

Highlights of Polio Fax Bulletin No. 1126 for Week 18 2020

I. Salient features

1. Polio eradication teams at the Regional and Country levels are contributing into COVID19 Response, particularly in areas of surveillance, analytics and communications and coordination.
2. Wild Poliovirus Type-1 (WPV1):
 - Eight new cases reported this week, six from Afghanistan and two from Pakistan - bringing total cases in 2020 in the EMR and world to 54 (Afghanistan – 11 and Pakistan - 43).
 - Eighteen new positive environmental samples, all from Pakistan.
3. Circulating Vaccine Derived Poliovirus Type-2 (cVDPV2):
 - Four new cases, two from Afghanistan and two from Pakistan – bringing total cases in 2020 in the EMR to date to 46, 2 from Afghanistan and 44 all from Pakistan.
 - Four new positive environmental samples, all from Afghanistan.

II. Wild Poliovirus Transmission

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

- a. *Human samples:* Six new WPV1 case reported this week.
Total WPV1 cases in 2020 to date is 54 (11 from Afghanistan and 43 from Pakistan). This compares with 25 cases in 2019 in the same period (7 from Afghanistan and 18 from Pakistan).
 - Afghanistan: Six new WPV1 cases reported and details are as follows:
 - Case (1): Reported from Shahwalikot district, Kandahar province, with date of onset on 4 March 2020. The case is a 9-month old male child. The child did not receive any OPV doses from routine or supplementary immunization activities (SIAs).
 - Case (2): Reported from Shegal Wa Shultan district, Kunar province, with date of onset on 5 March 2020. The case is a 14-month old male child. The child did not receive any OPV doses from routine or SIAs.
 - Case (3): Reported from Yawan district, Badakhshan province, with date of onset on 10 March 2020. The case is a 20-month old female child. The child reportedly received 4 OPV doses from routine and 7 doses from SIAs.
 - Case (4): Reported from Dhedadi district, Balkh province, with date of onset on 15 March 2020. The case is a 24-month old female child. The child reportedly received 1 OPV dose from routine and 2 doses from SIAs.
 - Case (5): Reported from Ghorak district, Kandahar province, with date of onset on 19 March 2020. The case is a 6-month old male child. The child did not receive any OPV doses from routine or SIAs.
 - Case (6): Reported from Shindand district, Herat province, with date of onset on 21 March 2020. The case is a 10-month old male child. The child reportedly received only 1 OPV dose from SIAs and none from routine.

In 2020, 11 WPV1 cases are reported, one each from Hilmand, Zabul, Farah, Nimroz, Laghman, Kunar, Badakhshan, Balkh and Herat provinces and two from Kandahar province. The most recent case has onset of paralysis on 21 March 2020.
 - Pakistan: Two new WPV1 cases reported and details are as follows:
 - Case (1): Reported from Jafarabad district, Balochistan province, with date of onset on 12 February 2020. The case is a 48-month old female child. The child reportedly received 7+ OPV doses from SIAs and none from routine.
 - Case (2): Reported from Ghotki district, Sindh province, with date of onset on 3 April 2020. The case is a 13-month old male child. The child reportedly received 1 OPV dose from routine and 4 doses from SIAs.

In 2020, 43 WPV1 cases are reported, 19 cases from Khyber Pakhtunkhwa (KP) province, 16 from Sindh province, 7 from Balochistan province and one from Punjab province. The most recent case has onset of paralysis on 3 April 2020.

b. *Environmental samples*: 18 new WPV1 positive environmental samples reported this week; all from Pakistan in 2020:

- Afghanistan: In 2020 to date, there are 9 WPV1 positive environmental samples including 1 combined (WPV1 and cVDPV2) with most recent sample collected on 25 March 2020.
- Pakistan: In 2020 to date, there are 140 WPV1 positive environmental samples including 7 combined (WPV1 and cVDPV2) and 2 combined (WPV1 and aVDPV2) with most recent positive sample collected on 14 April 2020.

III. Vaccine Derived Polioviruses (VDPVs)

1. Afghanistan: Two new circulating VDPV2 (cVDPV2) cases and four positive environmental samples reported this week.

The 2 new cVDPV2 cases are one each from Batikot and Shinwar districts, from Nangarhar province. The new cVDPV2 cases have dates of onset on 5 February and 27 March 2020, noting that the Batikot cVDPV2 case was identified as cVDPV2 by a positive contact.

In 2020 to date, there are 2 cVDPV2 cases reported both from Nangarhar province, with most recent case's onset on 27 March 2020.

Environment: In 2020 to date, 14 circulating VDPV2 (cVDPV2) positive environmental samples including 1 combined (WPV1 and cVDPV2) were reported; 11 from Jalalabad and 3 from Batikot districts, Nangarhar province, with most recent collection on 8 March 2020.

2. Pakistan: Two new cVDPV2 cases were reported this week and 2 new aVDPV2 environmental samples were reported.

The 2 new cVDPV2 cases are one each from Faisalabad district, from Punjab province, and Dir Lower district, KP province. The new cVDPV2 cases have dates of onset on 14 and 25 March 2020.

In 2020 to date, there are 44 cVDPV2 cases reported. Cases include 39 from KP province, 4 from Punjab province and 1 from Balochistan province, with most recent case's onset on 25 March 2020.

Environment: In 2020, there are 13 positive environmental samples for cVDPV2 (including 7 combined WPV1 and cVDPV2), the most recent sample collected on 11 March 2020. Also 2 new aVDPV2 positive environmental samples both combined (WPV1 + aVDPV2) were reported, with most recent collection on 18 March 2020.

3. SOMALIA: No new VDPV 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 epidemiological and laboratory investigations have been completed. Case is now classified as aVDPV1.

4. LIBYA: An aVDPV type-3 (aVDPV3) case from Msalth district, Tarabulus province, with date of onset 15 January 2020. The case is a 7-month old male child. The child has died.

