

Highlights of Polio Fax Bulletin No. 1120 for Week 12 2020

Polio eradication supported staff and infra-structure in countries and at the regional levels are strategizing strong contribution to global public health emergency of an unprecedented scale, that is COPVID-19, whilst maintaining critical PEI functions.

I. Wild Poliovirus Transmission

Endemic countries (Pakistan & Afghanistan): Following was reported this week:

- 2 new wild poliovirus type-1 (WPV1) cases from Pakistan
- 10 new WPV1 positive environmental samples; 4 from Afghanistan and 6 from Pakistan.

a. *Human samples:* Two new WPV1 cases reported this week in 2020.

Total WPV1 cases in 2020 to date is 34 (2 from Afghanistan and 32 from Pakistan). This compares with 11 cases in 2019 in the same period (5 from Afghanistan and 6 from Pakistan).

- Afghanistan: No newly reported cases this week.
In 2020, 2 WPV1 cases are reported, 1 from Hilmand and 1 from Zabul provinces. The most recent case has onset of paralysis on 21 January.

- Pakistan: 2 new WPV1 cases reported and details are as follows:

Case (1): The case is from Jacobabad district, Sindh province, with date of onset 28 February 2020. The case is an 18-month old male child. The child reportedly received 7+ oral polio vaccine (OPV) doses from supplementary immunization activities (SIAs) and none from routine.

Case (2): The case is from Ghotki district, Sindh province, with date of onset 2 March 2020. The case is a 12-month old female child. The child reportedly received 1 OPV dose from routine and 5 doses from SIAs.

b. *Environmental samples:* 10 new WPV1 positive environmental samples reported this week; 4 from Afghanistan and 6 from Pakistan all in 2020:

- Afghanistan: In 2020 to date, there are 8 WPV1 positive environmental samples including 1 combined (WPV1 and cVDPV2) with most recent sample collected on 25 February 2020.
- Pakistan: In 2020 to date, there are 78 WPV1 positive environmental samples including 4 combined (WPV1 and cVDPV2) with most recent positive sample collected on 4 March 2020.

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

1. Afghanistan:

In 2020 to date, 2 cVDPV2 positive environmental samples including 1 combined (WPV1 and cVDPV2) were reported both from Jalalabad district, Nangarhar province, with most recent collection on 8 January 2020.

2. Pakistan:

In 2020 to date, there are 25 cVDPV2 cases reported. Cases include 24 from Khyber Pakhtunkhwa (KP) province and one from Punjab province, with most recent onset on 12 February 2020.

Environment: In 2020, there are 8 positive environmental samples for cVDPV2 (including 4 combined WPV1 and cVDPV2), the recent most sample collected on 10 February 2020.

3. SOMALIA: No new cVDPV isolates from human or environmental samples were reported.

In 2020 to date: 4 cVDPV2 were isolated from environmental samples most recent collected on 4 February 2020.

- *An AFP case with VDPV1 was earlier reported from Lughaya district, Awdal province, with date of onset 26 January 2020. Field investigation report of the case is awaited.*

III. **Surveillance performance indicators**

In 2020, 16 of 22 member states are meeting the global target of both key surveillance indicators, namely non polio AFP rate of 2 per 100,000 children aged below 15 years and percent AFP cases with adequate specimen 80% and above.

- Djibouti and Qatar are missing both indicators; they have not yet reported any AFP cases in 2020.
- Morocco and Tunisia are also missing both indicators as their non-polio afp rate is 1.8 and 0.7 and percentage of AFP cases with adequate stool specimens is 71.4% and 75.0%, respectively.
- Palestine and Saudi Arabia have a non-polio AFP rate of 1.4 and 1.8, 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 (12/20) / Ending on : 22/03/2020														
	Total AFP 2018	Total AFP 2019	Total AFP to date, 2020	W01 05 Jan 20	W02 12 Jan 20	W03 19 Jan 20	W04 26 Jan 20	W05 02 Feb 20	W06 09 Feb 20	W07 16 Feb 20	W08 23 Feb 20	W09 01 Mar 20	W10 08 Mar 20	W11 15 Mar 20	W12 22 Mar 20
Afghanistan	3378	3768	723	80	67	72	87	97	60	67	76	58	45	24	1
Bahrain	35	17	6	0	0	0	0	1	1	1	2	1	0	0	0
Djibouti	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	1246	1343	224	29	18	21	24	23	22	11	23	22	20	12	
Iran	896	1070	176	20	21	30	22	25	23	25	8	1	1		
Iraq	1023	1157	165	23	20	12	22	20	25	17	13	11	4	0	
Jordan ****	115	113	17	1	4	0	3	0	3	2	3	1	0	0	0
Kuwait	72	48	9	1	1	1	0	0	2	1	1	2	0	0	0
Lebanon ****	89	87	22	4	2	2	3	2	2	1	2	4	1		
Libya	122	107	35	4	4	5	1	4	3	3	3	4	2	0	2
Morocco	212	247	35	4	2	3	5	6	4	2	8	1	0		
Oman	28	30	5	0	1	0	0	2	0	0	1	1	0	0	
Pakistan	12276	15206	3165	360	327	332	355	323	303	368	343	280	180	72	1
Palestine ****	44	62	6	0	1	0	2	1	1	1	0	0	0		
Qatar	10	9	0	0	0	0	0	0	0	0	0	0	0		
Saudi Arabia	242	236	34	1	5	8	3	0	5	7	3	3	0	0	
Somalia	353	361	101	10	6	8	16	16	6	12	7	11	7	2	1
Sudan	579	608	100	14	10	12	13	13	13	2	7	5	7	6	0
Syria ****	362	377	90	7	7	11	12	15	8	12	5	8	4	4	
Tunisia	68	79	4	1	1	0	0	0	2	0	0	0	0	0	
U.A.E	40	50	11	3	0	1	1	3	2	1	0	0	0	0	
Yemen	730	779	137	9	18	14	13	16	15	19	15	11	7		
Total EMR	21920	25759	5065	571	515	532	582	567	500	552	520	424	278	120	5

