**Polio Outbreak in the European Region and Country Responses**

**Summary**

As of 25 October, Tajikistan had reported 458 laboratory-confirmed cases of wild poliovirus type 1, including 26 deaths. The last confirmed case in Tajikistan had a date of onset of 4 July. Since the beginning of the year, the Russian Federation had reported 14 poliomyelitis (polio) cases; Turkmenistan, 3 cases, and Kazakhstan, 1 case.

National immunization days (NIDs) were conducted in Tajikistan (5 rounds), Uzbekistan (3 rounds), Turkmenistan (3 rounds) and Kyrgyzstan (2 rounds). Kazakhstan held its first round of NIDs on 6–10 September. Reported coverage was extremely high in all countries (Table 1).

This epidemiological brief provides an update on the polio outbreak and the response measures taken in the WHO European Region. It also presents the genetic relationship of wild poliovirus type 1 (WPV1) isolates in four countries of the European Region: Kazakhstan, the Russian Federation, Tajikistan and Turkmenistan (Fig. 1.). The tree is rooted in the isolates from a WPV1 SOAS (South Asia) genotype from northern India.

Fig. 1 highlights that all viruses are closely related to the WPV1 SOAS genotype from northern India and that the outbreak is the result of a single importation of WPV1 into the European Region. Further, it is clear that WPV1 isolates in Kazakhstan, the Russian Federation and Turkmenistan are genetically related to the viruses from Tajikistan.

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**Fig. 1. Genetic relationship of WPV1 isolates in the European Region in 2010**

**Note.**

Only viruses from the first WPV1 case in each country are highlighted, based on complete VP1 nucleotide sequences (906nt):

- Tajikistan (red)
- Russian Federation (pink)
- Turkmenistan (dark green)
- Kazakhstan (neon green)

The topology is calculated by the neighbour-joining method using the Kimura-2-parameter (K2P).
Tajikistan
As of 25 October, Tajikistan had reported 458 laboratory-confirmed cases of WPV1, including 26 deaths. Confirmed cases came from 35 of 61 administrative territories. Surveillance for acute flaccid paralysis (AFP) cases continued to be sensitive: 10 AFP cases had been reported since the last confirmed case (4 July 2010) with specimens collected for laboratory investigation and sent to the regional reference laboratory in Moscow, Russian Federation: 9 tested negative for wild poliovirus and 1 positive for SL1 poliovirus.

Russian Federation
Between 1 January and 25 October 2010, the Russian Federation reported 327 AFP cases; 14 were laboratory-confirmed cases of WPV1. The latest two cases are in relatives of a previous one from the southwestern part of the Republic of Dagestan, near the border with the Republic of Chechnya.

Out of 83 territories, 42 have conducted catch-up immunization of children who were not fully immunized.

Turkmenistan
In the period 1 January – 25 October 2010, Turkmenistan reported 41 AFP cases, of which 3 have been laboratory confirmed for WPV1, and 33 were negative. All cases had come from the Lebap province, bordering Uzbekistan. The last confirmed case had a date of onset of 28 June.

Kyrgyzstan
Since 1 January 2010, Kyrgyzstan had reported 50 AFP cases, of which 37 tested negative and 13 are pending.

Uzbekistan
Since the beginning of the year, 122 AFP cases had been officially reported. The most recent reported case had a date of paralysis onset of 13 October 2010; 5 AFP cases were reported in September.

Kazakhstan
On 6 October the regional reference laboratory in Moscow informed Kazakhstan of the isolation of WPV1. The confirmed case is in a 7-year-old boy from Saryagach district in southern Kazakhstan. The date of onset is recorded as 12 August 2010. Laboratory investigations are pending for 8 AFP cases.

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**TABLE 1. National Immunization Day Rounds and Mop-up vaccination activities in the Central Asian Republics**

<table>
<thead>
<tr>
<th>Country</th>
<th>Dates of SIAs, vaccine a, and coverage b (%)</th>
<th>Target age groups</th>
<th>Target population size</th>
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<tbody>
<tr>
<td></td>
<td>I round  II round  III round  IV round  V round  VI round  Mop-up</td>
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<tr>
<td>Tajikistan</td>
<td>04-08 May mOPV1 (99.4%)</td>
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<td>18-22 May mOPV1 (99.4%)</td>
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<td>01-05 June mOPV1 (98.8%)</td>
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<td>15-19 June mOPV1 (99.3%)</td>
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<td></td>
<td>04-08 Oct tOPV</td>
<td>13-17 Sep mOPV</td>
<td>≤ 6 years (182 rounds)</td>
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<td>34 districts</td>
<td>&lt; 15 years (3rd-6th</td>
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<td>round and mop-up)</td>
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<td>Turkmenistan</td>
<td>12-18 July tOPV (98.9%)</td>
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<td>26 Aug - 05 Sept mOPV1 (99.6%)</td>
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<td>20-29 Sept mOPV1 (99.6%)</td>
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<td>28 July -06 Aug mOPV1 (95.5%)</td>
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<td>Uzbekistan</td>
<td>17-21 May mOPV1 (100.8%)</td>
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<td>07-11 June mOPV1 (100.4%)</td>
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<td>05-09 July mOPV1 (100.5%)</td>
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<td>25-31 Oct mOPV1</td>
<td>20-26 Jul mOPV1</td>
<td>&lt; 5 years (1-3 rounds)</td>
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<td>&lt; 15 years (4th round)</td>
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<td>0-25 yrs mop-up in</td>
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<td>Kazakhsttan</td>
<td>06-10 Sept tOPV (98.9%).</td>
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<td>1-10 Nov mOPV1 (SNID c)</td>
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<td>&lt; 5 years (1st round)</td>
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<td>&lt; 15 years (2nd round)</td>
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<td>1 668 727 (1st round)</td>
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<td>2 200 000 (2nd round)</td>
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<td>Kyrgyzstan</td>
<td>19-23 July mOPV1 (95.2%)</td>
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<td>23-27 Aug mOPV1 (95%)</td>
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<td>&lt; 5 years</td>
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<td>670 165</td>
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a Vaccines are monovalent oral polio vaccine type 1 (mOPV1) and trivalent oral polio vaccine (tOPV).
b Coverage figures are those reported by countries’ health ministries.
c SNID = subnational immunization day.

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