

## Highlights of Polio Fax Bulletin No. 1154 for Week 46 2020

### I. Salient features

1. Polio eradication teams at the Regional and Country levels continue to contribute to the COVID19 Response, particularly in areas of surveillance (field and laboratory), data analysis, communications and coordination.
2. Wild Poliovirus Type-1 (WPV1): Two new cases were reported, one each from Afghanistan and Pakistan. Four new WPV1 positive environmental samples, one from Afghanistan and three from Pakistan.
3. Vaccine Derived Poliovirus (VDPV):
  - cVDPV1: No new cases reported this week.
  - cVDPV2: Five new cVDPV2 cases and three new positive environmental samples from Sudan reported this week.

*Advance notification:* 24 cVDPV2 cases from Afghanistan. Details will be shared in next bulletin.

### II. Wild Poliovirus Transmission

WPV1 transmission in the EMR and world is in two polio-endemic countries only, Pakistan and Afghanistan.

Total WPV1 cases in 2020 to date is 135 (54 from Afghanistan and 81 from Pakistan). This compares with 124 cases in 2019 in the same period (25 from Afghanistan and 99 from Pakistan).

- a. *Human samples:* Two new WPV1 positive cases reported this week (Afghanistan – 1 & Pakistan – 1).

**Afghanistan:** The newly reported case is from Maruf district, Kandahar province, with date of onset 14 October 2020. The case is a 12-month old male child. The child reportedly received only 1 OPV dose from supplementary immunization activities (SIAs) and none from routine.

In 2020, **54 WPV1 cases** have been reported so far: 18 cases from Kandahar province; 10 from Hilmand province; 5 from Khost province; four each from Farah and Uruzgan provinces; three from Zabul province; two each from Herat and Badghis provinces; and one each from Nimroz, Laghman, Kunar, Badakhshan, Balkh and Paktika provinces. **The most recent case has onset of paralysis on 14 October 2020.**

**Pakistan:** The newly reported case is from Layyah district, Punjab province, with date of onset 21 October 2020. The case is a 41-month old male child. The child reportedly received a total of 10 OPV doses, 3 doses from routine and 7 doses from SIAs.

In 2020 to date, **81 WPV1 cases** are reported, 23 from Balochistan province, 22 cases each from Khyber Pakhtunkhwa (KP) and Sindh provinces, and 14 from Punjab province. **The most recent case has onset of paralysis on 21 October 2020.**

- b. *Environmental samples:* 4 newly reported positive environmental samples (Afghanistan – 1 & Pakistan – 3).

- **Afghanistan:** In 2020 to date, there are **34** WPV1 positive environmental samples including four combined (WPV1 and cVDPV2) with most recent sample collected on 6 October 2020.

- **Pakistan:** In 2020 to date, there are **384** WPV1 positive environmental samples including 56 combined (WPV1 and cVDPV2) and 4 combined (WPV1 and aVDPV2) with most recent positive sample collected on 21 October 2020.

### III. Vaccine Derived Polioviruses (VDPVs):

Total cVDPV2 cases in 2020 to date is 274 (136 from Afghanistan, 83 from Pakistan, 11 from Somalia and 44 from Sudan). This compares with 14 cases in 2019 in the same period (11 from Pakistan and 3 from Somalia).

1. **Outbreaks:** Five countries have VDPVs outbreaks, four with cVDPV2 and one with cVDPV1.

**Afghanistan:** No new VDPV cases or positive environmental samples reported this week.

*Human samples:* In 2020 to date, there are **136** cVDPV2 cases; 45 reported from Nangarhar province, 25 from Kandahar province, 14 from Laghman province, 9 from Khost province, 8 from Kunar province, 6 from Kabul province, 5 from Farah province, 4 from Paktya province, 3 each from Hilmand, Paktika and Nimroz provinces, 2 each from Hirat, Logar and Nuristan province, 1 each from Jawzian, Kunduz, Ghazni, Badakhshan and Parwan provinces. **The most recent case has onset of paralysis on 23 September 2020.**

*Environment:* In 2020 to date, 104 cVDPV2 positive environmental samples including 4 combined (WPV1 and cVDPV2) were reported: 39 from Jalalabad, 11 from Batikot, 3 from Behsud districts, Nangarhar province; 15 from Kandahar district, Kandahar province; 14 from Kabul district, Kabul province, and 4 from Asadabad

district, Kunar province; 7 from Lashkargah and 3 from Nahr-E-Saraj districts , Hilmand province; 3 each from Khost (Matun) district, Khost province and Mehtarlam (Gumeen) district, Laghman province and 1 each from Gardez district, Paktya province and Kunduz district, Kunduz province. **The most recent cVDPV2 positive environmental sample was collected on 6 September 2020.**

**Pakistan:** No new VDPV cases or positive environmental samples reported this week.

**Human samples:** In 2020 to date, there are **83** cVDPV2 cases reported. Cases include 42 from KP province, 22 from Sindh province, 17 from Punjab province, and 2 from Balochistan province, with most recent case's onset on 23 September 2020. In addition to 7 aVDPV2 cases, 6 from Punjab province and 1 from Sindh province, with most recent case's onset on 11 September 2020.

**Environment:** In 2020, there are **71** positive environmental samples for cVDPV2 so far (including 56 combined WPV1 and cVDPV2), the most recent sample collected on 28 September 2020. Also, there are 9 aVDPV2 isolates detected in the environment samples, which include four combined (WPV1 + aVDPV2). The most recent aVDPV2 positive environmental sample was collected on 17 September 2020.

**SOMALIA:** No new VDPV cases or positive environmental samples reported this week.

In 2020 to date, **11** cVDPV2 cases reported, 7 from Banadir province and 1 each from Lower Juba, Middle Shabelle, Bay and Galbeed provinces, with **most recent date of onset 30 September 2020**. Also, there are 25 cVDPV2 positive environmental samples reported, the most recent collected on 26 September 2020.

**SUDAN:** 5 new cVDPV2 cases and 3 positive environmental samples were reported this week.

The 5 new cVDPV2 cases were reported 2 from Kassala State (both from Hamshkoreep locality), one each from Gezira State (Al Gurashi locality), River Nile State (Shandi locality) and Red Sea State (Port Sudan locality). Their dates of onset are between 17-30 September 2020.

In 2020 to date, **44** cVDPV2 cases reported. **The most recent case has onset of paralysis on 30 September 2020.**

A total of **11** environmental samples have been positive for cVDPV2 so far, all from Khartoum with most recent collection on 6 September 2020.

**YEMEN:** No new VDPV cases were reported this week.

In 2020 to date, **16** cVDPV1 cases are reported. All cases are from Saadah province, 5 each from Kitaf Wa Buga and Sahar districts, 3 from Al Safrah district, and one each from Sageen, Saadh City and Majz districts.

**The most recent case has onset of paralysis on 5 June 2020.**

## 2. Events: There are two countries currently having Event due to VDPV2.

**Egypt:** In 2020, an Event of an aVDPV2 positive environmental sample from Giza province is under investigation to determine the appropriate response. The isolate is genetically related with earlier virus seen in Sudan consequent to importation from Chad. **Date of sample collection is 21 September 2020.**

**Iran:** A reported VDPV2 positive environmental sample from Zabol district, Sistan & Balochistan province – it is under investigation to determine the appropriate response. The isolate is genetically related with earlier virus seen in Afghanistan consequent to importation from Pakistan. **Date of sample collection is 3 October 2020.**

## IV. Surveillance performance indicators

In 2020, 13 out of 22 member states are meeting the global target of both key surveillance indicators, namely non polio AFP rate of 2 per 100,000 children aged below 15 years and percent AFP cases with adequate specimen 80% and above.

- Morocco and Tunisia are missing both indicators as their non-polio AFP rates are 0.9 and 1.2 and their percentage of AFP cases with adequate stool specimens is 64.6%, and 63.3%, respectively.
- Djibouti, Jordan, Oman, Palestine, Saudi Arabia and United Arab Emirates have a non-polio AFP rate of 1.2, 0.9, 1.9, 0.7, 1.8 and 1.6 respectively.
- Qatar has AFP cases with adequate stool specimens is 22.2%.

