

## Highlights of Polio Fax Bulletin No. 1149 for Week 41 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): 4 new cases (1 from Afghanistan and 3 from Pakistan) and 4 new positive environmental samples (1 from Afghanistan and 3 from Pakistan).
3. Vaccine Derived Poliovirus (VDPV):
  - cVDPV1: No new cases reported this week.
  - cVDPV2: 10 new cVDPV2 cases all from Pakistan and 18 new cVDPV2 positive environmental samples (11 from Afghanistan and 7 from Pakistan).

*Advance notification: 16 new cVDPV2 cases from Sudan and 6 positive environmental samples (1 from Somalia and 5 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 129 (52 from Afghanistan and 77 from Pakistan). This compares with 101 cases in 2019 in the same period (20 from Afghanistan and 81 from Pakistan).

a. *Human samples:* Four new WPV1 positive cases; 1 from Afghanistan and 3 from Pakistan.

**Afghanistan:** The new WPV1 case was reported from Bak district, Khost province, with date of onset 3 September 2020. The case is an 11-months old male child. The child did not receive any OPV doses neither from routine nor from supplementary immunization activities (SIAs)

In 2020, **52 WPV1 cases** have been reported so far: 16 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 7 September 2020.***

**Pakistan:**

**Case (1):** Reported from DG Khan district, Punjab province, with date of onset 14 September 2020. The case is a 22-months old male child. The child reportedly received 10 OPV doses, 3 doses from routine and 7 doses from SIAs.

**Case (2):** Reported from Quetta district, Balochistan province, with date of onset 15 September 2020. The case is a 9-months old female child. The child did not receive any OPV doses neither from routine nor from SIAs.

**Case (3):** Reported from Vehari district, Punjab province, with date of onset 16 September 2020. The case is an 89-months old male child. The child reportedly received 3 OPV doses from routine and 7+ doses from SIAs.

In 2020 to date, **77 WPV1 cases** are reported, 22 cases each from Khyber Pakhtunkhwa (KP) and Sindh provinces, 21 from Balochistan province and 12 from Punjab province. ***The most recent case has onset of paralysis on 16 September 2020.***

b. *Environmental samples:* 4 new WPV1 positive environmental samples, 1 from Afghanistan and 3 from Pakistan.

- **Afghanistan:** In 2020 to date, there are 30 WPV1 positive environmental samples including three combined (WPV1 and cVDPV2) with most recent sample collected on 6 September 2020.

- **Pakistan:** In 2020 to date, there are 358 WPV1 positive environmental samples including 44 combined (WPV1 and cVDPV2) and 3 combined (WPV1 and aVDPV2) with most recent positive sample collected on 24 September 2020.

III. **Vaccine Derived Polioviruses (VDPVs):** Total cVDPV2 cases in 2020 to date is 188 (87 from Afghanistan, 74 from Pakistan, 4 from Somalia and 23 from Sudan). This compares with 11 cases in 2019 in the same period (8 from Pakistan and 3 from Somalia).

**Afghanistan:** No new VDPV cases reported but 11 cVDPV2 positive environmental sample were reported this week.

*Human samples:* In 2020 to date, there are **87 cVDPV2 cases**; 44 reported from Nangarhar province, 12 from Laghman province, 8 from Kunar province, 4 from Farah province, 3 each from Kabul, Nimroz and Khost

provinces, 2 each from Nuristan and Kandahar provinces and one each from Badakhsan, Paktya, Jawzian, Hilmand, Hirat and Logar provinces and with **most recent case's onset on 20 August 2020**.

*Environment:* In 2020 to date, 89 cVDPV2 positive environmental samples including 3 combined (WPV1 and cVDPV2) were reported: 38 from Jalalabad, 11 from Batikot, 3 from Behsud districts, Nangarhar province, 14 from Kabul district, Kabul province, 4 from Asadabad and 8 from Kandahar districts, Kandahar province; 3 from Lashkargah district, Hilmand province, 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; with **most recent collection on 5 September 2020**.

**Pakistan:** 10 new cVDPV2 cases and 7 positive environmental samples were reported this week.

The new cVDPV2 cases are 6 from Sindh province (2 each from Karachi's Baldia and Gadap towns – 1 each from Orangi and Gulshan-e-Iqbal towns of Karachi); 3 from Punjab province (1 each from Rahimyar Khan, Jhang and Toba Teik Singh districts); and 1 from Balochistan (Kila Abdullah district).

In 2020 to date, there are 74 cVDPV2 cases reported. Cases include 42 from KP province, 16 from Sindh province, 14 from Punjab province, and 2 from Balochistan province, with most recent case's onset on 31 August 2020. In addition to 6 aVDPV2 cases all from Punjab province, with most recent case's onset on 23 August 2020.

*Environment:* In 2020, there are 58 positive environmental samples for cVDPV2 so far (including 44 combined WPV1 and cVDPV2), the most recent sample collected on 16 September 2020. Also, there are 6 aVDPV2 isolates detected in the environment samples, which include three combined (WPV1 + aVDPV2). The most recent aVDPV2 positive environmental sample was collected on 29 July 2020.

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

In 2020 to date: Four cVDPV2 cases reported from Abdul Aziz, Shibis, Dharkenley and Daynile districts, Banadir province, with **most recent date of onset 31 July 2020**. Also, there are 23 cVDPV2 positive environmental samples reported, the most recent collected on 29 August 2020.

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

In 2020 to date, 23 cVDPV2 cases reported. **The most recent case has onset of paralysis on 18 August 2020.**

A total of eight environmental samples have been positive for cVDPV2 so far, all from Khartoum with most recent collection on 9 August 2020.

