

Highlights of Polio Fax Bulletin No. 1152 for Week 44 2020

I. Salient features

1. Polio eradication teams at the Regional and Country levels are contributing to COVID19 Response, particularly in areas of surveillance (field and laboratory), data analysis, communications and coordination.
2. Wild Poliovirus Type-1 (WPV1): One new case and one positive environmental sample both from Pakistan reported this week.
3. Vaccine Derived Poliovirus (VDPV):
 - cVDPV1: No new cases reported this week.
 - cVDPV2: 20 new cVDPV2 cases all from Afghanistan were reported this week in addition to 1 new positive environmental sample from Somalia.

Advance notifications:

- Iran: A newly reported VDPV2 positive environmental sample reported from Zabol district, Sistan & Balochistan province, with date of sample collection on 3 October 2020 – Details will be shared within next bulletin.

II. Wild Poliovirus Transmission

Endemic countries (Pakistan & Afghanistan): Total WPV1 cases in 2020 to date is 133 (53 from Afghanistan and 80 from Pakistan). This compares with 113 cases in 2019 in the same period (21 from Afghanistan and 92 from Pakistan).

a. *Human samples:* No new WPV1 positive cases reported this week.

Afghanistan: In 2020, **53 WPV1 cases** have been reported so far: 17 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 13 September 2020.**

Pakistan: In 2020 to date, **80 WPV1 cases** are reported, 23 from Balochistan province, 22 cases each from Khyber Pakhtunkhwa (KP) and Sindh provinces, and 13 from Punjab province. **The most recent case has onset of paralysis on 4 October 2020.**

b. *Environmental samples:* 1 newly reported positive environmental sample from Pakistan.

- **Afghanistan:** In 2020 to date, there are **33** WPV1 positive environmental samples including three combined (WPV1 and cVDPV2) with most recent sample collected on 6 October 2020.
- **Pakistan:** In 2020 to date, there are **376** WPV1 positive environmental samples including 48 combined (WPV1 and cVDPV2) and 3 combined (WPV1 and aVDPV2) with most recent positive sample collected on 14 October 2020.

III. **Vaccine Derived Polioviruses (VDPVs):** Total cVDPV2 cases in 2020 to date is 248 (121 from Afghanistan, 80 from Pakistan, 8 from Somalia and 39 from Sudan). This compares with 13 cases in 2019 in the same period (10 from Pakistan and 3 from Somalia).

Afghanistan: 20 new cVDPV2 cases reported this week, and no new positive environmental samples were reported.

Human samples: The new 20 cVDPV2 cases are 12 from Kandahar province (Kandahar – 7, Panjwai – 2, Arghandab – 2 and Spinboldak – 1), 2 from Paktya province (Zurmat – 1 and Sayed Karam -1), 1 each from Khost province (Matun district), Laghman province (Alingar district), Logar province (Barakibarak district), Paktika province (Sharan district), Parwan district (Bagram district) and Farah province (Bakwa district). Dates of onset vary between 19 August to 10 September 2020.

In 2020 to date, there are 121 cVDPV2 cases; 44 reported from Nangarhar province, 17 from Kandahar province, 13 from Laghman province, 8 each from Kunar and Khost provinces, 5 from Farah province, 4 each from Kabul and Paktya provinces, 3 from Nimroz province, 2 each from Hilmand, Hirat, Paktika, Logar and Nuristan provinces and one each from Badakhshan, Jawzian, Ghazni, Parwan and Kunduz provinces and with **most recent case's onset on 10 September 2020.**

Environment: In 2020 to date, 90 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, 9 from Kandahar and 4 from Asadabad 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 6 September 2020**.

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

In 2020 to date, there are **80** cVDPV2 cases reported. Cases include 42 from KP province, 20 from Sindh province, 16 from Punjab province, and 2 from Balochistan province, with most recent case's onset on 10 September 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 **62** positive environmental samples for cVDPV2 so far (including 48 combined WPV1 and cVDPV2), the most recent sample collected on 16 September 2020. Also, there are 7 aVDPV2 isolates detected in the environment samples, which include three combined (WPV1 + aVDPV2). The most recent aVDPV2 positive environmental sample was collected on 16 August 2020.

SOMALIA: No new VDPV cases, but one new cVDPV2 positive environmental sample was reported this week.

In 2020 to date, **8** cVDPV2 cases reported, 5 from Banadir province and 1 each from Lower Juba, Middle Shabelle and Bay provinces, with **most recent date of onset 17 September 2020**. Also, there are 25 cVDPV2 positive environmental samples reported, the most recent collected on 26 September 2020.