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## AFP SURVEILLANCE

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Table 1: Acute Flaccid Paralysis (AFP) cases by week of onset

Country	Reported AFP cases by week of onset - Week (46/20) / Ending on : 15/11/2020														
	Total AFP 2018	Total AFP 2019	Total AFP to date, 2020	W35 30 Aug 20	W36 06 Sep 20	W37 13 Sep 20	W38 20 Sep 20	W39 27 Sep 20	W40 04 Oct 20	W41 11 Oct 20	W42 18 Oct 20	W43 25 Oct 20	W44 1 Nov 20	W45 8 Nov 20	W46 15 Nov 20
Afghanistan	3378	3768	3348	92	118	106	117	81	94	100	89	85	62	32	3
Bahrain	35	17	12	0	0	0	0	1	0	0	0	0	1	0	0
Djibouti	0	5	4	2	0	1	0	0	0	0	0	1	0		
Egypt	1246	1343	832	29	20	25	21	20	31	23	13	31	22	23	3
Iran	896	1070	499	10	17	12	14	9	9	7	8	8	5	2	0
Iraq	1023	1157	382	8	6	8	8	8	5	13	14	7	14	4	
Jordan ****	115	113	31	0	0	0	1	1	1	2	0	0	0	0	
Kuwait	72	48	29	2	0	0	0	0	0	1	1	1	1	0	
Lebanon ****	89	87	42	1	1	2	1	1	0	2	1	1			
Libya	122	107	86	2	3	0	0	2	0	1	3	1	1	1	
Morocco	212	247	79	0	0	0	1	0	0	3					
Oman	28	30	19	0	0	1	0	1	1	1	0	1	2	0	0
Pakistan	12276	15216	9971	191	277	274	328	279	287	246	234	212	190	62	0
Palestine ****	44	62	12	0	0	0	1	0	0	0	0	1	0	0	
Qatar	10	9	9	0	0	1	0	0	0	0	0	0	0	0	1
Saudi Arabia	242	236	133	1	2	5	5	8	10	2	8	6	2	3	0
Somalia	353	361	327	7	8	4	11	7	5	6	3	5	2	2	0
Sudan	579	608	599	26	30	27	34	32	17	27	19	25	14	2	
Syria ****	362	377	298	7	4	8	1	13	3	1	3	10	3	5	1
Tunisia	68	79	30	0	0	1	0	0	0	0	0	1	1	0	
U.A.E	40	50	18	1	1	0	0	0	0	0	1	0	0	0	
Yemen	730	779	656	17	27	19	20	22	29	15	14	17	17	14	1
<b>Total EMR</b>	<b>21920</b>	<b>25769</b>	<b>17416</b>	<b>396</b>	<b>514</b>	<b>494</b>	<b>563</b>	<b>485</b>	<b>492</b>	<b>450</b>	<b>411</b>	<b>413</b>	<b>337</b>	<b>150</b>	<b>9</b>

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2018	Total year 2019	15/11		Confirmed polio cases by month of onset											
	2018	2019	2019	2020	December 2019	January 2020	February 2020	March 2020	April 2020	May 2020	June 2020	July 2020	August 2020	September 2020	October 2020	November 2020
Afghanistan	21	29	25	54	1	2	3	7	0	12	10	7	6	6	1	
Bahrain	0	0	0	0	0	0	0	0	0	0	0	0	0			
Djibouti	0	0	0	0	0	0	0	0	0	0	0	0				
Egypt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Iran	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Iraq	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jordan ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lebanon ****	0	0	0	0	0											
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Morocco	0	0	0	0	0	0			0	0					0	
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pakistan	12	147	99	81	32	18	17	7	6	6	6	6	5	7	3	
Palestine ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Qatar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Somalia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Syria ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tunisia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Yemen	0	0	0	0	0	0										
<b>Total EMR</b>	<b>33</b>	<b>176</b>	<b>124</b>	<b>135</b>	<b>33</b>	<b>20</b>	<b>20</b>	<b>14</b>	<b>6</b>	<b>18</b>	<b>16</b>	<b>13</b>	<b>11</b>	<b>13</b>	<b>4</b>	<b>0</b>

\*\*\*\* UNRWA cases are included with those of country of residence

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Table 3: Investigation of AFP cases with paralysis onset in 2019 &amp; 2020 up to Week (46/20) / Ending on : 15/11/2020

COUNTRY	2019												2020												Latest line List Date		
	AFP												AFP														
	Total AFP cases onset 2019	Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV	Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis	Specimen	Wild cases ****	Wild P1 Poliovirus	Wild P3 Poliovirus	Total AFP cases onset 2020	Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV	Annualized Non polio AFP rate ***	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis	Specimen	Wild cases ****			
Afghanistan	3768	29	1	1	3737	0	18.1	0	0	94.1	29	0	3348	54	0	387	2769	138	17.8	69	5	93.5	54	0	15/11/2020		
Bahrain	17	0	0	0	17	0	5.7	0	0	100.0	0	0	12	0	0	2	10	0	4.6	0	0	91.7	0	0	15/11/2020		
Djibouti	5	0	0	0	5	0	1.4	0	0	80.0	0	0	4	0	0	4	0	0	1.2	0	0	100.0	0	0	01/11/2019		
Egypt	1343	0	0	0	1343	0	3.6	0	0	93.4	0	0	832	0	0	99	733	0	2.5	0	0	91.8	0	0	12/11/2020		
Iran	1070	0	0	0	1069	1	5.2	0	0	97.1	0	0	499	0	0	17	482	0	2.7	0	0	99.2	0	0	15/11/2020		
Iraq	1157	0	0	0	1157	0	7.4	0	0	94.3	0	0	382	0	0	28	354	0	2.7	0	0	92.9	0	0	14/11/2020		
Jordan	113	0	0	0	113	0	3.9	0	0	100.0	0	0	31	0	0	0	31	0	0.9	0	0	100.0	0	0	05/11/2020		
Kuwait	48	0	0	0	48	0	5.4	0	0	89.6	0	0	29	0	0	2	27	0	3.6	0	0	82.8	0	0	08/11/2020		
Lebanon	87	0	0	0	87	0	4.7	0	0	89.7	0	0	42	0	0	25	17	0	2.6	15	13	95.2	0	0	30/10/2020		
Libya	107	0	0	0	107	0	4.3	0	0	98.1	0	0	86	0	0	8	77	1	3.7	0	0	100.0	0	0	14/11/2020		
Morocco	247	0	0	0	247	0	2.8	0	0	84.2	0	0	79	0	0	35	44	0	0.9	29	8	64.6	0	0	16/10/2020		
Oman	30	0	0	0	30	0	2.7	0	0	80.0	0	0	19	0	0	3	16	0	1.9	0	0	100.0	0	0	15/11/2020		
Pakistan	15216	147	6	0	15040	23	19.3	0	0	86.6	147	0	9971	81	8	940	8852	90	14.5	147	0	87.2	81	0	15/11/2020		
Palestine	62	0	0	0	62	0	3.5	0	0	98.4	0	0	12	0	0	5	7	0	0.7	3	0	100.0	0	0	12/11/2020		
Qatar	9	0	0	0	9	0	2.2	0	0	88.9	0	0	9	0	0	7	2	0	2.4	6	0	22.2	0	0	14/11/2020		
Saudi Arabia	236	0	0	0	236	0	2.8	0	0	93.2	0	0	133	0	0	51	82	0	1.8	1	0	95.5	0	0	15/11/2020		
Somalia	361	0	0	0	358	3	5.7	0	0	95.6	0	0	327	0	0	19	295	13	4.6	2	1	96.0	0	0	15/11/2020		
Sudan	608	0	0	0	608	0	3.4	0	0	96.4	0	0	599	0	0	81	479	44	3.6	5	1	93.0	0	0	12/11/2020		
Syria	377	0	0	0	377	0	4.8	0	0	88.1	0	0	298	0	0	15	283	0	4.3	0	0	90.9	0	0	14/11/2020		
Tunisia	79	0	0	0	78	1	2.9	0	0	74.7	0	0	30	0	0	5	25	0	1.2	1	0	63.3	0	0	13/11/2020		
U.A.E	50	0	0	0	50	0	4.0	0	0	90.0	0	0	18	0	0	1	17	0	1.6	0	0	100.0	0	0	08/11/2020		
Yemen	779	0	0	0	778	1	5.5	0	0	89.0	0	0	656	0	1	416	223	16	5.3	208	184	90.9	0	0	14/11/2020		
EMR	25769	176	7	1	25556	29	10.2	0	0	89.5	176	0	17416	135	9	2150	14825	302	7.6	486	212	89.7	135	0			
2018	21920	33	4	0	21868	15	8.7	0	0	89.8	33	0															