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2018	Total year 2019	22/03		Confirmed polio cases by month of onset											
			2019	2020	April 2019	May 2019	June 2019	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019	January 2020	February 2020	March 2020
Afghanistan	21	29	5	2	1	5	1	2	2	3	1	7	1	2		
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	0	0	0	
Egypt	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		
Iraq	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		
Lebanon ****	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		
Morocco	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		
Pakistan	12	146	6	32	11	11	16	12	14	5	16	23	32	18	13	1
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		
Somalia	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		
Syria ****	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		
U.A.E	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		
Total EMR	33	175	11	34	12	16	17	14	16	8	17	30	33	20	13	1

**** 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 (12/20) / Ending on : 22/03/2020

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	10	3728	0	18.5	7	0	94.1	29	0	723	2	0	138	583	0	15.9	0	0	95.0	2	0	19/03/2020
Bahrain	17	0	0	2	15	0	5.9	2	0	100.0	0	0	6	0	0	6	0	0	9.2	0	0	100.0	0	0	22/03/2020
Djibouti	5	0	0	0	5	0	1.4	0	0	80.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	16/03/2019
Egypt	1343	0	0	2	1341	0	3.6	2	0	93.4	0	0	224	0	0	72	152	0	2.6	0	0	91.1	0	0	19/03/2020
Iran	1070	0	0	0	1069	1	5.2	0	0	97.1	0	0	176	0	0	17	159	0	3.8	0	0	99.4	0	0	14/03/2020
Iraq	1157	0	0	0	1157	0	7.4	0	0	94.3	0	0	165	0	0	85	80	0	4.5	0	0	89.1	0	0	15/03/2020
Jordan	113	0	0	0	113	0	3.9	0	0	100.0	0	0	17	0	0	0	17	0	2.0	0	0	100.0	0	0	22/03/2020
Kuwait	48	0	0	0	48	0	5.4	0	0	89.6	0	0	9	0	0	3	6	0	4.5	0	0	100.0	0	0	22/03/2020
Lebanon	87	0	0	8	79	0	4.7	8	0	89.7	0	0	22	0	0	13	9	0	5.3	0	0	95.5	0	0	13/03/2020
Libya	107	0	0	0	107	0	4.3	0	0	98.1	0	0	35	0	0	9	26	0	6.2	0	0	100.0	0	0	21/03/2020
Morocco	247	0	0	0	247	0	2.8	0	0	84.2	0	0	35	0	0	21	14	0	1.8	0	0	71.4	0	0	08/03/2020
Oman	30	0	0	0	30	0	2.7	0	0	80.0	0	0	5	0	0	1	4	0	2.0	0	0	80.0	0	0	15/03/2020
Pakistan	15206	146	5	216	14816	23	19.3	175	0	86.6	146	0	3165	32	0	688	2420	25	17.9	0	0	88.4	32	0	22/03/2020
Palestine	62	0	0	1	61	0	3.3	1	0	98.4	0	0	6	0	0	6	0	0	1.4	0	0	100.0	0	0	09/03/2020
Qatar	9	0	0	0	9	0	2.2	0	0	88.9	0	0	0	0	0	0	0	0	0.0	0	0		0	0	08/03/2020
Saudi Arabia	236	0	0	0	236	0	2.8	0	0	93.2	0	0	34	0	0	30	4	0	1.8	0	0	94.1	0	0	19/03/2020
Somalia	361	0	0	0	358	3	5.7	0	0	95.6	0	0	101	0	0	22	78	1	5.5	0	0	95.0	0	0	22/03/2020
Sudan	608	0	0	0	608	0	3.4	0	0	96.4	0	0	100	0	0	17	83	0	2.3	0	0	96.0	0	0	22/03/2019
Syria	377	0	0	0	377	0	4.8	0	0	88.1	0	0	90	0	0	15	75	0	5.0	0	0	94.4	0	0	21/03/2020
Tunisia	79	0	0	0	77	1	2.9	0	0	74.4	0	0	4	0	0	3	1	0	0.7	0	0	75.0	0	0	19/03/2019
U.A.E	50	0	0	3	47	0	4.0	3	1	90.0	0	0	11	0	0	1	10	0	3.9	0	0	100.0	0	0	16/03/2020
Yemen	779	0	0	328	451	0	5.5	303	269	89.0	0	0	137	0	0	112	25	0	4.3	0	0	92.7	0	0	14/03/2020
EMR	25759	175	6	570	24979	28	10.2	501	270	89.5	175	0	5065	34	0	1259	3746	26	8.7	0	0	90.5	34	0	
2018	21920	33	4	86	21782	15	8.7	86	80	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	1138	8	0	48	202	0	189	2	0	12	19	12
BAH	0	0	0	0	0	0	0	0	0	0	0	0
DJI	1	0	0	0	0	0	0	0	0	0	0	0
EGY	498	0	0	8	57	0	50	0	0	2	0	18
IRN	216	0	0	4	7	0	0	0	0	0	0	0
IRQ	603	0	0	12	39	6	90	0	0	0	2	36
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	2	0	0	0	0	0
OMA	78	0	0	2	28	0	30	0	0	1	3	13
PAK	5497	26	9	248	959	0	1476	10	1	197	136	116
PAL	0	0	0	0	0	0	0	0	0	0	0	0
QAT	0	0	0	0	0	0	0	0	0	0	0	0
SAA	44	0	0	1	0	0	2	0	0	0	0	2
SOM	1080	0	1	45	140	6	308	0	0	2	36	78
SUD	402	0	0	1	31	90	30	0	0	0	2	5
SYR	813	0	0	23	36	0	174	0	0	5	1	11
TUN	27	0	0	0	2	0	0	0	0	0	0	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	423	0	0	0	0	220	53	0	0	0	0	53
EMR	10935	34	10	395	1508	352	2404	12	1	219	199	344