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

In 2020 to date, **39** cVDPV2 cases reported. **The most recent case has onset of paralysis on 3 September 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 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.

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 60.7%, respectively.
- Djibouti, Jordan, Oman, Palestine, Qatar, Saudi Arabia and United Arab Emirates have a non-polio AFP rate of 1.3, 1.0, 1.7, 0.7, 0.6, 1.8 and 1.6 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 (44/20) / Ending on : 01/11/2020														
	Total AFP 2018	Total AFP 2019	Total AFP to date, 2020	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	W42 18 Oct 20	W43 25 Oct 20	W44 1 Nov 20
Afghanistan	3378	3768	3147	76	96	92	118	104	115	79	91	84	67	29	3
Bahrain	35	17	11	0	0	0	0	0	0	1	0	0	0	0	0
Djibouti	0	5	4	0	0	2	0	1	0	0	0	0	0	1	
Egypt	1246	1343	773	23	23	29	20	25	21	20	31	23	13	19	1
Iran	896	1070	481	11	15	10	18	12	14	9	9	6	3	2	
Iraq	1023	1157	360	4	4	8	6	8	8	8	5	13	13	4	
Jordan ****	115	113	31	0	0	0	0	0	1	1	1	2	0	0	
Kuwait	72	48	27	2	0	2	0	0	0	0	0	1	1	0	
Lebanon ****	89	87	42	0	0	1	1	2	1	1	0	2	1	1	
Libya	122	107	84	5	6	2	3	0	0	2	0	1	3	1	
Morocco	212	247	79	1	2	0	0	0	1	0	0	3			
Oman	28	30	16	0	0	0	0	1	0	1	1	1	0	0	
Pakistan	12276	15216	9463	235	247	190	275	268	324	278	276	235	178	57	1
Palestine ****	44	62	11	0	0	0	0	0	1	0	0	0	0		
Qatar	10	9	2	0	0	0	0	1	0	0	0	0	0	0	
Saudi Arabia	242	236	125	5	5	1	2	5	5	8	10	2	8	3	0
Somalia	353	361	311	8	11	7	8	4	9	7	5	3	1	0	0
Sudan	579	608	557	29	30	26	30	27	35	29	17	26	14	7	
Syria ****	362	377	286	2	3	7	4	8	1	13	3	1	3	7	
Tunisia	68	79	28	1	1	0	0	1	0	0	0	0	0	0	
U.A.E	40	50	17	0	0	1	1	0	0	0	0	0	0	0	
Yemen	730	779	612	18	25	17	27	19	20	21	29	14	12	9	
Total EMR	21920	25769	16467	420	468	395	513	486	556	478	478	417	317	140	5

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2018	Total year 2019	01/11		Confirmed polio cases by month of onset											
			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	21	53	1	2	3	7	0	12	10	7	6	6		
Bahrain	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				
Egypt	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				
Iraq	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		
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0		0		
Lebanon ****	0	0	0	0	0	0										
Libya	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				
Pakistan	12	147	92	80	32	18	17	7	6	6	6	6	5	7	2	
Palestine ****	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		
Saudi Arabia	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		
Sudan	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		
Tunisia	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							
Yemen	0	0	0	0	0	0										
Total EMR	33	176	113	133	33	20	20	14	6	18	16	13	11	13	2	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 (44/20) / Ending on : 01/11/2020