IV. Surveillance performance indicators

In 2020, 14 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 since they did not report any AFP case in 2020
- Morocco is also missing both indicators as its non-polio AFP rate is 1.5 and percentage of AFP cases with adequate stool specimens is 71.7%.
- Jordan, Palestine, Saudi Arabia, Sudan and Tunisia have a non-polio AFP rate of 1.5, 1.1, 1.5, 1.9 and 1.1 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 (18/20) / Ending on : 03/05/2020														
	Total AFP 2018	Total AFP 2019	Total AFP to date, 2020	W07 16 Feb 20	W08 23 Feb 20	W09 01 Mar 20	W10 08 Mar 20	W11 15 Mar 20	W12 22 Mar 20	W13 29 Mar 20	W14 5 Apr 20	W15 12 Apr 20	W16 19 Apr 20	W17 26 Apr 20	W18 3 May 20
Afghanistan	3378	3768	1068	66	78	59	51	61	56	57	52	41	51	35	9
Bahrain	35	17	7	1	2	1	0	0	0	1	0	0	0	0	0
Djibouti	0	5	0	0	0	0	0	0							
Egypt	1246	1343	309	11	23	22	20	15	12	18	9	18	8	11	6
Iran	896	1070	216	27	13	3	11	3	3	4	5	2	5	1	
Iraq	1023	1157	208	17	13	11	7	4	6	7	8	7	8	0	
Jordan ****	115	113	19	2	3	1	0	0	0	0	0	1	1	0	
Kuwait	72	48	12	1	2	2	0	0	1	0	0	0	1	0	
Lebanon ****	89	87	24	1	2	4	1	1	0	0	0	0	1		
Libya	122	107	42	3	3	4	2	0	3	0	1	2	1	1	1
Morocco	212	247	46	2	8	3	6	2	1	0					
Oman	28	30	9	0	1	1	0	1	1	0	0	1	1	0	
Pakistan	12276	15215	4154	379	353	300	247	287	167	115	98	136	106	31	2
Palestine ****	44	62	7	1	0	0	0	0	0	0	1	0	0	0	0
Qatar	10	9	0	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	242	236	42	7	3	3	4	2	0	2	0	0	0	0	0
Somalia	353	361	149	12	7	12	8	7	13	8	12	3	5	1	0
Sudan	579	608	121	2	7	6	10	10	6	2	5	0			
Syria ****	362	377	113	12	5	9	4	8	3	2	1	1	7	3	1
Tunisia	68	79	10	0	1	0	0	0	2	1	0	0	0	0	
U.A.E	40	50	11	1	0	0	0	0	0	0	0	0	0	0	
Yemen	730	779	199	20	16	12	10	20	10	12	13	1			
Total EMR	21920	25768	6766	565	540	453	381	421	284	229	205	213	195	83	19

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2018	Total year 2019	03/05		Confirmed polio cases by month of onset											
			2019	2020	June 2019	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019	January 2020	February 2020	March 2020	April 2020	May 2020
Afghanistan	21	29	7	11	1	2	2	3	1	7	1	2	3	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	0			
Egypt	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			
Jordan ****	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			
Lebanon ****	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			
Morocco	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	147	18	43	16	12	14	5	17	23	32	18	17	7	1	
Palestine ****	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		
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			
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	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	176	25	54	17	14	16	8	18	30	33	20	20	13	1	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 (18/20) / Ending on : 03/05/2020

COUNTRY	2019												2020												Latest line List Date
	AFP									Specimen	Wild cases ****		AFP									Specimen	Wild cases ****		
	Total AFP cases onset 2019	Case classification					Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis		% with *** adequate specimens	Wild P1 Poliovirus	Wild P3 Poliovirus	Total AFP cases onset 2020	Case classification					Annualized Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis		AFP cases pending classification and lab > 90 days from onset of paralysis	% with *** adequate specimens	
		Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV				Total Confirmed Polio Cases *					Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV							
Afghanistan	3768	29	1	0	3738	0	18.1	0	0	94.1	29	0	1068	11	0	182	873	2	14.7	8	0	95.5	11	0	03/05/2020
Bahrain	17	0	0	0	17	0	5.9	0	0	100.0	0	0	7	0	0	7	0	0	7.1	1	1	100.0	0	0	03/05/2020
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	0	1343	0	3.6	0	0	93.4	0	0	309	0	0	66	243	0	2.4	0	0	90.6	0	0	30/04/2020
Iran	1070	0	0	0	1069	1	5.2	0	0	97.1	0	0	216	0	0	11	205	0	3.1	3	0	99.5	0	0	02/05/2020
Iraq	1157	0	0	0	1157	0	7.4	0	0	94.3	0	0	208	0	0	22	186	0	3.8	2	0	91.3	0	0	01/05/2020
Jordan	113	0	0	0	113	0	3.9	0	0	100.0	0	0	19	0	0	2	17	0	1.5	0	0	100.0	0	0	26/04/2020
Kuwait	48	0	0	0	48	0	5.4	0	0	89.6	0	0	12	0	0	5	7	0	3.7	0	0	83.3	0	0	26/04/2020
Lebanon	87	0	0	0	87	0	4.7	0	0	89.7	0	0	24	0	0	7	17	0	3.8	0	0	100.0	0	0	24/04/2020
Libya	107	0	0	0	107	0	4.3	0	0	98.1	0	0	42	0	0	14	27	1	4.9	0	0	100.0	0	0	02/05/2020
Morocco	247	0	0	0	247	0	2.8	0	0	84.2	0	0	46	0	0	28	18	0	1.5	4	1	71.7	0	0	03/04/2020
Oman	30	0	0	0	30	0	2.7	0	0	80.0	0	0	9	0	0	2	7	0	2.3	0	0	88.9	0	0	27/04/2020
Pakistan	15215	147	5	169	14871	23	19.3	169	0	86.6	147	0	4154	43	0	494	3571	46	15.5	132	0	88.8	43	0	03/05/2020
Palestine	62	0	0	0	62	0	3.3	0	0	98.4	0	0	7	0	0	3	4	0	1.1	2	0	100.0	0	0	03/05/2020
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	03/05/2020
Saudi Arabia	236	0	0	0	236	0	2.8	0	0	93.2	0	0	42	0	0	31	11	0	1.5	5	0	92.9	0	0	03/05/2020
Somalia	361	0	0	0	358	3	5.7	0	0	95.6	0	0	149	0	0	25	123	1	5.4	0	0	96.0	0	0	03/05/2020
Sudan	608	0	0	0	608	0	3.4	0	0	96.4	0	0	121	0	0	12	109	0	1.9	3	0	96.7	0	0	16/04/2020
Syria	377	0	0	0	377	0	4.8	0	0	88.1	0	0	113	0	0	19	94	0	4.2	0	0	92.0	0	0	02/05/2020
Tunisia	79	0	0	0	78	1	2.9	0	0	74.7	0	0	10	0	0	6	4	0	1.1	3	1	80.0	0	0	02/05/2020
U.A.E	50	0	0	0	50	0	4.0	0	0	90.0	0	0	11	0	0	1	10	0	2.6	0	0	100.0	0	0	27/04/2020
Yemen	779	0	0	163	616	0	5.5	163	145	89.0	0	0	199	0	0	160	39	0	4.2	33	25	94.0	0	0	14/04/2020
EMR	25768	176	6	332	25226	28	10.1	332	145	89.4	176	0	6766	54	0	1097	5565	50	7.6	196	28	91.0	54	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	268	4	1	18	23	29
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	89	0	0	7	4	13
IRN	216	0	0	4	7	0	5	0	0	0	0	0
IRQ	603	0	0	12	39	6	107	0	0	0	6	6
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	35	0	0	2	6	0
PAK	5497	26	9	248	959	0	1813	12	6	229	193	36
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	141	5	449	0	0	12	50	81
SUD	402	0	0	1	31	90	32	0	0	0	2	7
SYR	813	0	0	23	36	0	207	0	0	8	3	3
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	0	0	0	0	0	0	0	0	0	0	0	0
EMR	10512	34	10	395	1509	131	3009	16	7	276	287	177