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	2	19-Jan-20
	Pakistan	10	18/Feb/20
2020 Total		12	18/Feb/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	HILMAND	WASHER	1	4-Jan-20	4-Jan-20
	PAK	PUNJAB	DG KHAN	1	18-Jan-20	18-Jan-20
		KHYBER PAKHTUNKHWA	KARAK	1	20-Jan-20	20-Jan-20
2020 Total				3	04-Jan-20	20-Jan-20
2019	AFG	URUZGAN	TIRINKOT	1	2-Aug-19	2-Aug-19
		HILMAND	MUSAQALAH	1	05-Jun-19	05-Jun-19
		SANGIN	1	06-Mar-19	06-Mar-19	
	PAK	PUNJAB	DG KHAN	2	2-Dec-19	10-Dec-19
		SINDH	KHIORANGI	1	28-Aug-19	28-Aug-19
			SUJAWAL	1	25-Sep-19	25-Sep-19
			JAMSHORO	1	09-Oct-19	09-Oct-19
			T. ALLAHYAR	1	10-Nov-19	10-Nov-19
			KAMBAR	1	02-Nov-19	02-Nov-19
			MIRPURKHAS	2	01-Dec-19	18-Dec-19
		LARKANA	1	24-Dec-19	24-Dec-19	
		JACOBABAD	1	19-Dec-19	19-Dec-19	
		BALOCHSITAN	MASTUNG	1	18-Nov-19	18-Nov-19
	KILLABDULLAH		2	2-Jul-19	19-Nov-19	
	KHYBER PAKHTUNKHWA (KP)	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 (12/2020) / Ending on : (22/03/2020)

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	673	59	7	63	497	49		1	42						39				9	8%	100%	100%	100%	15/03/2020	
Bahrain	NPL Oman / CDC																								15/03/2020	
Djibouti	NPL Kenya / CDC																								16/03/2020	
Egypt***	RRL Egypt	210	14	1	17	138	26	14		8						4			1	2	7%	100%	100%	100%	19/03/2020	
Iran	NPL Iran / CDC	189	2		2	178	7		2							1					1%	100%	100%	100%	17/03/2020	
Iraq	RRL Egypt	168			14	138	9	7													8%	100%		100%	19/03/2020	
Jordan	NPL Jordan / RRL EGYPT	17			3	14															18%	100%		100%	19/03/2020	
Kuwait	RRL Kuwait / RIVM	10				6		4													5%	100%		100%	22/03/2020	
Lebanon	NPL Jordan / RRL EGYPT	19			5	14															26%	100%		100%	19/03/2020	
Libya	RRL Tunisia / RIVM	27	3			15		9								3					0%	100%	100%	100%	06/03/2020	
Morocco	NPL Morocco / RRL Tunisia	32			1	25	4	2													2%	100%		100%	13/03/2020	
Oman	NPL Oman / CDC	5			2	3															19%	100%		100%	15/03/2020	
Pakistan	RRL Pakistan	3129	314	24	246	2159	326	50	30	93			90	24		144			1	24	8%	100%	98%	98%	22/03/2020	
Palestine & UNRWA		6				6															0%	33%		100%	09/03/2020	
Qatar	NPL Oman / CDC																								15/03/2020	
Saudi Arabia	NPL Saudi Arabia / CDC	37				30	7														0%	100%			19/03/2020	
Somalia	NPL Kenya / CDC	101	1		17	61	8	14			1										22%	9%		100%	22/03/2020	
Sudan	NPL Sudan / RRL Egypt	99			10	76	13														13%	100%			22/03/2020	
Syria	NPL Syria / RRL Egypt	86	4			76	6														1%	100%			19/03/2020	
Tunisia	RRL Tunisia	6				4		2													0%	100%		100%	06/03/2020	
U.A.E	NPL Oman / CDC	9				9															0%	100%		67%	15/03/2020	
Yemen	NPL Kenya / CDC	24	2		7	15										2					29%	100%	100%	0%	14/03/2020	
Total EMR 2020		4847	399	32	387	3464	455	102	31	145	1		90	24		193			1	3	33	8%	98%	98%	98%	
Total EMR 2019		24669	1048	98	3614	19867		30	151	572	1		46	24		623	1		3	21	6	1	12%	95%	99%	97%

* 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	7
	Wild+cVDPV2					1
	cVDPV2					1
	EV/SL	177	265	248	200	38
	Negative	6	9	5	3	
AFG Total		185	316	336	259	62
EGY	EV/SL	492	481	508	666	84
	Negative	36	41	32	34	4
	Pending					28
	EGY Total	528	522	540	700	116
IRN	Wild				3	
	EV/SL		5	51	65	10
	Negative		1	3	3	
IRN Total			6	54	71	10
JOR	EV/SL	2	29	36	36	2
	Negative		2			1
	Pending					6
JOR Total		2	31	36	36	9
KUW	EV/SL			3	3	
	Pending				8	
KUW Total			3	11		
LEB	EV/SL	2	26	44	44	4
	Negative	2	1	1	3	
	Pending					4
LEB Total		4	27	45	47	8
PAK	Wild	60	106	139	368	74
	Wild+cVDPV2	2			10	4
	cVDPV2	2			25	4
	aVDPV2	3	4		2	
	EV/SL	456	523	531	421	20
	Negative	6		3	4	2
	Pending				1	77
PAK Total		529	633	673	831	181
SOM	cVDPV2		2	19	5	4
	cVDPV3			11		
	aVDPV2			2	1	
	EV/SL		20	43	28	4
	Negative		14	138	29	7
SOM Total			36	213	63	20
SUD	EV/SL			15	42	5
	Negative				1	
	Pending				17	5
SUD Total			15	60	10	
SYR	EV/SL		4	81	155	24
	Negative			21	30	6
	Pending					15
SYR Total			4	102	185	45
TOTAL		1248	1575	2017	2263	461

