

Highlights of Polio Fax Bulletin No. 1181 for Week 20 2021

I. Salient features this week

1. Polio eradication teams at the Regional and Country levels continue to contribute to the COVID19 Response, particularly in areas of surveillance (field and laboratory), data analysis, communications and coordination.
2. No new wild poliovirus type-1 (WPV1) cases or new positive environmental samples reported this week.
3. No new circulating vaccine derived poliovirus type-1 (cVDPV1) cases reported this week.
4. No new circulating vaccine derived poliovirus type-2 (cVDPV2) cases reported but one cVDPV2 positive environmental sample from Pakistan reported this week.

II. Wild Poliovirus Type-1 (WPV1) Transmission

WPV1 transmission continues though restricted globally to only two countries in the EMR namely Pakistan and Afghanistan – the remaining polio endemic countries in the world.

As of week 20 of 2021, two WPV1 cases were reported [72 in the same period in 2020; Afghanistan – 20, Pakistan - 52].

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

Afghanistan:

In 2021 to date, **1 WPV1** case has been reported so far from Southeast Region with onset of paralysis **1 January 2021**.

Pakistan:

In 2021 to date, **1 WPV1** case has been reported so far from Balochistan province with date of onset **27 January 2021**.

- b. *Environmental samples*: No new WPV1 positive environmental samples reported this week.

- **Afghanistan**: In 2021 to date, there is **1** WPV1 combined with cVDPV2 positive environmental sample reported with collection date on **23 February 2021**.
- **Pakistan**: In 2021, there are **55** WPV1 positive environmental samples (including 16 mixture of WPV1 and cVDPV2 and 4 mixture of WPV1 and aVDPV2) with most recent sample collected on **12 April 2021**.

III. Vaccine Derived Polioviruses (VDPVs): No new VDPV cases reported, but one cVDPV2 and four aVDPV2 positive environmental samples from Pakistan reported this week.

In 2021 to date, two cVDPV1 reported from Yemen and 45 cVDPV2 cases were reported (Afghanistan 38 and Pakistan 7).

1. **Outbreaks**: *Six countries have VDPVs outbreaks, five with cVDPV2 and one with cVDPV1.*

Afghanistan: No new VDPV2 cases or positive environmental samples were reported this week.

In 2021 to date, there are **38 cVDPV2** cases: 15 from West Region, 11 from South Region, seven from South East Region, three from Central Region and two from North Region. **The most recent case had onset on 22 April 2021.**

Environment: In 2021 to date, there are **39** cVDPV2 positive environmental samples including 1 mixture of WPV1 and cVDPV2 reported with **most recent sample collected on 25 April 2021**.

Pakistan: No new VDPV2 cases reported, but one cVDPV2 and four aVDPV2 positive environmental samples were reported this week.

In 2021, there are **seven** cVDPV2 cases reported three from Balochistan, two from Sindh and one each from Khyber Pakhtunkhwa (KP) and Punjab provinces with **most recent onset on 8 April 2021**.

Environment: In 2021 to date; there are **31** cVDPV2 positive samples including 16 mixture of WPV1 and cVDPV2 with **most recent sample collected on 12 April 2021**.

SOMALIA: No new cVDPV2 isolates from human or environmental samples reported this week.

No VDPV isolates from human or environmental sample in 2021 so far.

The most recent isolate was from a case having onset of paralysis on 25 October 2020.

SUDAN: No new cVDPV2 isolates from human or environmental samples reported this week.

No VDPV isolates from human or environmental sample in 2021 so far.

The most recent isolate was from a case having onset of paralysis on 18 December 2020.

Egypt: No new cVDPV2 isolates from human or environmental samples reported this week.

In 2021 to date, **nine** cVDPV2 positive environmental samples are reported. These include two each from Aswan, Qena and Alexandria provinces; and one each from Beni Suef, Kafr El Sheikh and Giza provinces. The samples are genetically related with each other and belong to CHA-NDG-1 emergence (importation from Sudan/Chad). **Date of the recent most cVDPV2 positive environmental sample is 25 February 2021. There is no child paralyzed due to cVDPV2.**

YEMEN: No new cVDPV1 cases reported this week.

In 2021 to date, **2** cVDPV1 cases were reported with most recent date of onset on 15 February 2021.

VDPV Events: There is one country having an Event due to VDPV2. Response per WHO's SOPs are ongoing.

Iran: In 2021 to date, **1** cVDPV2 positive environmental sample was collected from Zehedan district, Sistan & Balochistan province. The isolate is genetically related with earlier Pakistan virus. ***Date of collection was on 20 February 2021. There is no child paralyzed due to cVDPV2.***

IV. Surveillance performance indicators

In 2021, 11 out of 22 member states (14 in the same period in 2020) are meeting the global target of both key surveillance indicators: non polio AFP rate of 2/100,000 children aged below 15 years and percent AFP cases with adequate specimen 80% and above.

- Morocco, Oman, and Tunisia are missing both indicators as their non-polio AFP rates are 0.4, 0.8 and 1.1 and the percentages of AFP cases with adequate stool specimens is 38.5%, 75.0% and 66.7% respectively.
- Bahrain, Jordan, Lebanon, Palestine, Qatar, Saudi Arabia, and United Arab Emirates have a non-polio AFP rate of 1.7, 0.2, 1.4, 0.4, 1.1, 1.5, and 0.7 respectively.
- Djibouti has AFP cases with adequate stool specimens is 75.0%.

