

Highlights of Polio Fax Bulletin No. 1141 for Week 33 2020

I. Salient features

1. Polio eradication teams at the Regional and Country levels are contributing into COVID19 Response, particularly in areas of surveillance (field and laboratory), data analysis, communications and coordination.
2. Wild Poliovirus Type-1 (WPV1):
 - Five new WPV1 cases reported this week, 3 from Afghanistan and 2 from Pakistan.
 - Three new WPV1 positive environmental samples reported this week, 1 from Afghanistan and 2 from Pakistan.
3. Vaccine Derived Poliovirus (VDPV):
 - cVDPV1:
 - 16 new cVDPV1 cases reported this week, all from Yemen.
 - cVDPV2:
 - 6 new cVDPV2 cases reported this week, 2 each from Afghanistan, Somalia and Sudan.
 - 9 new cVDPV2 positive environmental samples reported this week, 5 from Afghanistan and 4 from Somalia

Advance notification of 9 new cVDPV2 cases from Sudan – details will be shared in next bulletin.

II. Wild Poliovirus Transmission

Endemic countries (Pakistan & Afghanistan): Total WPV1 cases in 2020 to date is 102 (37 from Afghanistan and 65 from Pakistan). This compares with 77 cases in 2019 in the same period (16 from Afghanistan and 61 from Pakistan).

- **Afghanistan:**

Human samples: Three new WPV1 cases reported this week and their details are as follows:

Case (1): Reported from Shahid-e-Hassas district, Uruzgan province, with date of onset 12 July 2020. The case is of an 11-month old female child. The child did not receive reportedly any OPV doses neither from routine nor from supplementary immunization activities (SIAs).

Case (2): Reported from Baghran district, Hilmand province, with date of onset 16 July 2020. The case is of a 15-month old male child. The child did not receive reportedly any OPV doses neither from routine nor from SIAs.

Case (3): Reported from Zehray district, Kandahar province, with date of onset 20 July 2020. The case is of a 12-month old female child. The child did not receive reportedly any OPV doses neither from routine nor from SIAs.

In 2020, 37 WPV1 cases are reported so far - 12 cases from Hilmand province; eight from Kandahar province, four each from Farah and Uruzgan provinces; 2 from Herat province; and one each from Zabul, Nimroz, Laghman, Kunar, Badakhshan, Balkh, and Badghis provinces. **The most recent case has onset of paralysis on 20 July 2020.**

- **Pakistan:**

Human samples: Two new WPV1 cases reported this week and their details are as follows:

Case (1): Reported from Quetta district, Balochistan province, with date of onset 17 July 2020. The case is of a 20-month old male child. The child did not receive reportedly any OPV doses neither from routine nor from SIAs.

Case (2): Reported from Lahore district, Punjab province, with date of onset 24 July 2020. The case is of a 166-month old male child. The child reportedly received 3 OPV doses from routine and 7 doses from SIAs.

In 2020, 65 WPV1 cases are reported so far, 22 cases from Khyber Pakhtunkhwa (KP) province, 21 from Sindh, 16 from Balochistan and 6 from Punjab province. **The most recent case has onset of paralysis on 24 July 2020.**

b. *Environmental samples:* 3 new WPV1 positive environmental samples reported this week, 1 from Afghanistan and 2 from Pakistan.

- Afghanistan: In 2020 to date, there are 25 WPV1 positive environmental samples including one combined (WPV1 and cVDPV2) with most recent sample collected on 25 July 2020.
- Pakistan: In 2020 to date, there are 276 WPV1 positive environmental samples including 26 combined (WPV1 and cVDPV2) and 3 combined (WPV1 and aVDPV2) with most recent positive sample collected on 4 August 2020.

III. Vaccine Derived Polioviruses (VDPVs)

1. **Afghanistan:** 2 new cVDPV2 cases and 5 positive environmental samples reported this week.

Human samples: The two new cVDPV2 cases are one each from Chaparhar and Khogyani districts, Nangarhar province. The dates of onset of both cases are 17 and 20 June, respectively.

In 2020 to date, there are 54 cVDPV2 cases; 36 reported from Nangarhar province, 8 from Laghman province, 4 from Kunar province, 2 from Kabul province and one each from Badakhshan, Farah, Nuristan and Paktya with **most recent case's onset on 6 July 2020.**

Environment: In 2020 to date, 49 cVDPV2 positive environmental samples including 1 combined (WPV1 and cVDPV2) were reported: 32 from Jalalabad, 8 from Batikot, 2 from Behsud districts, Nangarhar province, 4 from Kabul district, Kabul province, 2 from Asadabad district, Kandahar province and one from Khost (Matun), Khost province; with most recent collection on 8 July 2020. Also, there is one aVDPV2 isolate detected in the environment from Lashkargah district, Hilmand province, with stool collection on 27 May 2020.

2. **Pakistan:** No new cVDPV2 isolate from human or environmental samples this week.

Human samples: The new aVDPV2 case was reported from Jhang district, Punjab province, with date of onset 19 July 2020.

In 2020 to date, there are 52 cVDPV2 cases reported. Cases include 42 from KP province, 6 from Punjab province, 3 from Sindh province and 1 from Balochistan province, with most recent case's onset on 11 June 2020. In addition to 3 aVDPV2 cases all from Punjab province, with most recent case's onset on 19 July 2020.

Environment: In 2020, there are 35 positive environmental samples for cVDPV2 so far (including 25 combined WPV1 and cVDPV2), the most recent sample collected on 2 July 2020. Also, there are four aVDPV2 isolates detected in the environment samples, which include three combined (WPV1 + aVDPV2). The most recent aVDPV2 positive environmental sample was collected on 10 April 2020.

Note: One new aVDPV2 case reported this week.

3. **SOMALIA:** Two new cVDPV2 cases reported in addition to 4 new positive environmental samples reported this week.

In 2020 to date: Two new cVDPV2 cases reported from Abdul Azizi and Shibus districts, Banadir province, with dates of onset 18 and 29 June 2020 respectively. Also there are 17 cVDPV2 positive environmental samples reported, the most recent collected on 21 June 2020.

4. **SUDAN:** Two new cVDPV2 cases reported, and no positive environmental samples reported this week.

In 2020 to date: The 2 new cVDPV2 cases reported this week are from Kas district, South Darfur with date of onset 7 March 2020 and the second case is from Elgedarf district, Gedarif province, with date of onset 1 April 2020. In addition, there are 3 cVDPV2 positive environmental samples reported from Soba, Elgoz and Hawasha sites from Khartoum province, the most recent collected on 29 March 2020.