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	4	3734	0	18.1	4	0	94.1	29	0	3147	53	0	338	2633	123	17.5	54	0	93.9	53	0	01/11/2020
Bahrain	17	0	0	0	17	0	5.7	0	0	100.0	0	0	11	0	0	1	10	0	4.4	0	0	90.9	0	0	01/11/2020
Djibouti	5	0	0	0	5	0	1.4	0	0	80.0	0	0	4	0	0	4	0	0	1.3	0	0	100.0	0	0	25/10/2019
Egypt	1343	0	0	0	1343	0	3.6	0	0	93.4	0	0	773	0	0	77	696	0	2.4	1	0	92.2	0	0	28/10/2020
Iran	1070	0	0	0	1069	1	5.2	0	0	97.1	0	0	481	0	0	15	466	0	2.8	0	0	98.8	0	0	31/10/2020
Iraq	1157	0	0	0	1157	0	7.4	0	0	94.3	0	0	360	0	0	27	333	0	2.7	0	0	93.1	0	0	30/10/2020
Jordan	113	0	0	0	113	0	3.9	0	0	100.0	0	0	31	0	0	1	30	0	1.0	0	0	100.0	0	0	28/10/2020
Kuwait	48	0	0	0	48	0	5.4	0	0	89.6	0	0	27	0	0	2	25	0	3.6	0	0	88.9	0	0	25/10/2020
Lebanon	87	0	0	0	87	0	4.7	0	0	89.7	0	0	42	0	0	25	17	0	2.7	13	12	95.2	0	0	30/10/2020
Libya	107	0	0	0	107	0	4.3	0	0	98.1	0	0	84	0	0	24	59	1	3.8	0	0	100.0	0	0	31/10/2020
Morocco	247	0	0	0	247	0	2.8	0	0	84.2	0	0	79	0	0	35	44	0	0.9	28	7	64.6	0	0	16/10/2020
Oman	30	0	0	0	30	0	2.7	0	0	80.0	0	0	16	0	0	3	13	0	1.7	0	0	100.0	0	0	25/10/2020
Pakistan	15216	147	6	0	15040	23	19.3	0	0	86.6	147	0	9463	80	8	803	8486	86	14.4	202	0	87.3	80	0	01/11/2020
Palestine	62	0	0	0	62	0	3.5	0	0	98.4	0	0	11	0	0	4	7	0	0.7	3	0	100.0	0	0	18/10/2020
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	25/10/2020
Saudi Arabia	236	0	0	0	236	0	2.8	0	0	93.2	0	0	125	0	0	52	73	0	1.8	0	0	95.2	0	0	01/11/2020
Somalia	361	0	0	0	358	3	5.7	0	0	95.6	0	0	311	0	0	8	293	10	4.6	2	1	96.1	0	0	01/11/2020
Sudan	608	0	0	0	608	0	3.4	0	0	96.4	0	0	557	0	0	113	405	39	3.5	7	0	93.7	0	0	28/10/2020
Syria	377	0	0	0	377	0	4.8	0	0	88.1	0	0	286	0	0	14	272	0	4.3	0	0	91.3	0	0	31/10/2020
Tunisia	79	0	0	0	78	1	2.9	0	0	74.7	0	0	28	0	0	3	25	0	1.2	1	0	60.7	0	0	30/10/2020
U.A.E	50	0	0	0	50	0	4.0	0	0	90.0	0	0	17	0	0	6	11	0	1.6	4	4	100.0	0	0	26/10/2020
Yemen	779	0	0	0	778	1	5.5	0	0	89.0	0	0	612	0	1	419	176	16	5.2	204	179	90.5	0	0	31/10/2020
EMR	25769	176	7	4	25553	29	10.2	4	0	89.5	176	0	16467	133	9	1976	14074	275	7.5	520	203	89.9	133	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

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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	0	0	0	0	0	0	892	14	23	29	169	89
BAH	0	0	0	0	0	0	1	0	0	0	0	0
DJI	1	0	0	0	0	0	2	0	0	0	0	2
EGY	498	0	0	8	57	0	219	0	0	8	17	16
IRN	216	0	0	4	7	0	16	0	0	0	0	0
IRQ	603	0	0	12	39	6	156	0	0	3	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	4
OMA	78	0	0	2	28	0	50	0	0	2	6	4
PAK	5497	26	9	248	959	0	3789	19	7	310	579	173
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	0	0	0	17	0	0	0	0	5
SOM	1081	0	1	45	141	5	872	0	4	16	114	25
SUD	402	0	0	1	31	90	261	0	10	0	4	196
SYR	813	0	0	23	36	0	265	0	0	11	10	6
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	184	0	0	0	23	46
EMR	9798	26	12	352	1375	136	6737	33	44	379	930	567

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
2020 Total		33	4/Sep/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	1	04-Jan-20	04-Jan-20
			NIMROZ	1	28-Feb-20	28-Feb-20
			FARAH	1	06-May-20	06-May-20
			WASHER	1	04-Jan-20	04-Jan-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
2020 Total				11	04-Jan-20	01-Sep-20
2019	AFG	URUZGAN	TIRINKOT	1	02-Aug-19	02-Aug-19
			HILMAND	1	05-Jun-19	05-Jun-19
	PAK	PUNJAB	SANGIN	1	06-Mar-19	06-Mar-19
			DG KHAN	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
		SINDH	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	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		
2019 Total				24	06-Mar-19	24-Dec-19

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Table 5: Laboratory investigation of AFP cases with paralysis onset in 2020 up to Week (44/2020) / Ending on : (01/11/2020)