**YEMEN:** No new VDPV cases.

In 2020 to date, 14 cVDPV1 cases are reported. All cases are from Saadah province, 5 from Kitaf Wa Buga district, 3 each from Sahar and Al Safrah districts, and 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.

- Morocco and Tunisia are missing both indicators as their non-polio AFP rates are 1.0 and 1.2 and their percentage of AFP cases with adequate stool specimens is 65.8%, and 63.0%, respectively.
- Djibouti, Jordan, Oman, Palestine, Qatar, Saudi Arabia and United Arab Emirates have a non-polio AFP rate of 1.0, 0.9, 1.6, 0.7, 0.6, 1.5 and 1.7 respectively.

## World Health Organization – Regional Office for Eastern Mediterranean

## 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 (41/20) / Ending on : 11/10/2020														
	Total AFP 2018	Total AFP 2019	Total AFP to date, 2020	W30 26 Jul 20	W31 02 Aug 20	W32 09 Aug 20	W33 16 Aug 20	W34 23 Aug 20	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
Afghanistan	3378	3768	2915	72	69	96	74	95	91	119	102	111	76	49	4
Bahrain	35	17	10	0	0	0	0	0	0	0	0	0	0	0	0
Djibouti	0	5	3	0	0	0	0	0	2	0	1	0	0	0	0
Egypt	1246	1343	713	14	7	14	23	23	29	20	25	21	20	26	1
Iran	896	1070	451	14	10	11	11	15	10	18	12	8	4	1	
Iraq	1023	1157	326	1	3	2	3	4	8	6	8	8	6	3	
Jordan ****	115	113	28	1	1	2	0	0	0	0	0	1	1	0	
Kuwait	72	48	25	1	1	1	2	0	1	0	0	0	0	0	
Lebanon ****	89	87	38	1	1	2	0	0	1	1	2	1	1		
Libya	122	107	80	0	1	3	5	6	2	3	0	0	2	0	1
Morocco	212	247	76	0	0	0	1	2	0	0	0	1	0	0	
Oman	28	30	14	1	0	0	0	0	0	0	1	0	1	0	
Pakistan	12276	15216	8681	175	177	219	233	244	189	266	259	300	226	80	1
Palestine ****	44	62	10	0	0	0	0	0	0	0	0	0			
Qatar	10	9	2	0	0	0	0	0	0	0	1	0	0	0	0
Saudi Arabia	242	236	96	2	1	1	5	5	1	2	5	5	2	0	0
Somalia	353	361	299	11	4	6	8	11	7	8	4	8	3	2	0
Sudan	579	608	491	15	12	22	29	30	26	30	26	30	26	7	
Syria ****	362	377	273	5	4	7	2	3	7	4	8	1	12	2	1
Tunisia	68	79	27	0	0	1	1	1	0	0	1	0	0	0	
U.A.E	40	50	17	0	0	0	0	0	1	1	0	0	0	0	
Yemen	730	779	551	13	11	15	18	25	17	27	19	18	17	9	0
<b>Total EMR</b>	<b>21920</b>	<b>25769</b>	<b>15126</b>	<b>326</b>	<b>302</b>	<b>402</b>	<b>415</b>	<b>464</b>	<b>392</b>	<b>505</b>	<b>474</b>	<b>513</b>	<b>397</b>	<b>179</b>	<b>8</b>

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2018	Total year 2019	11/10		Confirmed polio cases by month of onset											
			2019	2020	November 2019	December 2019	January 2020	February 2020	March 2020	April 2020	May 2020	June 2020	July 2020	August 2020	September 2020	October 2020
Afghanistan	21	29	20	52	7	1	2	3	7	0	12	10	7	6	5	
Bahrain	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	
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	
Kuwait	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	
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	81	77	23	32	18	17	7	6	6	6	6	4	7	
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	0	0	0	0	0	0	0	0	0	
<b>Total EMR</b>	<b>33</b>	<b>176</b>	<b>101</b>	<b>129</b>	<b>30</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>10</b>	<b>12</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 (41/20) / Ending on : 11/10/2020