5. **YEMEN:** 16 new cVDPV1 cases reported this week.

The 16 new cVDPV1 cases reported this week are all from Saadah province, 5 each from Sahar and Kitaf Wa Buga districts, 3 from Al Safrah district, one each from Sageen, Saadh City and Majz districts. The dates of onset vary between 31 January to 5 June 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.

- Djibouti is missing both indicators and has not reported any AFP case in 2020 to date.
- Morocco and Tunisia are, also, missing both indicators as their non-polio AFP rate is 1.3 for both countries and their percentage of AFP cases with adequate stool specimens is 66.7% and 61.9%, respectively.
- Jordan, Oman, Palestine, Qatar, Saudi Arabia and United Arab Emirates have a non-polio AFP rate of 1.0, 1.7, 0.8, 0.4, 1.3 and 1.9 respectively.

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

Country	Reported AFP cases by week of onset - Week (33/20) / Ending on : 16/08/2020														
	Total AFP 2018	Total AFP 2019	Total AFP to date, 2020	W22 31 May 20	W23 7 Jun 20	W24 14 Jun 20	W25 21 Jun 20	W26 28 Jun 20	W27 5 Jul 20	W28 12 Jul 20	W29 19 Jul 20	W30 26 Jul 20	W31 02 Aug 20	W32 09 Aug 20	W33 16 Aug 20
Afghanistan	3378	3768	2140	54	70	82	79	93	87	88	92	70	61	57	3
Bahrain	35	17	10	0	0	0	0	0	0	0	0	0	0	0	0
Djibouti	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	1246	1343	521	7	22	18	20	20	11	12	16	14	7	9	1
Iran	896	1070	349	8	10	7	7	9	7	6	8	11	3	0	
Iraq	1023	1157	274	6	4	6	8	2	2	4	5	1	0	1	
Jordan ****	115	113	25	0	2	0	1	0	0	0	0	1	1	1	
Kuwait	72	48	19	0	0	1	1	2	0	0	0	1	0	0	
Lebanon ****	89	87	31	0	2	0	0	0	0	0	0	1	1	1	
Libya	122	107	62	2	1	1	1	0	3	3	0	0	1	3	1
Morocco	212	247	72	2	3	2	0	3	1	2	0				
Oman	28	30	12	0	0	1	0	0	0	0	0	1	0	0	0
Pakistan	12276	15216	6565	165	182	148	141	132	141	157	169	156	126	50	0
Palestine ****	44	62	10	0	0	0	0	1	2	0	0	0	0	0	
Qatar	10	9	1	0	0	0	1	0	0	0	0	0	0	0	
Saudi Arabia	242	236	70	2	4	2	0	2	1	1	3	2	1	1	0
Somalia	353	361	237	5	7	7	11	4	5	6	6	9	3	1	1
Sudan	579	608	237	2	4	12	10	8	8	11	8	6	2	0	
Syria ****	362	377	226	5	10	22	4	11	12	8	3	4	4	2	
Tunisia	68	79	21	0	0	2	0	2	0	0	0	0	0	0	
U.A.E	40	50	15	1	1	0	0	1	0	1	0	0	0	0	
Yemen	730	779	392	10	9	8	9	14	17	12	17	13	8	9	
Total EMR	21920	25769	11289	269	331	319	293	304	297	311	327	290	218	135	6

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2018	Total year 2019	16/08		Confirmed polio cases by month of onset											
	2018	2019	2019	2020	September 2019	October 2019	November 2019	December 2019	January 2020	February 2020	March 2020	April 2020	May 2020	June 2020	July 2020	August 2020
Afghanistan	21	29	16	37	3	1	7	1	2	3	7		12	10		
Bahrain	0	0	0	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	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	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	0	0	0	0	0	0	0	0	0	0	0
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Morocco	0	0	0	0	0	0	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	61	65	5	17	23	32	18	17	7	6	6	6	5	
Palestine ****	0	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	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	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	0	0	0	0	0	0	0	0	0	
Total EMR	33	176	77	102	8	18	30	33	20	20	14	6	18	16	8	0

**** 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 & 2020 up to Week (33/20) / Ending on : 16/08/2020

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 ****	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	0	3738	0	18.1	0	0	94.1	29	0	2140	37	0	262	1786	54	15.9	21	3	94.5	37	0	16/08/2020
Bahrain	17	0	0	0	17	0	5.9	0	0	100.0	0	0	10	0	0	4	6	0	5.5	3	0	90.0	0	0	16/08/2020
Djibouti	5	0	0	0	5	0	1.4	0	0	80.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	16/08/2019
Egypt	1343	0	0	0	1343	0	3.6	0	0	93.4	0	0	521	0	0	54	467	0	2.1	0	0	92.3	0	0	13/08/2020
Iran	1070	0	0	0	1069	1	5.2	0	0	97.1	0	0	349	0	0	9	340	0	2.7	0	0	99.4	0	0	15/08/2020
Iraq	1157	0	0	0	1157	0	7.4	0	0	94.3	0	0	274	0	0	12	262	0	2.7	1	0	92.0	0	0	14/08/2020
Jordan	113	0	0	0	113	0	3.9	0	0	100.0	0	0	25	0	0	3	22	0	1.0	0	0	100.0	0	0	13/08/2020
Kuwait	48	0	0	0	48	0	5.4	0	0	89.6	0	0	19	0	0	2	17	0	3.4	0	0	84.2	0	0	09/08/2020
Lebanon	87	0	0	0	87	0	4.7	0	0	89.7	0	0	31	0	0	14	17	0	2.7	8	7	93.5	0	0	07/08/2020
Libya	107	0	0	0	107	0	4.3	0	0	98.1	0	0	62	0	0	16	45	1	3.9	0	0	100.0	0	0	15/08/2020
Morocco	247	0	0	0	247	0	2.8	0	0	84.2	0	0	72	0	0	36	36	0	1.3	22	8	66.7	0	0	24/07/2020
Oman	30	0	0	0	30	0	2.7	0	0	80.0	0	0	12	0	0	1	11	0	1.7	0	0	100.0	0	0	16/08/2020
Pakistan	15216	147	6	0	15040	23	19.3	0	0	86.6	147	0	6565	65	6	621	5818	55	13.3	180	0	88.5	65	0	16/08/2020
Palestine	62	0	0	0	62	0	3.3	0	0	98.4	0	0	10	0	0	4	6	0	0.8	1	0	100.0	0	0	09/08/2020
Qatar	9	0	0	0	9	0	2.2	0	0	88.9	0	0	1	0	0	1	0	0	0.4	0	0	100.0	0	0	09/08/2020
Saudi Arabia	236	0	0	0	236	0	2.8	0	0	93.2	0	0	70	0	0	19	51	0	1.3	1	0	94.3	0	0	16/08/2020
Somalia	361	0	0	0	358	3	5.7	0	0	95.6	0	0	237	0	0	22	212	3	4.7	2	2	96.6	0	0	16/08/2020
Sudan	608	0	0	0	608	0	3.4	0	0	96.4	0	0	237	0	0	38	199	2 #	2.0	17	12	95.4	0	0	13/08/2020
Syria	377	0	0	0	377	0	4.8	0	0	88.1	0	0	226	0	0	10	216	0	4.5	0	0	92.5	0	0	15/08/2020
Tunisia	79	0	0	0	78	1	2.9	0	0	74.7	0	0	21	0	0	6	15	0	1.3	0	0	61.9	0	0	15/08/2020
U.A.E	50	0	0	0	50	0	4.0	0	0	90.0	0	0	15	0	0	4	11	0	1.9	0	0	100.0	0	0	10/08/2020
Yemen	779	0	0	9	770	1	5.5	9	6	89.0	0	0	392	0	0	267	109	16	4.4	137	127	91.6	0	0	15/08/2020
EMR	25769	176	7	9	25549	29	10.1	9	6	89.5	176	0	11289	102	6	1405	9646	131	6.9	393	159	90.7	102	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 <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