Table 7: Environmental Wild/VDPV 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	
			ISLAMABAD	3	12/Apr/19	21/Aug/19	
			KPAKHTUNKHWA	40	8/Jan/19	28/Dec/19	
			PUNJAB	98	5/Jan/19	17/Dec/19	
			SINDH	155	2/Jan/19	20/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	8	9/Oct/19	24/Dec/19	
			PUNJAB	10	21/Aug/19	17/Dec/19	
			SINDH	1	19/Dec/19	19/Dec/19	
			PUNJAB	2	11/Apr/19	18/Dec/19	
aVDPV2	PUNJAB	2	11/Apr/19	18/Dec/19			
PAK Total			405	1/Jan/19	31/Dec/19		
SOM	cVDPV2	BANADIR	5	10/Nov/19	22/Dec/19		
		BANADIR	1	3/Feb/19	3/Feb/19		
SOM Total			6	3/Feb/19	22/Dec/19		
2019 Total			470	1/Jan/19	31/Dec/19		
2020	AFG	Wild	HILMAND	2	1/Jan/20	25/Feb/20	
			KANDAHAR	4	28/Jan/20	25/Feb/20	
			NANGARHAR	1	26/Jan/20	26/Jan/20	
		Wild+cVDPV2	NANGARHAR	1	8/Jan/20	8/Jan/20	
			cVDPV2	NANGARHAR	1	7/Jan/20	7/Jan/20
	AFG Total			9	1/Jan/20	25/Feb/20	
	PAK	Wild	AJK	1	25/Feb/20	25/Feb/20	
			BALUCHISTAN	21	1/Jan/20	2/Mar/20	
			ISLAMABAD	1	16/Jan/20	16/Jan/20	
			KPAKHTUNKHWA	3	28/Jan/20	8/Feb/20	
			PUNJAB	16	4/Jan/20	20/Feb/20	
		SINDH	Wild+cVDPV2	SINDH	32	3/Jan/20	4/Mar/20
				BALUCHISTAN	1	1/Feb/20	1/Feb/20
				PUNJAB	1	4/Jan/20	4/Jan/20
		cVDPV2	SINDH	2	3/Jan/20	6/Feb/20	
			KPAKHTUNKHWA	3	10/Jan/20	10/Feb/20	
			PUNJAB	1	10/Jan/20	10/Jan/20	
			PUNJAB	1	10/Jan/20	10/Jan/20	
			PUNJAB	1	10/Jan/20	10/Jan/20	
			PUNJAB	1	10/Jan/20	10/Jan/20	
PAK Total			82	1/Jan/20	4/Mar/20		
SOM	cVDPV2	BANADIR	4	5/Jan/20	4/Jan/20		
SOM Total			4	5/Jan/20	4/Jan/20		
2020 Total			95	1/Jan/20	4/Mar/20		