COUNTRY	2019											2020											Latest line List Date		
	AFP									Specimen	Wild cases ****		AFP									Specimen		Wild cases ****	
	Total AFP cases onset 2019	Case classification					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		% with *** adequate specimens	Wild P1 Poliovirus	Wild P3 Poliovirus	Total AFP cases onset 2020	Case classification					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	% with *** adequate specimens
		Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV				Total Confirmed Polio Cases *					Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV							
Afghanistan	3768	29	1	0	3738	0	18.1	0	0	94.1	29	0	2915	52	0	389	2385	89	17.4	49	1	94.0	52	0	11/10/2020
Bahrain	17	0	0	0	17	0	5.7	0	0	100.0	0	0	10	0	0	0	10	0	4.3	0	0	90.0	0	0	11/10/2020
Djibouti	5	0	0	0	5	0	1.4	0	0	80.0	0	0	3	0	0	3	0	0	1.0	0	0	100.0	0	0	11/10/2019
Egypt	1343	0	0	0	1343	0	3.6	0	0	93.4	0	0	713	0	0	76	637	0	2.4	1	0	90.7	0	0	07/10/2020
Iran	1070	0	0	0	1069	1	5.2	0	0	97.1	0	0	451	0	0	14	437	0	2.8	0	0	99.3	0	0	10/10/2020
Iraq	1157	0	0	0	1157	0	7.4	0	0	94.3	0	0	326	0	0	20	306	0	2.6	2	1	92.3	0	0	09/10/2020
Jordan	113	0	0	0	113	0	3.9	0	0	100.0	0	0	28	0	0	2	26	0	0.9	0	0	100.0	0	0	08/10/2020
Kuwait	48	0	0	0	48	0	5.4	0	0	89.6	0	0	25	0	0	0	25	0	3.6	0	0	84.0	0	0	04/10/2020
Lebanon	87	0	0	0	87	0	4.7	0	0	89.7	0	0	38	0	0	21	17	0	2.6	11	10	94.7	0	0	03/10/2020
Libya	107	0	0	0	107	0	4.3	0	0	98.1	0	0	80	0	0	20	59	1	3.9	0	0	100.0	0	0	10/10/2020
Morocco	247	0	0	0	247	0	2.8	0	0	84.2	0	0	76	0	0	32	44	0	1.0	28	7	65.8	0	0	09/10/2020
Oman	30	0	0	0	30	0	2.7	0	0	80.0	0	0	14	0	0	1	13	0	1.6	0	0	100.0	0	0	04/10/2020
Pakistan	15216	147	6	0	15040	23	19.3	0	0	86.6	147	0	8681	77	7	944	7573	80	14.1	228	0	87.4	77	0	11/10/2020
Palestine	62	0	0	0	62	0	3.5	0	0	98.4	0	0	10	0	0	4	6	0	0.7	4	0	100.0	0	0	20/09/2020
Qatar	9	0	0	0	9	0	2.2	0	0	88.9	0	0	2	0	0	2	0	0	0.6	1	0	100.0	0	0	11/10/2020
Saudi Arabia	236	0	0	0	236	0	2.8	0	0	93.2	0	0	96	0	0	29	67	0	1.5	0	0	94.8	0	0	11/10/2020
Somalia	361	0	0	0	358	3	5.7	0	0	95.6	0	0	299	0	0	17	276	6	4.7	2	1	96.0	0	0	11/10/2020
Sudan	608	0	0	0	608	0	3.4	0	0	96.4	0	0	491	0	0	92	376	23 #	3.3	3	0	94.1	0	0	08/10/2020
Syria	377	0	0	0	377	0	4.8	0	0	88.1	0	0	273	0	0	21	252	0	4.4	0	0	91.2	0	0	10/10/2020
Tunisia	79	0	0	0	78	1	2.9	0	0	74.7	0	0	27	0	0	4	23	0	1.2	2	0	63.0	0	0	09/10/2020
U.A.E	50	0	0	0	50	0	4.0	0	0	90.0	0	0	17	0	0	6	11	0	1.7	4	4	100.0	0	0	04/10/2020
Yemen	779	0	0	0	778	1	5.5	0	0	89.0	0	0	551	0	1	378	158	14	5.0	171	151	90.4	0	0	11/10/2020
EMR	25769	176	7	0	25557	29	10.2	0	0	89.5	176	0	15126	129	8	2075	12701	213	7.4	506	175	89.9	129	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

# Advance notification of 16 new cVDPV2 cases from Sudan with onset in July, August, September 2020 - their details will be shared in next 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	832	14	20	29	137	71
BAH	0	0	0	0	0	0	1	0	0	0	0	0
DJI	1	0	0	0	0	0	1	0	0	0	0	1
EGY	498	0	0	8	57	0	196	0	0	8	12	22
IRN	216	0	0	4	7	0	16	0	0	0	0	0
IRQ	603	0	0	12	39	6	152	0	0	3	8	3
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	4
OMA	78	0	0	2	28	0	40	0	0	2	6	0
PAK	5497	26	9	248	959	0	3483	18	7	287	526	207
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	43	0	0	0	0	0	14	0	0	0	0	2
SOM	1081	0	1	45	141	5	872	0	2	16	103	46
SUD	402	0	0	1	31	90	209	0	6	0	4	147
SYR	813	0	0	23	36	0	259	0	0	11	10	3
TUN	27	0	0	0	2	0	5	0	0	0	0	1
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	423	0	2	6	68	5	173	0	0	0	20	131
EMR	10935	34	12	400	1577	136	6261	32	35	356	826	638

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	18	4/Sep/20
<b>2020 Total</b>		<b>32</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	1	04-Jan-20	04-Jan-20
			NIMROZ	1	28-Feb-20	28-Feb-20
			FARAH	1	06-May-20	06-May-20
			PAK	1	01-Sep-20	01-Sep-20
	PAK	BALOCHISTAN	KSAIFULLAH	1	01-Sep-20	01-Sep-20
2019	AFG	HILMAND	LAHORE	1	24-Jul-20	24-Jul-20
			PUNJAB	2	18-Jan-20	05-Jul-20
	PAK	SINDH	KARAK	1	20-Jan-20	20-Jan-20
			JACOBABAD	2	07-Feb-20	14-Jul-20
			URUZGAN	1	02-Aug-19	02-Aug-19
			MUSAQALAH	1	05-Jun-19	05-Jun-19
			SANGIN	1	06-Mar-19	06-Mar-19
			PUNJAB	2	2-Dec-19	10-Dec-19
			KHIORANGI	1	28-Aug-19	28-Aug-19
			SUJAWAL	1	25-Sep-19	25-Sep-19
			JAMSHORO	1	09-Oct-19	09-Oct-19
			T. ALLAHYAR	1	10-Nov-19	10-Nov-19
			KAMBAR	1	02-Nov-19	02-Nov-19
			MIRPURKHAS	2	01-Dec-19	18-Dec-19
			LARKANA	1	24-Dec-19	24-Dec-19
			JACOBABAD	1	19-Dec-19	19-Dec-19
	BALOCHSITAN	1	18-Nov-19	18-Nov-19		
	MASTUNG	1	18-Nov-19	18-Nov-19		
	KHYBER PAKHTUNKHWA (KP)	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		
<b>2019 Total</b>		<b>24</b>	<b>06-Mar-19</b>	<b>24-Dec-19</b>		