Advance notification of nine new cVDPV2 cases from Sudan details will be shared in next week bulletin

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COUNTRY	2019						2020					
	# OF CONTACTS	LAB RESULTS					# OF CONTACTS	LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1138	8	0	48	202	0	565	11	9	23	78	49
BAH	0	0	0	0	0	0	1	0	0	0	0	0
DJI	1	0	0	0	0	0	0	0	0	0	0	0
EGY	498	0	0	8	57	0	142	0	0	7	4	25
IRN	216	0	0	4	7	0	9	0	0	0	0	0
IRQ	603	0	0	12	39	6	131	0	0	0	8	0
JOR	0	0	0	0	0	0	0	0	0	0	0	0
KUW	0	0	0	0	0	0	0	0	0	0	0	0
LEB	24	0	0	0	3	0	0	0	0	0	0	0
LIB	6	0	0	0	3	0	0	0	0	0	0	0
MOR	85	0	0	3	1	30	8	0	0	0	0	6
OMA	78	0	0	2	28	0	35	0	0	2	6	0
PAK	5497	26	9	248	959	0	2699	16	6	232	362	123
PAL	0	0	0	0	0	0	0	0	0	0	0	0
QAT	0	0	0	0	0	0	0	0	0	0	0	0
SAA	44	0	0	1	0	0	9	0	0	1	0	0
SOM	1081	0	1	45	141	5	709	0	1	13	80	79
SUD	402	0	0	1	31	90	62	0	0	0	2	36
SYR	813	0	0	23	36	0	237	0	0	11	9	3
TUN	27	0	0	0	2	0	2	0	0	0	0	1
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	423	0	2	6	68	6	139	0	0	0	5	125
EMR	10936	34	12	401	1577	137	4748	27	16	289	554	447

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	11	29/May/20
	Pakistan	16	31/Jul/20
2020 Total		27	31/Jul/20
2019	Afghanistan	8	17/Aug/19
	Pakistan	26	26/Dec/19
2019 Total		34	26/Dec/19

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
	PAK	NIMROZ	KHASHROD	1	28-Feb-20	28-Feb-20
		FARAH	ANARDARA	1	06-May-20	06-May-20
2020 Total	PAK	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	1	07-Feb-20	07-Feb-20
	AFG	URUZGAN	TIRINKOT	1	04-Jan-20	24-Jul-20
		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
		SINDH	KHORANGI	1	28-Aug-19	28-Aug-19
			SUJAWAL	1	25-Sep-19	25-Sep-19
2019 Total	PAK	JAMSHORO	JAMSHORO	1	09-Oct-19	09-Oct-19
		T. ALLAHYAR	10-Nov-19	1	10-Nov-19	10-Nov-19
		KAMBAR	02-Nov-19	1	02-Nov-19	02-Nov-19
		MIRPURKHAS	01-Dec-19	2	18-Dec-19	18-Dec-19
		LARKANA	24-Dec-19	1	24-Dec-19	24-Dec-19
		JACOBABAD	19-Dec-19	1	19-Dec-19	19-Dec-19
	BALOCHSITAN	MASTUNG	18-Nov-19	1	18-Nov-19	18-Nov-19
		KILLABDULLAH	2-Jul-19	2	2-Jul-19	19-Nov-19
		BANNU	13-Nov-19	1	13-Nov-19	13-Nov-19
		SWABI	17-Nov-19	1	17-Nov-19	17-Nov-19
2019	PAK	TANK	30-Oct-19	1	30-Oct-19	30-Oct-19
		LAKKIMRWAT	27-May-19	3	04-Oct-19	04-Oct-19
		TORGHAR	25-May-19	1	25-May-19	25-May-19
					24-Dec-19	24-Dec-19
				24	06-Mar-19	24-Dec-19

Table 5:

Laboratory investigation of AFP cases with paralysis onset in 2020 up to Week (33/2020) / Ending on : (16/08/2020)