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2020 - 22/03/2020

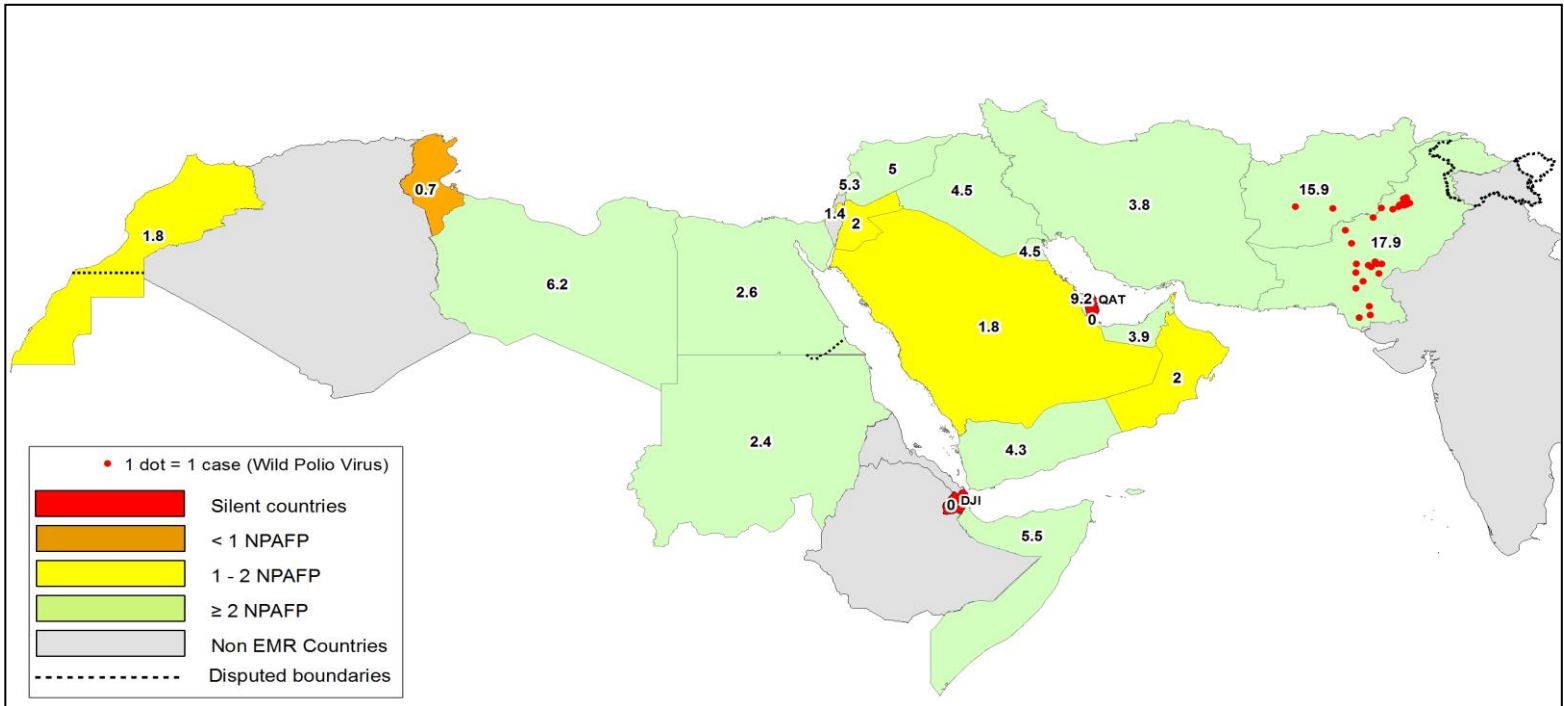


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2020 - 22/03/2020

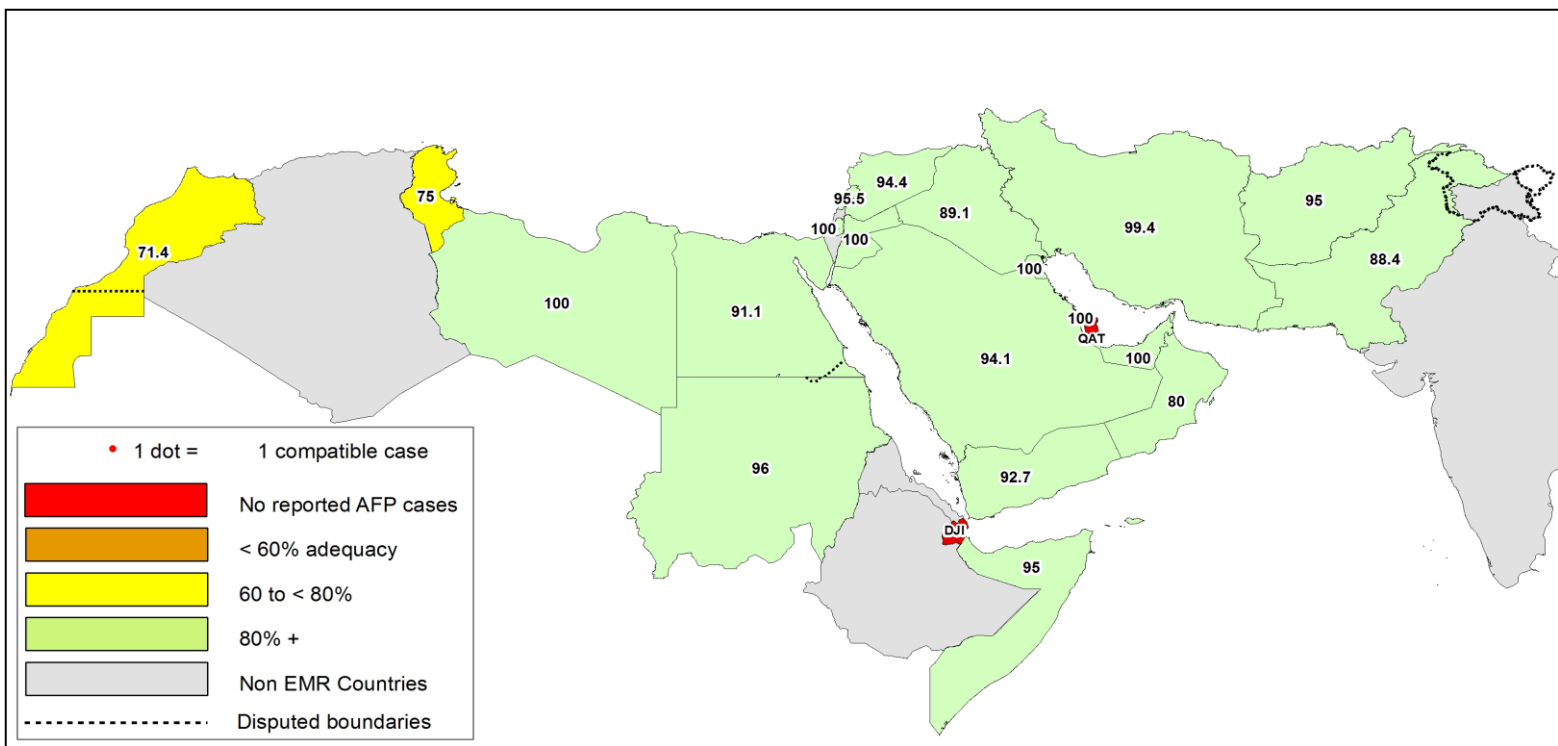


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2019 - 2020

Year	COUNTRY	Count	First Case	Last Case
2020	AFG	2	4-Jan-20	21-Jan-20
	PAK	32	1-Jan-20	2-Mar-20
2020 Total		34	1-Jan-20	2-Mar-20
2019	AFG	29	4-Jan-19	7-Dec-19
	PAK	146	15-Jan-19	31-Dec-19
2019 Total		175	4-Jan-19	31-Dec-19

Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2020 - 22/03/2020

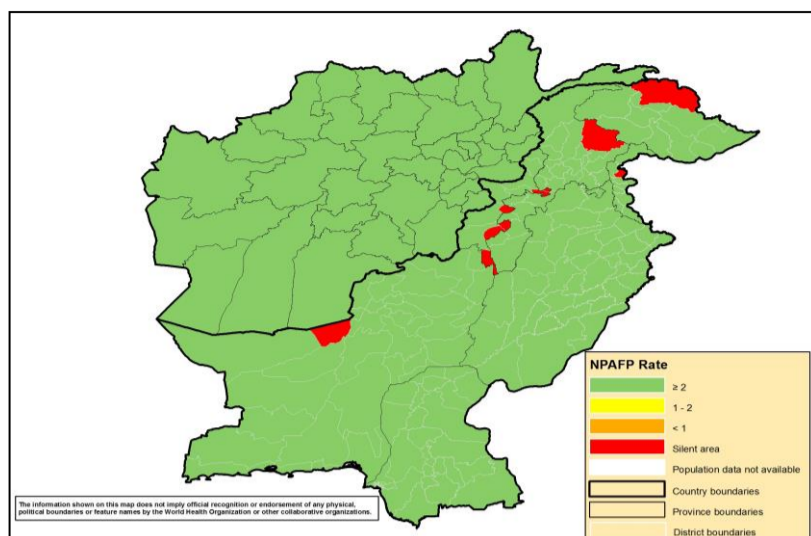


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2020 - 22/03/2020

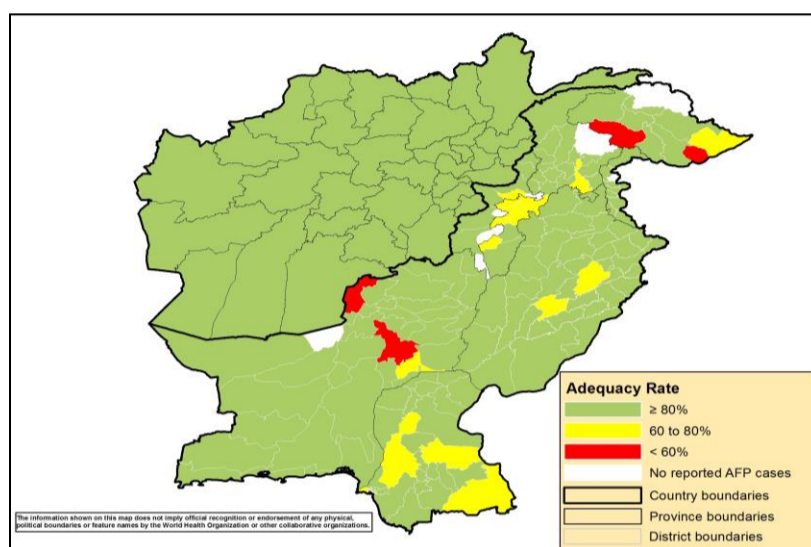
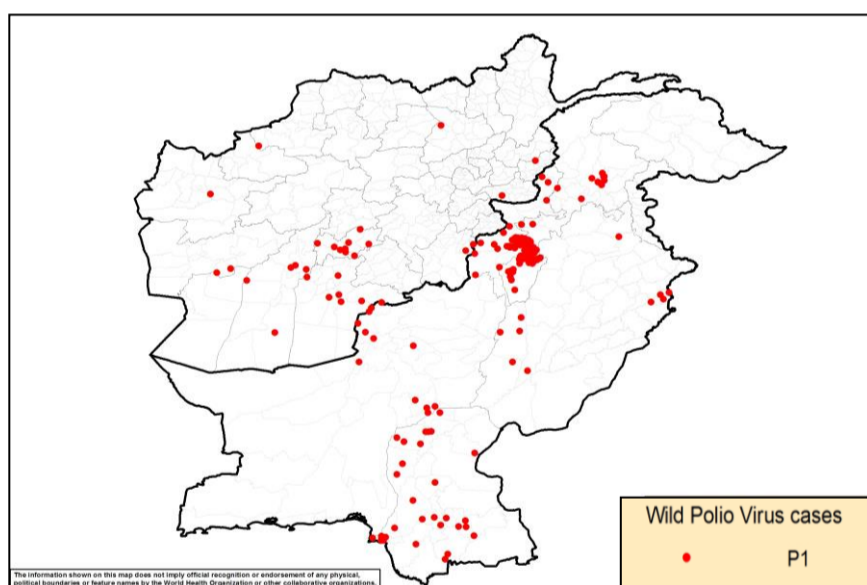
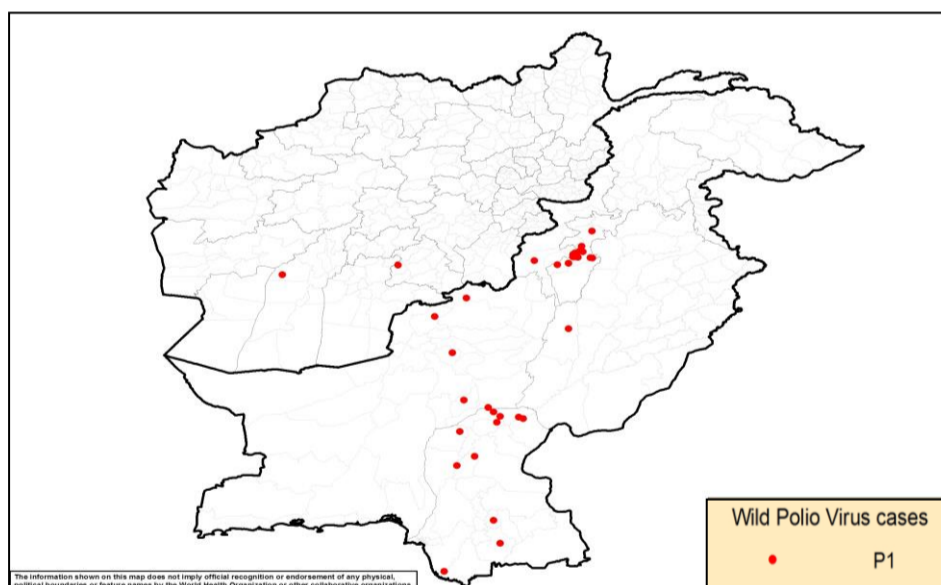