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AFP SURVEILLANCE

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

Country	Reported AFP cases by week of onset - Week (20/21) / Ending on : 23/05/2021														
	Total AFP 2019	Total AFP 2020	Total AFP to date, 2021	W09 7 Mar 21	W10 14 Mar 21	W11 21 Mar 21	W12 28 Mar 21	W13 4 Apr 21	W14 11 Apr 21	W15 18 Apr 21	W16 25 Apr 21	W17 02 May 21	W18 09 May 21	W19 16 May 21	W20 23 May 21
Afghanistan	3768	3972	1547	98	83	77	83	85	100	81	90	84	59	31	4
Bahrain	17	15	2	0	1	0	1	0	0	0	0	0	0	0	0
Djibouti	5	5	4	0	0	0	0	0	1	0	0	0	0	0	0
Egypt	1343	1009	452	38	49	46	21	27	18	14	27	8	10	14	4
Iran	1070	618	226	14	5	8	8	10	12	11	9	9	6	2	0
Iraq	1157	476	263	16	13	6	16	14	18	9	5	7	6	3	
Jordan ****	113	32	3	0	0	0	0	0	1	0	0				
Kuwait	48	36	12	0	0	1	0	0	1	2	1	0	0		
Lebanon ****	87	49	9	0	0	1	0	1	0	0	1	0	1		
Libya	107	95	32	0	3	3	4	4	3	2	2	0	1	0	1
Morocco	247	87	26	1	4	3	3	2	0	2	2	1	1	0	
Oman	30	22	4	0	0	0	0	0	0	1	2	0	0	0	
Pakistan	15218	11970	3960	239	206	212	246	238	208	178	190	127	103	15	1
Palestine ****	62	16	3	0	0	0	0	0	0	0	0	0	0	0	0
Qatar	9	9	2	0	1	0	0	0	0	0	0	1	0	0	0
Saudi Arabia	236	200	49	2	2	3	3	2	1	0	0	0	0	0	0
Somalia	361	376	131	9	6	7	5	3	4	5	3	8	4	3	1
Sudan	608	733	202	10	16	10	14	8	9	7	4	6	0	0	
Syria ****	377	343	140	11	12	7	16	8	8	9	5	8	1	5	2
Tunisia	79	40	12	0	1	1	0	3	0	1	1	0	0	0	
U.A.E	50	19	4	2	0	0	0	0	0	0	0				
Yemen	779	825	269	14	28	15	19	9	9	10	8	6	5	1	
Total EMR	25771	20947	7352	454	430	400	439	414	393	332	350	265	197	74	13

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2019	Total year 2020	23/05		Confirmed polio cases by month of onset											
			2020	2021	June 2020	July 2020	August 2020	September 2020	October 2020	November 2020	December 2020	January 2021	February 2021	March 2021	April 2021	May 2021
Afghanistan	29	56	20	1	10	7	6	6	3	0	0	1	0	0		
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	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	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	0
Morocco	0	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	0
Pakistan	147	84	52	1	6	6	5	7	4	2	0	1	0	0	0	0
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	0
Somalia	0	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	0
Syria ****	0	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	0
Yemen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total EMR	176	140	72	2	16	13	11	13	7	2	0	2	0	0	0	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 2020 & 2021 up to Week (20/21) / Ending on : 23/05/2021

COUNTRY	2020												2021												Latest line List Date				
	AFP										Specimen		Wild cases ****		AFP											Specimen		Wild cases ****	
	Total AFP cases onset 2020	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 2021	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	Wild P1 Poliovirus	Wild P3 Poliovirus					
		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	3972	56	3	0	3600	314	18.5	0	0	92.6	56	0	1547	1	0	214	1292	40	18.3	18	0	93.8	1	0	23/05/2021				
Bahrain	15	0	0	0	15	0	5.0	0	0	93.3	0	0	2	0	0	2	0	0	1.7	0	0	100.0	0	0	23/05/2021				
Djibouti	5	0	0	0	5	0	1.4	0	0	100.0	0	0	4	0	0	0	4	0	2.6	0	0	75.0	0	0	17/05/2021				
Egypt	1009	0	0	0	1009	0	2.6	0	0	94.6	0	0	452	0	0	109	343	0	2.9	5	0	86.5	0	0	20/05/2021				
Iran	618	0	0	0	618	0	3.0	0	0	98.5	0	0	226	0	0	16	210	0	2.8	0	0	94.7	0	0	23/05/2021				
Iraq	476	0	0	0	476	0	2.8	0	0	93.3	0	0	263	0	0	24	239	0	3.9	3	0	94.7	0	0	22/05/2021				
Jordan	32	0	0	0	32	0	0.8	0	0	96.9	0	0	3	0	0	1	2	0	0.2	0	0	100.0	0	0	29/04/2021				
Kuwait	36	0	0	0	36	0	4.1	0	0	91.7	0	0	12	0	0	4	8	0	3.5	0	0	83.3	0	0	09/05/2021				
Lebanon	49	0	0	0	49	0	3.1	0	0	89.8	0	0	9	0	0	4	5	0	1.4	0	0	88.9	0	0	12/05/2021				
Libya	95	0	0	0	94	1	3.6	0	0	100.0	0	0	32	0	0	4	28	0	3.2	0	0	100.0	0	0	22/05/2021				
Morocco	87	0	0	0	87	0	0.9	0	0	78.2	0	0	26	0	0	22	4	0	0.7	3	1	38.5	0	0	18/05/2020				
Oman	22	0	0	0	22	0	1.9	0	0	100.0	0	0	4	0	0	0	4	0	0.8	0	0	75.0	0	0	17/05/2021				
Pakistan	11970	84	27	11	11708	142	15.2	11	0	85.4	84	0	3960	1	2	446	3498	13	10.0	82	0	88.5	1	0	23/05/2021				
Palestine	16	0	0	0	16	0	0.9	0	0	100.0	0	0	3	0	0	3	0	0	0.4	3	0	100.0	0	0	16/05/2021				
Qatar	9	0	0	0	9	0	2.1	0	0	33.3	0	0	2	0	0	2	0	0	1.1	0	0	100.0	0	0	23/05/2021				
Saudi Arabia	200	0	0	0	200	0	2.4	0	0	96.0	0	0	49	0	0	14	35	0	1.5	1	0	93.9	0	0	23/05/2021				
Somalia	376	0	0	1	360	15	4.7	1	0	94.7	0	0	131	0	0	19	112	0	4.0	2	2	96.2	0	0	23/05/2021				
Sudan	733	0	0	0	675	58	3.8	0	0	92.9	0	0	202	0	0	32	170	0	2.6	4	0	95.0	0	0	20/05/2021				
Syria	343	0	0	0	343	0	4.3	0	0	91.0	0	0	140	0	0	20	120	0	4.6	0	0	92.9	0	0	22/05/2021				
Tunisia	40	0	0	0	40	0	1.4	0	0	55.0	0	0	12	0	0	9	3	0	1.1	0	0	66.7	0	0	21/05/2021				
U.A.E	19	0	0	0	19	0	1.5	0	0	100.0	0	0	4	0	0	4	0	0	0.7	2	0	100.0	0	0	26/04/2021				
Yemen	825	0	1	1	792	31	5.4	1	1	88.7	0	0	269	0	0	134	133	2	4.5	12	2	91.1	0	0	22/05/2021				
EMR	20947	140	31	13	20205	561	8.0	13	1	88.6	140	0	7352	2	2	1083	6210	55	6.6	135	5	90.2	2	0					
2019	25771	176	7	0	25559	29	10.2	0	0	89.5	176	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