\* Confirmed polio cases refer to wild isolation from AFP cases or from contacts of negative index AFP cases

\*\* Non-polio AFP per 100,000 children &lt;15 years

\*\*\* Adequate here refers to two stool specimens collected at least 24 hours apart, within 14 days of paralysis onset and specimens received in the lab in Good Condition

\*\*\*\* AFP cases co infected with P1 and P3 are counted separately as wild isolates

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COUNTRY	2019					2020				
	# OF CONTACTS	LAB RESULTS				# OF CONTACTS	LAB RESULTS			
		WILD	VDPV	SL	NPEV		WILD	VDPV	SL	NPEV
AFG	1138	8	0	48	202	0	996	14	23	34
BAH	0	0	0	0	0	0	1	0	0	0
DJI	1	0	0	0	0	0	2	0	0	0
EGY	498	0	0	8	57	0	246	0	0	8
IRN	216	0	0	4	7	0	16	0	0	0
IRQ	603	0	0	12	39	6	162	0	0	3
JOR	0	0	0	0	0	0	0	0	0	0
KUW	0	0	0	0	0	0	0	0	0	0
LEB	24	0	0	0	3	0	0	0	0	0
LIB	6	0	0	0	3	0	0	0	0	0
MOR	85	0	0	3	1	30	8	0	0	0
OMA	78	0	0	2	28	0	53	0	0	2
PAK	5497	26	9	248	959	0	3978	19	7	317
PAL	0	0	0	0	0	0	0	0	0	0
QAT	0	0	0	0	0	0	0	0	0	0
SAA	44	0	0	0	0	0	18	0	0	0
SOM	1081	0	1	45	141	5	872	0	5	16
SUD	402	0	0	1	31	90	270	0	12	0
SYR	813	0	0	23	36	0	272	0	0	11
TUN	27	0	0	0	2	0	5	0	0	0
UAE	0	0	0	0	0	0	0	0	0	0
YEM	423	0	2	6	68	5	187	0	0	0
EMR	10936	34	12	400	1577	136	7086	33	47	391
										974
										609

Table 4 (B): Most recent wild contacts in EMRO, 2019-2020

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2020	Afghanistan	14	26/Jul/20
	Pakistan	19	4/Sep/20
<b>2020 Total</b>		<b>33</b>	<b>4/Sep/20</b>
2019	Afghanistan	8	17/Aug/19
	Pakistan	26	26/Dec/19
<b>2019 Total</b>		<b>34</b>	<b>26/Dec/19</b>

Table 4 (C): Number of distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2019-2020

YEAR	COUNTRY	PROVINCE	DISTRICT	COUNT	First case	Last case
2020	AFG	KANDAHAR	NESH	1	23-May-20	23-May-20
		HILMAND	WASHER	1	04-Jan-20	04-Jan-20
		NIMROZ	KHASHROD	1	28-Feb-20	28-Feb-20
		FARAH	ANARDARA	1	06-May-20	06-May-20
	PAK	BALOCHISTAN	KSAIFULLAH	1	01-Sep-20	01-Sep-20
		PUNJAB	LAHORE	1	24-Jul-20	24-Jul-20
		KHYBER PAKHTUNKHWA (KP)	DG KHAN	2	18-Jan-20	05-Jul-20
		SINDH	KARAK	1	20-Jan-20	20-Jan-20
			JACOBABAD	2	07-Feb-20	14-Jul-20
				11	04-Jan-20	01-Sep-20
2019	AFG	URUZGAN	TIRINKOT	1	02-Aug-19	02-Aug-19
		HILMAND	MUSAQALAH	1	05-Jun-19	05-Jun-19
			SANGIN	1	06-Mar-19	06-Mar-19
		PUNJAB	DG KHAN	2	2-Dec-19	10-Dec-19
			KHORANGI	1	28-Aug-19	28-Aug-19
	PAK		SUJAWAL	1	25-Sep-19	25-Sep-19
		SINDH	JAMSHORO	1	09-Oct-19	09-Oct-19
			T. ALLAHYAR	1	10-Nov-19	10-Nov-19
		BALOCHSITAN	KAMBAR	1	02-Nov-19	02-Nov-19
			MIRPURKHAS	2	01-Dec-19	18-Dec-19
	PAK		LARKANA	1	24-Dec-19	24-Dec-19
		KHYBER PAKHTUNKHWA (KP)	JACOBABAD	1	19-Dec-19	19-Dec-19
			MASTUNG	1	18-Nov-19	18-Nov-19
			KILLABDULLAH	2	2-Jul-19	19-Nov-19
			BANNU	1	13-Nov-19	13-Nov-19
			SWABI	1	17-Nov-19	17-Nov-19
			TANK	1	30-Oct-19	30-Oct-19
			LAKKIMRWAT	3	27-May-19	04-Oct-19
			TORGHAR	1	25-May-19	25-May-19
				24	06-Mar-19	24-Dec-19

Table 5:

## Laboratory investigation of AFP cases with paralysis onset in 2020 up to Week (46/2020) / Ending on : (15/11/2020)

Country	Polio laboratories	ITD / Nucleotide Sequencing (Nucleotide Sequencing performed by EGY, PAK, TUN, CDC and RIVM laboratories)	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results #										Indicators				Latest report Date		
				Referred for ITD		NPEV only	Negative	Pending		Type 1		Type 2		Type 3		Discordant pending sequence	NPEV by PCR	Non-EV	Pending ITD	% specimens positive for NPEV*	% AFP cases with culture results within 14 days	% AFP cases with ITD results within 7 days				
				L20B+	L20B+/NPEV			received < / = 14 days	received > 14 days ago	Wild	Sabin	VPV	Wild	Sabin	VPV	Wild	Sabin	VPV								
Afghanistan	RRL Pakistan	3206	372	20	488	2172	88	66	50 #	86			29	110 #		79	1		2		78	15%	93%	100%	97%	08/11/2020
Bahrain	NPL Oman / CDC	10			1	9																9%	100%		0%	10/11/2020
Djibouti	NPL Kenya / CDC	4						4																		01/11/2020
Egypt***	RRL Egypt	804	21	12	84	623	47	17		9						13			9	3		10%	95%	100%	99%	12/11/2020
Iran	NPL Iran / CDC	513	7		5	483	18	1		3						5						1%	100%	100%	100%	14/11/2020
Iraq	RRL Egypt	381	1		31	332	16	1	1	1												8%	95%	67%	98%	13/11/2020
Jordan	NPL Jordan / RRL EGYPT	31			5	26																16%	100%		100%	05/11/2020
Kuwait	RRL Kuwait / RIVM	31				27	1	3														1%	81%		93%	15/11/2020
Lebanon	NPL Jordan / RRL EGYPT	42			5	33	4															12%	97%		100%	05/11/2020
Libya	RRL Tunisia / RIVM	65	4			61											3	1				0%	100%	100%	65%	15/09/2020
Morocco	NPL Morocco / RRL Tunisia	65			1	58		6														1%	100%		98%	13/11/2020
Oman	NPL Oman / CDC	20			2	14	4															12%	100%		100%	10/11/2020
Pakistan	RRL Pakistan	9497	744	45	1363	6999	151	193	73 #	153			283	86		241		1	5	2	40	13%	94%	99%	97%	08/11/2020
Palestine & UNRWA		12				11	1															0%	36%		100%	12/11/2020
Qatar	NPL Oman / CDC	2				2																0%	100%		100%	10/11/2020
Saudi Arabia	NPL Saudi Arabia / CDC	131	1			124	3	3									1					0%	100%	100%	100%	08/11/2020
Somalia	NPL Kenya / CDC	327	20	5	49	234	4	14		3	1				10		14					18%	5%		97%	15/11/2020
Sudan	NPL Sudan / RRL Egypt	572	45		77	423		27		2			25	41		1						15%	99%	100%	53%	12/11/2020
Syria	NPL Syria / RRL Egypt	293	15	1	13	252	12	1														4%	100%			12/11/2020
Tunisia	RRL Tunisia	21				20		1														0%	100%		95%	15/09/2020
U.A.E	NPL Oman / CDC	16				16																0%	100%		50%	10/11/2020
Yemen	NPL Kenya / CDC	199	25		45	112	17			2	17					5		1		1		25%	96%	20%	0%	14/11/2020
Total EMR 2020		16242	1255	83	2169	12031	366	337	124	259	18		337	247		362	2	2	16	6	118	13%	93%	98%	96%	
Total EMR 2019		24920	1057	100	3669	20059		23	152	576	1		46	25		629	1	3	21	6		13%	95%	99%	96%	