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	% 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	3118	346	20	462	2120	170		50	86			29	110		79	1		2		52	15%	93%	100%	97%	01/11/2020
Bahrain	NPL Oman / CDC	10			1	9																9%	100%		0%	26/10/2020
Djibouti	NPL Kenya / CDC	4					1	3																		25/10/2020
Egypt***	RRL Egypt	754	20	12	79	590	38	15		8						13		9	3			10%	95%	100%	99%	29/10/2020
Iran	NPL Iran / CDC	484	6		5	463	8	2		3						4						1%	100%	100%	100%	31/10/2020
Iraq	RRL Egypt	357	1		30	305	20													1		8%	95%	100%	98%	30/10/2020
Jordan	NPL Jordan / RRL EGYPT	31			5	25	1															16%	100%		100%	28/10/2020
Kuwait	RRL Kuwait / RIVM	29				24	2	3														1%	79%		92%	29/10/2020
Lebanon	NPL Jordan / RRL EGYPT	38			5	33																12%	97%		100%	28/10/2020
Libya	RRL Tunisia / RIVM	65	4			61										3	1					0%	100%	100%	65%	15/09/2020
Morocco	NPL Morocco / RRL Tunisia	64			1	58		5														1%	100%		98%	23/10/2020
Oman	NPL Oman / CDC	16			2	14																12%	100%		100%	26/10/2020
Pakistan	RRL Pakistan	9272	726	45	1310	6840	327	21	73	153			281	82		239		1	3	2	33	13%	93%	99%	97%	01/11/2020
Palestine & UNRWA		11				11																0%	36%		100%	18/10/2020
Qatar	NPL Oman / CDC	2				2																0%	100%		100%	26/10/2020
Saudi Arabia	NPL Saudi Arabia / CDC	128	1			115	12									1						0%	100%	100%	100%	01/11/2020
Somalia	NPL Kenya / CDC	311	20	5	48	232		5		3	1			7		14				3		18%	5%		97%	01/11/2020
Sudan	NPL Sudan / RRL Egypt	541	42		64	370	21	45		1			20	36								14%	99%	100%	53%	29/10/2020
Syria	NPL Syria / RRL Egypt	279	12	1	12	246	8															4%	100%			29/10/2020
Tunisia	RRL Tunisia	21				20		1														0%	100%		95%	15/09/2020
U.A.E	NPL Oman / CDC	16				16																0%	100%		50%	26/10/2020
Yemen	NPL Kenya / CDC	178	24		42	108	4			2	17					5				1		25%	96%	21%	0%	31/10/2020
Total EMR 2020		15729	1202	83	2066	11662	612	100	123	256	18		330	235		358	2	1	14	6	89	13%	92%	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

** 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	30
	Wild+cVDPV2					3
	cVDPV2					87
	EV/SL	177	265	248	200	145
	Negative	6	9	5	3	3
AFG Total		185	316	336	259	327
EGY	aVDPV2					1
	EV/SL	492	481	508	666	387
	Negative	36	41	32	34	31
	Pending					21
	aVDPV3					1
	aVDPV1					1
EGY Total		528	522	540	700	443
IRN	Wild				3	
	EV/SL		5	51	65	28
	Negative		1	3	3	1
	Pending					2
IRN Total			6	54	71	31
JOR	EV/SL	2	29	36	36	17
	Negative		2			1
	Pending					2
JOR Total		2	31	36	36	20
KUW	EV/SL			3	3	
	Pending					8
KUW Total				3	11	
LEB	EV/SL	2	26	44	44	14
	Negative	2	1	1	3	2
	Pending					3
LEB Total		4	27	45	47	19
PAK	Wild	59	105	139	367	325
	Wild+cVDPV2	2			10	48
	Wild+aVDPV2	1	1		2	3
	cVDPV2	2			29	14
	aVDPV2	3	4			4
	EV/SL	456	523	531	420	233
	Negative	6		3	4	4
	Pending					51
PAK Total		529	633	673	832	682
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
SOM Total			36	213	63	65
SUD	cVDPV2					8
	EV/SL			15	42	12
	Negative				1	2
	Pending				17	18
SUD Total				15	60	40
SYR	EV/SL		4	81	155	143
	Negative			21	30	16
	Pending					10
SYR Total			4	102	185	169
TOTAL		1248	1575	2017	2264	1796