***** VDPV cases including all types (ambiguous, immune deficient & circulating)

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COUNTRY	2020						2021					
	# OF CONTACTS	LAB RESULTS					# OF CONTACTS	LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1252	14	79	52	270	0	560	0	11	50	77	19
BAH	1	0	0	0	0	0	0	0	0	0	0	0
DJI	2	0	0	0	0	0	1	0	0	0	0	0
EGY	330	0	0	12	32	1	219	0	0	29	16	36
IRN	46	0	0	0	0	0	79	0	0	11	1	3
IRQ	168	0	0	4	10	0	72	0	0	3	6	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	5	0	0	0	0	0	13	0	0	0	0	4
LIB	19	0	0	0	0	0	0	0	0	0	0	0
MOR	8	0	0	0	0	4	14	0	0	0	0	14
OMA	64	0	0	2	8	1	5	0	0	1	0	4
PAK	4653	21	19	379	787	1	1687	0	2	128	202	74
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	18	0	0	0	0	6	8	0	0	0	0	8
SOM	1109	0	10	23	149	7	388	0	0	0	26	69
SUD	364	0	18	3	29	11	50	0	0	0	0	34
SYR	280	0	0	11	15	0	26	0	0	3	3	6
TUN	6	0	0	0	0	1	1	0	0	0	0	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	230	0	0	7	41	0	104	0	0	2	4	77
EMR	8555	35	126	493	1341	32	3227	0	13	227	335	348

Table 4 (B): Most recent wild contacts in EMRO, 2020-2021

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2020	Afghanistan	14	26/Jul/20
	Pakistan	21	14/Dec/20
2020 Total		35	14/Dec/20

Table 4 (C): Number of distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2020-2021

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
				KHASHROD	1	28-Feb-20	28-Feb-20
			FARAH	1	06-May-20	06-May-20	
	PAK	BALOCHISTAN	KSAIFULLAH	1	01-Sep-20	01-Sep-20	
			PUNJAB	LAHORE	1	24-Jul-20	24-Jul-20
				DG KHAN	2	18-Jan-20	05-Jul-20
			KHYBER PAKHTUNKHWA (KP)	KARAK	1	20-Jan-20	20-Jan-20
				SINDH	2	07-Feb-20	14-Jul-20
	2020 Total				11	04-Jan-20	01-Sep-20

Table 5: Laboratory investigation of AFP cases with paralysis onset in 2020 up to Week (20/2021) / Ending on : (23/05/2021)

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	1510	157	18	181	1020	81	2	1	45	1		68	36		56		1		3	11%	100%	99%	98%	23/05/2021	
Bahrain	NPL Oman / CDC																								17/05/2021	
Djibouti	NPL Kenya / CDC	4			1																100%			100%	17/05/2021	
Egypt***	RRL Egypt	429	54	3	30	289	25	28		2			53			1		1	1		6%	99%	100%	99%	20/05/2021	
Iran	NPL Iran / CDC	246	9		3	214	20			1			6			2					1%	100%	100%	100%	22/05/2021	
Iraq	RRL Egypt	259	5		10	234	9	1		1						8					4%	100%	38%	98%	21/05/2021	
Jordan	NPL Jordan / RRL EGYPT	3			1	2															33%	100%		100%	23/05/2021	
Kuwait	RRL Kuwait / RIVM	12				12															0%	100%		100%	20/05/2021	
Lebanon	NPL Jordan / RRL EGYPT	8				6	2														0%	100%			23/05/2021	
Libya	RRL Tunisia / RIVM	28				28															0%	100%		96%	19/05/2021	
Morocco	NPL Morocco / RRL Tunisia	11				11															3%	100%		100%	21/05/2021	
Oman	NPL Oman / CDC	5				5															0%	100%		100%	17/05/2021	
Pakistan	RRL Pakistan	3922	254	24	550	2895	170	16	1	81			145	11		89		2	1		11%	100%	100%	97%	23/05/2021	
Palestine & UNRWA		3				3															0%	0%		100%	16/05/2021	
Qatar	NPL Oman / CDC	1				1															0%	100%		100%	17/05/2021	
Saudi Arabia	NPL Saudi Arabia / CDC	54				53	1														0%	98%		100%	23/05/2021	
Somalia	NPL Kenya / CDC	131			12	100	7	12													11%	6%		96%	23/05/2021	
Sudan	NPL Sudan / RRL Egypt	198			25	163		10													12%	100%			09/05/2021	
Syria	NPL Syria / RRL Egypt	136	4		3	118	11														2%	100%		0%	22/05/2021	
Tunisia	RRL Tunisia	12				12															0%	100%		100%	19/05/2021	
U.A.E	NPL Oman / CDC	4				4															0%	100%		50%	17/05/2021	
Yemen	NPL Kenya / CDC	132	6		20	106				1	1					3		1			13%	100%	100%	1%	22/05/2021	
Total EMR 2021		7108	489	45	836	5276	326	69	2	131	2		272	47		159		2	3	1	4	10%	98%	99%	96%	
Total EMR 2020		20389	1681	93	3046	15556		4	129	352	32		509	468		462	2	3	18	11		14%	94%	97%	93%	

