

Technical Reports

Elimination of neonatal tetanus will save 1 million newborns annually

The number of infants dying each year from tetanus in the first three weeks of life has been cut in half since 1980 and is now estimated at 500 000 worldwide. In addition, over 30 000 deaths of women from the same cause are being prevented each year.

This achievement, outlined in a report* prepared for the WHO Executive Board meeting in Geneva, is mainly the result of the effective immunization of women with tetanus toxoid vaccine before or during their pregnancy.

Immunization at this stage provides long-term protection against tetanus for the mother, but, critically, also protects her newborn child during the early weeks of life. It is during this period that tetanus spores, implanted in the infant's umbilical cord as a result of unhygienic birth practices, can lead to the disease. Poor birth hygiene and harmful traditional practices pose an ever-present threat both to mothers and infants.

"The initiative to eliminate neonatal tetanus will ensure better protection of the mother and the child, and, by its emphasis on training birth attendants, will also lead to safer childbirth", says Dr Ralph Henderson, Assistant Director-General of the World Health Organization.

In 1989, the World Health Assembly committed WHO to achieving the elimination of the disease by 1995, which in many countries accounted for up to 25% of all infant deaths in the early 1980s. Elimination is defined as less than one case of tetanus for every 1000 births occurring in each administrative district throughout the world.

In a statement adopted today, WHO's Executive Board encourages Member States to demonstrate the political will and provide the resources for neonatal tetanus elimination. Priority support should be given to countries accounting for 80% of the estimated global neonatal tetanus cases: Bangladesh, China, Ethiopia, India, Indonesia, Kenya, Nepal, Nigeria, Pakistan, Somalia, Sudan, Uganda, Viet Nam, Zaire.

"With two years to go, we are facing the most dangerous stretch of the road with warning signs saying *Complacency Ahead*. We simply must focus on the situation in the 14 countries responsible for 80% of all cases worldwide", stressed Dr Henrik Zoffmann, Acting Director of WHO's Expanded Programme on Immunization (EPI).

In 1980, fewer than 5% of women in developing countries had received the recommended course of at least two vaccinations against

tetanus, a figure that by 1993 had risen to 43% in spite of the steady increase in the total population.

As public health workers extend immunization programmes to reach the most needy populations – including the poor, the least educated, those living in remote areas, overcrowded and unhygienic conditions – the opportunity is taken to educate mothers and birth attendants on how to conduct hygienic births. Improved hygiene during and after delivery makes for a safer childbirth both for mothers and infants.

Cases of neonatal tetanus do not occur evenly throughout the world. WHO estimates that only 25 countries have more than five cases of tetanus per 1000 births. Within a country, cases tend to occur in clusters, in areas with poor birth hygiene and harmful traditional practices. It is true to say that neonatal tetanus affects mostly the poorest of the poor in countries in greatest need.

Public health workers use clusters of the disease as the basis for an effective control strategy. Detecting cases helps to determine areas with low immunization levels and poor birth hygiene. This approach

* Elimination of neonatal tetanus and control of measles, EB93/21.

yields better results than blanket countrywide immunization of all women of childbearing age, whatever the risk of contracting the disease.

The progress achieved is promising but there is still much to be done. Reliable supplies of potent vaccine, sterile syringes and needles are needed to enable affected countries to conduct regional immunization days backed up by health education campaigns. These needs are vital. Without their provision, not only will the 1995 target of neonatal tetanus elimination be missed, but the potential of safer child-

birth and the possible 25% cut in infant mortality will also be unnecessarily delayed.

"Tetanus is but one among many problems associated with childbirth which threaten the lives of mothers and their newborns", says Dr Henderson. "Eliminating this one problem will not solve them all. But tetanus is a warning beacon. Wherever it occurs, it demonstrates abject failure of the health system. So eliminating this disease automatically requires health workers to recognize and respond to the problems which have generated it, ensuring that all mothers

have access to the basics of good maternal care. Tetanus elimination does indeed provide a powerful strategy for improving maternal care more generally."

For further information please contact:

Dr. François Gasse
Medical Officer
Expanded Programme on
Immunization
WHO, Geneva
Tel: ++41/22 791 4414
Fax ++41/22 791 0746

WHO advocates affordable fluoride toothpastes for the developing countries

Fluoride toothpaste is now the most widely used method of prevention in the world, but its cost remains a deterrent for many of the world's poorer populations. This was the conclusion reached by a WHO Expert Committee meeting a few months before this year's World Health Day, on 7 April, which focused on oral health. Among measures to promote greater access to these toothpastes, the Committee proposed exemption from duties and taxation, since fluorides are added for the sake of public health and not for cosmetic purposes.

According to data presented at a recent meeting in Geneva, more than 800 million people throughout the world now benefit from fluorides, the most common naturally occurring fluorine chemical compounds, as a means of controlling

caries and maintaining oral health. This is mostly achieved through the fluoridation of water for (210 million people), salt (50 million) or toothpaste (450 million). Ground water in its natural condition almost always contains fluorides, but in concentrations that vary widely from one place to another. Fluoride has been known for several decades to be effective against dental caries, and it acts in several different ways. When present in dental plaque and saliva, it hastens the remineralization of incipient enamel lesions before cavities can become established. It also interferes with glycolysis, the process by which bacteria metabolize sugars to produce acid. In higher concentrations, it has a bactericidal effect and when ingested during the period of tooth development, fluoride is thought to make the

enamel more resistant to later acid attacks.

The other side of the story is that high concentrations of fluoride may give rise to fluorosis, with the appearance of white patches and lines on the teeth. Mild fluorosis cannot be detected by the untrained eye, but may present unaesthetic forms when it is more severe. The ideal balance must thus be found to ensure the benefit of effective fluoride protection against caries while avoiding the damaging forms of fluorosis, which the WHO experts nevertheless regard as acceptable in a mild form.

From the public health standpoint, they advocate as a general rule a strategy of low but regular exposure to fluorides, while the application of higher concentrations, especially gels, should be