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Regional Office for South-East Asia

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FOLLOW-UP ACTION ON PENDING ISSUES AND SELECTED REGIONAL COMMITTEE RESOLUTIONS/DECISIONS FOR THE LAST THREE YEARS:

UPDATE ON THE PROGRESS AND CHALLENGES IN POLIO ERADICATION

Polio eradication continues to be a priority in the South-East Asia Region. In the first four months of 2009*, 40 polio cases were detected in India with 14 subtype 1 poliovirus (P1) and 26 subtype 3 poliovirus (P3) cases. This paper presents an update on the progress and challenges in polio eradication.

At the start of 2008 a reduction in the transmission of P1 cases, particularly in western Uttar Pradesh (UP) was seen which, however, was offset by re-importation from Bihar in the later half of the year, resulting in 62 subtype P1 cases. Rapid and large-scale mop-up immunizations prevented P1 importation into neighbouring states. The subtype P3 outbreak of 2007 was rapidly controlled with massive outbreak response and mop-up operations.

There are several challenges to the eradication of polio from the Region. The principal challenge in India is overcoming suboptimal vaccine efficacy in the districts of western UP which continues to be polio endemic. Another key challenge in the endemic areas is the low levels of sanitation and personal hygiene. While some efforts have been made by the government, these are at present not of sufficient scale to have an impact. More needs to be done in this area.

The main challenge for other countries in the Region, in particular the countries that share an open border with India, is to protect their polio-free status by preventing re-infection. A strong routine immunization programme that can deliver and maintain OPV3 coverage greater than 80% in all districts in all countries will help prevent re-infection. Additionally, all polio-free countries must conduct periodic risk assessment to determine the level of risk of re-infection and spread, and to decide whether or not polio immunization campaigns will be required to boost population immunity.

Finally, polio eradication requires substantial funding. A substantial proportion is being met through external funding. Member States can help the eradication effort by committing funds for surveillance, outbreak response, and strengthening routine immunization delivery.

The paper is submitted to HLP Meeting for its consideration and noting.

**As of 24 April*

Update on the progress and challenges in polio eradication:

1. Polio eradication continues to be a priority in the South-East Asia Region. Countries in the Region fall into three broad categories: polio-free, re-infected and endemic. Bhutan, Sri Lanka, Maldives, Timor-Leste, DPR Korea and Thailand have been polio-free for more than 10 years. Bangladesh, Indonesia and Myanmar were re-infected countries that have been polio-free for more than a year. Nepal, which was also recently re-infected, has remained polio-free for six months. India remains the only endemic country in the Region with cases of wild type 1 & 3 poliovirus and is therefore the focus of considerable effort to break the last chains of transmission in the Region.

2. During the first four months of 2009*, 40 polio cases have been detected in India with 14 cases identified as type 1 poliovirus (P1) and 26 cases identified as type 3 poliovirus (P3). In 2008, there were 559 polio cases in India* with 75 identified as polio type 1 and 484 as polio type 3. Most polio cases were in the endemic states of Bihar and Uttar Pradesh (UP) with sporadic cases in other states.

3. In 2008, there was a reduction in the transmission of P1 cases in the endemic states of India. Bihar reported only three P1 cases, the lowest number ever detected, and Uttar Pradesh stopped indigenous P1 transmission. In 2008, an importation from Bihar established a local circulation resulting in 62 P1 cases. Rapid and large-scale mop up immunizations prevented P1 importation into neighbouring states.

4. The transmission of P3 has been suppressed since the outbreak in 2007 with intermittent immunization rounds with type 3 monovalent Oral Polio Vaccine (OPV3) in Bihar and Uttar Pradesh. In 2008, the majority of cases seen in Bihar and Uttar Pradesh occurred in the beginning of the year and represented the tail end of the 2007 outbreak. Sporadic P3 cases were also reported outside the endemic states but aggressive mop-up immunization campaigns resulted in no additional cases.

5. The case count in 2008 looks promising when compared with 2007. The number of polio cases declined to 559 from 874 cases in 2007 with 80 P1, 791 P3 and three P1/3.

6. The principal challenge in India is overcoming suboptimal vaccine efficacy in the districts of western Uttar Pradesh which continues to be polio endemic. Measures which have been implemented to overcome this challenge include the use of more effective monovalent vaccines and vaccine with higher potency.

7. The other challenge is to eradicate type 1 wild poliovirus as soon as possible and suppress the circulation of type 3. India is intensifying efforts guided by the recommendation of the India Expert Advisory Group (IEAG) by prioritizing eradication of the more dangerous P1 while suppressing P3. Specific areas of focus include improving coverage and quality of immunization campaigns, and identifying immunity gaps in high-risk populations.

*As of 24 April 2009

8. The challenge of maintaining high-quality delivery of the vaccine is being addressed through measures that are being taken to improve coverage and quality of the National and Subnational Immunization Days (NIDs/SNID), particularly in the endemic states. These activities include: increasing access in compromised areas such as the Kosi River in Bihar; including senior government officials in monitoring activities; enrolling local community influences to target reluctant families; and, improving involvement of health on the vaccination teams.

9. In addition to intensified immunization rounds and the use of more efficacious monovalent oral polio vaccines, several research projects are being conducted to identify immunity gaps and possible interventions in high-risk populations. The studies include: a sero prevalence study to assess and compare immunity of children in Uttar Pradesh; a high titer mOPV1 study comparing immunity with standard trivalent OPV (tOPV) in Andhra Pradesh and Madhya Pradesh; a bivalent OPV study comparing immunity with mOPV1, mOPV3 and tOPV in Tamil Nadu and Maharashtra; and an IPV study comparing different IPV preparations with mOPV1 and high titer mOPV1 in Uttar Pradesh.

10. Another challenge that must be overcome in the endemic areas is the low levels of sanitation and personal hygiene. While some efforts have been made by the Government, these are at present not sufficient scale to have an early impact. More needs to be done in this area.

11. The main challenge for other countries in the Region, in particular the countries which share an open border with India, is to protect their polio-free status by preventing re-infection. Nepal remains the most vulnerable to importation due to its long porous border with the endemic states of India. The last polio cases detected in Nepal were in December 2006 (P1) and October 2008 (P3). However, on account of the free and open trans-border communication within the Region, India and Nepal allowed for a coordinated, rapid response to the case to prevent future spread to other areas of Nepal.

12. In all countries in the Region, maintaining a highly functioning and responsive acute flaccid paralysis (AFP) surveillance system and laboratory network is paramount to being able to detect and respond to wild polio cases. Maintaining an OPV3 immunization coverage level that is greater than 80% in all districts of the country will help prevent re-infection. Additionally, all polio-free countries must conduct periodic risk assessment to determine the level of risk of re-infection and spread and to decide whether or not polio immunization campaigns will be required to boost population immunity.

13. Finally, polio eradication requires substantial funding. A substantial proportion is being met through external funding. Member Countries can help the eradication effort by committing funds for surveillance, outbreak response strengthening routine immunization delivery.

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