

An AFP surveillance review conducted in West Bengal in October 2010 indicated that the core AFP surveillance system processes are broadly functioning; however, surveillance gaps were noted in some high-risk districts.

Note: Although there was a near absence of WPV1 cases detected in Bihar in 2010, WPV1 related to Bihar 2009 strains identified elsewhere in India and Nepal in 2010 suggests undetected circulation in 2010. Transient re-infections in older children and young adults may play a role in sustaining low level WPV transmission inside and/or outside of Bihar.

Risk Assessment:

Data suggest significant improvements in reaching mobile and remote populations in SIAs, and overall high seropositivity in the tested populations in western Uttar Pradesh and central Bihar. The reduction in the number of WPV1 and WPV3 cases and affected districts in India from 2009 indicates continued significant progress towards interrupting WPV transmission in India.

India's achievements are among the most promising in 2010; data indicate substantial progress toward meeting milestone 3 by the end of 2011 or earlier if current success can be maintained into the low transmission season. However, progress is vulnerable and depends on rapidly interrupting WPV transmission in Bihar, West Bengal and Jharkhand, maintaining high population immunity in Bihar and Uttar Pradesh, and improving coverage in specific migrant subpopulations. Confirmed WPV circulation in five states in the last six months is indicative of remaining population susceptibility. The 14 September CDC report indicated moderate, decreasing risk. Although WPV incidence remains low, India remains at moderate, decreasing risk of failure to detect and interrupt WPV transmission by the end of 2011.

The historic low incidence of both WPV1 and WPV3 cases in India during the 2010 high season indicates continued significant progress towards polio eradication. India is at moderate, further decreasing risk of failure to detect and interrupt WPV transmission by the end of 2011.

There remains an ongoing threat of persistent transmission in Bihar, reseeding high-risk areas of western Uttar Pradesh, additional importation of WPV into other areas of India and its neighbors, and long-distance importation into other vulnerable areas. If direct evidence of persist transmission in Bihar surfaces, contingency measures to supplement current approaches may need to be considered.

NIGERIA

Epidemiologic Situation:

From January–September 2010, Nigeria identified 9 WPV (5 WPV1 and 4 WPV3) cases in 9 districts in 6 states. WPV1 cases declined from 74 during January–September 2009, and WPV3 cases declined from 306. The onset of the most recent WPV3 case was 5 August (Sokoto state) and of the most recent WPV1 case was 27 September (Kano state). An additional WPV3 in Sokoto has been identified with onset outside the reporting period (5 October). There have been 18 cVDPV2 cases during January–September 2010, decreased from 150 during January–September 2009, in 8 northern states. The most recent cVDPV2 was 10 September (Kano state).

Immunization Performance:

During January–September 2010, two national SIAs (one using bOPV and one using tOPV), five sub-national SIAs, and one “mop-up” round were conducted. Different OPV formulations were often used in combination in SIAs; overall, bOPV was used in five SIAs. According to monitoring data presented at the Expert Review Committee meeting in early October, the percentage of wards in 85 high risk LGAs with >10% missed children declined to 15% in September. Among high risk northern states, Kano continued to report 14% of wards with >10% missed children during the SIAs. Based on the MPI data, immunization performance is weak.

The MPI is <10% 0-dose NPAFP children in each of the 12 high-risk states. That goal has been met for ten (83%) states; the two that failed are Kano (16.7 % 0-dose and 35% 4+ doses) and Yobe (13.4% 0-dose and 41% 4+ doses). The proportion of missed children may be underestimated by this indicator. In the 12 high risk states, 58% of children have 4+ doses.

Nationally, there are 3.4% 0-dose and 65% 4+ dose NPAFP children; pooled national data mask the situation in high-risk areas.

Surveillance Performance:

The MPI target for all endemic, re-established transmission, and “importation belt” countries is NPAFP rate >2 in all sub-national levels (GPEI#2). AFP surveillance performance indicators appear to generally meet targets nationally and sub-nationally, with all states having NPAFP rates > 2 (national rate is 8.9) and >80% adequate specimen collection. The national proportion of adequate stools is 94%.