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		
	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	11	1/Jan/20	6/Sep/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	
			NANGARHAR	2	26/Jan/20	6/Oct/20	
			Wild+cVDPV2	KANDAHAR	1	9/Jul/20	9/Jul/20
			NANGARHAR	2	8/Jan/20	25/Jul/20	
			cVDPV2	HILMAND	3	27/May/20	3/Aug/20
			KABUL	14	26/Apr/20	5/Sep/20	
			KANDAHAR	8	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	50	7/Jan/20	22/Aug/20			
	PAKTYA	1	26/Jul/20	26/Jul/20			
	AFG Total		120	1/Jan/20	6/Oct/20		
	EGY	aVDPV2	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	82	1/Jan/20	12/Oct/20	
			GBALISTAN	1	12/May/20	12/May/20	
			ISLAMABAD	4	16/Jan/20	12/Oct/20	
			KPAKHTUNKHWA	17	28/Jan/20	12/Oct/20	
			PUNJAB	109	4/Jan/20	12/Oct/20	
			SINDH	111	3/Jan/20	14/Oct/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	
			SINDH	33	3/Jan/20	14/Sep/20	
			cVDPV2	BALUCHISTAN	1	2/Jun/20	2/Jun/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	BALUCHISTAN	1	16/Aug/20	16/Aug/20
			KPAKHTUNKHWA	2	10/Apr/20	29/Jul/20	
			PUNJAB	1	4/May/20	4/May/20	
			PAK Total		391	1/Jan/20	14/Oct/20
			SOM	cVDPV2	BANADIR	22	5/Jan/20
	BAY	2			19/Jun/20	20/Jun/20	
	LOWER JUBA	1			8/Sep/20	8/Sep/20	
	SOM Total		25	5/Jan/20	26/Sep/20		
SUD	cVDPV2	KHARTOUM	8	29/Mar/20	9/Aug/20		
		SUD Total	8	29/Mar/20	9/Aug/20		
2020 Total			545	1/Jan/20	14/Oct/20		