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	% AFP cases with ITD results within 45 days of onset**			
				L20B+	L20B+/NPEV			received < / = 14 days	received > 14 days ago	Wild	Sabin	VPDV	Wild	Sabin	VPDV	Wild	Sabin	VPDV								
Afghanistan	RRL Pakistan	2069	200	18	247	1477	126			34	80		3	51		75			2	17	11%	90%	100%	98%	16/08/2020	
Bahrain	NPL Oman / CDC	10			1	9															9%	100%		0%	10/08/2020	
Djibouti	NPL Kenya / CDC																								26/07/2020	
Egypt***	RRL Egypt	505	16	7	36	414	14	18		8						9			4	3	7%	96%	100%	99%	13/08/2020	
Iran	NPL Iran / CDC	358	5		4	344	5			3						3					1%	100%	100%	100%	15/08/2020	
Iraq	RRL Egypt	270			30	235	1	4													10%	94%	100%	99%	14/08/2020	
Jordan	NPL Jordan / RRL EGYPT	25			4	19	2														17%	100%		100%	16/08/2020	
Kuwait	RRL Kuwait / RIVM	21				19	1	1													2%	74%		95%	13/08/2020	
Lebanon	NPL Jordan / RRL EGYPT	28			5	23															17%	96%		100%	16/08/2020	
Libya	RRL Tunisia / RIVM	51	4			47										3	1				0%	100%	100%	76%	16/07/2020	
Morocco	NPL Morocco / RRL Tunisia	59			1	58															1%	100%		98%	07/08/2020	
Oman	NPL Oman / CDC	11			2	9															16%	100%		100%	10/08/2020	
Pakistan	RRL Pakistan	6462	460	39	749	4902	286	16	60	131			136	52		199		1	1	1	4	11%	93%	99%	97%	16/08/2020
Palestine & UNRWA		10				10															0%	30%		100%	09/08/2020	
Qatar	NPL Oman / CDC	1				1															0%	100%		100%	10/08/2020	
Saudi Arabia	NPL Saudi Arabia / CDC	68				64		4													0%	100%		100%	09/08/2020	
Somalia	NPL Kenya / CDC	237	8	4	36	167	6	16	3	3			2		9	2					19%	6%		97%	16/08/2020	
Sudan	NPL Sudan / RRL Egypt	241	13		29	186	10	3	1		13	2									13%	98%	100%	31%	16/08/2020	
Syria	NPL Syria / RRL Egypt	223	11		8	198	6														3%	100%			13/08/2020	
Tunisia	RRL Tunisia	17				17															0%	100%		94%	16/07/2020	
U.A.E	NPL Oman / CDC	10				10															0%	100%		60%	10/08/2020	
Yemen	NPL Kenya / CDC	149	24		25	77	23			2	1				5		7		1	11	20%	95%	80%	0%	15/08/2020	
Total EMR 2020		10825	741	68	1177	8286	480	62	94	228	4		152	107		303	3	8	7	5	32	10%	91%	99%	96%	
Total EMR 2019		24835	1052	100	3659	19986		26	152	575	1		46	24		625	1	3	21	6	1	13%	95%	99%	96%	

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

** This indicator reflects surveillance and laboratory activities

Table 6: Environmental isolate by year and type

COUNTRY	LAB RESULTS					
		2016	2017	2018	2019	2020
AFG	Wild	2	42	83	56	24
	Wild+cVDPV2				1	
	cVDPV2				48	
	aVDPV2				1	
	EV/SL	177	265	248	200	105
	Negative	6	9	5	3	3
	Pending				44	
AFG Total		185	316	336	259	226
EGY	EV/SL	492	481	508	666	272
	Negative	36	41	32	34	23
	Pending					28
	aVDPV3					1
	aVDPV1					1
EGY Total		528	522	540	700	325
IRN	Wild				3	
	EV/SL		5	51	65	15
	Negative		1	3	3	
	Pending					3
IRN Total			6	54	71	18
JOR	EV/SL	2	29	36	36	11
	Negative		2			1
	Pending					2
JOR Total		2	31	36	36	14
KUW	EV/SL			3	3	
	Pending				8	
KUW Total				3	11	
LEB	EV/SL	2	26	44	44	9
	Negative	2	1	1	3	2
LEB Total		4	27	45	47	11
PAK	Wild	59	105	139	367	247
	Wild+cVDPV2	2			10	26
