

Highlights of Polio Fax Bulletin No. 1192 for Week 31 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) isolates from human or environmental samples reported this week.
3. No new circulating vaccine derived poliovirus (cVDPV) cases reported, but one new VDPV1 and five new VDPV2 positive environmental samples from Egypt were 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 31 of 2021, two WPV1 cases were reported [112 in the same period in 2020; Afghanistan – 45, Pakistan - 67].

- a. *Human samples*: No new WPV1 cases 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 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 **60** WPV1 positive environmental samples (including 16 mixture of WPV1 and cVDPV2, 4 mixture of WPV1 and aVDPV2 and 1 mixture of WPV1 and aVDPV3) with most recent sample collected on **6 July 2021**.

III. Circulating Vaccine Derived Polioviruses (cVDPVs): No new cVDPV isolates from human or environmental samples reported this week

In 2021 to date, three cVDPV1 cases reported from Yemen and 51 cVDPV2 cases were reported (Afghanistan 43 and Pakistan 8).

1. **Outbreaks/Events**: *Five countries (barring endemics) have evidence of VDPVs transmission, four with cVDPV2 and one with cVDPV1.*

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

In 2021 to date, there are **43 cVDPV2** cases: 17 from West Region, 12 from South Region, eight from South East Region, four from Central Region and two from North Region. **The most recent case had onset on 9 July 2021.**

Environment: In 2021 to date, there are **40** cVDPV2 positive environmental samples including 1 mixture of WPV1 and cVDPV2 reported with **most recent sample collected on 23 June 2021**.

Pakistan: No new VDPV cases reported, but 3 new aVDPV2 environmental samples were reported this week.

The three new aVDPV2 positive environmental samples include two from Sindh province with specimen collection dates 6 and 7 July 2021, and one from Khyber Pakhtunkhwa province with specimen collection on 12 July 2021.

In 2021, there are **eight** cVDPV2 cases reported four from Balochistan, two from Sindh and one each from KP and Punjab provinces with **most recent onset on 23 April 2021**.

Environment: In 2021 to date; there are **32** cVDPV2 positive samples including 16 mixture of WPV1 and cVDPV2 with **most recent sample collected on 18 May 2021**.

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

Environment: One cVDPV2 positive environmental sample was reported from Banadir province, **with date of specimen collection on 23 May 2021**.

SUDAN: No new 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 cases reported, but one new VDPV1 and five VDPV2 positive environmental samples were reported this week.

In 2021 to date, **10** cVDPV2 positive environmental samples are reported. These include three from Qena province; two each from Aswan 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 8 June 2021. There is no child paralyzed due to cVDPV2.**

Note: The one new VDPV1 positive environmental sample is from Alexandria province (Gharb site) with specimen collection on 11 July 2021 and the five VDPV2 positive environmental samples are one each from: Fayoum province (Fayoum City site) and Gharbia province (Tanta site) both with specimens collection on 8 July 2021, Sohag province (Sohag City site) with specimen collection on 10 July 2021, Alexandria province (Sharq site) with specimen collection on 11 July 2021 and Matrouh province (Matrouh site) with specimen collection 14 July 2021.

A total of 1 VDPV1, 2 aVDP2, 34 VDPV2 positive samples in 2021 are reported so far, each having no relation with others reported from country or elsewhere.

YEMEN: No new cVDPV1 cases reported this week.

In 2021 to date, **3** cVDPV1 cases were reported with most recent date of onset on 27 March 2021.

VDPV Events: There is one country having a Polio Event due to VDPV2.

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

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, 12 out of 22 member states (13 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.