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

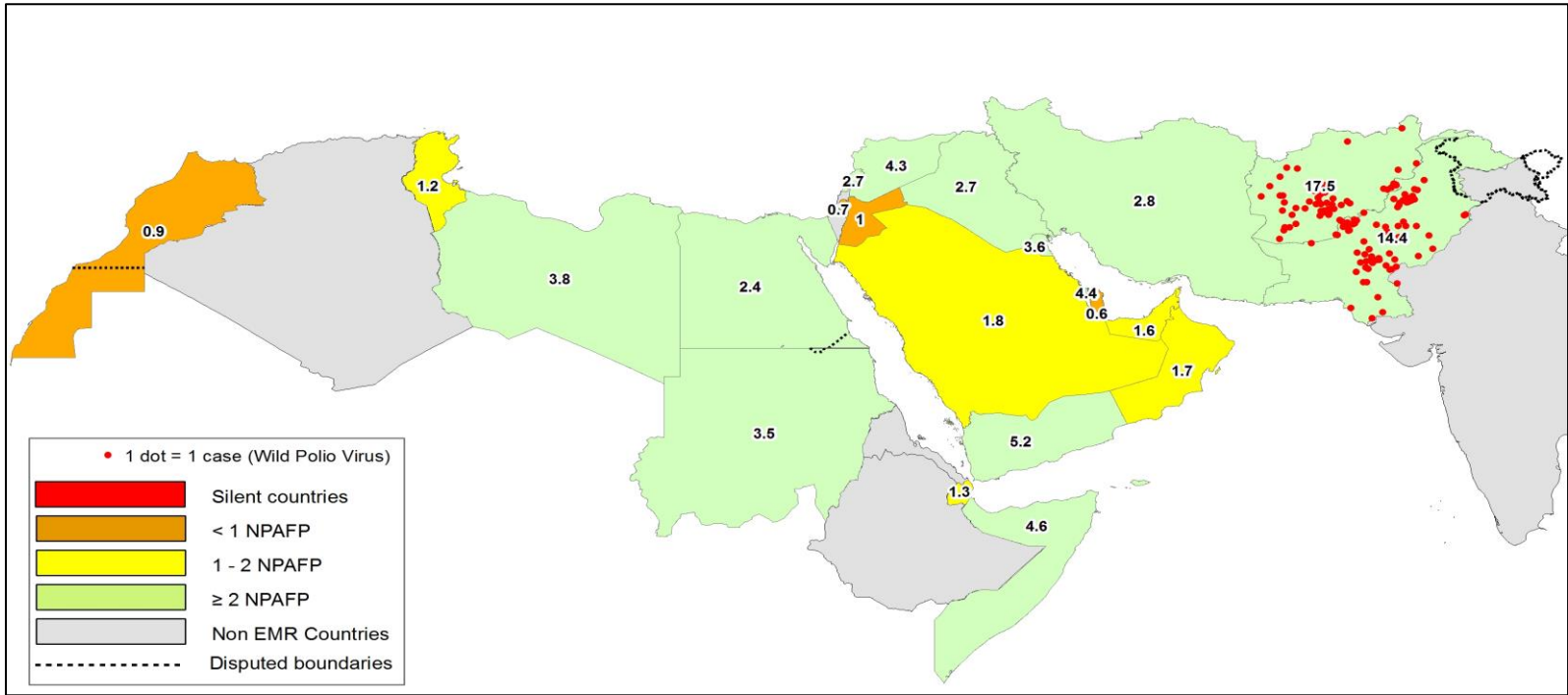


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2020 - 01/11/2020

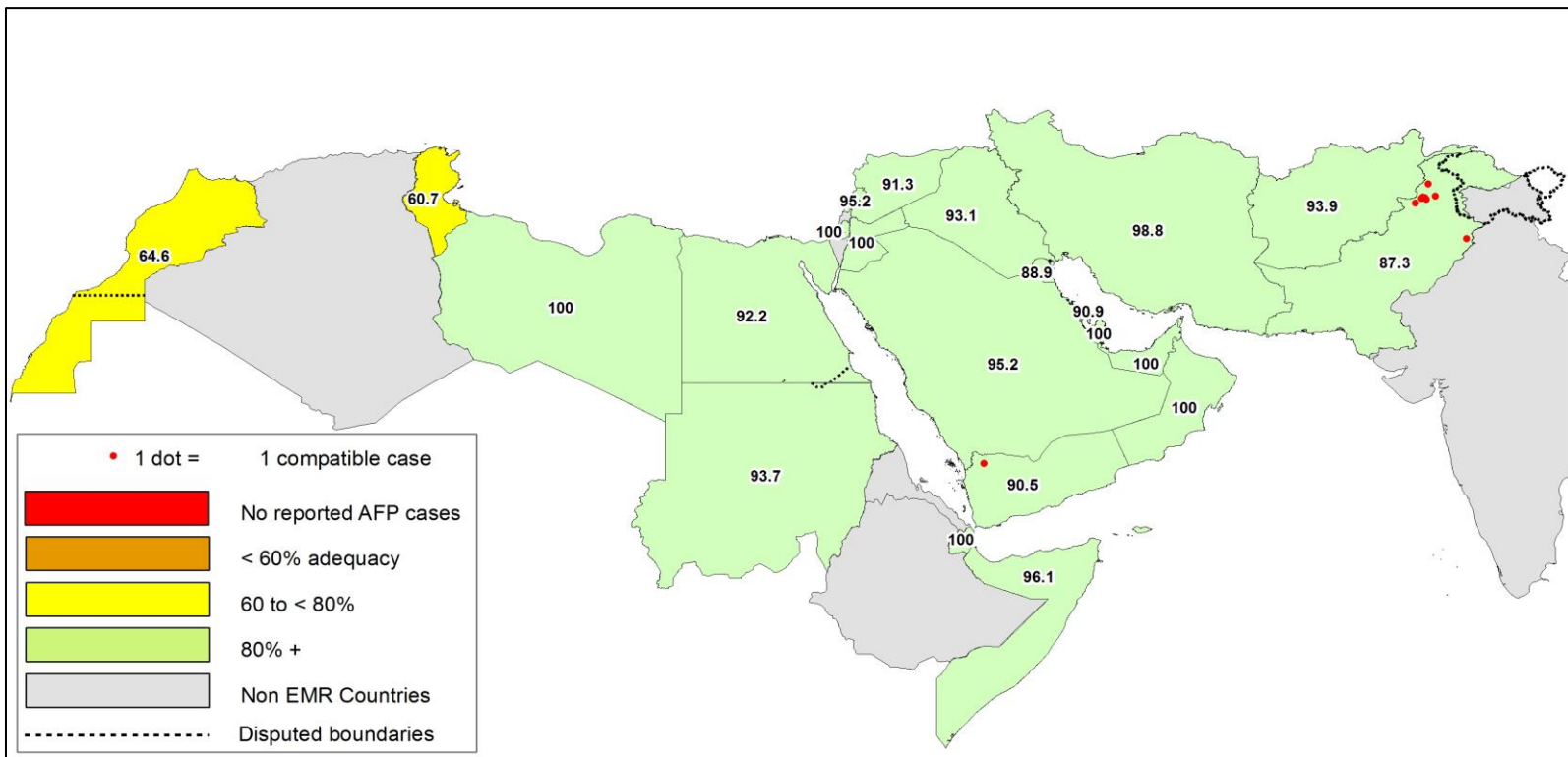


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2019 - 2020

Year	COUNTRY	Count	First Case	Last Case
2020	AFG	53	4-Jan-20	13-Sep-20
	PAK	80	1-Jan-20	4-Oct-20
2020 Total		133	1-Jan-20	4-Oct-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 - 01/11/2020

