Global status of HB Immunization, 1998

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Hepatitis B is one of the major vaccine preventable diseases of mankind. Approximately 2,000 million persons have serological evidence of current or past HBV infection, and more than 350,000,000 chronic carriers of this virus are alive today and are at high risk of death from chronic hepatitis, cirrhosis of the liver and primary liver cancer. These carriers also represent the reservoir and source of transmission of the virus in the human population. Globally, it is estimated that there are approximately one million deaths per year from the chronic consequences of HBV infection.

No country is free of HBV infection, but the distribution of the virus and the modes of transmission differ geographically. Traditionally the world is divided into regions of endemicity, with countries with 2% or less of HBV carriers in the general population classified as "low", 2% to 8% carriers "intermediate", and 8% and greater "high" endemicity. In "high" endemicity areas most of the population are infected with the virus during childhood either from perinatial (mother to child) transmission, transmission from child to child, or from percutaneous transmission usually due to unsafe injections or other medical or traditional skin piercing procedures.

In 1992 the World Health Assembly of the World Health Organization endorsed a 1991 recommendation calling for all countries to add routine hepatitis B immunization to their National Immunization Programmes by 1997. So far, 90 countries and regions (about half the countries in the world) have done so, and many more are planning to add the vaccine in 1998. These countries include about half of the world's children and about 70% of the world's carriers. The WHO target is to prevent 80% of new HBV carriers in children by the year 2001 by adding the vaccine into routine immunization.

Hepatitis B vaccines have proven to be highly safe and effective tools to prevent HB infection. In developing countries with high endemicity the vaccine has been shown to lower the carrier prevalence in immunized cohorts of children from 8% to 15% before immunization to less than 1% to 2%, changing the endemicity from "high" to "low". These effects are being seen in countries such as The Gambia, China, Thailand, Indonesia, and among Native Americans in Alaska. A direct reduction in liver cancer in immunized children has already been demonstrated in Taiwan.

There are three major constraints to introduction of HB vaccine into developing countries. These include a delivery infrastructure in some countries unable to deliver traditional vaccines with high coverage, other immunization priorities, and a financial infrastructure unable to provide new vaccines. The major problem is economic, with many countries in sub-Saharan Africa, the Indian sub-continent, and the countries in Eastern and Central Europe and the Newly Independent States unable to afford the vaccine. With some exceptions, donor governments and agencies who often supply these countries with other vaccines have not agreed to supply HB vaccine. HB vaccine is still more expensive than traditional vaccines in developing countries, but the price has fallen dramatically (to the range of US $0.50 to $1.00 per pediatric dose) for large public sector purchases in developing countries due to competition from many new producers and price tiering by producers. Our challenge is to educate and motivate countries and partners in development to afford control of hepatitis B the priority it deserves.