- Djibouti, Morocco, and Tunisia are missing both indicators as their non-polio AFP rates are 1.7, 0.7 and 0.8 and the percentages of AFP cases with adequate stool specimens is 75.0%, 56.4% and 69.2% respectively.
- Bahrain, Jordan, Oman, Palestine, Qatar, Saudi Arabia and United Arab Emirates have a non-polio AFP rate of 1.6, 0.4, 0.8, 0.4, 0.7, 1.9 and 0.8 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 (31/21) / Ending on : 08/08/2021														
	Total AFP 2019	Total AFP 2020	Total AFP to date, 2021	W20 23 May 21	W21 30 May 21	W22 06 Jun 21	W23 13 Jun 21	W24 20 Jun 21	W25 27 Jun 21	W26 04 Jul 21	W27 11 Jul 21	W28 18 Jul 21	W29 25 Jul 21	W30 01 Aug 21	W31 08 Aug 21
Afghanistan	3768	3972	2384	83	92	79	70	85	68	77	66	39	72	50	4
Bahrain	17	15	3	0	0	0	0	0	1	0	0	0	0	0	0
Djibouti	5	5	4	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	1343	1009	709	27	33	26	33	35	27	17	31	10	12	6	
Iran	1070	618	398	20	19	14	12	21	17	20	12	3	6	0	
Iraq	1157	476	417	8	15	23	19	21	10	21	10	4	10	5	
Jordan ****	113	32	9	0	0	2	1	1	0	0	0	1	0	1	0
Kuwait	48	36	22	0	2	4	1	1	1	1	0	0	0	0	
Lebanon ****	87	49	23	0	1	1	2	2	0	1	3	0	1		
Libya	107	95	49	2	2	1	4	1	1	1	1	2	2	0	
Morocco	247	87	39	1	1	4	0	3	0	1	2	0	0	0	
Oman	30	22	6	0	1	0	0	0	0	0	0	0	0		
Pakistan	15218	11972	6754	262	235	342	278	271	227	222	236	150	186	83	1
Palestine ****	62	16	4	0	0	0	0	0	0	0	0	0	0	0	
Qatar	9	9	2	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	236	200	97	3	3	6	2	6	8	5	4	2	0	0	0
Somalia	361	376	208	10	5	4	8	6	10	6	4	9	5	2	0
Sudan	608	733	332	14	16	11	11	9	14	15	10	6	4	9	
Syria ****	377	343	241	8	13	13	8	10	10	10	9	2	5	9	1
Tunisia	79	42	13	0	0	0	0	0	0	0	0	0	0	0	
U.A.E	50	19	7	0	0	0	0	0	0	0	0	0	0	0	
Yemen	779	825	437	14	20	26	15	15	13	15	12	12	6	3	
Total EMR	25771	20951	12158	452	458	556	464	487	407	412	400	240	309	168	6

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2019	Total year 2020	08/08		Confirmed polio cases by month of onset											
			2020	2021	September 2020	October 2020	November 2020	December 2020	January 2021	February 2021	March 2021	April 2021	May 2021	June 2021	July 2021	August 2021
Afghanistan	29	56	45	1	6	3	0	0	1	0	0	0	0	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	
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	147	84	67	1	7	4	2	0	1	0	0	0	0	0	0	
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	
Total EMR	176	140	112	2	13	7	2	0	2	0	0	0	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 (31/21) / Ending on : 08/08/2021