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	4	7/Mar/20
	Pakistan	12	13/Mar/20
2020 Total		16	13/Mar/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	
			KHASHROD	1	28-Feb-20	28-Feb-20	
	PAK	PUNJAB	DG KHAN	1	18-Jan-20	18-Jan-20	
			KARAK	1	20-Jan-20	20-Jan-20	
2020 Total				5	04-Jan-20	28-Feb-20	
2019	AFG	URUZGAN	TIRINKOT	1	2-Aug-19	2-Aug-19	
			MUSAQALAH	1	05-Jun-19	05-Jun-19	
			SANGIN	1	06-Mar-19	06-Mar-19	
	PAK	PUNJAB	SINDH	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		
		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	KHYBER PAKHTUNKHWA (KP)	MASTUNG	1	18-Nov-19	18-Nov-19
				KILLABDULLAH	2	2-Jul-19	19-Nov-19
				BANNU	1	13-Nov-19	13-Nov-19
		KHYBER PAKHTUNKHWA (KP)	KHYBER PAKHTUNKHWA (KP)	SWABI	1	17-Nov-19	17-Nov-19
				TANK	1	30-Oct-19	30-Oct-19
LAKKIMRWAT	3			27-May-19	04-Oct-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 (18/2020) / Ending on : (03/05/2020)

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	971	96	11	86	734	45		9	64				1		60			1		5	8%	90%	100%	98%	03/05/2020
Bahrain	NPL Oman / CDC																									27/04/2020
Djibouti	NPL Kenya / CDC																									16/03/2020
Egypt***	RRL Egypt	294	16	2	18	223	18	17		8						7			1	3		6%	100%	100%	100%	30/04/2020
Iran	NPL Iran / CDC	227	3		3	213	8			3						1						1%	100%	100%	100%	02/05/2020
Iraq	RRL Egypt	207			20	170	12	5														9%	92%		100%	30/04/2020
Jordan	NPL Jordan / RRL EGYPT	19			3	16																16%	100%		100%	23/04/2020
Kuwait	RRL Kuwait / RIVM	13				10		3														3%	70%		90%	04/05/2020
Lebanon	NPL Jordan / RRL EGYPT	19			5	14																26%	100%		100%	23/04/2020
Libya	RRL Tunisia / RIVM	37	4			33										3	1					0%	100%	100%	95%	27/04/2020
Morocco	NPL Morocco / RRL Tunisia	32			1	25		6														2%	100%		100%	13/03/2020
Oman	NPL Oman / CDC	8			2	6																19%	100%		100%	27/04/2020
Pakistan	RRL Pakistan	4101	416	35	370	3098	171	9	40	121			125	43		188		1		1	13	8%	99%	98%	97%	03/05/2020
Palestine & UNRWA		7				6		1														0%	33%		100%	03/05/2020
Qatar	NPL Oman / CDC																									27/04/2020
Saudi Arabia	NPL Saudi Arabia / CDC	43				40		3														0%	100%		100%	30/04/2020
Somalia	NPL Kenya / CDC	149	3	1	25	95	1	24		2	1					3						21%	8%		99%	03/05/2020
Sudan	NPL Sudan / RRL Egypt	120	2		13	99		6														13%	100%			03/05/2020
Syria	NPL Syria / RRL Egypt	108	7			93	8															1%	100%			30/04/2020
Tunisia	RRL Tunisia	9				9																0%	100%		100%	27/04/2020
U.A.E	NPL Oman / CDC	10				10																0%	100%		60%	27/04/2020
Yemen	NPL Kenya / CDC	98	5		20	55	16	2								3					2	25%	94%	67%	0%	14/04/2020
Total EMR 2020		6472	552	49	566	4949	279	76	49	198	1		125	44		265	1	1	2	4	20	8%	95%	99%	96%	
Total EMR 2019		24690	1049	100	3620	19881		28	152	573	1		46	24		624	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	8
	Wild+cVDPV2					1
	cVDPV2					13
	EV/SL	177	265	248	200	54
	Negative	6	9	5	3	
AFG Total		185	316	336	259	90
EGY	EV/SL	492	481	508	666	129
	Negative	36	41	32	34	17
	Pending					27
EGY Total		528	522	540	700	173
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	59	105	139	366	131
	Wild+cVDPV2	2			10	7
	Wild+aVDPV2	1	1		2	2
	cVDPV2	2			25	6
	aVDPV2	3	4		2	
	EV/SL	456	523	531	421	66
	Negative	6		3	4	2
PAK Total		529	633	673	831	270
SOM	cVDPV2		2	19	5	4
	cVDPV3			11		
	aVDPV2			2	1	
	EV/SL		20	43	28	5
	Negative		14	138	29	12
SOM Total			36	213	63	32
SUD	EV/SL			15	42	13
	Negative				1	2
	Pending				17	5
SUD Total			15	60	20	
SYR	EV/SL		4	81	155	47
	Negative			21	30	11
	Pending					8
SYR Total			4	102	185	66
TOTAL		1248	1575	2017	2263	678