Table 5: Laboratory investigation of AFP cases with paralysis onset in 2020 up to Week (41/2020) / Ending on : (11/10/2020)

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	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Afghanistan	RRL Pakistan	2848	287	20	407	1929	204	1	49	82			8	78		76	1		2		51	14%	92%	100%	98%	11/10/2020
Bahrain	NPL Oman / CDC	10			1	9																9%	100%		0%	11/10/2020
Djibouti	NPL Kenya / CDC	3						3																		11/10/2020
Egypt***	RRL Egypt	677	19	12	65	545	30	6		8						12		9	3			9%	94%	100%	99%	08/10/2020
Iran	NPL Iran / CDC	466	5		5	438	18			3						3						1%	100%	100%	100%	10/10/2020
Iraq	RRL Egypt	325	1		30	279	12	3												1		9%	95%	100%	97%	08/10/2020
Jordan	NPL Jordan / RRL EGYPT	28			5	21	2															19%	100%		100%	04/10/2020
Kuwait	RRL Kuwait / RIVM	26				24		2														1%	79%		92%	08/10/2020
Lebanon	NPL Jordan / RRL EGYPT	32			5	27																15%	97%		100%	04/10/2020
Libya	RRL Tunisia / RIVM	65	4			61										3	1					0%	100%	100%	65%	15/09/2020
Morocco	NPL Morocco / RRL Tunisia	59			1	58																1%	100%		98%	18/09/2020
Oman	NPL Oman / CDC	15			2	12	1															13%	100%		100%	11/10/2020
Pakistan	RRL Pakistan	8503	657	44	1127	6192	470	7	70	139			255	76		217		1	2	2	26	12%	94%	99%	97%	11/10/2020
Palestine & UNRWA		10				10																0%	30%		100%	20/09/2020
Qatar	NPL Oman / CDC	2				2																0%	100%		100%	11/10/2020
Saudi Arabia	NPL Saudi Arabia / CDC	96				87	3	6														0%	100%		100%	04/10/2020
Somalia	NPL Kenya / CDC	299	15	4	47	217	5	10		3	1			5		12				1		18%	5%		97%	11/10/2020
Sudan	NPL Sudan / RRL Egypt	480	35		53	310	58	24		1			20	21								15%	99%	100%	57%	11/10/2020
Syria	NPL Syria / RRL Egypt	263	11		12	229	8	3														4%	100%			01/10/2020
Tunisia	RRL Tunisia	21				20		1														0%	100%		95%	15/09/2020
U.A.E	NPL Oman / CDC	16				16																0%	100%		50%	11/10/2020
Yemen	NPL Kenya / CDC	174	24		42	108				2	17					5				1		25%	96%	21%	0%	11/10/2020
<b>Total EMR 2020</b>		14418	1058	80	1802	10594	811	66	119	238	18		283	180		328	2	1	13	6	79	12%	93%	98%	96%	
<b>Total EMR 2019</b>		24920	1057	100	3669	20055	1	26	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