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	2384	1	1	194	2143	45	18.3	18	0	93.7	1	0	08/08/2021				
Bahrain	15	0	0	0	15	0	5.0	0	0	93.3	0	0	3	0	0	1	2	0	1.6	0	0	100.0	0	0	08/08/2021				
Djibouti	5	0	0	0	5	0	1.4	0	0	100.0	0	0	4	0	0	0	4	0	1.7	0	0	75.0	0	0	08/08/2021				
Egypt	1009	0	0	0	1009	0	2.6	0	0	94.6	0	0	709	0	0	100	608	1	3.0	2	0	89.1	0	0	05/08/2021				
Iran	618	0	0	0	618	0	3.0	0	0	98.5	0	0	398	0	0	18	380	0	3.3	0	0	96.0	0	0	07/08/2021				
Iraq	476	0	0	0	476	0	2.8	0	0	93.3	0	0	417	0	0	47	370	0	4.0	12	1	92.8	0	0	07/08/2021				
Jordan	32	0	0	0	32	0	0.8	0	0	96.9	0	0	9	0	0	1	8	0	0.4	0	0	100.0	0	0	08/08/2021				
Kuwait	36	0	0	0	36	0	4.1	0	0	91.7	0	0	22	0	0	5	17	0	4.2	0	0	86.4	0	0	05/08/2021				
Lebanon	49	0	0	0	49	0	3.1	0	0	89.8	0	0	23	0	0	12	11	0	2.4	1	0	82.6	0	0	30/07/2021				
Libya	95	0	0	0	94	1	3.6	0	0	100.0	0	0	49	0	0	15	34	0	3.1	0	0	100.0	0	0	07/08/2021				
Morocco	87	0	0	0	87	0	0.9	0	0	78.2	0	0	39	0	0	28	11	0	0.7	16	3	56.4	0	0	03/08/2020				
Oman	22	0	0	0	22	0	1.9	0	0	100.0	0	0	6	0	0	0	6	0	0.8	0	0	83.3	0	0	27/07/2021				
Pakistan	11972	84	29	0	11719	142	15.2	0	0	85.4	84	0	6754	1	3	728	6006	16	11.1	121	0	87.9	1	0	08/08/2021				
Palestine	16	0	0	0	16	0	0.9	0	0	100.0	0	0	4	0	0	4	0	0	0.4	4	0	100.0	0	0	01/08/2021				
Qatar	9	0	0	0	9	0	2.1	0	0	33.3	0	0	2	0	0	0	2	0	0.7	0	0	100.0	0	0	08/08/2021				
Saudi Arabia	200	0	0	0	200	0	2.4	0	0	96.0	0	0	97	0	0	42	55	0	1.9	2	0	91.8	0	0	08/08/2021				
Somalia	376	0	0	1	360	15	4.7	1	0	94.7	0	0	208	0	0	55	153	0	4.2	3	1	96.2	0	0	08/08/2021				
Sudan	733	0	0	0	675	58	3.8	0	0	92.9	0	0	332	0	0	37	295	0	2.8	2	0	94.3	0	0	05/08/2021				
Syria	343	0	0	0	343	0	4.3	0	0	91.0	0	0	241	0	0	24	217	0	5.2	0	0	92.1	0	0	07/08/2021				
Tunisia	42	0	0	0	42	0	1.5	0	0	54.8	0	0	13	0	0	3	10	0	0.8	3	3	69.2	0	0	06/08/2021				
U.A.E	19	0	0	0	19	0	1.5	0	0	100.0	0	0	7	0	0	3	4	0	0.8	3	0	100.0	0	0	25/07/2021				
Yemen	825	0	1	0	793	31	5.4	0	0	88.7	0	0	437	0	0	224	210	3	4.7	67	57	91.5	0	0	07/08/2021				
EMR	20951	140	33	1	20219	561	8.0	1	0	88.6	140	0	12158	2	4	1541	10546	65	7.1	254	65	90.0	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	715	0	16	55	119	21
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	0	405	0	1	32	24	80
IRN	46	0	0	0	0	0	105	0	0	11	1	3
IRQ	168	0	0	4	10	0	135	0	0	5	13	12
JOR	0	0	0	0	0	0	0	0	0	0	0	0
KUW	4	0	0	0	0	0	18	0	0	0	1	6
LEB	5	0	0	0	0	0	13	0	0	0	1	0
LIB	24	0	0	0	0	0	0	0	0	0	0	0
MOR	8	0	0	0	0	2	19	0	0	0	0	5
OMA	64	0	0	2	8	0	10	0	0	1	0	0
PAK	4653	21	19	379	787	0	2722	0	3	167	383	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	21	0	0	0	0	0	15	0	0	0	0	1
SOM	1110	0	10	23	150	7	619	0	0	1	48	181
SUD	363	0	18	3	31	5	75	0	0	1	4	23
SYR	280	0	0	11	15	0	64	0	0	3	7	9
TUN	9	0	0	0	0	0	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	137	0	0	2	9	62
EMR	8570	35	126	493	1344	14	5054	0	20	278	610	576

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 (31/2021) / Ending on : (08/08/2021)

