Dear Doctors,

I am very pleased to share exciting news with you all. The Expanded Programme on Immunization, Department of Health, Ministry of Health will be introducing two new vaccines into our country’s routine immunization program in November 2012.

The new Vaccines are:
(1) Haemophilus influenzae type b
(2) Second dose of routine measles vaccine

Haemophilus influenzae type b is the leading cause of pneumonia and meningitis in Myanmar in children. The latter clinically presents with high fever, loss of alertness, neck rigidity and at times convulsions which can be fatal. It also presents itself as Pneumonia, throat infection and bone/joint infections.

More than (169) countries worldwide have already introduced this vaccine into their national immunization programs, and WHO recommends all countries to use this vaccine for their children as the disease burden has been significantly proved for every country.

In Myanmar the Hib vaccine will be provided as a combined vaccine in the form of pentavalent vaccine (Diphtheria-Pertussis-Tetanus + Hepatitis B + Haemophilus influenzae type b).

Three doses of Pentavalent vaccine is recommended for all infants at the age of (2), (4), and (6) months. The first dose can be given at 5 weeks of life and all three doses should be completed before the age of (1) year. This vaccine is very safe and highly effective. The infant will be protected from (5) diseases by getting a single injection and this also reduces the number of injections and their visits.

The impact of the introduction of new Hib containing vaccine will lead to greater reduction of childhood mortality which in turn accelerates our progress to achieve the millennium development goal (MDG 4).

Our Honorable Union Minister of Health Professor Dr. Pe Thet Khin strongly supports the new vaccine introduction initiative to bring down the child mortality.

Recently we successfully completed a nation wide mass measles campaign in March 2012 and the country has significantly reduced the measles transmission. In order to achieve measles elimination goals and protect all children, we need to provide two doses of Measles vaccine to every child. In addition to the existing first dose of measles vaccine (at 9 months), now every child will be provided with a second dose of measles vaccine at the age of 18 months.

The entire medical profession in Myanmar is excited about these new public health initiatives and the public should be made fully aware of the availability of new vaccines which will benefit all our children, the future of our generation.

I would like to urge all my colleagues’ doctors and medical professionals to bring this to the attention of all parents and caretakers to ensure that all children in Myanmar avail themselves of the benefit of these life saving vaccines.

Let us work together with the Ministry of Health which is collaborating with WHO, UNICEF and other partners to reach every single child.

Dr Kyaw Myint Naing
President Myanmar Medical Association

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Message From President of Paediatric Society

I am Professor Dr. Saw Win, President of the Paediatric Society of Myanmar Medical Association and Professor and Head of Paediatric Department, University of Medicine (1), Yangon.

I am very pleased to know that our Ministry of Health is introducing two new vaccines in the Routine Immunization Programme, Haemophilus influenzae type b vaccine and routine second dose of Measles vaccine from the month of November 2012. I would like to welcome this historic public health initiative in Myanmar. I have sadly witnessed many children die of pneumonia, meningitis, and complications of measles which are easily preventable by immunization, during my 30 years of clinical practice. In the last two decades I have observed remarkable reduction in Poliomyelitis, measles and neonatal tetanus cases as a direct result of the successful immunization program in our country. Now I am confident that with these two new vaccines we can further reduce the cases of pneumonia and meningitis among our children. The new Hib vaccine has been proven to be safe and successfully used in more than 169 countries.
The full benefit of these new vaccines will be achieved only when they can be given to all our children (especially in hard to reach areas) and leave no child unprotected.

Please remember that if we miss to give one injection of pentavalent vaccine to a child, he or she will not be protected from 5 diseases, which will be more than the previous immunization practice.

Dr. Saw Win,
M.B.B.S, DCH, M Med Sc (Paed), FRCP (Edin), MRCP(UK), MRCPCH(UK),
DCH (Glass), D.T.M&H (London), Dip Med Edu
Professor of Paediatrics, University of Medicine I, Yangon

Fact about Hib

Haemophilus influenzae are a major cause of morbidity and mortality in young children throughout the world. Six serotypes (types a-f) are known to cause disease, but type b is responsible for over 90-95% of the life-threatening Haemophilus influenzae infections in children, including meningitis and pneumonia.

Recent global estimate showed that 370,000 children die each year due to these Haemophilus influenzae type b (Hib) diseases.

Researchers have developed the new "conjugate" vaccines by connecting certain proteins with part of the Hib bacterium. The proteins enhance the immune response to the Hib component, and the vaccines protect children from the age of two months.

Current Hib vaccine is safe and highly effective – 90-99% of children develop antibodies after three doses. It prevents meningitis, pneumonia, epiglottitis, and other serious infections caused by the Hib bacterium.