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	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	8	9/Oct/19	24/Dec/19	
PUNJAB			10	21/Aug/19	17/Dec/19		
SINDH			1	19/Dec/19	19/Dec/19		
aVDPV2	PUNJAB	2	11/Apr/19	18/Dec/19			
PAK Total			403	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			468	1/Jan/19	31/Dec/19		
2020	AFG	Wild	HILMAND	2	1/Jan/20	25/Feb/20	
			KANDAHAR	5	28/Jan/20	25/Mar/20	
			NANGARHAR	1	26/Jan/20	26/Jan/20	
			Wild+cVDPV2	1	8/Jan/20	8/Jan/20	
	AFG Total	cVDPV2	NANGARHAR	13	7/Jan/20	8/Mar/20	
				22	1/Jan/20	25/Mar/20	
	PAK	Wild	AJK	1	25/Feb/20	25/Feb/20	
			BALUCHISTAN	29	1/Jan/20	12/Apr/20	
			ISLAMABAD	1	16/Jan/20	16/Jan/20	
			KPAKHTUNKHWA	6	28/Jan/20	3/Apr/20	
			PUNJAB	34	4/Jan/20	13/Apr/20	
		Wild+cVDPV2	SINDH	60	3/Jan/20	14/Apr/20	
			BALUCHISTAN	2	1/Feb/20	2/Mar/20	
			PUNJAB	2	4/Jan/20	10/Feb/20	
		cVDPV2	SINDH	3	3/Jan/20	5/Mar/20	
			KPAKHTUNKHWA	4	10/Jan/20	11/Mar/20	
			PUNJAB	2	16/Jan/20	3/Feb/20	
			PAK Total		144	1/Jan/20	14/Apr/20
			SOM	cVDPV2	BANADIR	4	5/Jan/20
	SOM Total			4	5/Jan/20	4/Feb/20	
2020 Total			170	1/Jan/20	14/Apr/20		