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	2344	211	26	369	1611	109	1	1	87	1		71	40		81		4			14%	99%	99%	98%	08/08/2021	
Bahrain	NPL Oman / CDC	3				2	1														0%	100%		0%	05/08/2021	
Djibouti	NPL Kenya / CDC	4			1																100%			100%	08/08/2021	
Egypt***	RRL Egypt	685	60	3	64	506	32	20		2			58			1			2		8%	96%	100%	99%	05/08/2021	
Iran	NPL Iran / CDC	410	12		4	383	11			3			6			3					1%	100%	100%	98%	07/08/2021	
Iraq	RRL Egypt	411	7		30	356	18	1		3						13					8%	100%	46%	98%	06/08/2021	
Jordan	NPL Jordan / RRL EGYPT	8			1	7															13%	100%		100%	01/08/2021	
Kuwait	RRL Kuwait / RIVM	26				24	2														0%	100%		100%	05/08/2021	
Lebanon	NPL Jordan / RRL EGYPT	22			1	16	5														6%	100%			01/08/2021	
Libya	RRL Tunisia / RIVM	43				43															0%	100%		98%	29/07/2021	
Morocco	NPL Morocco / RRL Tunisia	37			1	35	1														3%	100%		97%	06/08/2021	
Oman	NPL Oman / CDC	6				6															0%	100%		100%	05/08/2021	
Pakistan	RRL Pakistan	6637	388	34	1138	4678	379	24	1	143			170	13		149	1	7		1	14%	100%	100%	97%	08/08/2021	
Palestine & UNRWA		4				4															0%	25%		100%	01/08/2021	
Qatar	NPL Oman / CDC	2				2															0%	100%		100%	05/08/2021	
Saudi Arabia	NPL Saudi Arabia / CDC	100	2			91	6	1								1					0%	92%	100%	97%	08/08/2021	
Somalia	NPL Kenya / CDC	208			22	131	9	45													14%	5%		97%	08/08/2021	
Sudan	NPL Sudan / RRL Egypt	335			47	252	34	2					1								15%	97%	100%	100%	05/08/2021	
Syria	NPL Syria / RRL Egypt	237	4		14	203	16														5%	100%		0%	07/08/2021	
Tunisia	RRL Tunisia	13				13															0%	100%		100%	29/07/2021	
U.A.E	NPL Oman / CDC	7				7															0%	100%		43%	05/08/2021	
Yemen	NPL Kenya / CDC	282	9		45	154	75			1	3					5					18%	100%	100%	0%	07/08/2021	
Total EMR 2021		11824	693	63	1737	8524	698	94	2	239	4		306	53		253	1	11	2	1	13%	98%	99%	95%		
Total EMR 2020		20386	1681	93	3046	15555		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					2	2
	aVDPV2					167	39
	Enterovirus	125	170	177	138	111	81
	Negative	6	9	5	3	3	6
	Pending						38
	SL1/3	36	94	71	60	31	11
SL2	16	1		2	64	92	
AFG Total		185	316	336	259	413	270
EGY	aVDPV1					1	
	aVDPV2					1	2
	aVDPV3					2	
	cVDPV2						16
	Enterovirus	354	322	321	397	288	50
	Negative	34	41	32	34	41	15
	Pending						53
SL1/3	79	159	187	269	212	40	
SL2	60					179	
VDPV1	1					34	
EGY Total		528	522	540	700	545	384
IRN	Wild						1
	Wild+cVDPV2					3	1
	aVDPV2						15
	Enterovirus		1	29	55	23	1
	Negative		1	3	3		2
	Pending						4
	SL1/3		4	22	10	16	4
SL2					1	7	
IRN Total		6	34	54	71	43	30
JOR	Enterovirus	1	13	27	24	1	6
	Negative		2				1
	Pending						2
	SL1/3	1	16	9	12	14	12
JOR Total		2	31	36	36	25	20
KUW	Enterovirus			2	9	1	
	Negative				1	7	
	Pending					12	
	SL1/3			1	4		12
KUW Total			3	14	20	12	
LEB	Enterovirus	2	12	24	15	16	15
	Negative	2	1	1	3	2	4
	Pending						4
	SL1/3	4	14	20	29	13	3
LEB Total		8	37	54	30	26	
PAK	aVDPV1						1
	Wild	59	105	139	367	337	39
	Wild+cVDPV2	2	1		10	91	16
	aVDPV2	3	4		2	16	4
	cVDPV2	2			29	44	24
	Enterovirus	300	392	404	308	135	120
	Negative	6		3	4	6	4
	Pending						45
	SL1/3	77	106	127	90	49	31
	SL2	79	25		22	146	214
	Wild+aVDPV3						1
PAK Total		529	633	621	832	830	515
SOM	aVDPV2			2	1		1
	cVDPV2		2	18	1	26	
	cVDPV2+cVDPV3			1			
	aVDPV3			11			
	Enterovirus	16	25	25	22	12	19
	Negative	14	138		29	34	26
	Pending						18
SL1/3	2		8	6	6	3	
SL2	2		10	1	5	1	
SOM Total		30	213	53	63	63	63
SUD	aVDPV2			15	31	14	15
	Enterovirus				4	32	6
	Negative						14
	SL1/3				5	2	1
SL2					2	4	
SUD Total			15	40	52	30	
SYR	Enterovirus		4	72	111	152	86
	Negative			21	30	17	9
	Pending						10
	SL1/3			6	44	36	15
SL2			3		3		
SYR Total			7	103	186	205	120
TOTAL		1248	1575	2017	2267	2245	1485