* 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	2021	
AFG	Wild	2	42	83	56	28	1	
	Wild+cVDPV2					7	2	
	aVDPV2					2	2	
	cVDPV2					167	38	
	Enteric	125	170	177	138	111	27	
	Negative	6	9	5	3	3	2	
AFG Total	Pending						10	
	SL1/3	36	94	71	60	31	4	
	SL2	16	1		2	64	76	
		185	316	346	259	452	160	
	EGY	aVDPV1					1	
		aVDPV2					1	
aVDPV3						1		
cVDPV2							9	
Enteric		354	322	321	397	288	45	
Negative		34	41	32	34	41	11	
EGY Total	Pending						44	
	SL1/3	79	159	187	269	212	16	
	SL2	60					92	
	VDPV2	1						
	VDPV3					1		
	(blank)						1	
	528	522	540	700	545	238		
IRN	Wild				3		1	
	cVDPV2					3	7	
	Enteric		1	29	55	23		
	Negative		1	3	3		3	
	Pending						2	
	SL1/3		4	22	10	16	5	
IRN Total	SL2					1	18	
	Enteric	1	13	27	24	9	3	
	Negative		2			1		
	Pending						2	
	SL1/3	1	16	9	12	14	9	
	SL2	2	31	16	16	25	14	
JOR	Enteric			2	9			
	SL1/3			1	4			
	(blank)				4			
				3	14			
	Enteric	2	12	24	15	16	8	
	Negative	2	1	1	3	2	1	
JOR Total	Pending						4	
	SL1/3		14	20	29	13	3	
	SL2	4	27	45	47	31	16	
	aVDPV1						1	
	Wild	59	105	139	367	337	35	
	Wild+cVDPV2	2			10	91	16	
PAK	Wild+aVDPV2	1	1		2	6	4	
	aVDPV2	3	4		4	16	17	
	cVDPV2	2			29	44	15	
	Enteric	300	392	404	308	135	55	
	Negative	6		3	4	6	1	
	Pending						58	
PAK Total	SL1/3	77	106	127	90	49	11	
	SL2	79	25		22	146	121	
		529	633	623	672	630	234	
	aVDPV2			2	1			
	cVDPV2+cVDPV3		2	18	5	26		
	cVDPV3			11				
SOM	Enteric		16	25	22	12	11	
	Negative		14	29	29	34	21	
	Pending						5	
	SL1/3		2	8	6	6	1	
	SL2		2	10		5	1	
			36	213	63	63	41	
SUD	cVDPV2			15		14		
	Enteric				51	32	11	
	Negative				4	2	5	
	Pending						1	
	SL1/3				5	2	3	
	SL2							
SUD Total	Enteric		4	72	111	152	47	
	Negative			21	30	17	6	
	Pending						8	
	SL1/3			6	44	36	14	
	SL2			3				
			4	102	185	205	75	
SYR	Enteric						2	
	Negative						3	
	Pending						20	
	SL1/3						47	
	SL2						6	
							14	
SYR Total	Enteric						2	
	Negative						3	
	Pending						20	
	SL1/3						47	
	SL2						6	
							14	
TOTAL		1248	1875	2017	2267	2226	916	

Table 7: Environmental Wild/VDPV isolate by site 2020-2021

YEAR	COUNTRY	LAB RESULTS	PROVINCE	Count	First date	Last date	
2020	AFG	Wild	HILMAND	10	1/Jan/20	24/Aug/20	
			HIRAT	4	26/Apr/20	23/Aug/20	
			KABUL	1	26/Sep/20	26/Sep/20	
			KANDAHAR	9	28/Jan/20	25/Jun/20	
			KHOST	1	25/Apr/20	25/Apr/20	
		KUNDUZ	1	27/Sep/20	27/Sep/20		
		Wild+cVDPV2	NANGARHAR	2	26/Jan/20	6/Oct/20	
			HILMAND	1	6/Sep/20	6/Sep/20	
			KANDAHAR	4	25/Jun/20	6/Dec/20	
			NANGARHAR	2	8/Jan/20	25/Jul/20	
			HILMAND	34	27/May/20	27/Dec/20	
		cVDPV2	HIRAT	3	26/Sep/20	26/Dec/20	
			KABUL	19	26/Apr/20	5/Nov/20	
			KANDAHAR	35	9/Jul/20	27/Dec/20	
			KHOST	6	24/Jun/20	23/Nov/20	
			KUNAR	5	6/Jun/20	7/Nov/20	
		aVDPV2	KUNDUZ	2	23/Aug/20	24/Oct/20	
			LAGHMAN	4	24/Jul/20	6/Oct/20	
			NANGARHAR	58	7/Jan/20	23/Dec/20	