\*\* This indicator reflects surveillance and laboratory activities

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

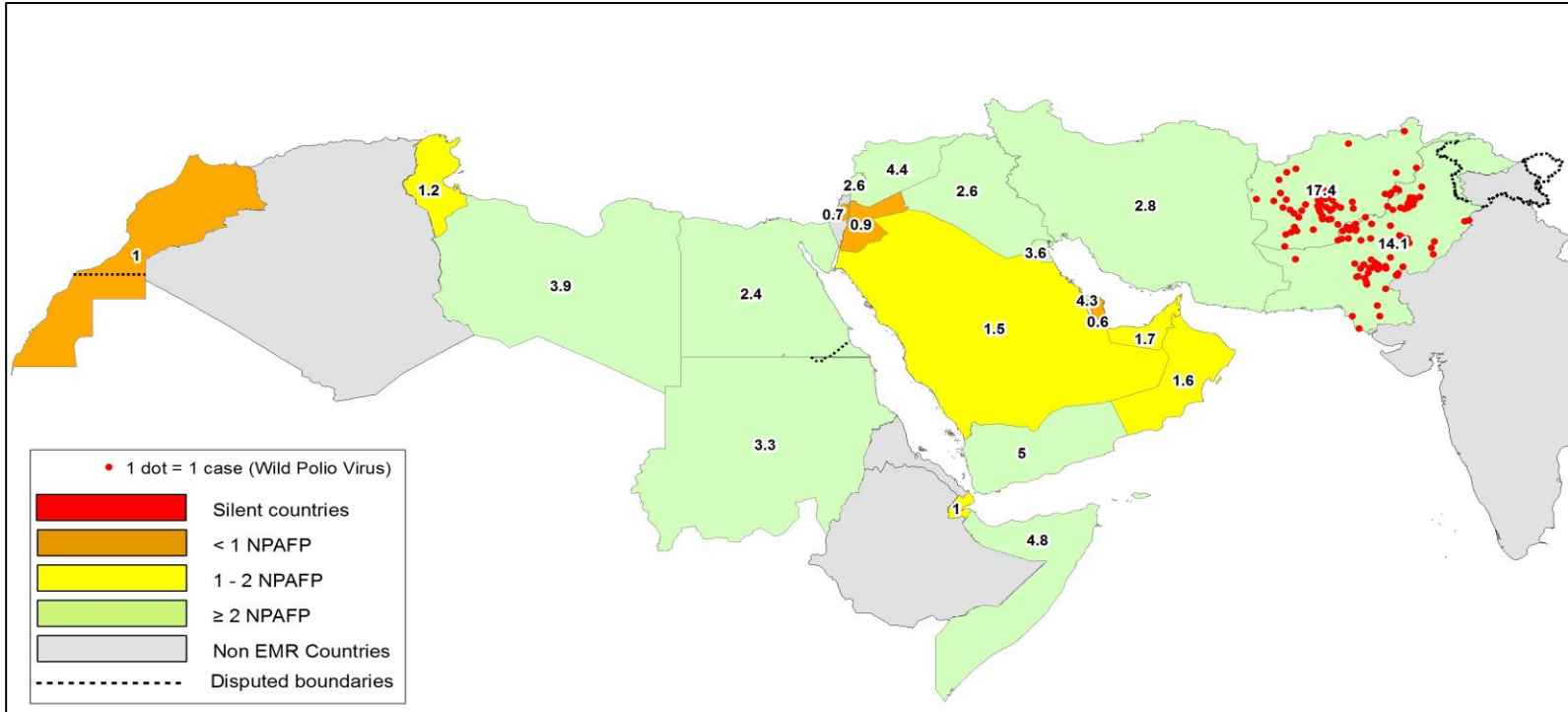
COUNTRY	LAB RESULTS	2016	2017	2018	2019	2020
AFG	Wild	2	42	83	56	27
	Wild+cVDPV2					3
	cVDPV2					86
	EV/SL	177	265	248	200	127
	Negative	6	9	5	3	3
AFG Total		185	316	336	259	300
EGY	cVDPV2					1
	EV/SL	492	481	508	666	356
	Negative	36	41	32	34	30
	Pending					22
	aVDPV3					1
EGY Total		528	522	540	700	411
IRN	Wild				3	
	EV/SL		5	51	65	25
	Negative		1	3	3	
	Pending					3
IRN Total			6	54	71	28
JOR	EV/SL	2	29	36	36	15
	Negative		2			1
	Pending					1
JOR Total		2	31	36	36	17
KUW	EV/SL			3		
	Pending				8	
KUW Total			3		11	
LEB	EV/SL	2	26	44	44	12
	Negative	2	1	1	3	2
	Pending					1
LEB Total		4	27	45	47	15
PAK	Wild	59	105	139	367	311
	Wild+cVDPV2	2			10	44
	Wild+aVDPV2	1	1		2	3
	cVDPV2	2			29	14
	aVDPV2	3	4			3
	EV/SL	456	523	531	420	216
	Negative	6		3	4	4
PAK Total		529	633	673	832	637
SOM	cVDPV2		2	18	5	23
	cVDPV3			11		
	aVDPV2			2	1	
	cVDPV2+cVDPV3			1		
	EV/SL		20	43	28	10
Negative		14	138	29	24	
Pending					8	
SOM Total			36	213	63	65
SUD	cVDPV2					8
	EV/SL			15	42	12
	Negative				1	2
	Pending				17	13
SUD Total			15	60	35	
SYR	EV/SL		4	81	155	128
	Negative			21	30	15
	Pending					10
SYR Total			4	102	185	153
<b>TOTAL</b>		<b>1248</b>	<b>1575</b>	<b>2017</b>	<b>2264</b>	<b>1661</b>