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2020 - 22/03/2020



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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	ZABUL	MIZAN	1	21-Jan-20	21-Jan-20	
	HILMAND	WASHER	1	4-Jan-20	4-Jan-20	
2020 Total			2	4-Jan-20	21-Jan-20	
2019	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	
		BAKWA	2	14-Nov-19	25-Nov-19	
	FARAH	PASHTUNZARGHUN	1	19-Nov-19	19-Nov-19	
	HIRAT	PUL-E- KHUMRI	1	14-Nov-19	14-Nov-19	
	BAGHLAN	KHASURUZGAN	1	2-Nov-19	2-Nov-19	
	URUZGAN	TIRINKOT	4	19-May-19	2-Aug-19	
		CHORA	3	20-Mar-19	23-Jul-19	
		SHAHID-E-HASSAS	1	25-Feb-19	25-Feb-19	
		BALAMURGHAB	1	17-Oct-19	17-Oct-19	
	BADGHIS	BERMEL	2	15-Sep-19	28-Sep-19	
	PAKTIKA	KHOGYANI	1	18-Sep-19	18-Sep-19	
	NANGARHAR	GARMSEER	1	26-May-19	26-May-19	
	HILMAND	MUSAQALAH	1	5-May-19	5-May-19	
		NAWZAD	1	3-Apr-19	3-Apr-19	
		WASHER	1	23-Mar-19	23-Mar-19	
		SANGIN	1	6-Mar-19	6-Mar-19	
		WATAPUR	1	8-May-19	8-May-19	
	KUNAR					
	2019 Total			29	4-Jan-19	7-Dec-19

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	SINDH	GHOTKI	1	2-Mar-20	2-Mar-20	
		JACOBABAD	1	28-Feb-20	28-Feb-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	
		KAMBAR	1	8-Jan-20	8-Jan-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	
		LAKKIMRWT	11	2-Jan-20	25-Feb-20	
	KHYBER PAKHTUNKHWA	TANK	2	11-Jan-20	17-Feb-20	
		KARAK	1	20-Jan-20	20-Jan-20	
	BALOCHISTAN	ZHOB	1	22-Feb-20	22-Feb-20	
		SOHBATPUR	1	12-Feb-20	12-Feb-20	
		SIBI	1	7-Feb-20	7-Feb-20	
		PISHIN	1	31-Jan-20	31-Jan-20	
		NSIRABAD	1	3-Jan-20	3-Jan-20	
KP TRIBAL DISTRICTS	WAZIR-S	1	21-Feb-20	21-Feb-20		
PUNJAB	DGKHAN	1	18-Jan-20	18-Jan-20		
2020 Total			32	1-Jan-20	2-Mar-20	
2019	KHYBER PAKHTUNKHWA	LAKKIMRWT	32	27-May-19	31-Dec-19	
		DIKHAN	4	5-May-19	21-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	
		TORGHAR	7	25-May-19	13-Sep-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	
		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	
	PUNJAB	LAHORE	5	20-Jan-19	28-Dec-19	
		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		
	KP TRIBAL DISTRICTS	MOHMAND	1	20-Dec-19	20-Dec-19	
		WAZIR-S	1	20-Aug-19	20-Aug-19	
		WAZIR-N	8	4-Apr-19	21-Jul-19	
		KHYBER	1	14-Feb-19	14-Feb-19	
		BAJOUR	1	18-Jan-19	18-Jan-19	
2019 Total			146	15-Jan-19	31-Dec-19	

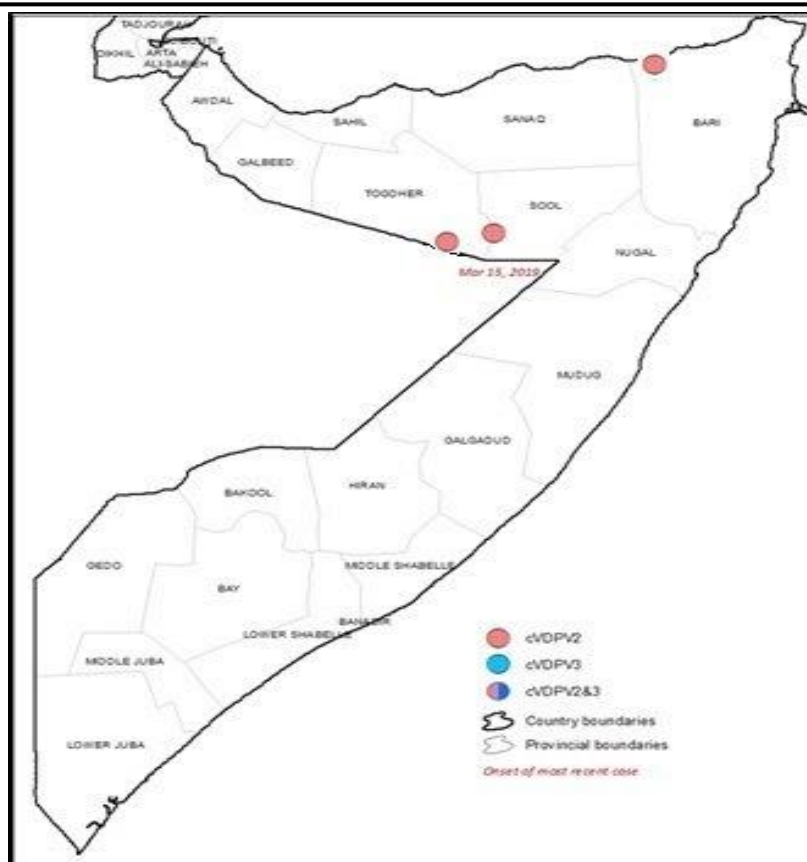
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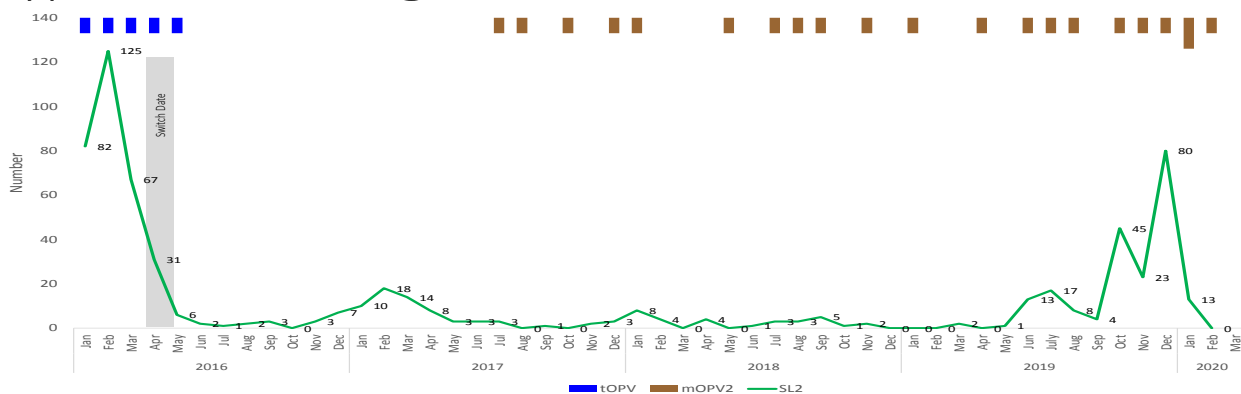
Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2019-2020