			PAKTYA	1	26/Jul/20	26/Jul/20	
	HILMAND		1	27/Sep/20	27/Sep/20		
	KABUL		1	26/Dec/20	26/Dec/20		
	AFG Total			204	1/Jan/20	27/Dec/20	
	EGY		aVDPV2	GIZA	1	21/Sep/20	21/Sep/20
			EGY Total			1	21/Sep/20
	IRN		cVDPV2	S & B	3	3/Oct/20	25/Dec/20
IRN Total			3	3/Oct/20	25/Dec/20		
PAK	Wild	AJK	1	25/Feb/20	25/Feb/20		
		BALUCHISTAN	71	1/Jan/20	21/Sep/20		
		GBALISTAN	1	12/May/20	12/May/20		
		ISLAMABAD	5	16/Jan/20	10/Nov/20		
		KPAKHTUNKHWA	23	28/Jan/20	18/Dec/20		
		PUNJAB	122	4/Jan/20	28/Dec/20		
		SINDH	114	3/Jan/20	8/Dec/20		
		Wild+cVDPV2	BALUCHISTAN	27	1/Feb/20	21/Dec/20	
			KPAKHTUNKHWA	1	11/Mar/20	11/Mar/20	
			PUNJAB	14	4/Jan/20	12/Oct/20	
			SINDH	49	3/Jan/20	10/Dec/20	
			BALUCHISTAN	1	17/Dec/20	17/Dec/20	
		Wild+aVDPV2	PUNJAB	5	16/Mar/20	21/Dec/20	
			BALUCHISTAN	15	2/Jun/20	28/Dec/20	
			KPAKHTUNKHWA	5	10/Jan/20	15/Oct/20	
	PUNJAB		3	16/Jan/20	18/Dec/20		
	SINDH		21	8/Jun/20	10/Dec/20		
	aVDPV2	BALUCHISTAN	3	17/Sep/20	17/Nov/20		
		KPAKHTUNKHWA	6	10/Apr/20	2/Dec/20		
		PUNJAB	5	4/May/20	30/Dec/20		
SINDH		2	13/Oct/20	3/Nov/20			
PAK Total			494	1/Jan/20	30/Dec/20		
SOM	cVDPV2	BANADIR	23	5/Jan/20	24/Oct/20		
	BAY	2	19/Jun/20	20/Jun/20			
	LOWER JUBA	1	8/Sep/20	8/Sep/20			
SOM Total			26	5/Jan/20	24/Oct/20		
SUD	cVDPV2	KHARTOUM	14	29/Mar/20	9/Nov/20		
	SUD Total			14	29/Mar/20	9/Nov/20	
2020 Total				742	1/Jan/20	30/Dec/20	
2021	AFG	Wild+cVDPV2	HILMAND	1	23/Feb/21	23/Feb/21	
			HILMAND	14	4/Jan/21	24/Mar/21	
			HIRAT	1	23/Mar/21	23/Mar/21	
			KABUL	1	6/Mar/21	6/Mar/21	
			KANDAHAR	17	5/Jan/21	25/Apr/21	
		aVDPV2	KUNDUZ	1	23/Feb/21	23/Feb/21	
			NANGARHAR	4	5/Jan/21	25/Apr/21	
			KABUL	1	3/Feb/21	3/Feb/21	
			KANDAHAR	1	7/Mar/21	7/Mar/21	
			AFG Total			41	4/Jan/21
	EGY	cVDPV2	ALEXANDRIA	2	10/Jan/21	25/Feb/21	
			ASWAN	2	20/Jan/21	9/Feb/21	
			BENI SUEF	1	27/Jan/21	27/Jan/21	
			GIZA	1	31/Jan/21	31/Jan/21	
			KAFR EL-SHEIKH	1	27/Jan/21	27/Jan/21	
			QENA	2	23/Jan/21	23/Feb/21	
	EGY Total			9	10/Jan/21	25/Feb/21	
	IRN	cVDPV2	S & B	1	20/Feb/21	20/Feb/21	
			IRN Total			1	20/Feb/21
	PAK	Wild	BALUCHISTAN	6	20/Jan/21	28/Feb/21	
			ISLAMABAD	3	11/Jan/21	17/Mar/21	
			KPAKHTUNKHWA	5	18/Jan/21	10/Mar/21	
			PUNJAB	12	4/Jan/21	5/Apr/21	
			SINDH	9	4/Jan/21	12/Apr/21	
			Wild+cVDPV2	BALUCHISTAN	11	2/Jan/21	12/Apr/21
				KPAKHTUNKHWA	1	11/Jan/21	11/Jan/21
		PUNJAB		2	11/Jan/21	18/Jan/21	
		Wild+aVDPV2	SINDH	2	2/Mar/21	10/Mar/21	
BALUCHISTAN			1	1/Jan/21	1/Jan/21		
PUNJAB			1	8/Jan/21	8/Jan/21		
cVDPV2		SINDH	2	12/Jan/21	4/Feb/21		
		BALUCHISTAN	10	1/Jan/21	2/Apr/21		
		KPAKHTUNKHWA	2	16/Jan/21	2/Mar/21		
		SINDH	3	12/Jan/21	9/Feb/21		
		aVDPV2	AK	1	16/Mar/21	16/Mar/21	
		KPAKHTUNKHWA	4	1/Mar/21	21/Apr/21		
	PUNJAB	7	1/Mar/21	19/Apr/21			
PAK Total			87	1/Jan/21	21/Apr/21		
2021 Total				138	1/Jan/21	25/Apr/21	

