control and Prevention (CDC) .
- The Hib Initiative is supported by a 4-year grant from the GAVI Alliance (www.gavialliance.org).

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**Visit the Hib Initiative at www.HibAction.org or
contact your local or regional WHO immunizations representative for more information**