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		
			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		
		Wild+cVDPV2	HILMAND	34	27/May/20	27/Dec/20		
			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		
			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		
aVDPV2	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			
			1	21/Sep/20	21/Sep/20			
IRN	cVDPV2	S & B	3	3/Oct/20	25/Dec/20			
			3	3/Oct/20	25/Dec/20			
PAK	Wild	AJK	1	25/Feb/20	25/Feb/20			
		BALOCHISTAN	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			
		BALOCHISTAN	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			
BALOCHISTAN	1	17/Dec/20	17/Dec/20					
Wild+aVDPV2	PUNJAB	5	16/Mar/20	21/Dec/20				
	BALOCHISTAN	15	2/Jun/20	28/Dec/20				
cVDPV2	KPAKHTUNKHWA	5	10/Jan/20	15/Oct/20				
	PUNJAB	3	16/Jan/20	18/Dec/20				
aVDPV2	SINDH	21	8/Jun/20	10/Dec/20				
	BALOCHISTAN	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			
			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	18	5/Jan/21	23/Jun/21		
			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		42	4/Jan/21	23/Jun/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	3	23/Jan/21	8/Jun/21	
				CAIRO	1	28/Apr/21	28/Apr/21	
				GIZA	1	4/May/21	4/May/21	
				EGY Total		12	10/Jan/21	8/Jun/21
				IRN	cVDPV2	S & B	1	20/Feb/21
S & B	1	10/Jul/21	10/Jul/21					
IRN Total		2	20/Feb/21	10/Jul/21				
PAK	Wild	BALOCHISTAN	6	20/Jan/21	28/Feb/21			
		ISLAMABAD	3	11/Jan/21	17/Mar/21			
		KPAKHTUNKHWA	7	18/Jan/21	18/Jun/21			
		PUNJAB	12	4/Jan/21	19/May/21			
		SINDH	11	4/Jan/21	6/Jul/21			
		BALOCHISTAN	11	2/Jan/21	12/Apr/21			
		KPAKHTUNKHWA	1	11/Jan/21	11/Jan/21			
		PUNJAB	2	11/Jan/21	18/Jan/21			
		SINDH	2	2/Mar/21	10/Mar/21			
		BALOCHISTAN	1	1/Jan/21	1/Jan/21			
		PUNJAB	1	8/Jan/21	8/Jan/21			
SINDH	2	12/Jan/21	4/Feb/21					
Wild+aVDPV2	BALOCHISTAN	11	1/Jan/21	18/May/21				
	KPAKHTUNKHWA	2	16/Jan/21	2/Mar/21				
cVDPV2	SINDH	3	12/Jan/21	9/Feb/21				
	AJK	1	16/Mar/21	16/Mar/21				
KPAKHTUNKHWA		6	1/Mar/21	12/Jul/21				
	PUNJAB	8	1/Mar/21	18/May/21				
SINDH	9	12/Jan/21	7/Jul/21					
PAK Total		99	1/Jan/21	12/Jul/21				
SOM	cVDPV2	BANADIR	1	23/May/21	23/May/21			
			1	23/May/21	23/May/21			
2021 Total			156	1/Jan/21	12/Jul/21			