\* Specimens from all sources including non-AFP cases, excluding environmental samples

# Advance notifications of 15 cVPV2 cases from Afghanistan from 7 provinces (dates of onset within Aug. - Sep. 2020) in addition to 2 WPV1 cases - 1 each from

\*\* This indicator reflects surveillance and laboratory activities

Afghanistan (Kandahar province) and Pakistan (Punjab province) with dates of onset in Oct. 2020 - Lab data details will be included in next week bulletin

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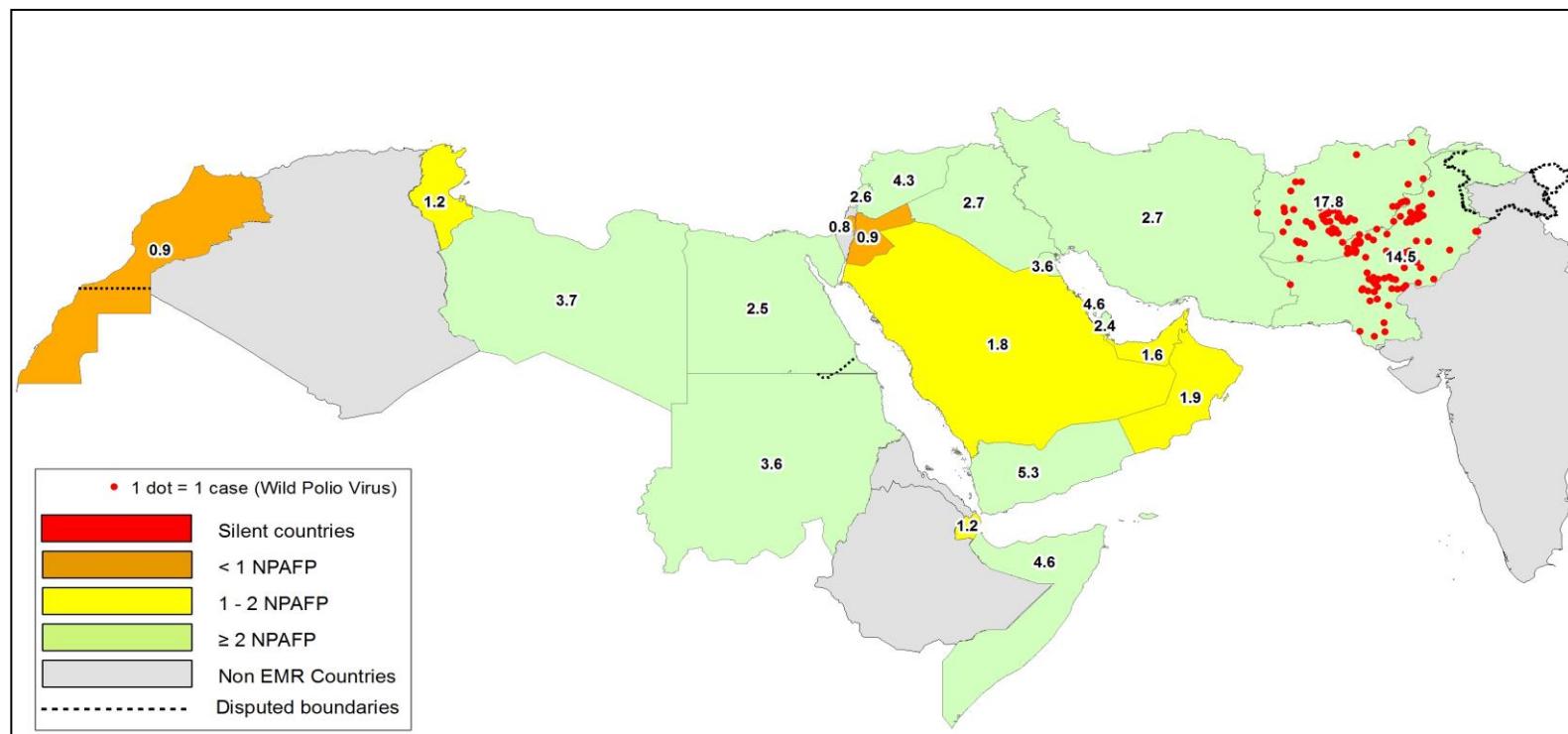
**Table 6: Environmental isolate by year and type**

COUNTRY	LAB RESULTS	2016	2017	2018	2019	2020
		Wild	Wild+cVDPV2	cVDPV2		
AFG	EV/SL	177	265	248	200	147
	Negative	6	9	5	3	3
	Pending					65
<b>AFG Total</b>		<b>185</b>	<b>316</b>	<b>336</b>	<b>259</b>	<b>349</b>
EGY	aVDPV2					1
	EV/SL	493	481	508	666	406
	Negative	35	41	32	34	31
	Pending					28
	aVDPV3					1
	aVDPV1					1
	VDPV3					1
<b>EGY Total</b>		<b>528</b>	<b>522</b>	<b>540</b>	<b>700</b>	<b>469</b>
IRN	Wild					1
	VDPV2					30
	EV/SL			5	65	30
	Negative		1	3	3	1
	Pending					3
<b>IRN Total</b>		<b>6</b>	<b>54</b>	<b>71</b>	<b>34</b>	
JOR	EV/SL	2	29	36	36	17
	Negative		2			1
	Pending					3
<b>JOR Total</b>		<b>2</b>	<b>31</b>	<b>36</b>	<b>36</b>	<b>21</b>
KUW	EV/SL			3	3	
	Pending				8	
<b>KUW Total</b>				<b>3</b>	<b>11</b>	
LEB	EV/SL	2	26	44	44	17
	Negative	2	1	1	3	2
	Pending					4
<b>LEB Total</b>		<b>4</b>	<b>27</b>	<b>45</b>	<b>47</b>	<b>23</b>
PAK	Wild	59	105	139	367	324
	Wild+cVDPV2	2			10	56
	Wild+aVDPV2	1	1		2	4
	cVDPV2	2			29	15
	aVDPV2	3	4			5
	EV/SL	456	523	531	420	237
	Negative			3	4	
	Pending					72
<b>PAK Total</b>		<b>529</b>	<b>633</b>	<b>673</b>	<b>832</b>	<b>717</b>
SOM	cVDPV2		2	18	5	25
	cVDPV3			11		
	aVDPV2			2	1	
	cVDPV2+cVDPV3			1		
	EV/SL		20	43	28	13
	Negative		14	138	29	26
	Pending					1
<b>SOM Total</b>		<b>36</b>	<b>213</b>	<b>63</b>	<b>65</b>	
SUD	cVDPV2			15	42	12
	EV/SL				1	2
	Negative				17	20
	Pending					45
<b>SUD Total</b>				<b>15</b>	<b>60</b>	<b>45</b>
SYR	EV/SL		4	81	155	152
	Negative			21	30	17
	Pending					8
<b>SYR Total</b>		<b>4</b>	<b>102</b>	<b>185</b>	<b>177</b>	
<b>TOTAL</b>		<b>1248</b>	<b>1575</b>	<b>2017</b>	<b>2264</b>	<b>1900</b>