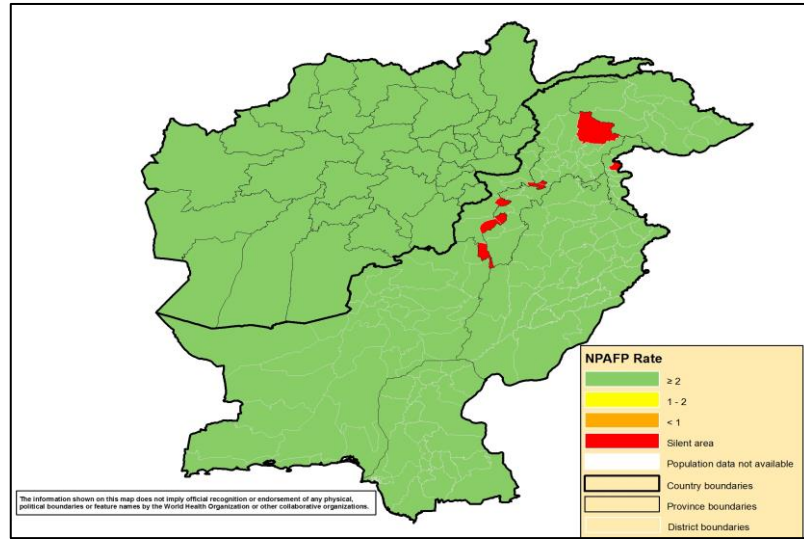


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2020 - 01/11/2020

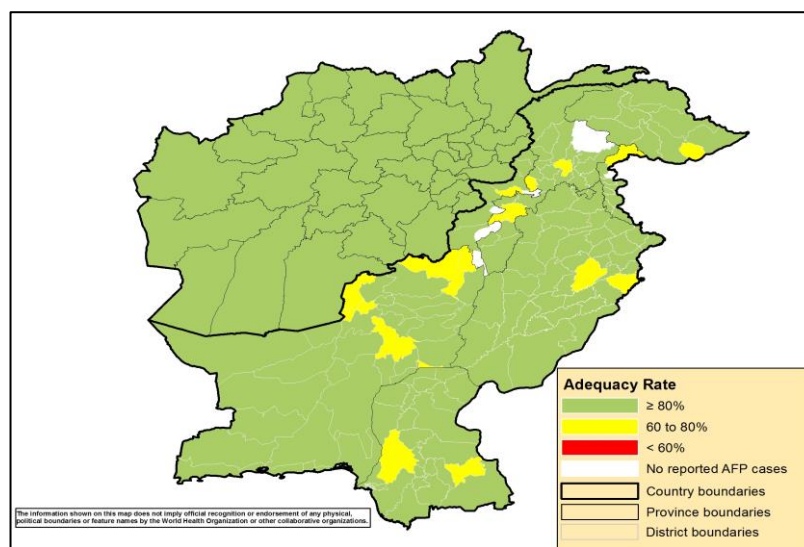
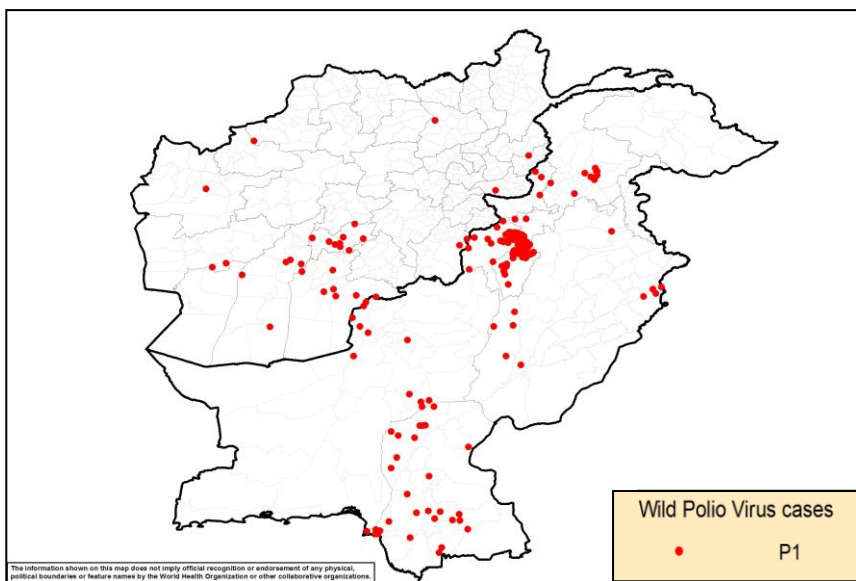
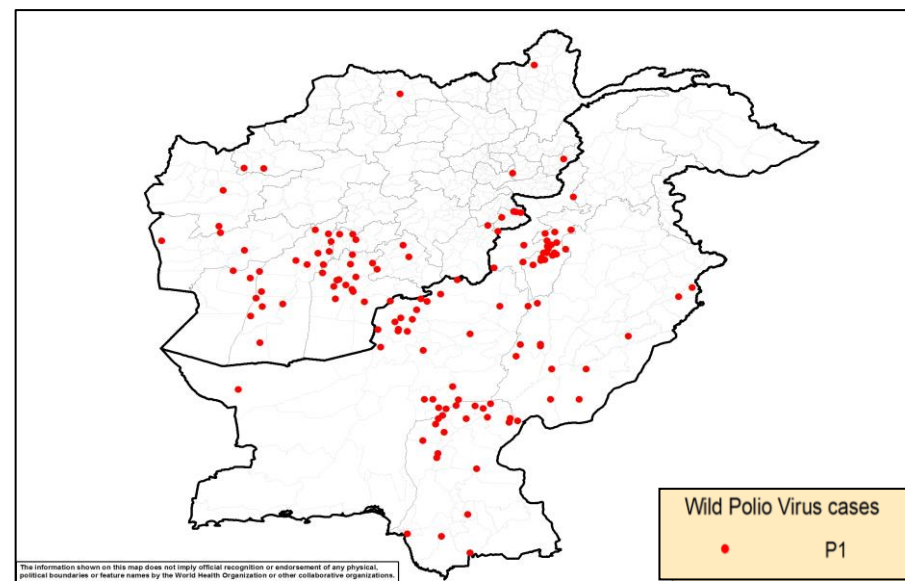