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2021 - 23/05/2021

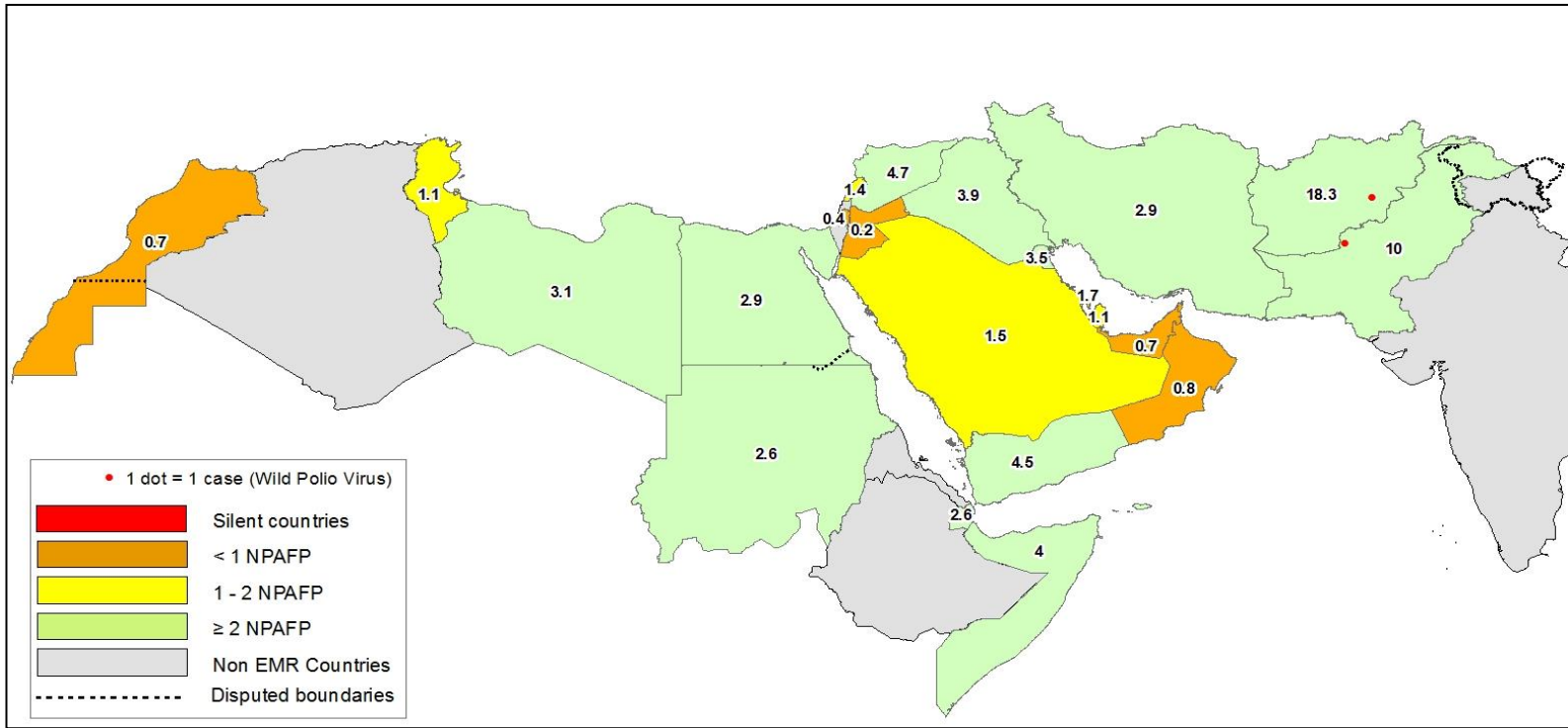


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2021 - 23/05/2021

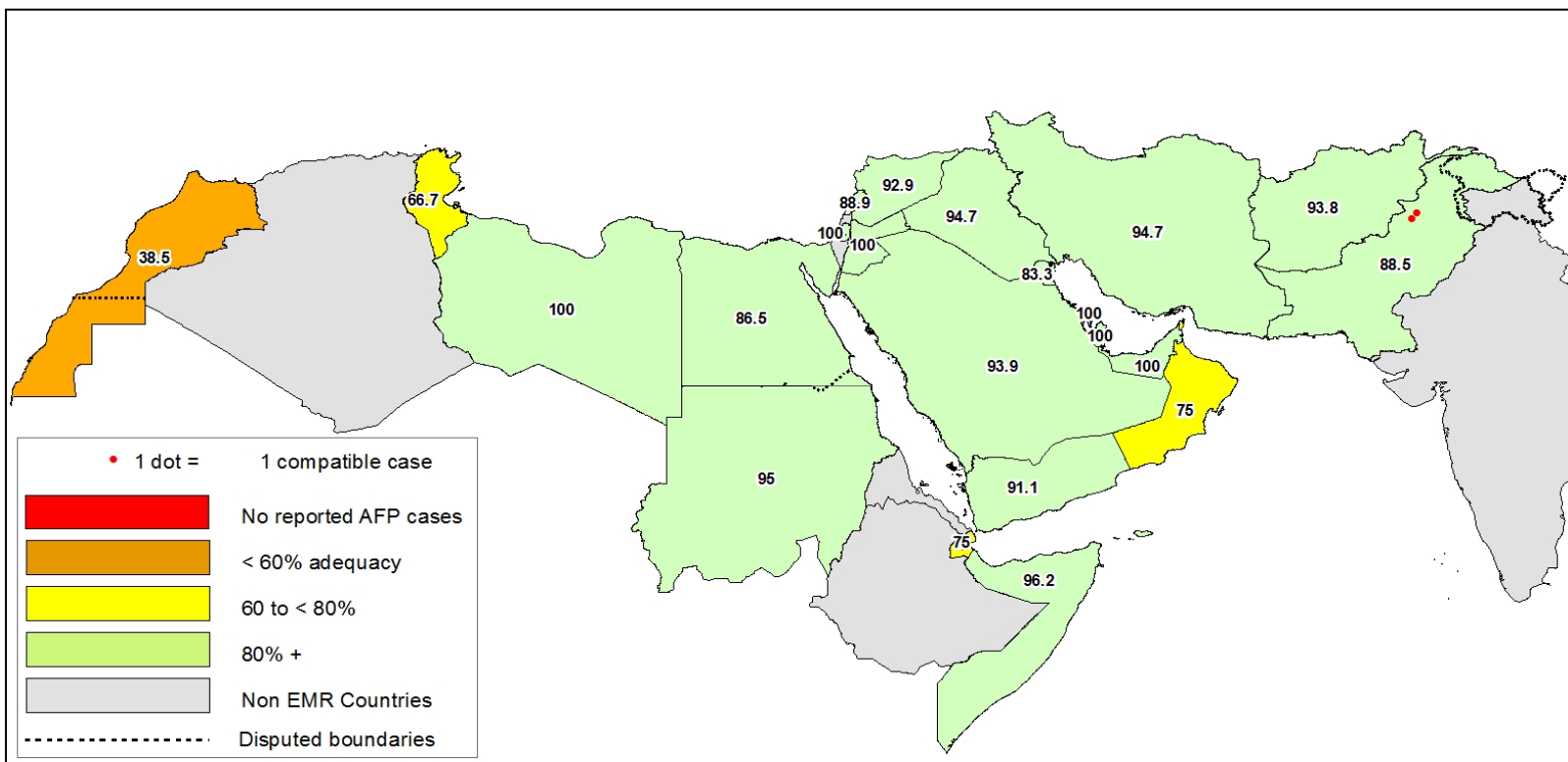


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2020 - 2021

Year	COUNTRY	Count	First Case	Last Case
2020	AFG	56	4-Jan-20	19-Oct-20
	PAK	84	1-Jan-20	23-Nov-20
2020 Total		140	1-Jan-20	23-Nov-20
2021	AFG	1	1-Jan-21	1-Jan-21
	PAK	1	27-Jan-21	27-Jan-21
2021 Total		2	1-Jan-21	27-Jan-21

Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2021 - 23/05/2021

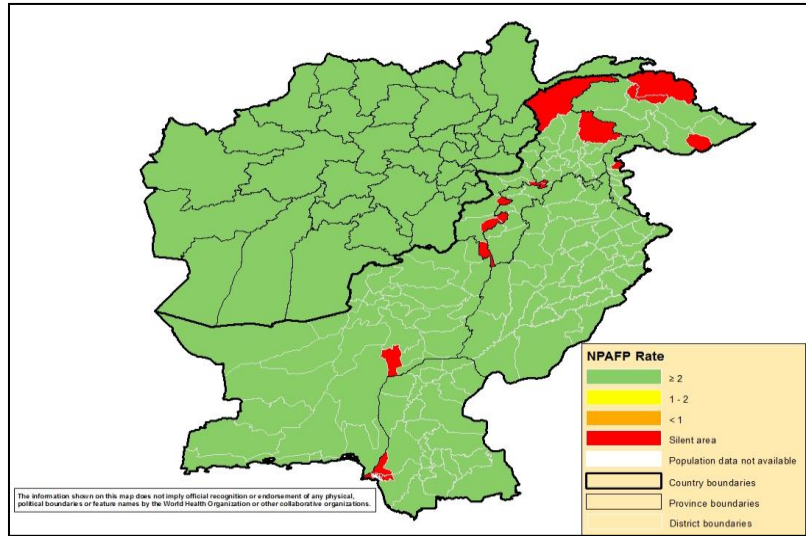


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2021 - 23/05/2021

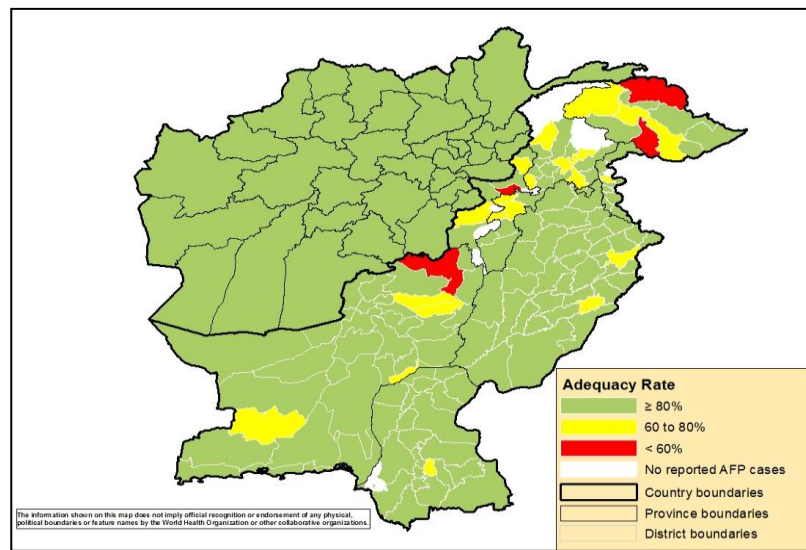
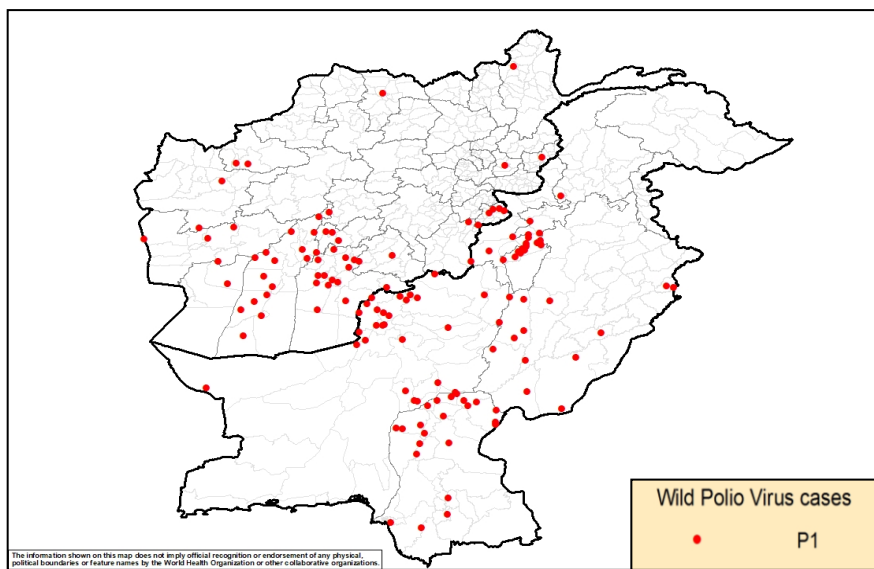
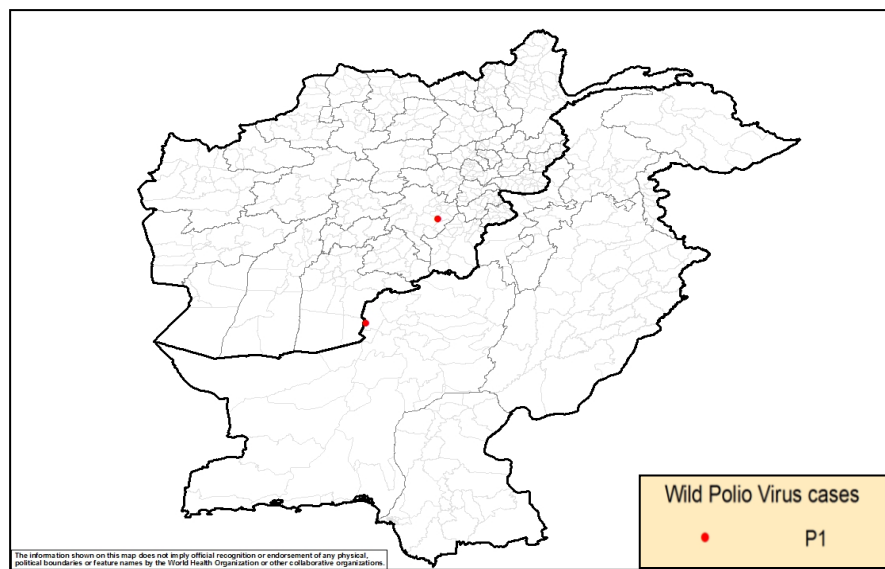


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

5(a) 01/01/2020 - 31/12/2020



5(b) 01/01/2021 - 23/05/2021



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Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2020-2021

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	MARUF	1	14-Oct-20	14-Oct-20
		KANDAHAR	3	22-Jun-20	13-Sep-20
		ZHERAY	3	20-Jul-20	24-Aug-20
		SPINBOLDAK	1	25-Jul-20	25-Jul-20
		PANJWAYI	1	10-Jun-20	10-Jun-20
		SHAHWALIKOT	3	4-Mar-20	6-Jun-20
		NESH	1	23-May-20	23-May-20
		GHORAK	1	19-Mar-20	19-Mar-20
	ZABUL	QALAT	1	6-Aug-20	6-Aug-20
		ARGHANDAB	1	14-Jul-20	14-Jul-20
		MIZAN	1	21-Jan-20	21-Jan-20
	HILMAND	NAD-E-ALI	2	1-May-20	19-Oct-20
		WASHER	3	4-Jan-20	19-Oct-20
		BAGHRAN	2	16-Jul-20	4-Sep-20
		KAJAKI	2	10-Jun-20	27-Jul-20
		REG	4	25-May-20	3-Jun-20
		DEH-E-SHU	1	27-May-20	27-May-20
NAWZAD		1	11-May-20	11-May-20	
SANGIN		1	7-May-20	7-May-20	
URUZGAN	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			56	4-Jan-20	19-Oct-20
2021	GAZNI	ANDAR	1	1-Jan-21	1-Jan-21
2021 Total			1	1-Jan-21	1-Jan-21