	Wild+aVDPV2	1	1		2	3
	cVDPV2	2			25	10
	aVDPV2	3	4		2	1
	EV/SL	456	523	531	421	184
	Negative	6		3	4	4
	Pending					32
PAK Total		529	633	673	831	507
SOM	cVDPV2		2	19	5	17
	cVDPV3			11		
	aVDPV2			2	1	
	EV/SL		20	43	28	8
	Negative		14	138	29	21
	Pending				4	
SOM Total			36	213	63	50
SUD	cVDPV2					3
	EV/SL			15	42	10
	Negative				1	2
	Pending				17	15
SUD Total				15	60	30
SYR	EV/SL		4	81	155	100
	Negative			21	30	15
	Pending				10	
SYR Total			4	102	185	125
TOTAL		1248	1575	2017	2263	1306

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

YEAR	COUNTRY	LAB RESULTS	PROVINCE	Count	First date	Last date
2019	AFG	Wild	HILMAND KANDAHAR NANGARHAR	19 24 13	6/Jan/19 6/Jan/19 26/Jan/19	25/Dec/19 25/Dec/19 25/Dec/19
	AFG Total	Wild	S & B	56	6/Jan/19	25/Dec/19
	IRN	Wild		3	22/Apr/19	20/May/19
	IRN Total	Wild	BALOCHISTAN GBALTISTAN ISLAMABAD KPAKHTUNKHWA PUNJAB SINDH	3	22/Apr/19	20/May/19
	PAK	Wild		72	1/Jan/19	20/Dec/19
			GBALTISTAN ISLAMABAD KPAKHTUNKHWA PUNJAB SINDH	1	9/Dec/19	9/Dec/19
		Wild+cVDPV2		40	12/Apr/19	21/Aug/19
			KPAKHTUNKHWA PUNJAB SINDH	97	8/Jan/19 5/Jan/19 2/Jan/19	28/Dec/19 17/Dec/19 17/Dec/19
		Wild+aVDPV2		154	31/Dec/19	31/Dec/19
			PUNJAB SINDH	1	6/Aug/19	16/Dec/19
				5	7/Oct/19	18/Dec/19
		cVDPV2		1	2/Dec/19	2/Dec/19
			GBALTISTAN ISLAMABAD KPAKHTUNKHWA PUNJAB SINDH	1	20/Dec/19	20/Dec/19
				5	24/Aug/19	6/Nov/19
				8	12/Nov/19	12/Nov/19
				10	9/Oct/19	24/Dec/19
				1	21/Aug/19	17/Dec/19
				1	19/Dec/19	19/Dec/19
				2	11/Apr/19	18/Dec/19
		aVDPV2		406	1/Jan/19	31/Dec/19
	SOM	cVDPV2	BANADIR	5	10/Nov/19	22/Dec/19
		aVDPV2	BANADIR	1	3/Feb/19	3/Feb/19
	SOM Total			6	3/Feb/19	22/Dec/19
2019 Total				471	1/Jan/19	31/Dec/19
2020	AFG	Wild	HILMAND HIRAT KANDAHAR KHOSR NANGARHAR	8 2 11 1 2	1/Jan/20 26/Apr/20 28/Jun/20 25/Apr/20 26/Jan/20	8/Jul/20 27/May/20 9/Jul/20 25/Apr/20 25/Jul/20
		Wild+cVDPV2	NANGARHAR	1	8/Jan/20	8/Jan/20
		cVDPV2	KABUL KHOSR KUNAR NANGARHAR	4 1 2 41	26/Apr/20 24/Jun/20 6/Jun/20 7/Jan/20	8/Jul/20 24/Jun/20 22/Jun/20 6/Jul/20
		aVDPV2	HILMAND	1	27/May/20	27/May/20
	AFG Total	Wild	AJK BALOCHISTAN GBALTISTAN ISLAMABAD KPAKHTUNKHWA PUNJAB SINDH	74	1/Jan/20	25/Jul/20
	PAK	Wild		60	1/Jan/20	28/Jul/20
			GBALTISTAN ISLAMABAD KPAKHTUNKHWA PUNJAB SINDH	1	12/May/20	12/May/20
		Wild+cVDPV2	BALOCHISTAN KPAKHTUNKHWA PUNJAB SINDH	13	16/Jan/20 28/Jan/20 4/Jan/20 3/Jan/20	16/Jan/20 10/Jul/20 4/Aug/20 21/Jul/20
				94	2/Jan/20	2/Jul/20
				3	11/Mar/20	11/Mar/20
				1	4/Jan/20	5/Jun/20
				5	3/Jan/20	15/Jul/20
				17	16/Mar/20	30/Mar/20
		Wild+aVDPV2	PUNJAB	3	2/Jan/20	2/Jul/20
			KPAKHTUNKHWA	2	10/Jan/20	17/Apr/20
		cVDPV2	BALOCHISTAN KPAKHTUNKHWA PUNJAB SINDH	4	16/Jan/20 16/Mar/20 8/Jun/20 10/Apr/20	17/Apr/20 17/Apr/20 18/Jun/20 10/Apr/20
				2	16/Jan/20	17/Apr/20
				3	8/Jun/20	18/Jun/20
				1	10/Apr/20	10/Apr/20
	PAK Total			287	1/Jan/20	4/Aug/20
	SOM	cVDPV2	BANADIR	15	5/Jan/20	21/Jun/20
			BAY	2	19/Jun/20	20/Jun/20
	SOM Total			17	5/Jan/20	21/Jun/20
	SUD	cVDPV2	KHARTOUM	3	29/Mar/20	29/Mar/20
	SUD Total			3	29/Mar/20	29/Mar/20
2020 Total				381	1/Jan/20	4/Aug/20