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2020 - 03/05/2020

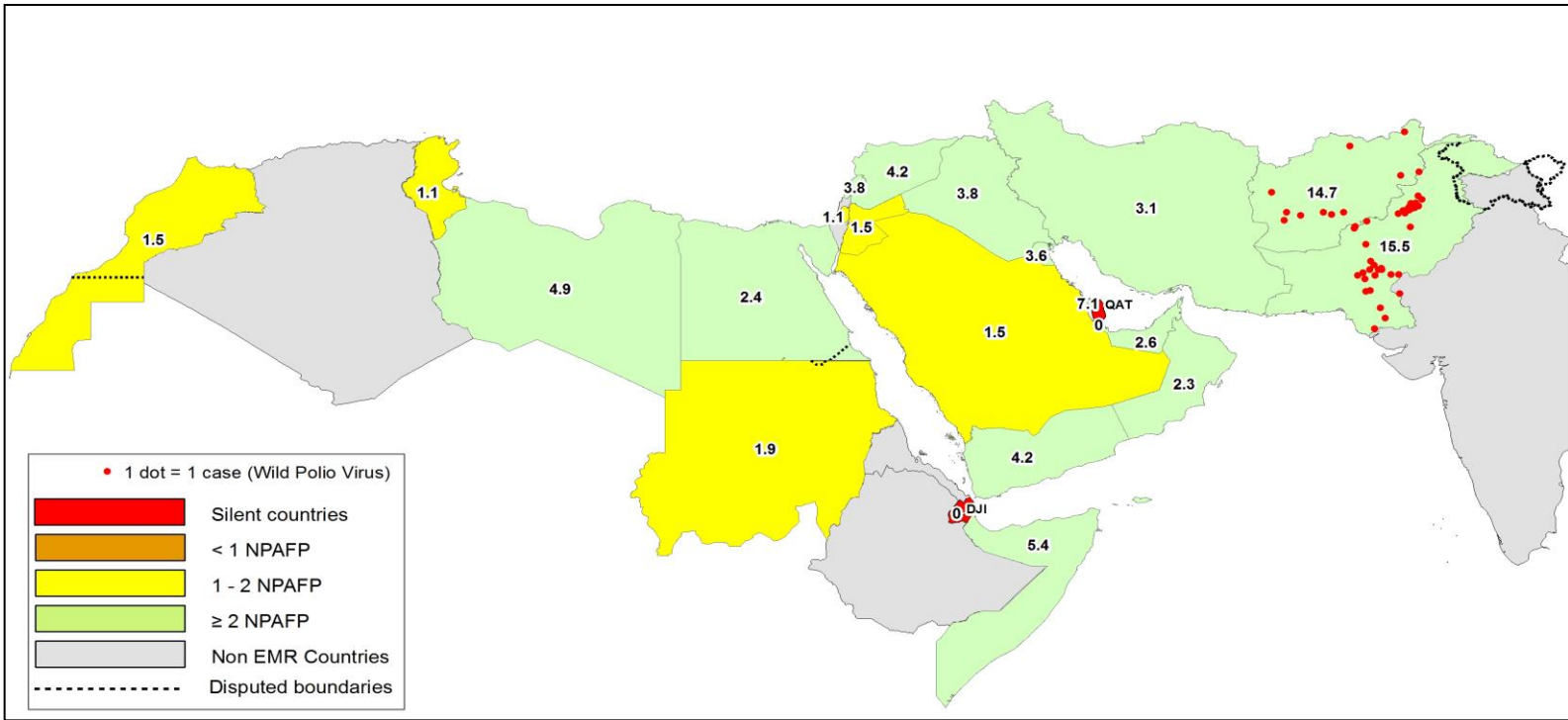


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2020 - 03/05/2020

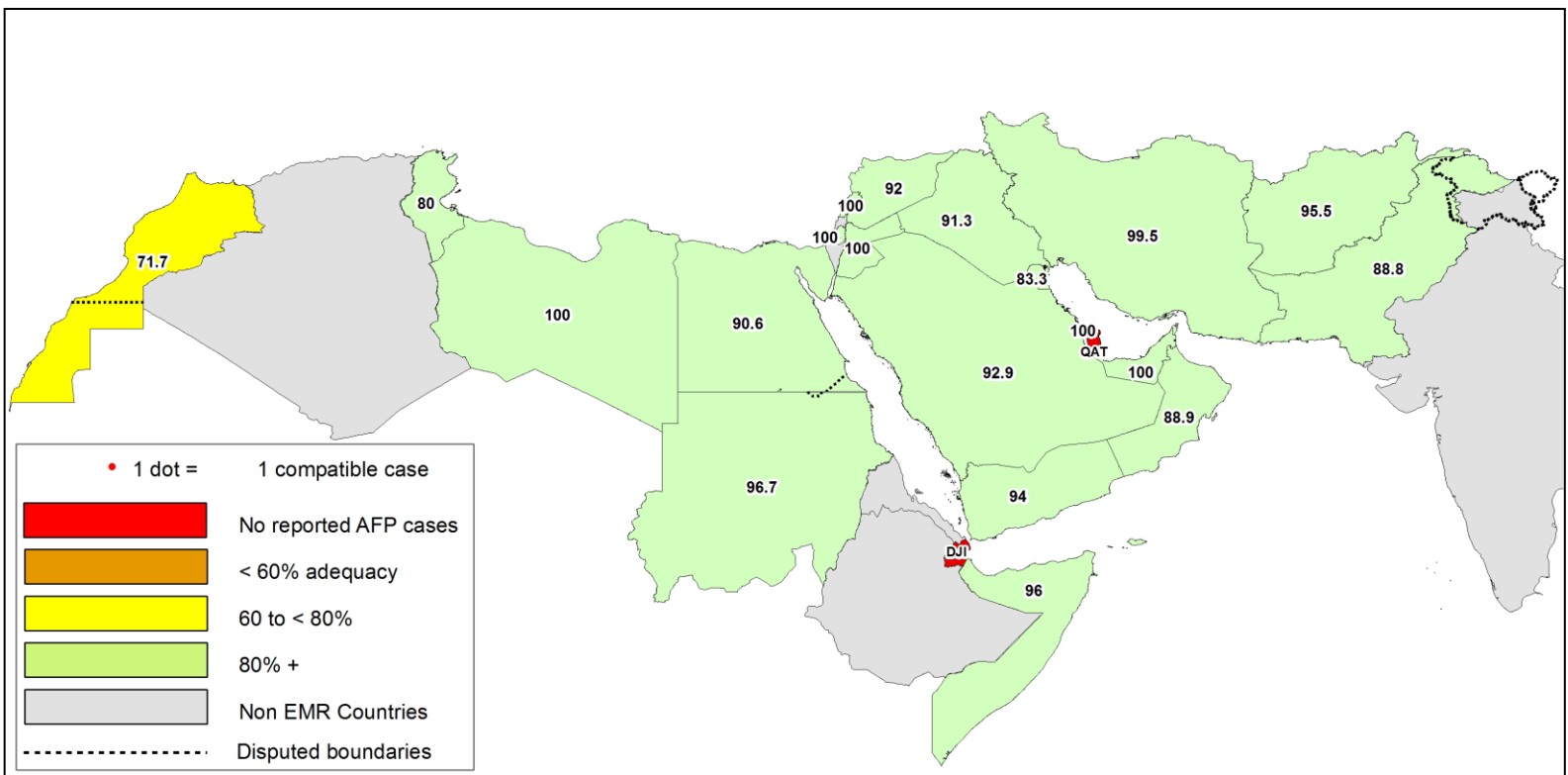


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2019 - 2020

Year	COUNTRY	Count	First Case	Last Case
2020	AFG	11	4-Jan-20	21-Mar-20
	PAK	43	1-Jan-20	3-Apr-20
2020 Total		54	1-Jan-20	3-Apr-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 - 03/05/2020

