

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.

Risk Assessment:

Circulation of both WPV serotypes persists in high-risk districts in both transmission zones. The number of WPV3 cases is similar in 2010 compared with the same time period in 2009; however, WPV1 cases have increased. Although Pakistan did not meet MPI targets for SIA IM in all locations, there were many areas where the targets were met; however, outside the house monitoring data have not been reported. Immunization and surveillance services were seriously disrupted with the recent massive flooding, particularly in areas where WPV was circulating. Pakistan has a high, increasing risk of failure to detect and interrupt WPV transmission by the end of 2011

**Because of continuing weakness in immunization performance and the additional uncertainty of the long-term impact of the flooding crisis, Pakistan has a high, increasing risk of failure to detect and interrupt WPV transmission by the end of 2011.**