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



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



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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
	FARAH	ANARDARA	1	6-May-20	6-May-20
		BAKWA	1	4-Feb-20	4-Feb-20
		BADGHIS	QALA-E-NAW	1	5-Sep-20
	BADGHIS	QADIS	1	13-May-20	13-May-20
		KUNAR	SHIGAL WA SHEL TAN	1	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	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
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			53	4-Jan-20	13-Sep-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
	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	
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

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	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	MUZFARGARH	1	4-Oct-20	4-Oct-20
	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	
		2020 Total			80	1-Jan-20
	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
		QUETTA	1	6-Jul-19	6-Jul-19	
		LAHORE	5	20-Jan-19	28-Dec-19	
PUNJAB		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		
2019 Total				147	15-Jan-19	31-Dec-19

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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	LOWER JUBA	1	29-Aug-20	29-Aug-20	
		MIDDLE SHABELLE	1	17-Jul-20	17-Jul-20	
		BAY	1	3-Sep-20	3-Sep-20	
		BANADIR	5	18-Jun-20	25-Aug-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	8	28-Jul-20	2-Sep-20	
		GEZIRA	4	9-Jul-20	28-Aug-20	
		RIVER NILE	3	29-Jun-20	18-Aug-20	
		RED SEA	5	29-Apr-20	16-Aug-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	
		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	
		AFG	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		17	4-Aug-20	5-Sep-20	
	HILMAND		2	1-Aug-20	16-Aug-20	
	JAWZIAN		1	4-Aug-20	4-Aug-20	
	KABUL		4	6-Jul-20	24-Aug-20	
	NURISTAN		2	21-Jun-20	13-Jul-20	
	NIMROZ		3	6-Jul-20	8-Aug-20	
	KHOST		8	5-Jul-20	26-Aug-20	
	PAKTYA		4	18-Jun-20	5-Sep-20	
	KUNDUZ		1	28-Aug-20	28-Aug-20	
	PAKTIKA		2	25-Aug-20	4-Sep-20	
	GHAZNI		1	29-Aug-20	29-Aug-20	
	BADAKHSAN		1	23-Apr-20	23-Apr-20	
	LAGHMAN		13	20-May-20	25-Aug-20	
	PARWAN		1	4-Sep-20	4-Sep-20	
	KUNAR		8	6-Apr-20	11-Jul-20	
	NANGARHAR		44	5-Feb-20	29-Jul-20	
	PAK		SINDH	20	2-May-20	10-Sep-20
		BALUCHISTAN	2	29-Feb-20	19-Aug-20	
		PUNJAB	16	5-Feb-20	3-Sep-20	
		KHYBER PAKHTUNKHWA	42	2-Jan-20	24-May-20	
	Total 2020			248	2-Jan-20	10-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
			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		
Total 2019			25	15-Mar-19	28-Dec-19	