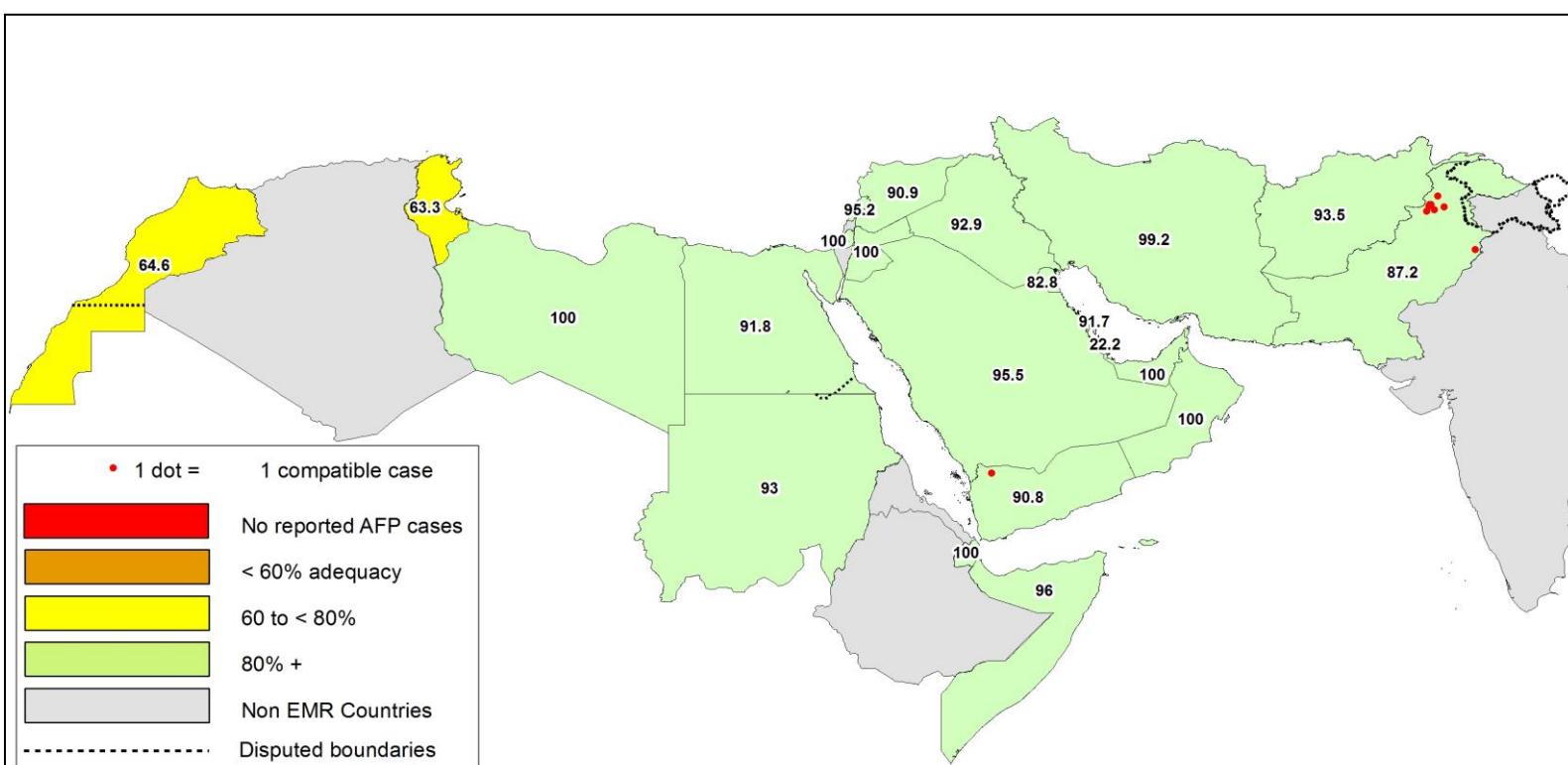
**Table 7: Environmental Wild/VDPV isolate by site 2019-2020**

YEAR	COUNTRY	LAB RESULTS	PROVINCE	Count	First date	Last date
2019	AFG	Wild	HILMAND	19	6/Jan/19	25/Dec/19
			KANDAHAR	24	6/Jan/19	25/Dec/19
			NANGARHAR	13	26/Jan/19	25/Dec/19
	<b>AFG Total</b>			<b>56</b>	<b>6/Jan/19</b>	<b>25/Dec/19</b>
	IRN	Wild	S & B	3	22/Apr/19	20/May/19
	<b>IRN Total</b>			<b>3</b>	<b>22/Apr/19</b>	<b>20/May/19</b>
	PAK	Wild	BALOCHISTAN	72	1/Jan/19	20/Dec/19
			GBALTISTAN	1	9/Dec/19	9/Dec/19
			ISLAMABAD	3	12/Apr/19	21/Aug/19
			KPAKHTUNKHWA	40	8/Jan/19	28/Dec/19
			PUNJAB	97	5/Jan/19	17/Dec/19
			SINDH	154	2/Jan/19	17/Dec/19
		Wild+cVDPV2	KPAKHTUNKHWA	1	31/Dec/19	31/Dec/19
			PUNJAB	5	6/Aug/19	16/Dec/19
			SINDH	4	7/Oct/19	18/Dec/19
		cVDPV2	GBALTISTAN	5	24/Aug/19	6/Nov/19
			ISLAMABAD	1	12/Nov/19	12/Nov/19
			KPAKHTUNKHWA	10	9/Oct/19	28/Dec/19
			PUNJAB	12	11/Apr/19	18/Dec/19
			SINDH	1	19/Dec/19	19/Dec/19
	<b>PAK Total</b>			<b>406</b>	<b>1/Jan/19</b>	<b>31/Dec/19</b>
	SOM	cVDPV2	BANADIR	5	10/Nov/19	22/Dec/19
		aVDPV2	BANADIR	1	3/Feb/19	3/Feb/19
	<b>SOM Total</b>			<b>6</b>	<b>3/Feb/19</b>	<b>22/Dec/19</b>
<b>2019 Total</b>				<b>471</b>	<b>1/Jan/19</b>	<b>31/Dec/19</b>
2020	AFG	Wild	HILMAND	10	1/Jan/20	24/Aug/20
			HIRAT	4	26/Apr/20	23/Aug/20
			KABUL	1	26/Sep/20	26/Sep/20
			KANDAHAR	11	28/Jan/20	27/Sep/20
			KHOST	1	25/Apr/20	25/Apr/20
			KUNDUZ	1	27/Sep/20	27/Sep/20
			NANGARHAR	2	26/Jan/20	6/Oct/20
		Wild+cVDPV2	HILMAND	1	6/Sep/20	6/Sep/20
			KANDAHAR	1	9/Jul/20	9/Jul/20
			NANGARHAR	2	8/Jan/20	25/Jul/20
		cVDPV2	HILMAND	9	27/May/20	6/Sep/20
			KABUL	14	26/Apr/20	5/Sep/20
			KANDAHAR	14	9/Jul/20	6/Sep/20
			KHOST	3	24/Jun/20	23/Aug/20
			KUNAR	4	6/Jun/20	4/Aug/20
			KUNDUZ	1	23/Aug/20	23/Aug/20
			LAGHMAN	3	24/Jul/20	24/Aug/20
			NANGARHAR	51	7/Jan/20	6/Sep/20
			PAKYA	1	26/Jul/20	26/Jul/20
	<b>AFG Total</b>			<b>134</b>	<b>1/Jan/20</b>	<b>6/Oct/20</b>
	EGY	aVDPV2	GIZA	1	21/Sep/20	21/Sep/20
	<b>EGY Total</b>			<b>1</b>	<b>21/Sep/20</b>	<b>21/Sep/20</b>
	PAK	Wild	AJK	1	25/Feb/20	25/Feb/20
			BALOCHISTAN	77	1/Jan/20	20/Oct/20
			GBALTISTAN	1	12/May/20	12/May/20
			ISLAMABAD	4	16/Jan/20	12/Oct/20
			KPAKHTUNKHWA	18	28/Jan/20	12/Oct/20
			PUNJAB	110	4/Jan/20	19/Oct/20
			SINDH	113	3/Jan/20	21/Oct/20
		Wild+cVDPV2	BALOCHISTAN	12	1/Feb/20	28/Sep/20
			KPAKHTUNKHWA	1	11/Mar/20	11/Mar/20
			PUNJAB	9	4/Jan/20	12/Aug/20
			SINDH	34	3/Jan/20	15/Sep/20
		cVDPV2	BALOCHISTAN	2	2/Jun/20	16/Aug/20
			KPAKHTUNKHWA	4	10/Jan/20	17/Apr/20
			PUNJAB	2	16/Jan/20	17/Apr/20
			SINDH	7	8/Jun/20	16/Sep/20
		aVDPV2	BALOCHISTAN	1	17/Sep/20	17/Sep/20
			KPAKHTUNKHWA	3	10/Apr/20	17/Sep/20
			PUNJAB	1	4/May/20	4/May/20
	<b>PAK Total</b>			<b>400</b>	<b>1/Jan/20</b>	<b>21/Oct/20</b>
	SOM	cVDPV2	BANADIR	22	5/Jan/20	26/Sep/20
			BAY	2	19/Jun/20	20/Jun/20
			LOWER JUBA	1	8/Sep/20	8/Sep/20
	<b>SOM Total</b>			<b>25</b>	<b></b>	

**Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2020 - 15/11/2020**



**Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2020 - 15/11/2020**



**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2019 - 2020**

Year	COUNTRY	Count	First Case	Last Case
2020	AFG	54	4-Jan-20	14-Oct-20
	PAK	81	1-Jan-20	21-Oct-20
<b>2020 Total</b>		<b>135</b>	<b>1-Jan-20</b>	<b>21-Oct-20</b>
2019	AFG	29	4-Jan-19	7-Dec-19
	PAK	147	15-Jan-19	31-Dec-19
<b>2019 Total</b>		<b>176</b>	<b>4-Jan-19</b>	<b>31-Dec-19</b>

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Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2020 - 15/11/2020

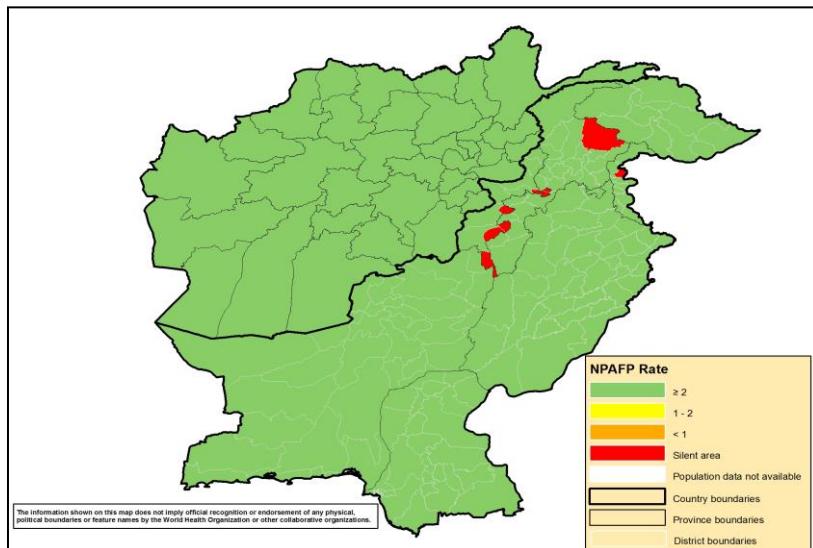


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2020 - 15/11/2020

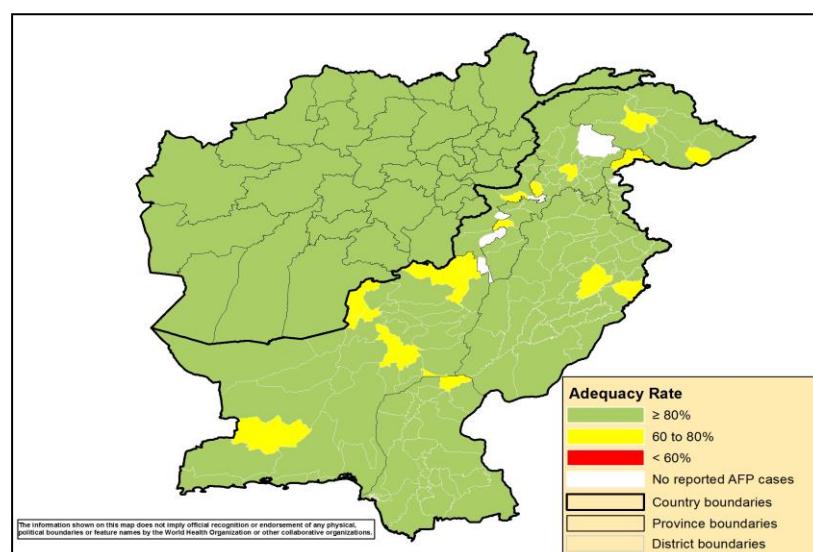
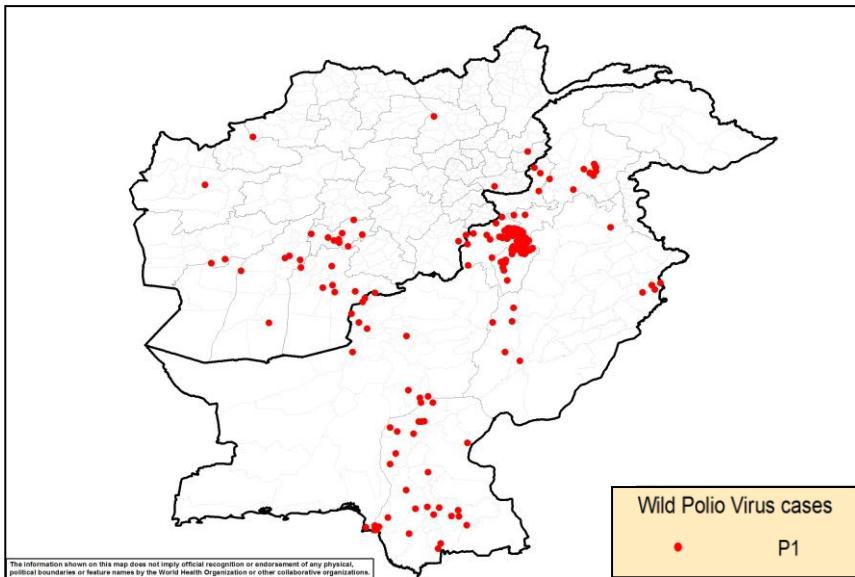
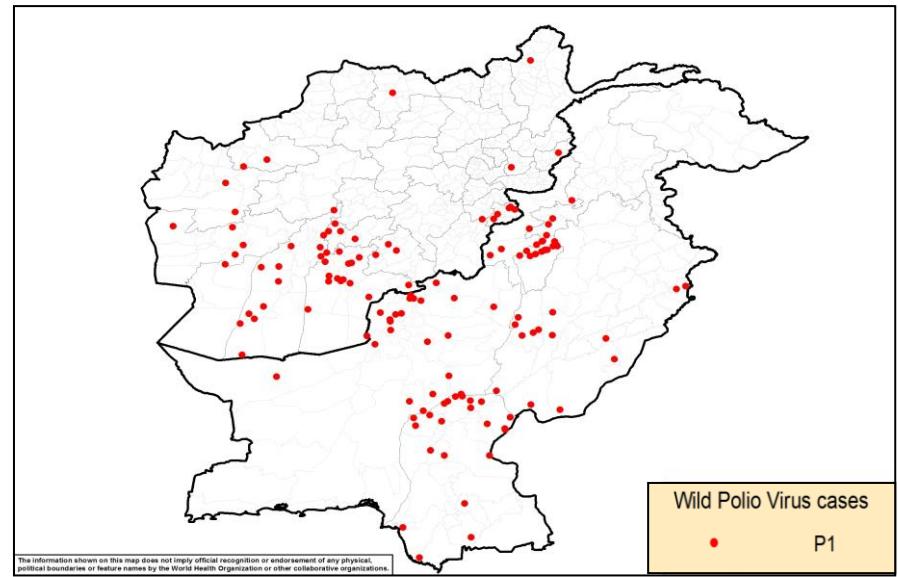


