


New vaccine to prevent child pneumonia and meningitis

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 Bangladesh introduces a new combination vaccine that will protect its children against five killer diseases in one injection, including, for the first time, the deadly bacterium *Haemophilus influenzae* type b (Hib) that causes some severe forms of pneumonia and meningitis. Minister for Health and Family Welfare Dr. A F M Ruhul Haque formally inaugurated this vaccination programme in the southwestern district Khulna on 15 January 2009. The four other deadly diseases against which this pentavalent (or 5-in-1) vaccine will protect our children are diphtheria, pertussis, tetanus and hepatitis B.

Hib is one of the causes of severe pneumonia and meningitis. It is estimated that Hib causes each year millions of serious illnesses and 4,00,000 deaths globally, the majority of them among children under five years of age. In Bangladesh, it is estimated that 24 percent of under-five child deaths is caused due to pneumonia. Even with treatment, thousands of children die of Hib diseases every year. Survivors are often permanently disabled – paralyzed, deafened or brain damaged.

However, the vaccine can prevent about one third of life-threatening cases of bacterial pneumonia and more than 80 percent of probable bacterial meningitis or brain infection. As Bangladesh records a high routine immunization coverage, it is estimated that every year Hib vaccine can save about 20,000 child lives here.

Bangladesh has achieved a tremendous success in preventing Vaccine-preventable Diseases in recent years. Polio has almost been eradicated and neonatal tetanus is in its elimination stage. Measles is under control. The new intervention with this life-saving vaccine represents yet another important step forward in preventing childhood diseases and under-five mortality, and achieving Millennium Development Goal 4 in Bangladesh.

With high poverty, low literacy levels and poor access to healthcare, many sick children in this densely populated country never reach a hospital and often die at home. So vaccines that protect against preventable high-mortality infections, such as Hib, are urgently needed here. In South Asia, Sri Lanka and Pakistan introduced the Hib vaccine in 2008.

The introduction of this vaccine in Bangladesh is carried out with financial and technical support from the GAVI (Global Alliance for Vaccines and Immunization) and its key partners including UNICEF, WHO and the Hib Initiative (which unites experts and provides technical, coordination and communication support to countries regarding the use of Hib vaccine). The GAVI Alliance will spend more than US\$ 90 million procuring more than 25 million doses for 2009-2010. The Government of Bangladesh will complement by investing US\$ 5.6 million for the same period.

The chronology of events in relation to introduction of Hib vaccine in Bangladesh starts with Consultative Workshop on Hib Disease Burden and Prevention in Bangladesh, held on 1 June 2006 at Radisson Water Garden Hotel, Dhaka. The following conclusions were drawn in the workshop:

- i) GAVI can provide very good support for introduction of Hib vaccine in our immunization schedule up to 2015.
- ii) Optimum utilization of routine vaccine and other logistics can also contribute to sustain Hib vaccine introduction in routine program.
- iii) Hib vaccine in pentavalent form will contribute towards increase in immunization coverage also.

The Interagency Coordination Committee (ICC, consisting of 28 agencies involved in introducing Hib vaccine in Bangladesh) in its 23rd meeting on 10 July 2006 suggested that Hib vaccine would be a cost-effective intervention in the country considering the disease burden. The ICC approved preparing a plan for introduction of Hib vaccine in the immunization service in the country.

Afterwards, following the decisions of 25th ICC meeting held on 18 February 2007, Bangladesh applied for GAVI support for NVS (New Vaccine Support) for introduction of Hib pentavalent vaccine.

On 2 July 2008, GAVI Board approved support for introduction of Hib pentavalent vaccine (single dose) in Bangladesh from January 2009.

The vaccine will be introduced in five other divisional districts soon. The target line of reaching the whole country with introduction of this vaccine in the routine immunization is June of this year.

We can summarize the pragmatic outcome of this new vaccine in this way: i) Parents and guardians are expected to be more motivated with minimum efforts as there will be less chances of complications. ii) Drop-out rate and vaccine wastage can be minimized. iii) Huge amount of money which was to be spent on antibiotics for the treatment of these diseases will be saved. iv) Storage of vaccine can be easier. v) Dose schedule is simple. Instead of three different injections – DPT, Hepatitis B and Hib – children will need only one injection at three different times during their first year of life: at the age of 6 weeks, 10 weeks and 14 weeks. vi) This will make it easier for health teams who will need less time and less logistics to immunize all children.

With all these outcomes together, overall coverage of EPI (Extended Programme on Immunization) will be increased.

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