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Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2020 - 16/08/2020

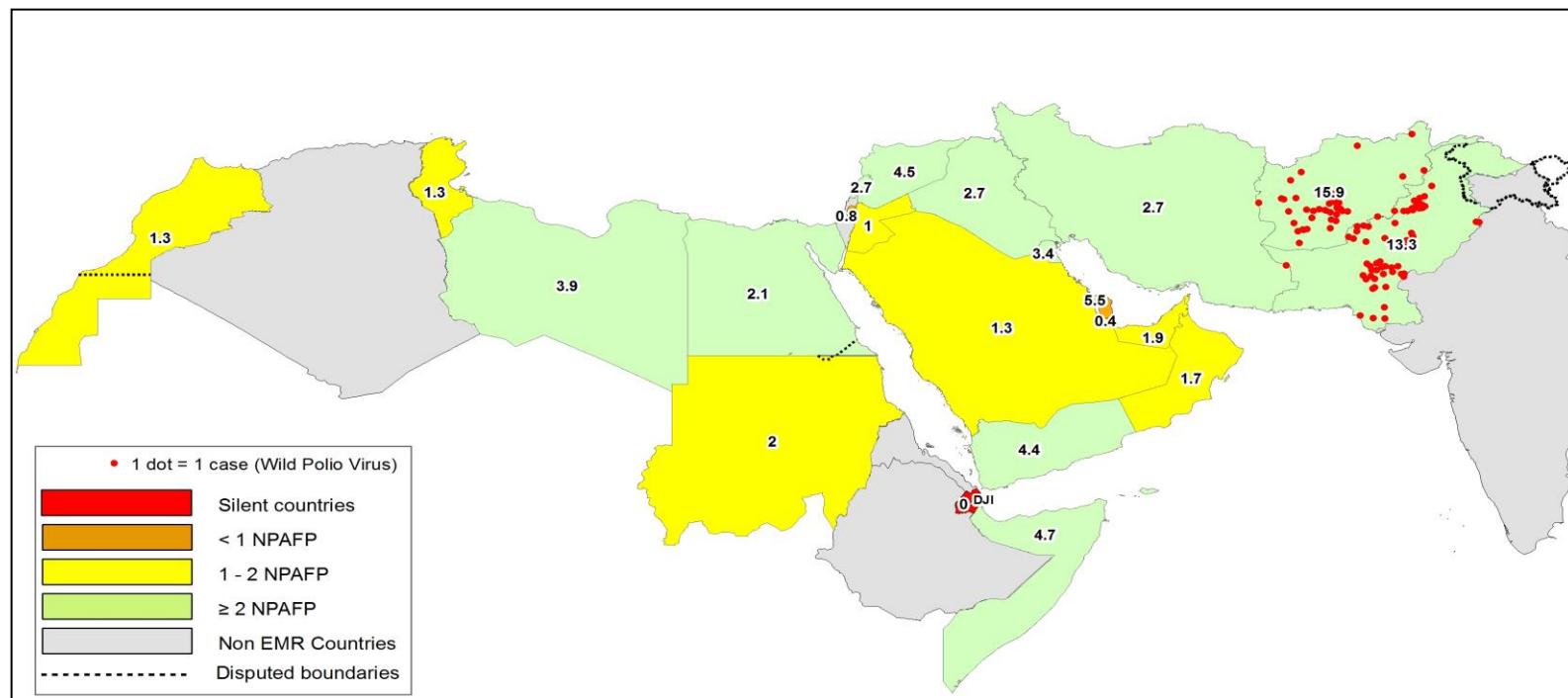


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2020 - 16/08/2020

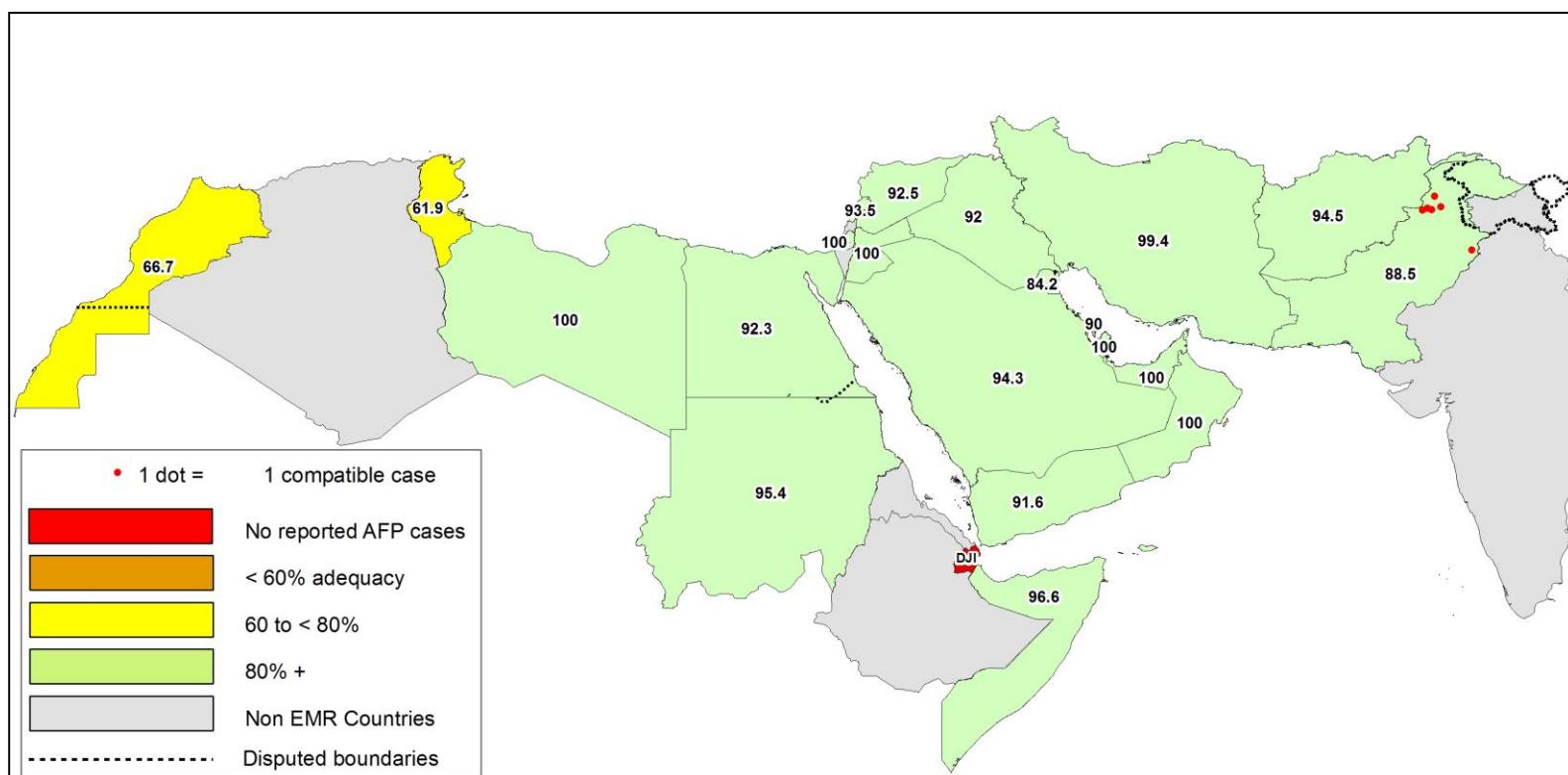


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2019 - 2020

Year	COUNTRY	Count	First Case	Last Case
2020	AFG	37	4-Jan-20	20-Jul-20
	PAK	65	1-Jan-20	24-Jul-20
2020 Total		102	1-Jan-20	24-Jul-20
2019	AFG	29	4-Jan-19	7-Dec-19
	PAK	147	15-Jan-19	31-Dec-19
2019 Total		176	4-Jan-19	31-Dec-19

Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2020 - 16/08/2020

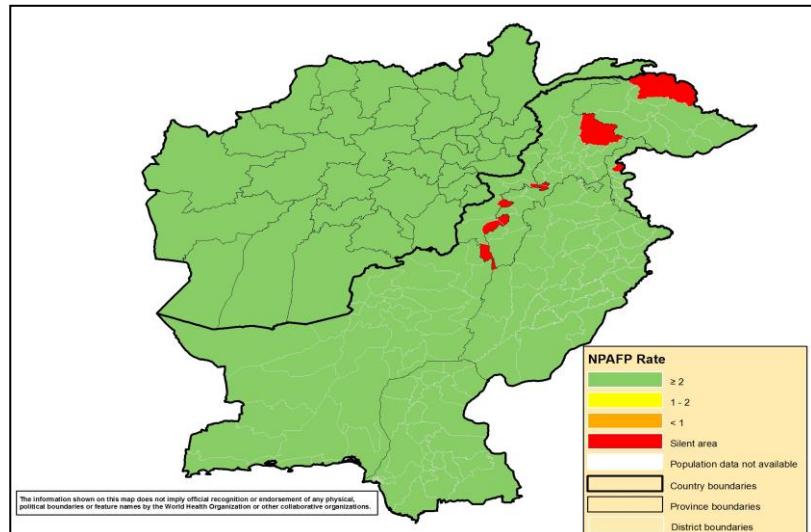


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2020 - 16/08/2020

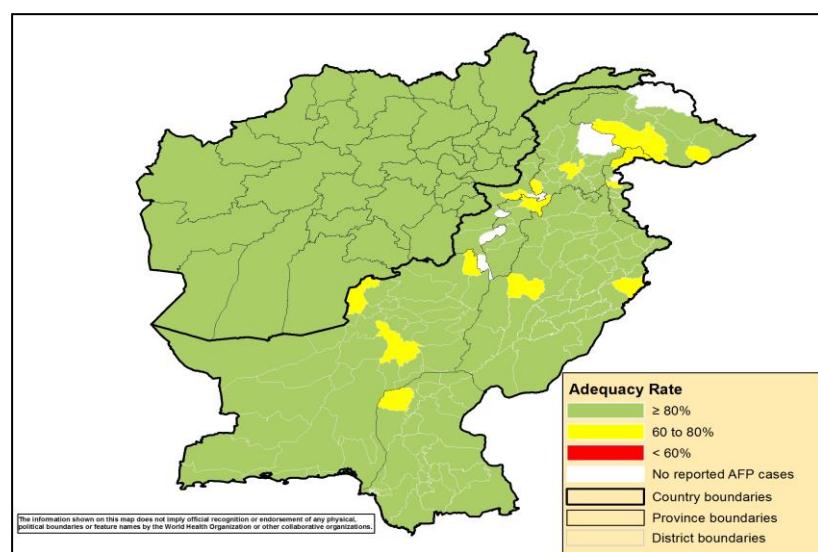
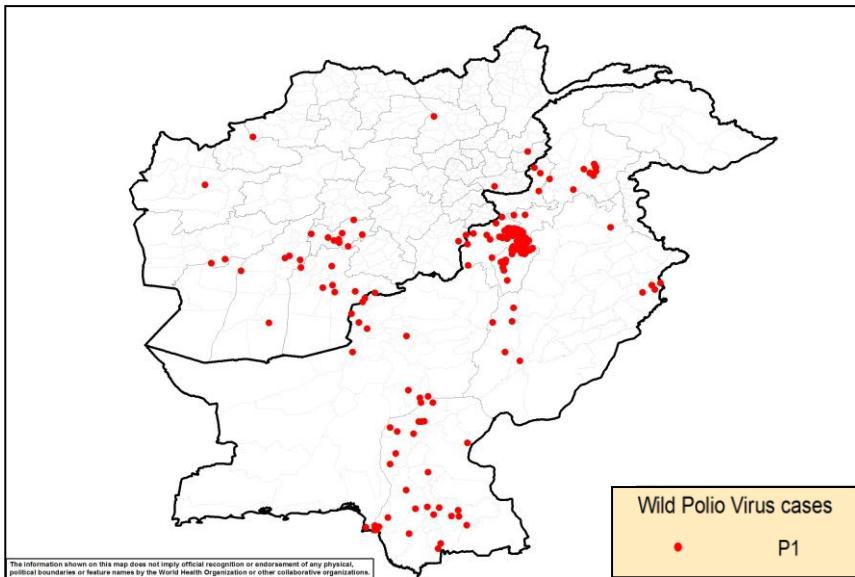
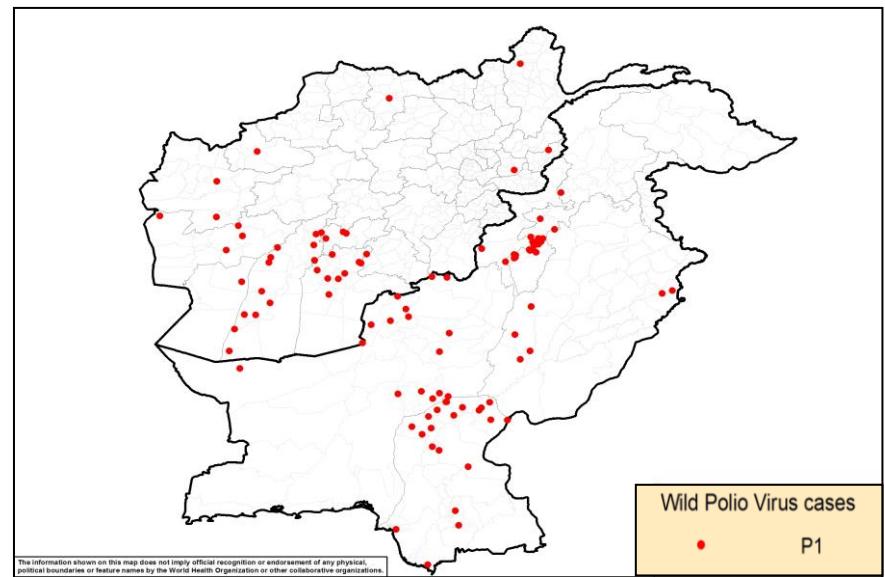


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2020 - 16/08/2020



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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
		SHINDAND	1	21-Mar-20	21-Mar-20
	FARAH	BALABULUK	2	11-May-20	17-May-20
		ANARDARA	1	6-May-20	6-May-20
		BAKWA	1	4-Feb-20	4-Feb-20
		QADIS	1	13-May-20	13-May-20
	KUNAR	SHIGAL WA SHELTON	1	5-Mar-20	5-Mar-20
	LAGHMAN	MEHTARLAM	1	10-Feb-20	10-Feb-20
	KANDAHAR	ZHERAY	1	20-Jul-20	20-Jul-20
		KANDAHAR	1	22-Jun-20	22-Jun-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	MIZAN	1	21-Jan-20	21-Jan-20
	HILMAND	BAGHRAN	1	16-Jul-20	16-Jul-20
		WASHER	2	4-Jan-20	13-Jun-20
		KAJAKI	1	10-Jun-20	10-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
		NAD-E-ALI	1	1-May-20	1-May-20
	URUZGAN	SHAHID-E-HASSAS	3	14-Jun-20	12-Jul-20
		TIRINKOT	1	28-May-20	28-May-20
	NIMROZ	KHASHROD	1	28-Feb-20	28-Feb-20
	BADAKHSHAN	YAWAN	1	10-Mar-20	10-Mar-20
2020 Total			37	4-Jan-20	20-Jul-20
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
		GARMSER	1	26-May-19	26-May-19
	HILMAND	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
		KHASURUZGAN	1	2-Nov-19	2-Nov-19
	URUZGAN	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
		PUL-E-KHUMRI	1	14-Nov-19	14-Nov-19
2019 Total			29	4-Jan-19	7-Dec-19