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

5(a) 01/01/2019 - 31/12/2019



5(b) 01/01/2020 - 15/11/2020



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**Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2019-2020**

ONSET YR	PROVINCE	DISTRICT	Count	First case	Last case
2020	BALKH	DEHDADI	1	15-Mar-20	15-Mar-20
	HIRAT	PASHTUNZARGHUN	1	29-Jun-20	29-Jun-20
	FARAH	SHINDAND	1	21-Mar-20	21-Mar-20
		BALABULUK	2	11-May-20	17-May-20
		ANARDARA	1	6-May-20	6-May-20
	BADGHIS	BAKWA	1	4-Feb-20	4-Feb-20
		QALA-E-NAW	1	5-Sep-20	5-Sep-20
	KUNAR	QADIS	1	13-May-20	13-May-20
		SHIGAL WA SHELTON	1	5-Mar-20	5-Mar-20
	LAGHMAN	MEHTARLAM	1	10-Feb-20	10-Feb-20
	PAKTIKA	NAKA	1	12-Aug-20	12-Aug-20
	KHOST	NADIR SHAHKOT	1	7-Sep-20	7-Sep-20
		BAK	2	3-Sep-20	7-Sep-20
		SABARI	1	8-Aug-20	8-Aug-20
		SPERA	1	1-Aug-20	1-Aug-20
	KANDAHAR	MARUF	1	14-Oct-20	14-Oct-20
		KANDAHAR	3	22-Jun-20	13-Sep-20
		ZHERAY	3	20-Jul-20	24-Aug-20
		SPINBOLDAK	1	25-Jul-20	25-Jul-20
		PANJWAYI	1	10-Jun-20	10-Jun-20
		SHAHWALIKOT	3	4-Mar-20	6-Jun-20
		NESH	1	23-May-20	23-May-20
		GHORAK	1	19-Mar-20	19-Mar-20
	ZABUL	QALAT	1	6-Aug-20	6-Aug-20
		ARGHANDAB (Z)	1	14-Jul-20	14-Jul-20
		MIZAN	1	21-Jan-20	21-Jan-20
	HILMAND	BAGHRAN	2	16-Jul-20	4-Sep-20
		KAJAKI	2	10-Jun-20	27-Jul-20
		WASHER	2	4-Jan-20	13-Jun-20
		REG	4	25-May-20	3-Jun-20
		DEH-E-SHU	1	27-May-20	27-May-20
		NAWZAD	1	11-May-20	11-May-20
		SANGIN	1	7-May-20	7-May-20
	URUZGAN	NAD-E-ALI	1	1-May-20	1-May-20
		SHAHID-E-HASSAS	3	14-Jun-20	12-Jul-20
	NIMROZ	TIRINKOT	1	28-May-20	28-May-20
		KHASHROD	1	28-Feb-20	28-Feb-20
	BADAKHSHAN	YAWAN	1	10-Mar-20	10-Mar-20
<b>2020 Total</b>			<b>54</b>	<b>4-Jan-20</b>	<b>14-Oct-20</b>
2019	HIRAT	PASHTUNZARGHUN	1	19-Nov-19	19-Nov-19
	FARAH	BAKWA	2	14-Nov-19	25-Nov-19
	BADGHIS	BALAMURGHAB	1	17-Oct-19	17-Oct-19
	NANGARHAR	KHOGYANI	1	18-Sep-19	18-Sep-19
	KUNAR	WATAPUR	1	8-May-19	8-May-19
	PAKTIKA	BERMEL	2	15-Sep-19	28-Sep-19
	KANDAHAR	SHAHWALIKOT	1	7-Dec-19	7-Dec-19
		SPINBOLDAK	2	4-Jan-19	22-Nov-19
		KANDAHAR	2	17-Aug-19	10-Nov-19
		GHORAK	1	12-Jan-19	12-Jan-19
	HILMAND	GARMSER	1	26-May-19	26-May-19
		MUSAQALAH	1	5-May-19	5-May-19
		NAWZAD	1	3-Apr-19	3-Apr-19
		WASHER	1	23-Mar-19	23-Mar-19
		SANGIN	1	6-Mar-19	6-Mar-19
	URUZGAN	KHASURUZGAN	1	2-Nov-19	2-Nov-19
		TIRINKOT	4	19-May-19	2-Aug-19
		CHORA	3	20-Mar-19	23-Jul-19
		SHAHID-E-HASSAS	1	25-Feb-19	25-Feb-19
	BAGHLAN	PUL-E-KHUMRI	1	14-Nov-19	14-Nov-19
<b>2019 Total</b>			<b>29</b>	<b>4-Jan-19</b>	<b>7-Dec-19</b>

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**Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2019-2020**

ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
<b>2020</b>	KHYBER PAKHTUNKHWA	PESHAWAR	1	13-Jul-20	13-Jul-20
		WAZIR-S	2	21-Feb-20	8-Jun-20
		BANNU	1	27-Apr-20	27-Apr-20
		TANK	4	11-Jan-20	15-Mar-20
		KARAK	2	20-Jan-20	13-Mar-20
		LAKKIMRW	12	2-Jan-20	9-Mar-20
	BALOCHISTAN	PISHIN	6	31-Jan-20	3-Oct-20
		QUETTA	4	17-Jul-20	15-Sep-20
		KSAIFULAH	1	1-Sep-20	1-Sep-20
		KABDULAH	2	11-May-20	29-Jun-20
		CHAGHAI	1	4-Jun-20	4-Jun-20
		DUKKI	1	26-May-20	26-May-20
		JHALMAGSI	1	19-Apr-20	19-Apr-20
		ZHOB	2	22-Feb-20	13-Apr-20
		NSIRABAD	2	3-Jan-20	13-Apr-20
		SOHBATPUR	1	12-Feb-20	12-Feb-20
		JAFARABAD	1	12-Feb-20	12-Feb-20
		SIBI	1	7-Feb-20	7-Feb-20
	PUNJAB	LAYYAH	1	21-Oct-20	21-Oct-20
		MUZFARGARH	1	4-Oct-20	4-Oct-20
		VEHARI	1	16-Sep-20	16-Sep-20
		DGKHAN	5	18-Jan-20	14-Sep-20
		BAHALWALPUR	2	17-Aug-20	5-Sep-20
		RYKHAN	1	1-Sep-20	1-Sep-20
		LAHORE	2	12-Jun-20	24-Jul-20
		RAJANPUR	1	2-Jun-20	2-Jun-20
	SINDH	JACOBABAD	4	7-Feb-20	14-Jul-20
		GHOTKI	4	2-Mar-20	9-Jul-20
		KHILANDHI	1	9-Jun-20	9-Jun-20
		LARKANA	1	21-May-20	21-May-20
		KAMBAR	3	8-Jan-20	11-Apr-20
		KHAIRPUR	1	27-Mar-20	27-Mar-20
		NFEROZ	2	8-Feb-20	22-Feb-20
		SHIKARPUR	1	11-Feb-20	11-Feb-20
		KASHMORE	2	16-Jan-20	3-Feb-20
		SUJAWAL	1	7-Jan-20	7-Jan-20
		T.ALLAHYAR	1	7-Jan-20	7-Jan-20
		BADIN	1	1-Jan-20	1-Jan-20
<b>2020 Total</b>			<b>81</b>	<b>1-Jan-20</b>	<b>21-Oct-20</b>
<b>2019</b>	KHYBER PAKHTUNKHWA	LAKKIMRW	32	27-May-19	31-Dec-19
		DIKHAN	4	5-May-19	21-Dec-19
		MOHMAND	1	20-Dec-19	20-Dec-19
		TANK	6	11-Oct-19	18-Dec-19
		BANNU	26	15-Jan-19	30-Nov-19
		SWABI	1	17-Nov-19	17-Nov-19
		WAZIR-N	9	4-Apr-19	10-Oct-19
		TORGHAR	7	25-May-19	13-Sep-19
		WAZIR-S	1	20-Aug-19	20-Aug-19
		HANGU	2	20-Jan-19	28-Jul-19
		CHARSADA	1	21-Jul-19	21-Jul-19
		SHANGLA	1	18-May-19	18-May-19
		KHYBER	1	14-Feb-19	14-Feb-19
		BAJOUR	1	18-Jan-19	18-Jan-19
	BALOCHISTAN	KABDULAH	5	9-Jun-19	31-Dec-19
		JAFARABAD	3	28-May-19	18-Dec-19
		NSIRABAD	1	5-Dec-19	5-Dec-19
		MASTUNG	1	18-Nov-19	18-Nov-19
		HARNAI	1	27-Sep-19	27-Sep-19
		QUETTA	1	6-Jul-19	6-Jul-19
	PUNJAB	LAHORE	5	20-Jan-19	28-Dec-19
		DGKHAN	4	2-Dec-19	25-Dec-19
		OKARA	1	8-Dec-19	8-Dec-19
		MUZFARGARH	1	26-Nov-19	26-Nov-19
		JHELUM	1	21-Jun-19	21-Jun-19
	SINDH	THATTA	1	26-Dec-19	26-Dec-19
		DADU	2	6-Dec-19	26-Dec-19
		LARKANA	3	17-Apr-19	24-Dec-19
		JAMSHORO	3	23-Aug-19	22-Dec-19
		JACOBABAD	1	19-Dec-19	19-Dec-19
		MIRPURKHAS	4	17-Nov-19	18-Dec-19
		KAMBAR	3	2-Nov-19	14-Dec-19
		BADIN	1	28-Nov-19	28-Nov-19
		T.ALLAHYAR	1	10-Nov-19	10-Nov-19
		KHIKAMARI	1	29-Oct-19	29-Oct-19
		SUKKUR	1	27-Oct-19	27-Oct-19
		KHIJAMSHEED	1	24-Oct-19	24-Oct-19
		SBENAZIRABAD	1	19-Oct-19	19-Oct-19
		SUJAWAL	1	25-Sep-19	25-Sep-19
		KHIORANGI	2	20-Aug-19	26-Aug-19
		HYDERABAD	2	20-Jul-19	5-Aug-19
		KHIGIQBAL	1	29-Apr-19	29-Apr-19
		KHILAYARI	1	25-Feb-19	25-Feb-19
<b>2019 Total</b>			<b>147</b>	<b>15-Jan-19</b>	<b>31-Dec-19</b>