COUNTRY	YEAR	PROVINCE	DISTRICT	Count	First Case	Last Case
PAK	2020	PUNJAB	RAWALPINDI	1	18-Jan-20	18-Jan-20
		KHYBER PAKHTUNKHWA	PESHAWAR	2	02-Jan-20	29-Jan-20
			BAJOUR	3	03-Jan-20	30-Jan-20
			KHYBER	13	12-Jan-20	12-Feb-20
			NOWSHERA	2	18-Jan-20	03-Feb-20
			LAKKI MARWAT	1	27-Jan-20	27-Jan-20
			MARDAN	1	02-Jan-20	02-Jan-20
			DIR LOWER	1	02-Feb-20	02-Feb-20
			BANNU	1	03-Jan-20	03-Jan-20
		Total 2020				25
PAK	2019	PUNJAB	GUJRANWALA	1	22-Nov-19	22-Nov-19
		KHYBER PAKHTUNKHWA	KHYBER	3	12-Dec-19	28-Dec-19
			MOHMAND	3	12-Dec-19	21-Dec-19
			BAJOUR	1	1-Dec-19	1-Dec-19
			PESHAWAR	1	8-Dec-19	8-Dec-19
			LAKKI MARWAT	1	13-Dec-19	13-Dec-19
			CHARSADA	1	3-Nov-19	3-Nov-19
			KOHISTANUPPER	1	27-Oct-19	27-Oct-19
			KOHISTANLOWER	2	6-Oct-19	11-Oct-19
		TORGHAR	3	4-Sep-19	17-Dec-19	
		ISLAMABAD	CDA	1	11-Sep-19	11-Sep-19
		GILGIT BALTISTAN	DIAMER	4	7-Jul-19	28-Aug-19
		SOM	BARI	BOSSASO	1	8-May-19
TOGDHER	BUHODLE		1	21-Apr-19	21-Apr-19	
SOOL	LAS ANOD		1	15-Mar-19	15-Mar-19	
Total 2019				25	15-Mar-19	28-Dec-19

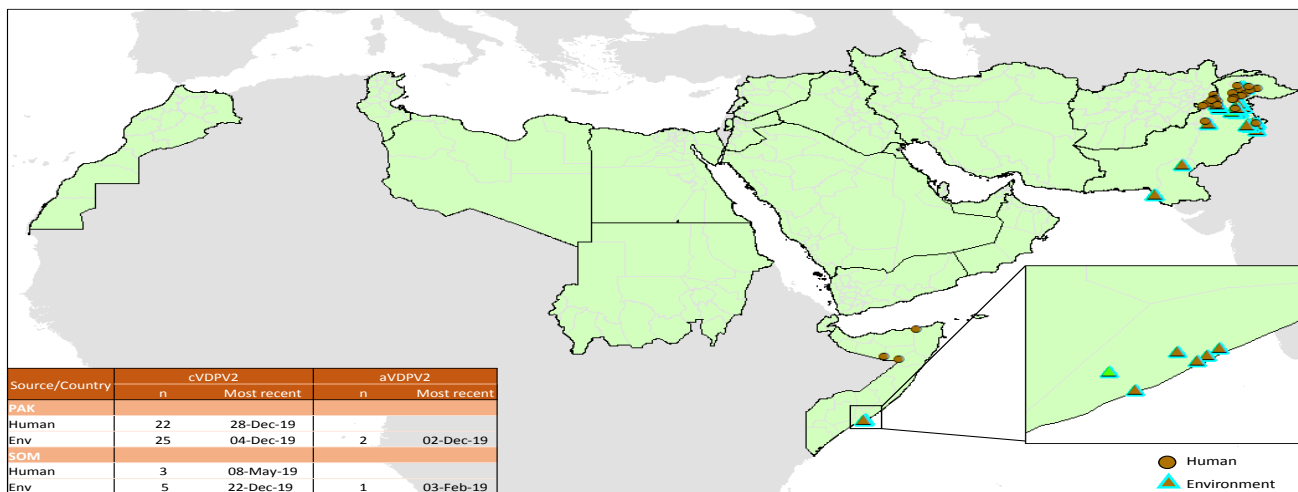
Figure 6: Somalia cVDPV cases by type and district 01/01/2019 - 31/12/2019



Sabin like type-2 poliovirus isolates (H&E) and vaccine types used during SIAs, EMRO, 2016 to 2020



VDPV2 isolates, EMR countries, 2019



VDPV2 isolates, EMR countries, 2020