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2021 - 08/08/2021

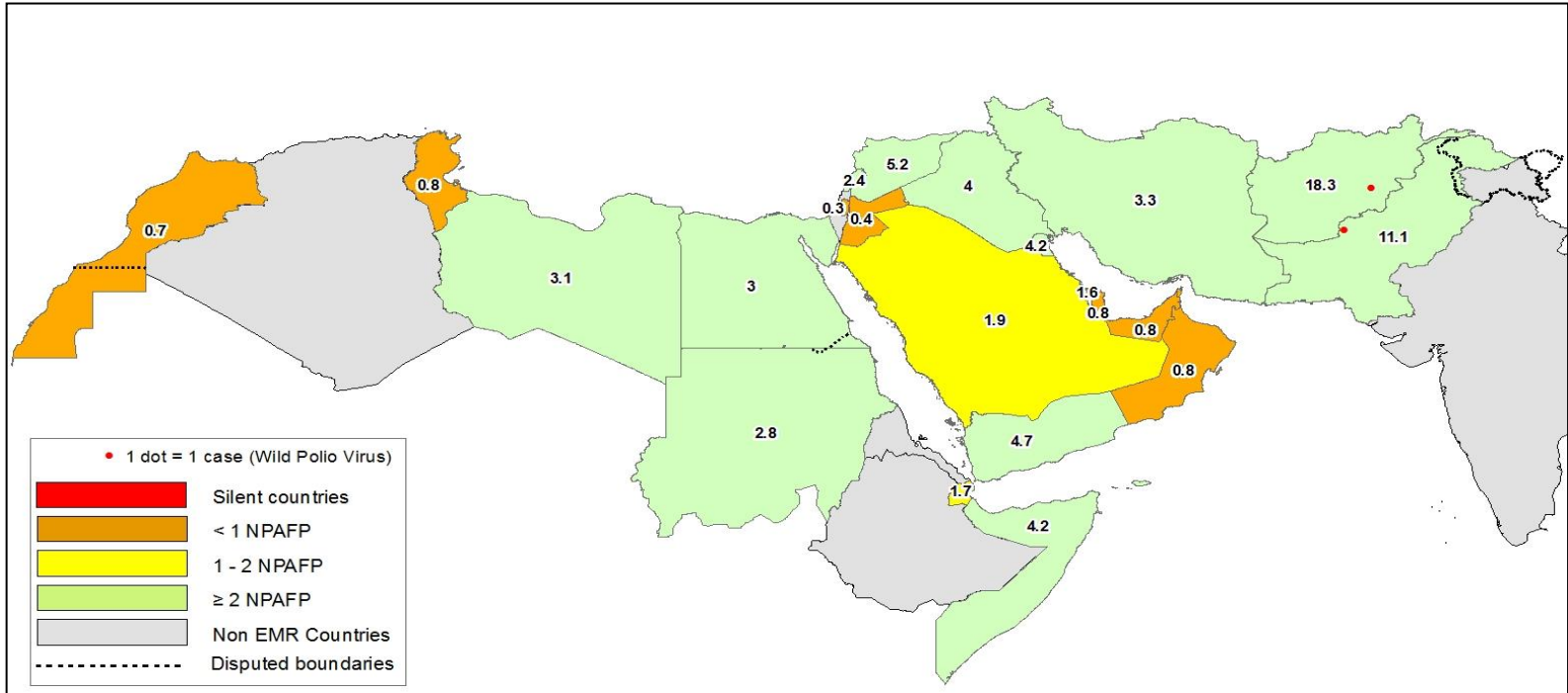


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2021 - 08/08/2021

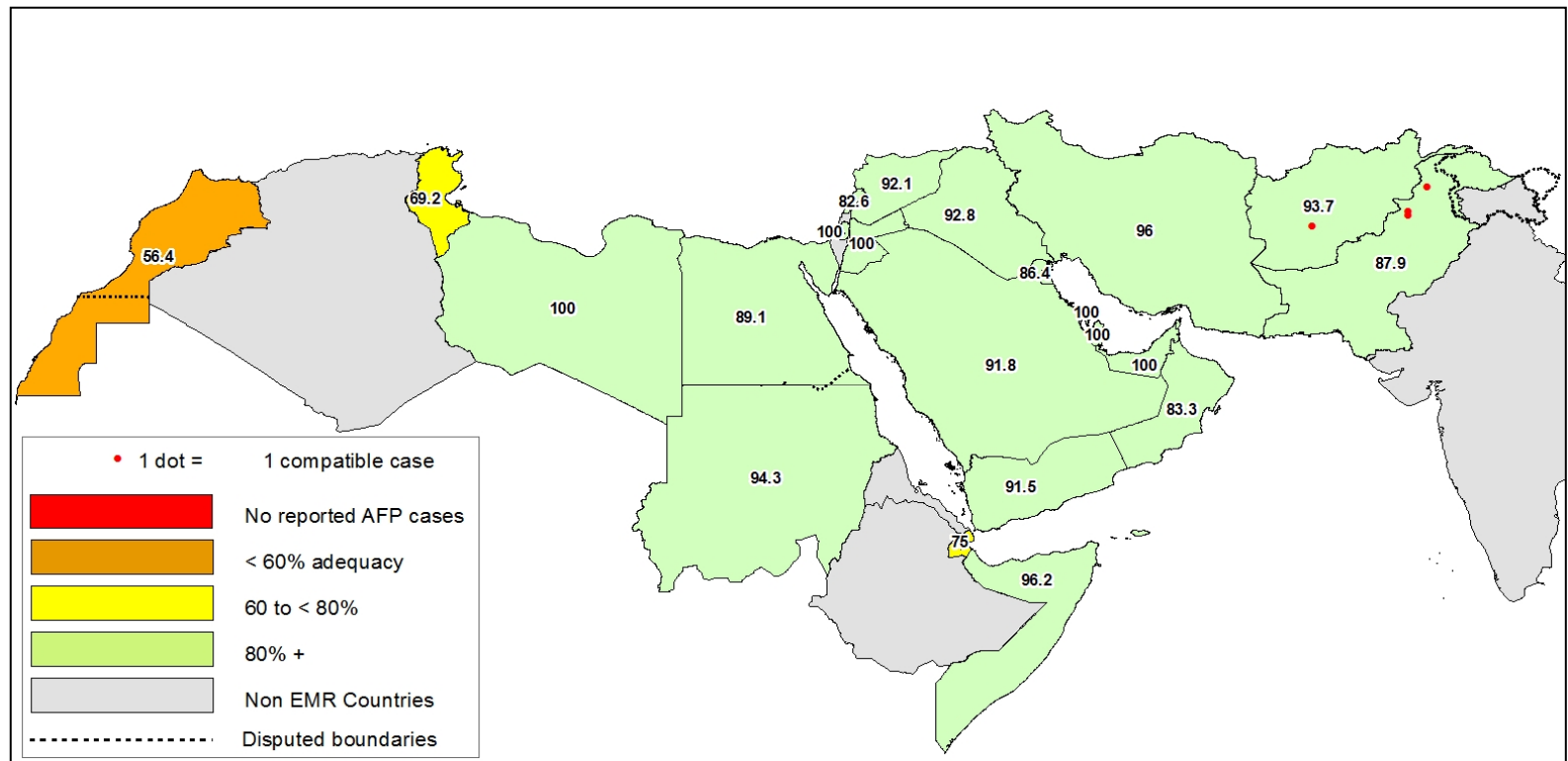


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2020 - 2021

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 - 08/08/2021