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

ONSET/yr	PROVINCE	DISTRICT	Count	First case	Last case
2020	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
		LAKKIMRWT	12	2-Jan-20	9-Mar-20
	BALOCHISTAN	QUETTA	1	17-Jul-20	17-Jul-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
		PISHIN	3	31-Jan-20	26-May-20
		JHALMAGSI	1	19-Apr-20	19-Apr-20
		NSIRABAD	2	3-Jan-20	13-Apr-20
		ZHOB	2	22-Feb-20	13-Apr-20
		JAFARABAD	1	12-Feb-20	12-Feb-20
		SOHBATPUR	1	12-Feb-20	12-Feb-20
		SIBI	1	7-Feb-20	7-Feb-20
	PUNJAB	LAHORE	2	12-Jun-20	24-Jul-20
		DGKHAN	3	18-Jan-20	5-Jul-20
		RAJANPUR	1	2-Jun-20	2-Jun-20
	SINDH	GHOSTKI	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
		JACOBABAD	3	7-Feb-20	16-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
		2020 Total	65	1-Jan-20	24-Jul-20
	2019	KHYBER PAKHTUNKHWA	LAKKIMRWT	32	27-May-19
			DIKHAN	4	5-May-19
			MOHMAND	1	20-Dec-19
			TANK	6	11-Oct-19
			BANNU	26	15-Jan-19
			SWABI	1	17-Nov-19
			WAZIR-N	9	4-Apr-19
			TORGHAR	7	25-May-19
			WAZIR-S	1	20-Aug-19
			HANGU	2	20-Jan-19
			CHARSADA	1	21-Jul-19
			SHANGLA	1	18-May-19
			KHYBER	1	14-Feb-19
			BAJOUR	1	18-Jan-19
	BALOCHISTAN	BALOCHISTAN	KABDULAH	5	9-Jun-19
			JAFARABAD	3	28-May-19
			NSIRABAD	1	5-Dec-19
			MASTUNG	1	18-Nov-19
			HARNAI	1	27-Sep-19
	PUNJAB	PUNJAB	QUETTA	1	6-Jul-19
			LAHORE	5	20-Jan-19
			DGKHAN	4	2-Dec-19
			OKARA	1	8-Dec-19
			MUZFARGARH	1	26-Nov-19
	SINDH	SINDH	JHELUM	1	21-Jun-19
			THATTA	1	26-Dec-19
			DADU	2	6-Dec-19
			LARKANA	3	17-Apr-19
			JAMSHORO	3	23-Aug-19
			JACOBABAD	1	19-Dec-19
			MIRPURKHAS	4	17-Nov-19
			KAMBAR	3	2-Nov-19
			BADIN	1	28-Nov-19
			T.ALLAHYAR	1	10-Nov-19
			KHIKAMARI	1	29-Oct-19
			SUKKUR	1	27-Oct-19
			KHIJAMSHEED	1	24-Oct-19
			SBENAZIRABAD	1	19-Oct-19
			SUJAWAL	1	25-Sep-19
			KHORANGI	2	20-Aug-19
			HYDERABAD	2	20-Jul-19
			KHIGIQBAL	1	29-Apr-19
			KHILAYARI	1	25-Feb-19
2019 Total			147	15-Jan-19	31-Dec-19

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

COUNTRY	YEAR	PROVINCE	DISTRICT	Count	First Case	Last Case
SOM		BANADIR	SHIBIS ABDUL AZIZ	1 1	29-Jun-20 18-Jun-20	29-Jun-20 18-Jun-20
		SOUTH DARFUR	KAS	1	7-Mar-20	7-Mar-20
SUD		GEDARIF	ELGEDARIF	1	1-Apr-20	1-Apr-20
		FAHAR	BAKWA	1	1-Jun-20	1-Jun-20
AFG	2020	KABUL	CHAHARASYAB BAGRAMI	1 1	06-Jul-20 06-Jul-20	06-Jul-20 06-Jul-20
		NURISTAN	KAMDESH	1	21-Jun-20	21-Jun-20
		PAKYA	ALIKHEL (JAJI)	1	18-Jun-20	18-Jun-20
		BADAKHSAN	KESHEM	1	23-Apr-20	23-Apr-20
		LAGHMAN	QARGHAYI ALINGAR ALISHANG MEHTERLAM	1 4 1 2	25-Jun-20 11-Jun-20 24-May-20 20-May-20	25-Jun-20 15-Jun-20 24-May-20 13-Jun-20
		KUNAR	SHIGAL WA SHELTA WATAPUR NARANG NURGAL	1 1 1 1	27-Jun-20 1-Jul-20 1-May-20 6-Apr-20	27-Jun-20 1-Jul-20 1-May-20 6-Apr-20
		NANGARHAR	KHOYANI JALALABAD ACHIN CHAPARHAR BEHSUD RODAT LALPUR BATIKOT SHINWAR MUHMAND DARA KAMA DEHBALA DAR-E-NUR	1 1 5 3 6 2 3 1 6 4 2 1 1	20-Jun-20 28-Jun-20 25-May-20 11-May-20 22-Apr-20 18-Apr-20 30-Apr-20 5-Feb-20 27-Mar-20 6-Apr-20 4-Apr-20 18-Apr-20 16-Apr-20	20-Jun-20 28-Jun-20 14-Jun-20 17-Jun-20 28-Jun-20 15-Jun-20 21-May-20 5-Feb-20 12-Jun-20 26-May-20 30-Apr-20 18-Apr-20 16-Apr-20
		SINDH	KHIGADAP KHIBALDIA KHISITE	1 1 1	11-Jun-20 15-May-20 2-May-20	11-Jun-20 15-May-20 2-May-20
		BALOCHISTAN	QUETTA	1	29-Feb-20	29-Feb-20
		PUNJAB	MUZAFFARGARTH ATTOCK RAWALPINDI FAISALABAD	1 1 1 3	08-Jun-20 30-May-20 18-Jan-20 5-Feb-20	08-Jun-20 30-May-20 18-Jan-20 14-Mar-20
		KHYBER PAKHTUNKHWA	TANK DIRUPPER WAZIR-S PESHAWAR BAJOUR KHYBER NOWSHERA LAKKI MARWAT MARDAN DIR LOWER BANNU	1 1 1 1 1 15 3 4 5 1 3 2	24-May-20 12-Apr-20 21-Mar-20 2-Jan-20 3-Jan-20 12-Jan-20 18-Jan-20 27-Jan-20 2-Jan-20 2-Feb-20 3-Jan-20	24-May-20 12-Apr-20 21-Mar-20 10-Apr-20 30-Jan-20 1-Mar-20 1-Mar-20 26-Feb-20 2-Jan-20 25-Mar-20 13-Feb-20
		Total 2020		110	2-Jan-20	6-Jul-20
PAK	2019	PUNJAB	GURANWALA KHYBER MOHAMAND BAJOUR PESHAWAR LAKKI MARWAT CHARSADA KOHISTANUPPER KOHISTANLOWER TORGHAR	1 3 3 1 1 1 1 1 2 3	22-Nov-19 12-Dec-19 12-Dec-19 1-Dec-19 8-Dec-19 13-Dec-19 3-Nov-19 27-Oct-19 6-Oct-19 4-Sep-19	22-Nov-19 28-Dec-19 21-Dec-19 1-Dec-19 8-Dec-19 13-Dec-19 3-Nov-19 27-Oct-19 11-Oct-19 17-Dec-19
		KHYBER PAKHTUNKHWA	ISLAMABAD GILGIT BALISTAN	1 4	11-Sep-19 7-Jul-19	11-Sep-19 28-Aug-19
		BARI	BOSSASO	1	8-May-19	8-May-19
		TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19
		Total 2019		25	15-Mar-19	28-Dec-19

Advance notification of nine new cVDPV2 cases from Sudan details will be shared in next week bulletin

VDPV isolates, EMR countries, 2020