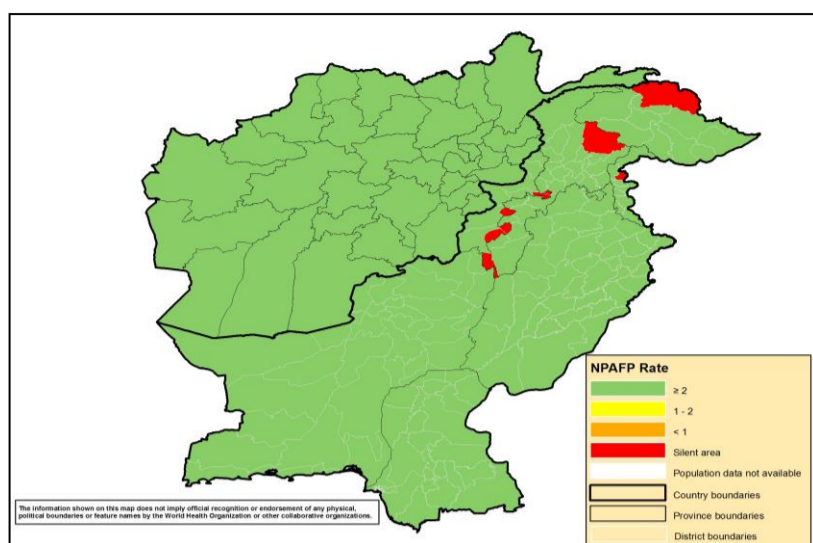


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2020 - 03/05/2020

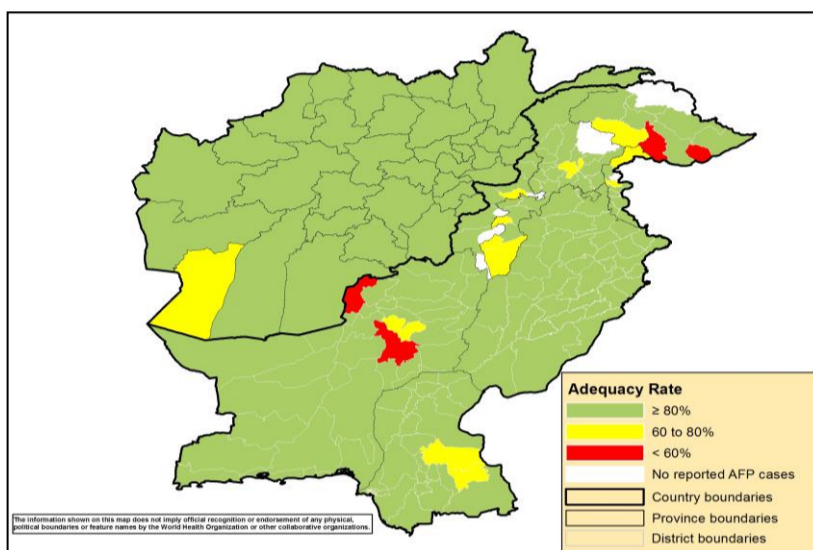
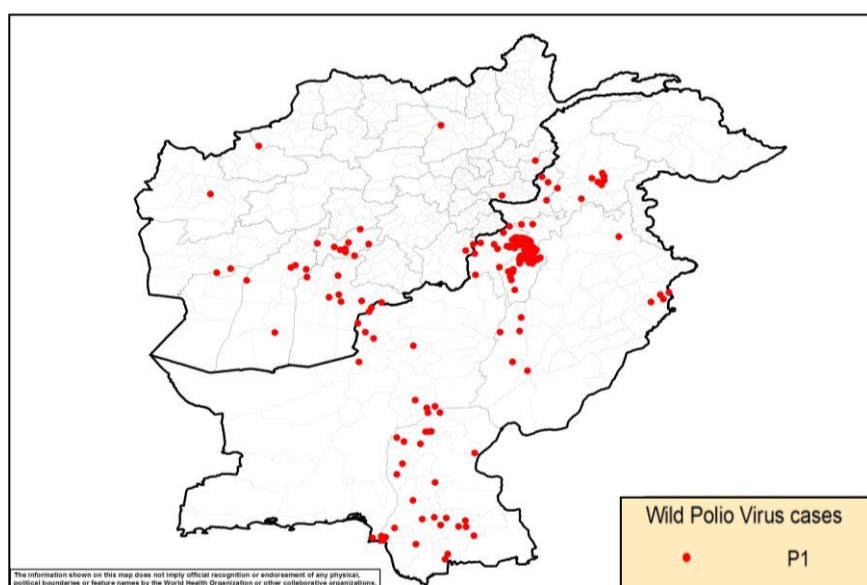
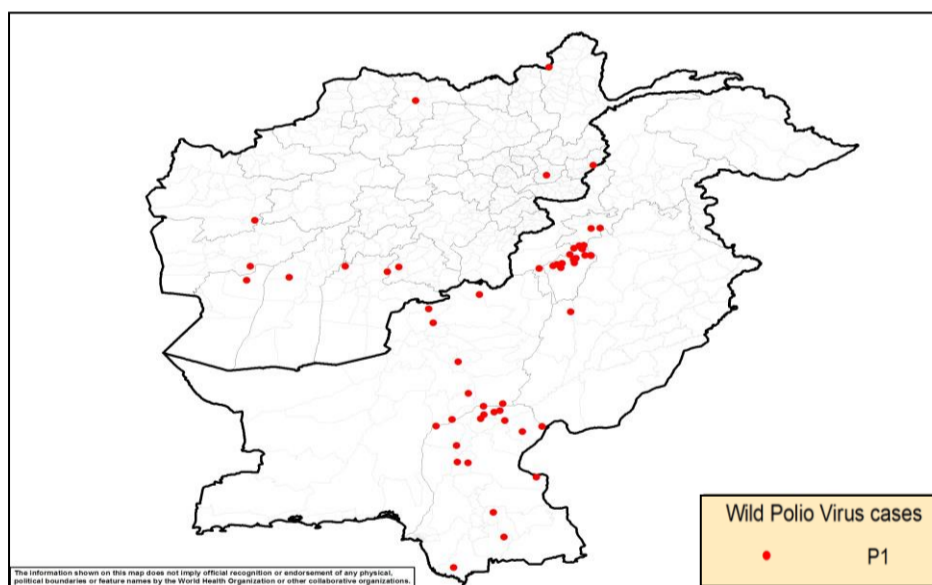


