Progress towards the elimination of maternal and neonatal tetanus

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In the late 1980s, the World Health Organization estimated that about 787,000 new-born babies died from tetanus within the first 28 days of their lives. Following progress in some Member States, in 1989, the World Health Assembly called for the elimination of neonatal tetanus (NT) by 1995. By 1999, 104 of 161 developing countries had achieved elimination. The global maternal and neonatal tetanus elimination (MNTE) initiative was launched by WHO, UNICEF and the United Nations Population Fund (UNFPA) in 1999, and these organizations jointly continue to spearhead the efforts to eliminate maternal and neonatal tetanus (MNT) by 2015, the target date for worldwide elimination of the disease. In line with the global targets, the WHO African Region developed strategic approaches to accelerate the achievement of MNTE in Member States and supported them to develop and implement national plans including validation of the achievement of elimination through neonatal mortality surveys.

WHO defines NT elimination as an annual rate of less than 1 case of NT per 1,000 live births at the district level; maternal tetanus is considered eliminated when NT is eliminated. To achieve the elimination goal of MNT the main strategies recommended by WHO consist of promotion of clean delivery practices, immunization of women against tetanus targeting pregnant women and those in the child-bearing age group (15–44 years) with a tetanus toxoid-containing vaccine (TT) in routine immunization, or provision of at least three doses of TT through supplemental immunization activities (SIAs), targeting women of reproductive age that reside in areas classified as being at high risk for MNT, and case-based surveillance to identify NT cases and deaths as well as the assessment of the risk-status of the area.

However, progress in elimination has been delayed in the Region, due to slow implementation of the recommended strategies with some Member States yet to achieve elimination despite the approaching elimination target year. NT therefore remains a public health problem in 12 countries: Angola, Central African Republic, Chad, Democratic Republic of the Congo, Equatorial Guinea, Guinea, Kenya, Mali, Mauritania, Niger, Nigeria and South Sudan, as well as the Somali region of Ethiopia. It is estimated that the current reporting system captures fewer than 10% of cases. This is because most of the affected rural communities find health care difficult to access; populations rely rather on traditional and spiritual healers for such diseases of sudden onset, and health facilities are only visited as a last resort. This is coupled with the fact that the existing surveillance system is focused more on review of medical records at health facility level with limited community surveillance component.

Methods

To assess the progress towards MNTE targets, the performance was reviewed using reports from the WHO and UNICEF.

Results

According to WHO-UNICEF estimates, coverage with the second dose of tetanus toxoid (TT2+), a proxy for protection at birth (PAB), was estimated at 55% in 2000 as compared with 75% by 2013. As a result of the progress made in routine
immunization and through SIAs using the high risk approach, a total of 2,776 NT cases were reported in 2013 as compared with 5,175 cases reported in 2000 via the WHO-UNICEF Joint Reporting Form, indicating decline of cases. However, skilled delivery remains low and needs to be increased to sustain the gains achieved towards elimination. Skilled delivery is 36% and 42% in Eastern and Southern Africa while it was 36% and 47% in West and Central Africa showing that the skilled delivery rate is still low in African countries.

Discussion

The Member States of the African Region have made remarkable progress towards achievement of the goal of MNTE. Of the 35 countries that attained MNTE between 2000 and June 2014 out of 59 priority countries globally, 25 (71%) are in the African Region. This is in addition to the nine countries that were already classified as having achieved elimination in 1999. These countries are also being supported to sustain their efforts so as to maintain their MNT elimination status. This support and guidance includes a shift from the use of TT-only vaccine to Td vaccine given as a booster in schools and to pregnant women during antenatal care.

The remaining 12 Member States that are yet to attain MNTE have their plans of action as part of the comprehensive multi-year plan for immunization, and are at different levels of strategic implementation of their planned activities to achieve elimination.

To improve coverage with at least two protective doses of TT-containing vaccine, efforts are continuing through the scale up of the RED approach, in Member States where most have adopted the five-dose TT schedule in their immunization programmes. Countries have used the WHO strategic guidance to prioritize the high-risk districts that are likely to harbour NT cases and conduct at least three rounds of TT SIAs targeting women of reproductive age in the African Region received at least two doses of TT vaccine.

Surveillance activities

Integrated Disease Surveillance and Response (IDSR) is the main strategy that is being followed for notification, reporting and action in the Region. Efforts are ongoing to integrate NT surveillance into the active acute flaccid paralysis (AFP) surveillance for polio using the vast infrastructure already in place. However, more cases are being documented through the IDSR than through the case-based surveillance for NT and cases are not followed by the appropriate response. Additionally, a significant number of the NT cases being reported through routine surveillance have been found not to be truly NT cases during programme reviews, pre-validation assessments or validation surveys, but more cases compatible with neonatal infections especially neonatal sepsis.

Promotion of clean delivery practices

Promoting clean delivery is an effective way to reduce maternal and neonatal infections, including tetanus. Improving maternal health has been given high priority by initiatives such as the Safe Motherhood Initiative. But with only 30–40% of births attended by skilled health personnel in the least developed countries, there are still numerous challenges ahead. Distribution of clean delivery kits, community education, and training of skilled birth attendants (midwives, nurses, doctors) are three examples of how delivery practices are being improved.

The shortage of midwives, cultural preferences of location of births, economic factors and attitude of health staff are, among others, some of the reasons for the number of low skilled attendants at birth in African Region. Only one in two births in sub-Saharan Africa and South Asia are attended by a skilled provider.

Conclusions

The goal of eliminating maternal and neonatal tetanus by 2015 has been achieved by 34 out of 47 (72%) of the WHO African Region Member States. The remaining 13 (inclusive of a region in Ethiopia) need to be supported to use the high risk approach, including increasing funding, to achieve the elimination goal while those who have achieved the goal need to sustain their significant achievement through the implementation of appropriate strategies depending on their local context. Additionally, surveillance for NT needs to be strengthened to include local response vaccination in areas where NT cases are identified.

References