Despite strong performance indicators, there are virologic indications of surveillance limitations. Genomic sequence analysis indicates some missed chains of WPV transmission during 2009–2010 with many chains of transmission not detected for more than a year. This finding indicates intermediate surveillance performance despite AFP surveillance performance indicators meeting or exceeding targets at national and all state levels. Surveillance gaps might be occurring among specific subpopulations such as migrants in northern Nigeria who have limited access to immunization activities and health-care providers, as well as among specific districts with surveillance weaknesses in AFP detection, investigation, specimen collection and/or transport in some areas of the country.

Risk Assessment:

There are substantial reductions in the number of identified WPV1, WPV3, and cVDPV2 cases and affected districts during January–September 2010 compared with the same period in 2009, suggesting marked improvements in coverage during SIAs since early-2009.

Within the high-risk northern states, a high proportion of children remain at risk as a result of focal areas with low routine immunization and SIA coverage and high birth rates. Because of apparent gaps in AFP surveillance as indicated by the virologic evidence, and because there are still sizable subpopulations of missed children, Nigeria has a high, decreasing risk of failure to detect and interrupt WPV transmission by the

If progress in Nigeria can be sustained, WPV transmission could be interrupted in the near future. However, with a high proportion of 0-dose children in high-risk areas, Nigeria has a high, decreasing risk of failure to detect and interrupt WPV transmission by the end of 2011.

end of 2011. Furthermore, potential disruptions in services during the state and federal elections planned for early 2011 could limit program progress.

PAKISTAN

Epidemiologic Situation:

During 1 January–30 September 2010, 91 WPV cases (70 WPV1 and 21 WPV3) were confirmed, compared with 66 (43 WPV1, 22 WPV3, and 1 WPV1/WPV3) during the same time period in 2009. The number of districts affected by WPV have remained largely unchanged from 2009 (26) to 2010 (30) and are located primarily in the northern transmission zone (most of Khyber Pakhtunkhwa [formerly North West Frontier Province] and the federally administered tribal areas [FATA], bordering eastern Afghanistan), and the southern transmission zone (bordering south Afghanistan, extending into Pakistan through Balochistan, into Punjab and into the towns around Karachi, Sindh).

Immunization Performance:

The MPI targets are: 1) <15% missed children during at least 8 SIAs in every district of the Quetta area and the persistent transmission districts and agencies of Khyber Pakhtunkhwa and FATA, and 2) <10% missed children during at least 4 SIAs in every town of Karachi. SIA IM data from house-to-house surveys are informative but tend to underestimate the proportion of missed children compared to market/outside the house monitoring, for which results have not been reported. In each of the three districts of Quetta area, house-to-house SIA IM indicated <15% missed children only during the four March–September SIAs out of the seven SIA rounds conducted to date in 2010. Each district in the Quetta failed to reach the target in at least one SIA. In Peshawar district, Khyber Pakhtunkhwa, the target of <15% missed children was reportedly reached in all seven SIA rounds, but up to 60% of children were missed in the monitored districts of FATA and Khyber Pakhtunkhwa when adjusting for limited access. Among the 18 monitored towns of Karachi, house-to-house SIA IM indicated <10% missed children in 17 towns in July and 18 towns in September; 15 towns reported <10% missed children in at least 4 SIA rounds conducted to date in 2010.

The reported immunization status of NPAFP children suggests high coverage nationally (2% 0-dose children) and sub-nationally (all provinces having <10% 0-dose children). The overall proportion of NPAFP children with 4+ doses of OPV (94%) is consistent with the Pol3 estimate of 85%. However, these data mask substantial differences apparent in the high-risk districts in both transmission zones. Because of SIA monitoring data, immunization performance is weak.

Surveillance Performance:

The MPI target for all endemic, re-established transmission, and “importation belt” countries is NPAFP rate >2 in all sub-national levels (GPEI#2). Overall AFP surveillance performance indicators generally meet targets nationally and sub-nationally with 100% of provinces meeting NPAFP>2 and the proportion of adequate specimens being 90%, despite access problems in the conflict-affected Khyber Pakhtunkhwa and FATA. Genomic sequence analysis of WPV isolates from AFP cases and sewage samples (environmental surveillance), however, indicate serious weaknesses in AFP detection, investigation, specimen collection and/or transport in some areas of the country. Surveillance performance is intermediate.