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2020 - 03/05/2020



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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	KANDAHAR	SHINDAND	1	21-Mar-20	21-Mar-20	
		GHORAK	1	19-Mar-20	19-Mar-20	
		SHAHWALIKOT	1	4-Mar-20	4-Mar-20	
	BALKH	DEHDADI	1	18-Mar-20	18-Mar-20	
	BADAKHSHAN	YAWAN	1	10-Mar-20	10-Mar-20	
	KUNAR	SHIGAL WA SHEL TAN	1	5-Mar-20	5-Mar-20	
	NIMROZ	KHASHROD	1	28-Feb-20	28-Feb-20	
	LAGHMAN	MEHTARLAM	1	10-Feb-20	10-Feb-20	
	FARAH	BAKWA	1	4-Feb-20	4-Feb-20	
	ZABUL	MIZAN	1	21-Jan-20	21-Jan-20	
	HILMAND	WASHER	1	4-Jan-20	4-Jan-20	
2020 Total			11	4-Jan-20	21-Mar-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	
		HIRAT	PASHTUNZARGHUN	1	19-Nov-19	19-Nov-19
		BAGHLAN	PUL-E- KHUMRI	1	14-Nov-19	14-Nov-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
	BADGHIS	BALAMURGHAB	1	17-Oct-19	17-Oct-19	
	PAKTIKA	BERMEL	2	15-Sep-19	28-Sep-19	
	NANGARHAR	KHOGYANI	1	18-Sep-19	18-Sep-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	
			WATAPUR	1	8-May-19	8-May-19
	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	KHYBER PAKHTUNKHWA	TANK	4	11-Jan-20	15-Mar-20		
		KARAK	2	20-Jan-20	13-Mar-20		
		LAKKIMRWT	12	2-Jan-20	9-Mar-20		
		WAZIR-S	1	21-Feb-20	21-Feb-20		
		BALOCHISTAN	PISHIN	2	31-Jan-20	31-Mar-20	
			ZHOB	1	22-Feb-20	22-Feb-20	
			JAFARABAD	1	12-Feb-20	12-Feb-20	
			SOHBATPUR	1	12-Feb-20	12-Feb-20	
			SIBI	1	7-Feb-20	7-Feb-20	
			NSIRABAD	1	3-Jan-20	3-Jan-20	
			DGKHAN	1	18-Jan-20	18-Jan-20	
	PUNJAB	GHOTKI	2	2-Mar-20	3-Apr-20		
		KHAIRPUR	1	27-Mar-20	27-Mar-20		
	SINDH	JACOBABAD	3	7-Feb-20	16-Mar-20		
		KAMBAR	2	8-Jan-20	26-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		
		T.ALLAHYAR	1	7-Jan-20	7-Jan-20		
		SUJAWAL	1	7-Jan-20	7-Jan-20		
		BADIN	1	1-Jan-20	1-Jan-20		
		2020 Total			43	1-Jan-20	3-Apr-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	
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	
	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		
SINDH	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

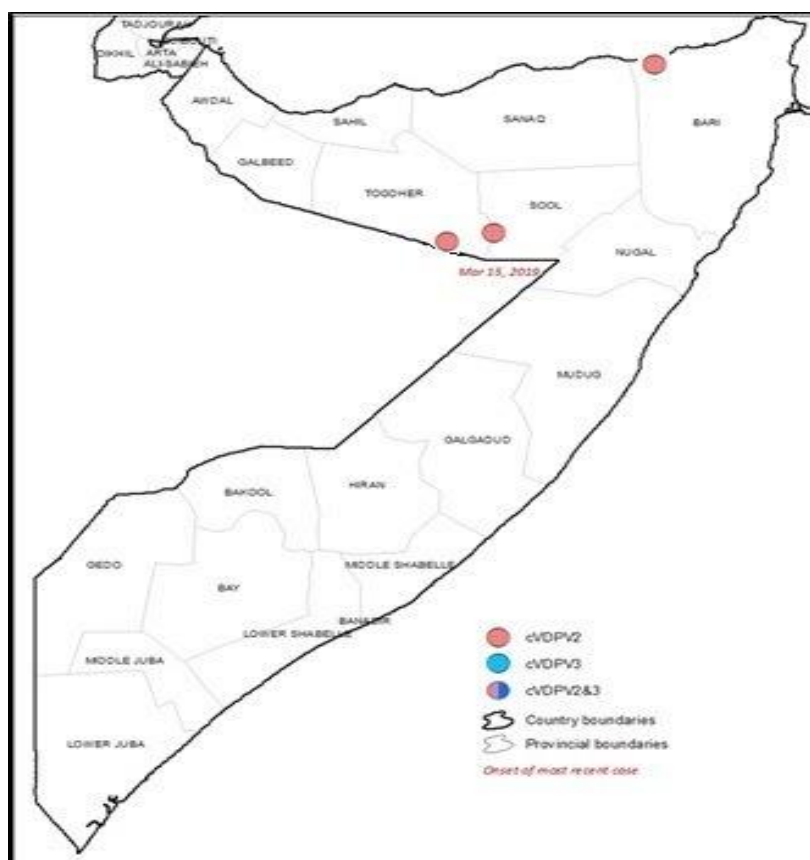
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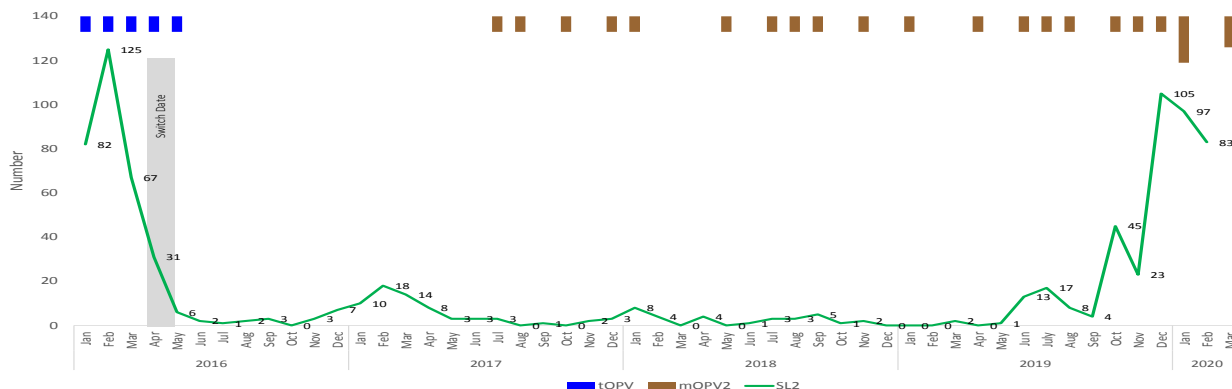
Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2019-2020