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

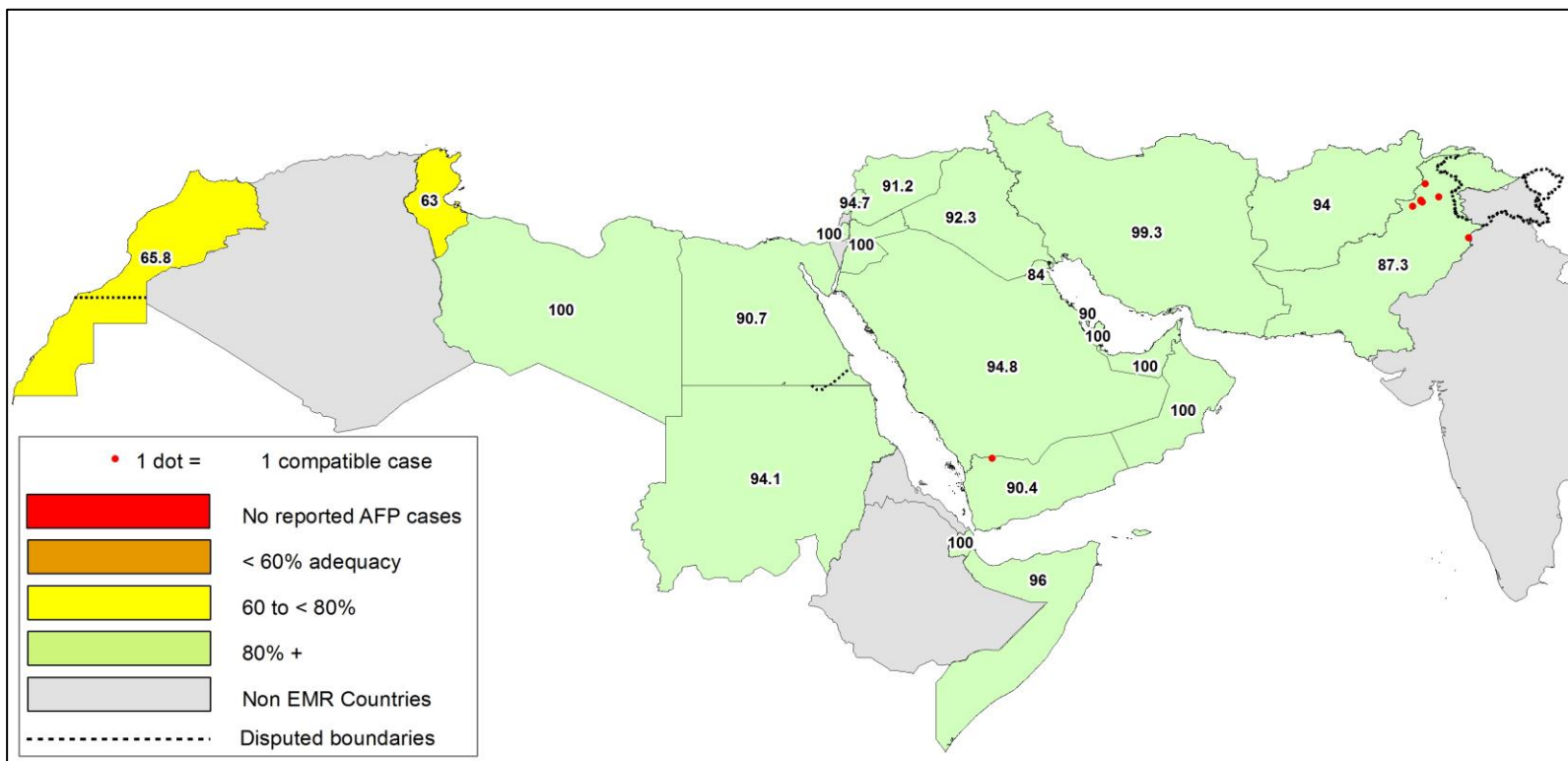
YEAR	COUNTRY	LAB RESULTS	PROVINCE	Count	First date	Last date	
2019	AFG	Wild	HILMAND	19	6/Jan/19	25/Dec/19	
			KANDAHAR	24	6/Jan/19	25/Dec/19	
			NANGARHAR	13	26/Jan/19	25/Dec/19	
	AFG Total			56	6/Jan/19	25/Dec/19	
	IRN	Wild	S & B	3	22/Apr/19	20/May/19	
	IRN Total			3	22/Apr/19	20/May/19	
	PAK	Wild	BALUCHISTAN	72	1/Jan/19	20/Dec/19	
			GBALISTAN	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	GBALISTAN	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		
PAK Total			406	1/Jan/19	31/Dec/19		
SOM	cVDPV2	BANADIR	5	10/Nov/19	22/Dec/19		
		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	11	1/Jan/20	6/Sep/20	
			HIRAT	4	26/Apr/20	23/Aug/20	
			KANDAHAR	10	28/Jan/20	25/Jun/20	
			KHOST	1	25/Apr/20	25/Apr/20	
			NANGARHAR	1	26/Jan/20	26/Jan/20	
			Wild+cVDPV2	KANDAHAR	1	9/Jul/20	9/Jul/20
				NANGARHAR	2	8/Jan/20	25/Jul/20
				HILMAND	3	27/May/20	3/Aug/20
			cVDPV2	KABUL	14	26/Apr/20	5/Sep/20
				KANDAHAR	7	9/Jul/20	3/Aug/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	50	7/Jan/20	22/Aug/20			
	PAKTYA	1	26/Jul/20	26/Jul/20			
	AFG Total			116	1/Jan/20	6/Sep/20	
	EGY	cVDPV2	GIZA	1	21/Sep/20	21/Sep/20	
	EGY Total			1	21/Sep/20	21/Sep/20	
	PAK	Wild	AJK	1	25/Feb/20	25/Feb/20	
			BALUCHISTAN	78	1/Jan/20	22/Sep/20	
			GBALISTAN	1	12/May/20	12/May/20	
			ISLAMABAD	3	16/Jan/20	10/Sep/20	
			KPAKHTUNKHWA	16	28/Jan/20	14/Sep/20	
			PUNJAB	103	4/Jan/20	24/Sep/20	
			SINDH	109	3/Jan/20	15/Sep/20	
			Wild+cVDPV2	BALUCHISTAN	5	1/Feb/20	1/Sep/20
KPAKHTUNKHWA				1	11/Mar/20	11/Mar/20	
PUNJAB				9	4/Jan/20	12/Aug/20	
cVDPV2			SINDH	29	3/Jan/20	10/Sep/20	
			BALUCHISTAN	1	2/Jun/20	2/Jun/20	
	KPAKHTUNKHWA	4	10/Jan/20	17/Apr/20			
	PUNJAB	2	16/Jan/20	17/Apr/20			
aVDPV2	SINDH	7	8/Jun/20	16/Sep/20			
	KPAKHTUNKHWA	2	10/Apr/20	29/Jul/20			
	PUNJAB	1	4/May/20	4/May/20			
PAK Total			372	1/Jan/20	24/Sep/20		
SOM	cVDPV2	BANADIR	21	5/Jan/20	29/Aug/20		
		BAY	2	19/Jun/20	20/Jun/20		
SOM Total			23	5/Jan/20	29/Aug/20		
SUD	cVDPV2	KHARTOUM	8	29/Mar/20	9/Aug/20		
SUD Total			8	29/Mar/20	9/Aug/20		
2020 Total			520	1/Jan/20	24/Sep/20		



**Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2020 - 11/10/2020**



**Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2020 - 11/10/2020**

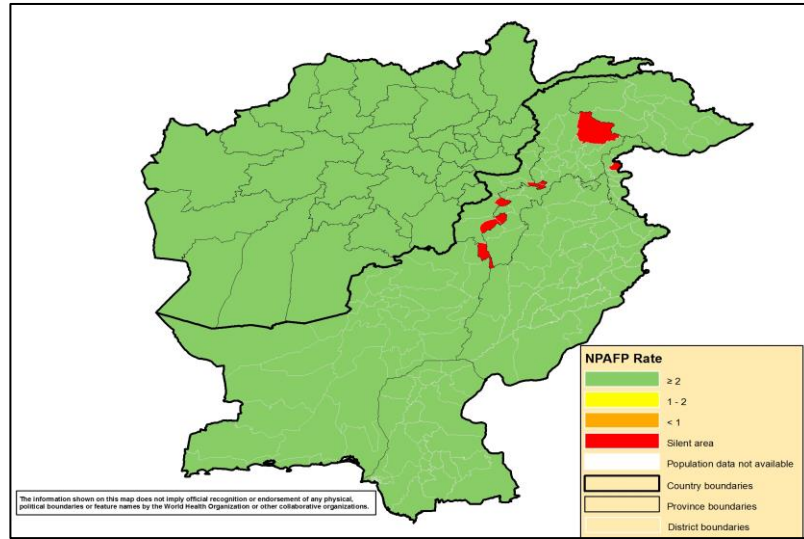


**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2019 - 2020**

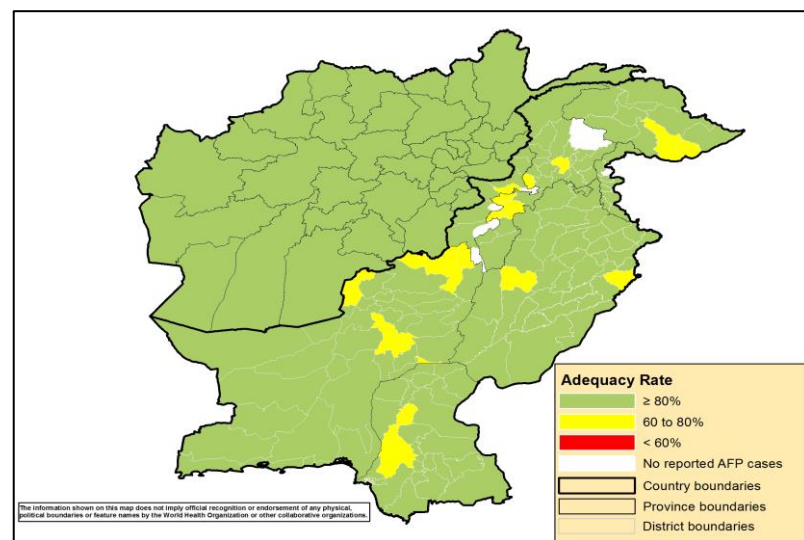
Year	COUNTRY	Count	First Case	Last Case
2020	AFG	52	4-Jan-20	7-Sep-20
	PAK	77	1-Jan-20	16-Sep-20
<b>2020 Total</b>		<b>129</b>	<b>1-Jan-20</b>	<b>16-Sep-20</b>
2019	AFG	29	4-Jan-19	7-Dec-19
	PAK	147	15-Jan-19	31-Dec-19
<b>2019 Total</b>		<b>176</b>	<b>4-Jan-19</b>	<b>31-Dec-19</b>



**Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2020 - 11/10/2020**

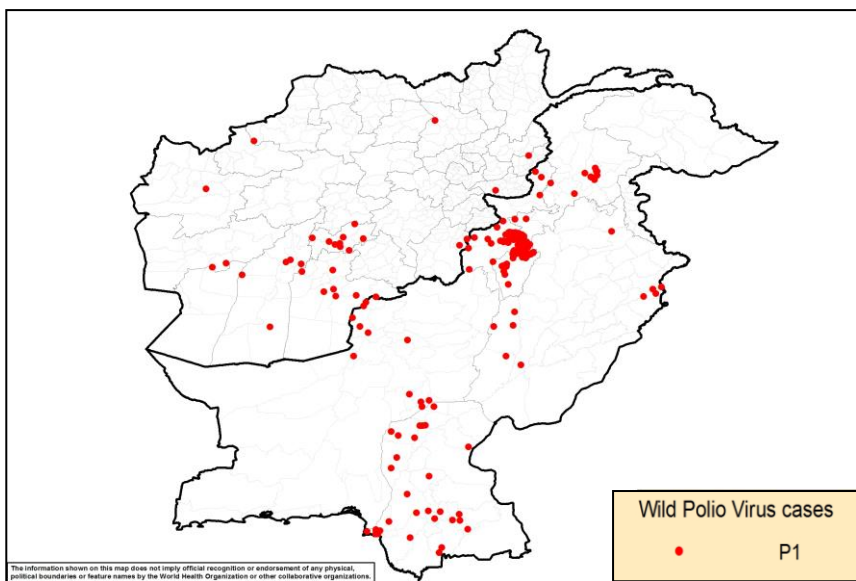


**Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2020 - 11/10/2020**

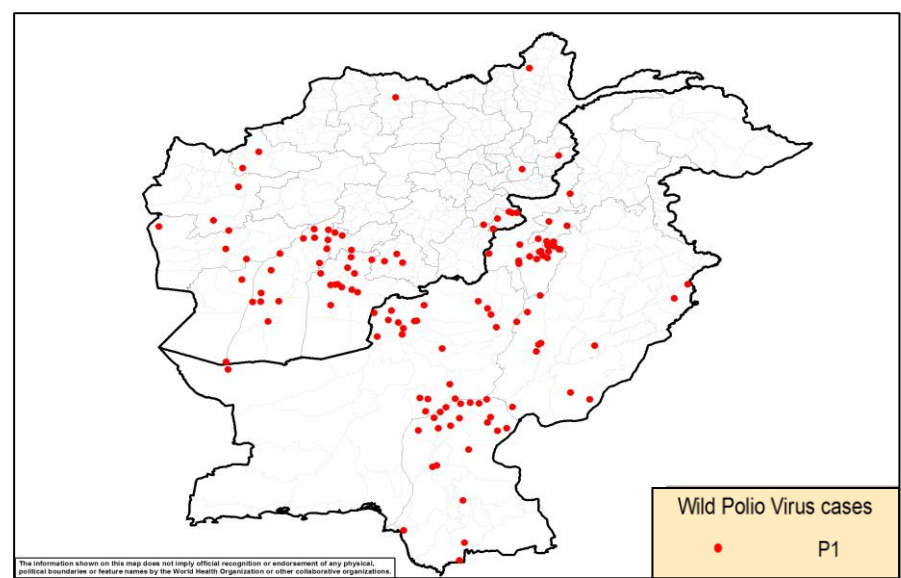


**Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan**

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



**5(b) 01/01/2020 - 11/10/2020**



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

ONSETYR	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
	BADGHIS	QALA-E-NAW	1	5-Sep-20	5-Sep-20
		QADIS	1	13-May-20	13-May-20
	KUNAR	SHIGAL WA SHEL TAN	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	NADIRSHAHKOT	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	ZHERAY	3	20-Jul-20	24-Aug-20
		KANDAHAR	2	22-Jun-20	6-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
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	
<b>2020 Total</b>			<b>52</b>	<b>4-Jan-20</b>	<b>7-Sep-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		
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	3	17-Jul-20	15-Sep-20		
		KSAIFULAH	1	1-Sep-20	1-Sep-20		
		PISHIN	5	31-Jan-20	16-Aug-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		
		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	VEHARI	1	16-Sep-20	16-Sep-20	
	DGKHAN		5	18-Jan-20	14-Sep-20		
	BAHAWALPUR		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>77</b>	<b>1-Jan-20</b>	<b>16-Sep-20</b>
		2019	KHYBER PAKHTUNKHWA	LAKKIMRWT	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		
PUNJAB	QUETTA		1	6-Jul-19	6-Jul-19		
	LAHORE		5	20-Jan-19	28-Dec-19		
	DGKHAN		4	2-Dec-19	25-Dec-19		
	OKARA		1	8-Dec-19	8-Dec-19		
SINDH	MUZFARGARH		1	26-Nov-19	26-Nov-19		
	JHELUM		1	21-Jun-19	21-Jun-19		
	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		
SINDH	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>	

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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	BANADIR	4	18-Jun-20	31-Jul-20	
		SOUTH DARFUR	2	7-Mar-20	29-Apr-20	
	SUD	EAST DARFUR	3	12-May-20	24-Jul-20	
		KHARTOUM	1	3-Aug-20	3-Aug-20	
		KASSALA	3	28-Jul-20	31-Jul-20	
		GEZIRA	1	9-Jul-20	9-Jul-20	
		RIVER NILE	3	29-Jun-20	18-Aug-20	
		RED SEA	4	29-Apr-20	16-Aug-20	
		WEST DARFUR	1	19-May-20	19-May-20	
		BLUE NILE	2	7-Aug-20	17-Aug-20	
		WHITE NILE	1	15-Jun-20	15-Jun-20	
		GEDARIF	2	1-Apr-20	5-Jul-20	
	AFG	FARAH	4	1-Jun-20	14-Aug-20	
		HIRAT	1	10-Aug-20	10-Aug-20	
		LOGAR	1	20-Aug-20	20-Aug-20	
		KANDAHAR	2	4-Aug-20	4-Aug-20	
		HILMAND	1	1-Aug-20	1-Aug-20	
		JAWZIAN	1	4-Aug-20	4-Aug-20	
		KABUL	3	6-Jul-20	8-Feb-20	
		NURISTAN	2	21-Jun-20	13-Jul-20	
		NIMROZ	3	6-Jul-20	8-Aug-20	
		KHOST	3	5-Jul-20	6-Aug-20	
		PAKTYA	1	18-Jun-20	18-Jun-20	
		BADAKHSAN	1	23-Apr-20	23-Apr-20	
		LAGHMAN	12	20-May-20	20-Jul-20	
		KUNAR	8	6-Apr-20	11-Jul-20	
	NANGARHAR	44	5-Feb-20	29-Jul-20		
	PAK	SINDH	16	2-May-20	31-Aug-20	
		BALOCHISTAN	2	29-Feb-20	19-Aug-20	
		PUNJAB	14	5-Feb-20	29-Aug-20	
		KHYBER PAKHTUNKHWA	42	2-Jan-20	24-May-20	
	<b>Total 2020</b>			<b>188</b>	<b>2-Jan-20</b>	<b>31-Aug-20</b>
	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
			GILGIT BALTISTAN	4	7-Jul-19	28-Aug-19
SOM		BARI	1	8-May-19	8-May-19	
		TOGDHER	1	21-Apr-19	21-Apr-19	
SOOL	1	15-Mar-19	15-Mar-19			
<b>Total 2019</b>			<b>25</b>	<b>15-Mar-19</b>	<b>28-Dec-19</b>	

Advance notification of 16 new cVDPV2 cases from Sudan with onset in July, August, September 2020 - their details will be shared in next bulletin