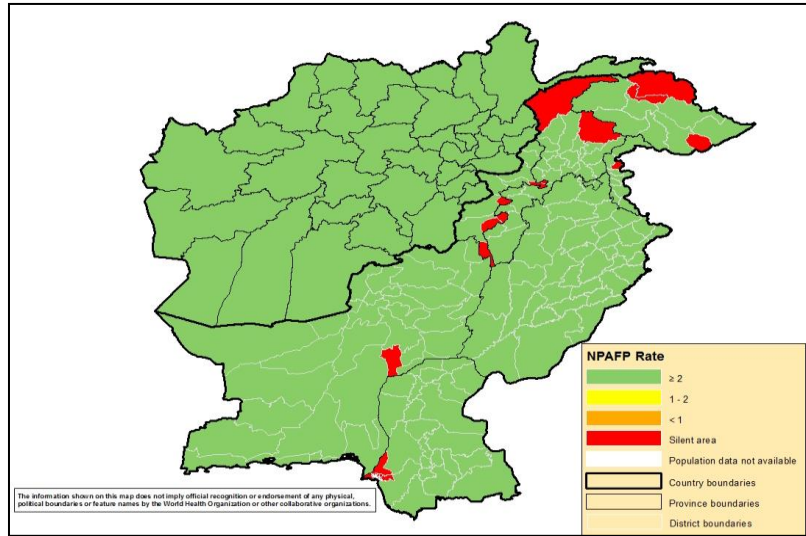


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2021 - 08/08/2021

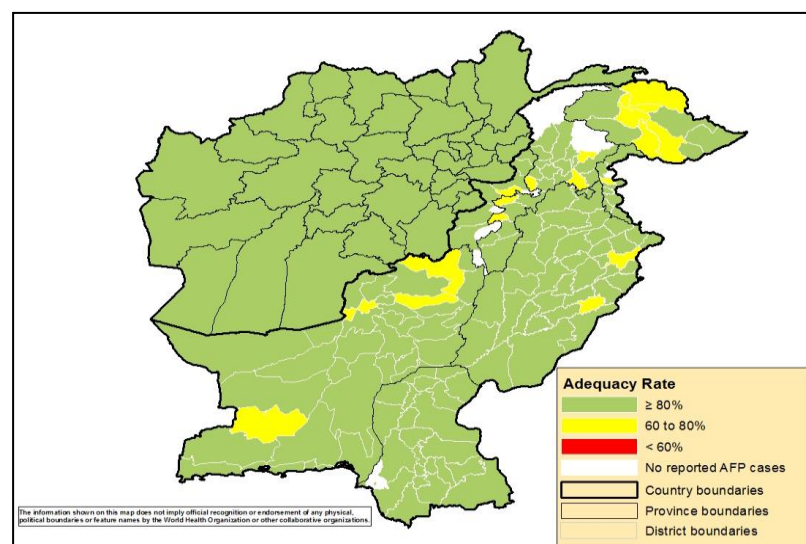
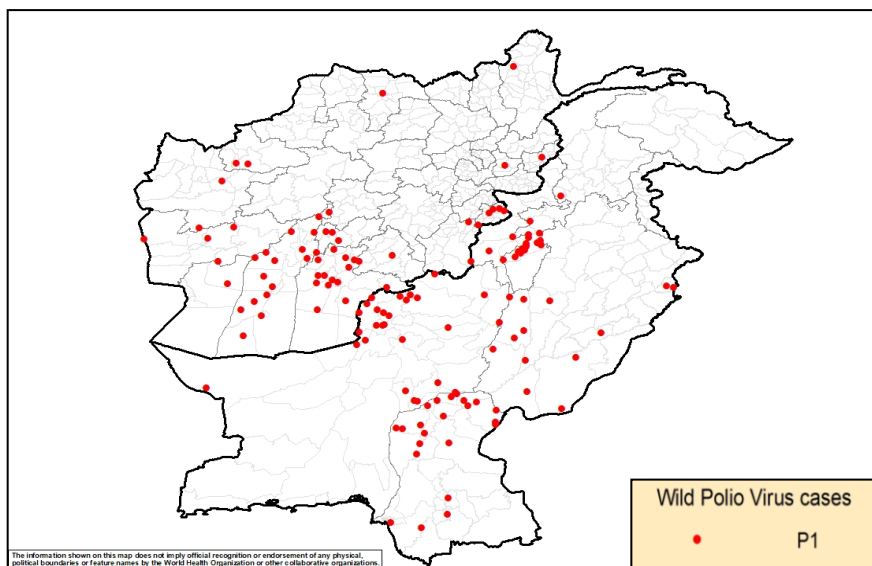
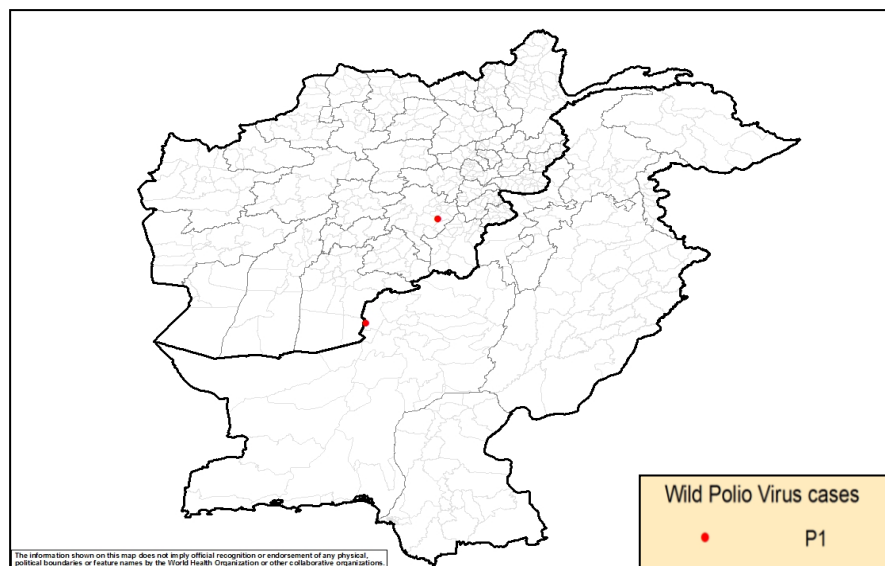


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2021 - 08/08/2021



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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	3	3-Mar-21	9-Jul-21	
		HIRAT	5	20-Feb-21	11-Apr-21	
		BADGHIS	7	12-Jan-21	9-Jun-21	
		FARYAB	2	28-Jan-21	26-Mar-21	
		HILMAND	2	5-Jan-21	11-Mar-21	
		GHAZNI	8	8-Jan-21	12-May-21	
		ZABUL	9	7-Jan-21	4-Apr-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	4		2-Jan-21	23-Apr-21		
Total 2021			51	1-Jan-21	9-Jul-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