In the United States, Hib cases declined 99% from 1986 to 1995 in children under five, as a result of the use of Hib vaccine.

WHO recommends that Hib vaccine should be included in routine immunization programmes for all children, as appropriate to national capacities and priorities.

Countries having introduced Hib vaccine and infant Hib coverage, 2010

The epidemiology of Hib

The Hib bacterium

Haemophilus influenzae type b is one of six types (a, b, c, d, e, and f) of encapsulated strains of the bacteria. All six types are characterized by the following:

They live in the nose and throat of people and usually do not cause serious illness.

When they do cause serious illness, they mostly affect children under five years of age, they may become systemic, i.e. spread by the blood throughout the body, and can be life threatening.

Type b bacteria account for over 90% of serious Haemophilus influenzae infections in children.
The Hib disease can be very serious and can cause ...

Bacterial meningitis – Inflammation of the membranes that cover and protect the spinal cord and brain. Bacterial meningitis in children is usually caused by Hib.

15 to 35% of children who survive Hib meningitis are left with permanent neurological disabilities such as mental retardation and hearing loss.

Pneumonia – Inflammation of the lungs. In developing countries, Hib is a major cause of pneumonia (or acute lower respiratory infection, ALRI) in children.

Other Hib infections include:

- Epiglottitis – Inflammation of the larynx and pharynx.
- Septicaemia – Presence of pathogenic bacteria in the blood.
- Septic arthritis – Inflammation of the joints.
- Osteomyelitis – Inflammation of the bones.
- Cellulitis – Inflammation of tissue under the skin.
- Pericarditis – Inflammation of the membrane around the heart.

Mode of transmission

Hib bacteria are passed from child to child in droplets of saliva expelled when an infected child coughs or sneezes. Hib also spreads when children share toys and things that they have put in their mouths. Transmission is likely to increase when many children spend prolonged periods of time together in settings such as day-care or creches.

Age distribution

Hib disease is most common in children under five years old, and children between the ages of four months to 18 months are most at risk.

At birth, maternal antibodies are adequate to protect most infants. Between two and three months of age, the level of these antibodies falls, and incidence of Hib infections increases. By four to five years of age, children develop their own immunity; thereafter, Hib disease occurs rarely.

Hib vaccine

Vaccines are available from different manufacturers. All manufacturers use the capsular polysaccharide material of the bacteria and link it to toxoid, toxoid-like protein, or a mix of proteins from another bacterium. Each of these has been proven effective in the prevention of Hib disease.

Pentavalent vaccine is composed of the following:

- Diphtheria toxoid
- Tetanus Toxoid
- B Pertussis (whole cell)
- HBSAg (recombinant DNA)
- Purified capsular Hib polysaccharide (FRP) conjugated to Tetanus Toxoid

Indications

Hib vaccine is indicated in children from the age of 6 weeks up to 18 months.

Contra-indications

There are no contra-indications to Hib immunization, except a history of hypersensitivity or allergy to any of the components in the vaccine (for example, tetanus or Diphtheria toxoids).

Schedule

Hib immunization schedules depends on the type of Hib vaccine used and the schedule for other vaccines. In general, the scheduling practices below are followed:

- The first dose is given to children at six weeks of age or older.

Three doses are given. Most Hib vaccines require three doses,

- The interval between doses is not less than one month.
- The vaccine may be given at the same time as DTP, OPV, and (if applicable)

According to the national immunization schedule of Myanmar Hib containing pentavalent vaccine is recommended to be given at age of 2 month, 4 month and 6 month in the first year of life. Booster dose is not required.

Dosage

The size of a dose is 0.5 ml.

Administration

Liquid vaccine is used directly from the vial.

Hib vaccine is given by intramuscular injection in the anterolateral aspect of the thigh (infants).

Side effects

Hib vaccine is very safe and has not been associated with any serious side effects. However, redness, swelling, and pain where the injection was given may occur in about 10% of children receiving the vaccine. These usually start within one day after the immunization and last from one to three days. Less commonly, children may develop fever or irritability for a short time after immunization.
Storage of vaccine

Pentavalent vaccine should be stored at temperature of +2 to +8 degree Celsius, at all levels in the upper basket of Ice Lined Refrigerator and should never be frozen. Conditioned ice packs or cool packs should be used during transportation to prevent freezing.

Who is eligible?
In Myanmar infants born after July 2012 will be eligible for first dose of pentavalent vaccine. Children who have started their routine immunization with DPT will continue to get second and third dose of DPT to complete the immunization.

How to read a vaccine vial monitor (VVM)

The following Partners are greatly acknowledge for their support to the Expanded Programme on Immunization in Myanmar.