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Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2020-2021

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	KABDULAH	3	11-May-20	23-Nov-20
		QUETTA	5	17-Jul-20	5-Nov-20
		MASTUNG	1	15-Oct-20	15-Oct-20
		PISHIN	6	31-Jan-20	3-Oct-20
		KSAIFULAH	1	1-Sep-20	1-Sep-20
		CHAGHAI	1	4-Jun-20	4-Jun-20
		DUKKI	1	26-May-20	26-May-20
		JHALMAGSI	1	19-Apr-20	19-Apr-20
		ZHOB	2	22-Feb-20	13-Apr-20
		NSIRABAD	2	3-Jan-20	13-Apr-20
		SOHBATPUR	1	12-Feb-20	12-Feb-20
		JAFARABAD	1	12-Feb-20	12-Feb-20
		SIBI	1	7-Feb-20	7-Feb-20
		PUNJAB	LAYYAH	1	21-Oct-20
	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			84	1-Jan-20	23-Nov-20
2021	BALOCHISTAN	KABDULAH	1	27-Jan-21	27-Jan-21
2021 Total			1	27-Jan-21	27-Jan-21

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Table 11: Circulating VDPV2 cases and date of onset of paralysis in EMR countries by provinces 2020-2021

YEAR	COUNTRY	PROVINCE	Count	First Case	Last Case	
2021	AFG	FARAH	5	1-Jan-21	16-Apr-21	
		LOGAR	1	19-Feb-21	19-Feb-21	
		KANDAHAR	1	16-Feb-21	16-Feb-21	
		WARDAK	2	3-Mar-21	22-Apr-21	
		HIRAT	5	20-Feb-21	11-Apr-21	
		BADGHIS	5	12-Jan-21	10-Mar-21	
		FARYAB	2	28-Jan-21	26-Mar-21	
		HILMAND	2	5-Jan-21	11-Mar-21	
		GHAZNI	7	8-Jan-21	15-Mar-21	
		ZABUL	8	7-Jan-21	7-Mar-21	
		PAK	KHYBER PAKHTUNKHWA	1	14-Jan-21	14-Jan-21
			PUNJAB	1	7-Jan-21	7-Jan-21
			SINDH	2	5-Jan-21	7-Jan-21
BALOCHISTAN	3		2-Jan-21	8-Apr-21		
Total 2021			45	1-Jan-21	22-Apr-21	
2020	SOM	LOWER JUBA	1	29-Aug-20	29-Aug-20	
		AWDAL	1	1-Aug-20	1-Aug-20	
		GALBEED	1	29-Sep-20	29-Sep-20	
		HIRAN	1	18-Oct-20	18-Oct-20	
		MIDDLE SHABELLE	1	17-Jul-20	17-Jul-20	
		BAY	2	3-Sep-20	25-Oct-20	
		BANADIR	7	18-Jun-20	30-Sep-20	
	SUD	SOUTH DARFUR	3	7-Mar-20	18-Dec-20	
		NORTH DARFUR	2	26-Nov-20	13-Dec-20	
		EAST DARFUR	3	12-May-20	24-Jul-20	
		KHARTOUM	4	15-Jul-20	16-Nov-20	
		KASSALA	11	28-Jul-20	6-Nov-20	
		GEZIRA	5	9-Jul-20	19-Sep-20	
		RIVER NILE	5	29-Jun-20	27-Sep-20	
		RED SEA	8	29-Apr-20	29-Nov-20	
		WEST DARFUR	1	19-May-20	19-May-20	
		BLUE NILE	4	7-Aug-20	26-Nov-20	
		SOUTH KORDOFAN	2	20-Nov-20	25-Nov-20	
		NORTH KORDOFAN	3	29-Aug-20	2-Dec-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	17	1-Jun-20	27-Dec-20
			BALKH	2	29-Oct-20	3-Nov-20
	BADGHIS		10	1-Nov-20	27-Dec-20	
	FARYAB		1	18-Oct-20	18-Oct-20	
	SAMANGAN		1	1-Nov-20	1-Nov-20	
	HIRAT		2	10-Aug-20	15-Aug-20	
	LOGAR		4	20-Aug-20	18-Nov-20	
	KANDAHAR		75	4-Aug-20	30-Dec-20	
	HILMAND		40	1-Aug-20	24-Dec-20	
	JAWZIAN		3	4-Aug-20	21-Nov-20	
	KABUL		7	6-Jul-20	12-Oct-20	
	NURISTAN		2	21-Jun-20	13-Jul-20	
	NIMROZ		3	6-Jul-20	8-Aug-20	
	KHOST		17	5-Jul-20	19-Oct-20	
	PAKTYA		5	18-Jun-20	25-Oct-20	
	KUNDUZ		3	28-Aug-20	3-Oct-20	
	PAKTIKA		5	25-Aug-20	7-Oct-20	
	GHAZNI		7	29-Aug-20	26-Dec-20	
	BADAKHSHAN		1	23-Apr-20	23-Apr-20	
	LAGHMAN		14	20-May-20	23-Sep-20	
	TAKHAR		1	20-Sep-20	20-Sep-20	
	ZABUL		12	17-Sep-20	15-Nov-20	
	GHOR		1	14-Nov-20	14-Nov-20	
	URUZGAN		15	28-Aug-20	22-Dec-20	
	PARWAN		1	4-Sep-20	4-Sep-20	
WARDAK	5		6-Sep-20	22-11-20		
KUNAR	9		6-Apr-20	29-Sep-20		
NANGARHAR	45		5-Feb-20	21-Sep-20		
PAK	SINDH		45	2-May-20	28-Nov-20	
	BALOCHISTAN		23	29-Feb-20	24-Dec-20	
	PUNJAB		25	5-Feb-20	5-Nov-20	
	KHYBER PAKHTUNKHWA		42	2-Jan-20	24-May-20	
	Total 2020			515	2-Jan-20	30-Dec-20

VDPV2 isolates, EMR countries, 2021