## World Health Organization – Regional Office for Eastern Mediterranean

## AFP SURVEILLANCE

9-Nov-20

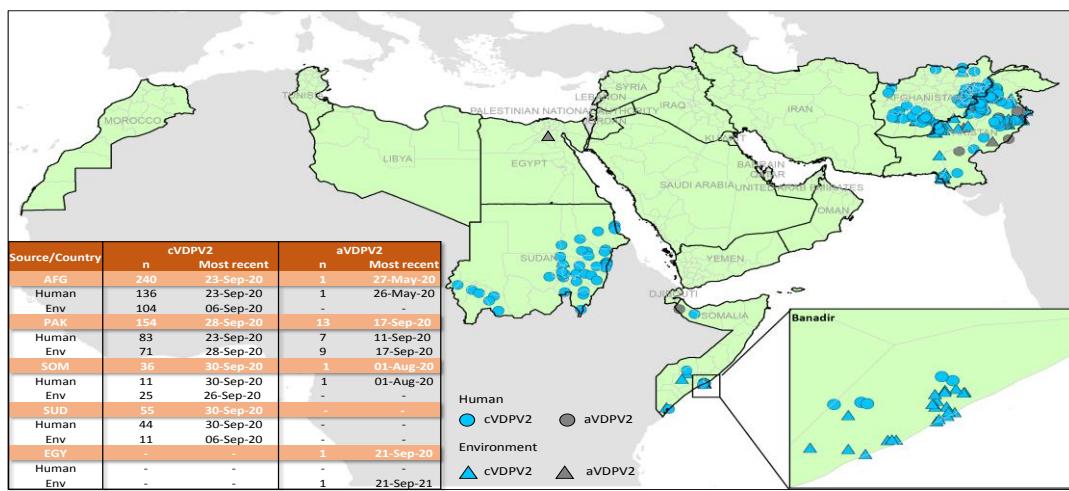
Week 45, ending 8 November 2020

Number 1153

Table 11: Circulating VDPV2 cases and date of onset of paralysis in EMR countries by provinces 2019-2020

YEAR	COUNTRY	PROVINCE	Count	First Case	Last Case
2020	SOM	LOWER JUBA	1	29-Aug-20	29-Aug-20
		GALBEED	1	29-Sep-20	29-Sep-20
		MIDDLE SHABELLE	1	17-Jul-20	17-Jul-20
		BAY	1	3-Sep-20	3-Sep-20
		BANADIR	7	18-Jun-20	30-Sep-20
	SUD	SOUTH DARFUR	2	7-Mar-20	29-Apr-20
		EAST DARFUR	3	12-May-20	24-Jul-20
		KHARTOUM	2	15-Jul-20	3-Aug-20
		KASSALA	10	28-Jul-20	22-Sep-20
		GEZIRA	5	9-Jul-20	19-Sep-20
		RIVER NILE	4	29-Jun-20	17-Sep-20
		RED SEA	6	29-Apr-20	30-Sep-20
		WEST DARFUR	1	19-May-20	19-May-20
		BLUE NILE	3	7-Aug-20	3-Sep-20
		NORTH KORDOFAN	1	29-Aug-20	29-Aug-20
	AFG	SENNAR	1	16-Aug-20	16-Aug-20
		WHITE NILE	3	15-Jun-20	22-Aug-20
		GEDARIF	3	1-Apr-20	1-Aug-20
		FARAH	5	1-Jun-20	30-Aug-20
		HIRAT	2	10-Aug-20	15-Aug-20
		LOGAR	2	20-Aug-20	10-Sep-20
		KANDAHAR	25	4-Aug-20	19-Sep-20
		HILMAND	3	1-Aug-20	8-Sep-20
		JAWZIAN	1	4-Aug-20	4-Aug-20
		KABUL	6	6-Jul-20	9-Sep-20
	PAK	NURISTAN	2	21-Jun-20	13-Jul-20
		NIMROZ	3	6-Jul-20	8-Aug-20
		KHOST	9	5-Jul-20	11-Sep-20
		PAKTYA	4	18-Jun-20	5-Sep-20
		KUNDUZ	1	28-Aug-20	28-Aug-20
		PAKTIKA	3	25-Aug-20	18-Sep-20
		GHAZNI	1	29-Aug-20	29-Aug-20
		BADAKHSAN	1	23-Apr-20	23-Apr-20
		LAGHMAN	14	20-May-20	23-Sep-20
		PARWAN	1	4-Sep-20	4-Sep-20
	PAK	KUNAR	8	6-Apr-20	11-Jul-20
		NANGARHAR	45	5-Feb-20	21-Sep-20
		SINDH	22	2-May-20	20-Sep-20
		BALOCHISTAN	2	29-Feb-20	19-Aug-20
	PAK	PUNJAB	17	5-Feb-20	23-Sep-20
		KHYBER PAKHTUNKHWA	42	2-Jan-20	24-May-20
		Total 2020	274	2-Jan-20	30-Sep-20
2019	PAK	PUNJAB	1	22-Nov-19	22-Nov-19
		KHYBER PAKHTUNKHWA	16	4-Sep-19	28-Dec-19
		ISLAMABAD	1	11-Sep-19	11-Sep-19
	SOM	GILGIT BALTISTAN	4	7-Jul-19	28-Aug-19
	PAK	BARI	1	8-May-19	8-May-19
		TOGDHER	1	21-Apr-19	21-Apr-19
		SOOL	1	15-Mar-19	15-Mar-19
	PAK	Total 2019	25	15-Mar-19	28-Dec-19

VDPV2 isolates, EMR countries, 2020



A positive VDPV2 environmental sample was reported from Iran, from S & B province, with collection date 3 October 2020 - classification type still awaited