COUNTRY	YEAR	PROVINCE	DISTRICT	Count	First Case	Last Case	
AFG	2020	NANGARHAR	BATIKOT	1	05-Feb-20	05-Feb-20	
			SHINWAR	1	27-Mar-20	27-Mar-20	
PAK	2020	BALUCHISTAN	QUETTA	1	29-Feb-20	29-Feb-20	
		PUNJAB	RAWALPINDI	1	18-Jan-20	18-Jan-20	
			FAISALABAD	3	05-Feb-20	14-Mar-20	
		KHYBER PAKHTUNKHWA	WAZIR-S	1	21-Mar-20	21-Mar-20	
			PESHAWAR	5	02-Jan-20	17-Mar-20	
			BAJOUR	3	03-Jan-20	30-Jan-20	
			KHYBER	15	12-Jan-20	01-Mar-20	
			NOWSHERA	4	18-Jan-20	01-Mar-20	
			LAKKI MARWAT	5	27-Jan-20	26-Feb-20	
			MARDAN	1	02-Jan-20	02-Jan-20	
			DIR LOWER	3	02-Feb-20	25-Mar-20	
BANNU	2	03-Jan-20	13-Feb-20				
Total 2020				46	2-Jan-20	27-Mar-20	
PAK	2019	PUNJAB	GUJRANWALA	1	22-Nov-19	22-Nov-19	
			KHYBER	3	12-Dec-19	28-Dec-19	
		KHYBER PAKHTUNKHWA	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	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	

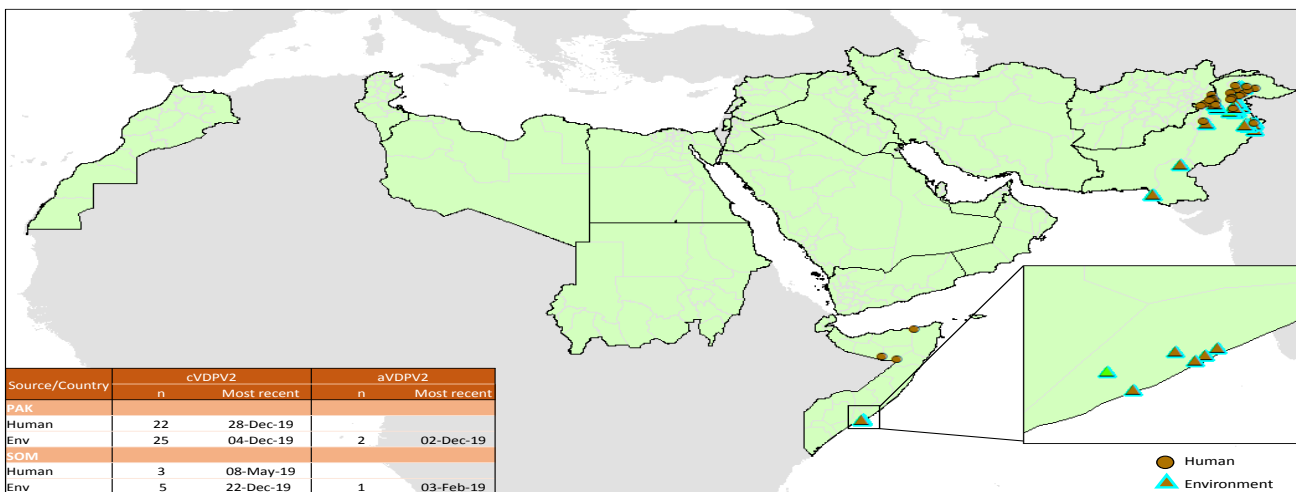
Figure 6: Somalia cVDPV cases by type and district 01/01/2019 - 31/12/2019



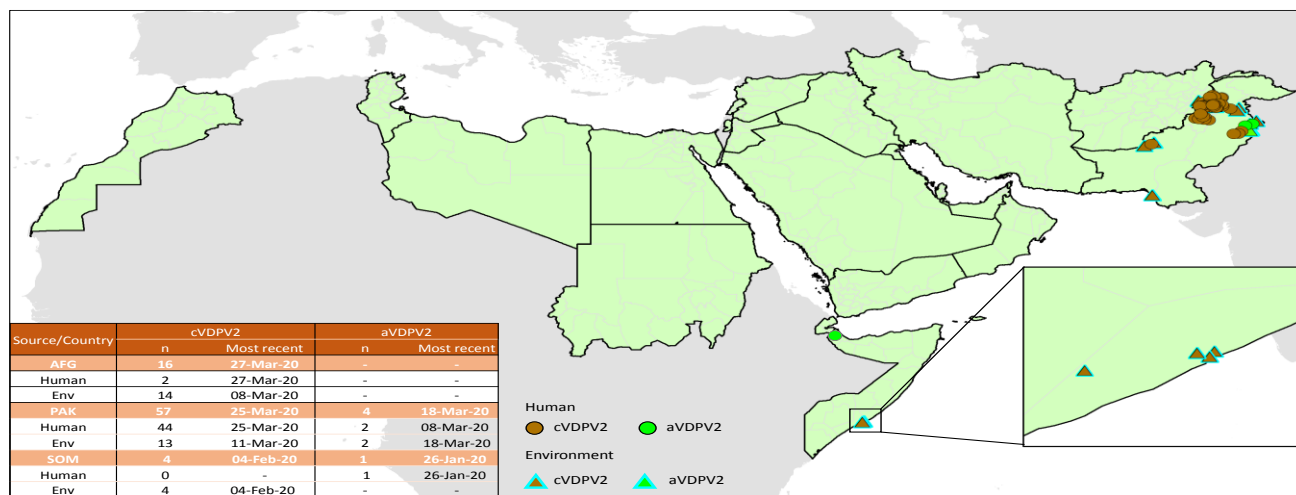
Sabin like type-2 poliovirus isolates (H&E) and vaccine types used during SIAs, EMRO, 2016 to 2020



VDPV2 isolates, EMR countries, 2019



VDPV2 isolates, EMR countries, 2020



VDPV3, AFP Case reported in Libya