

## Highlights of Polio Fax Bulletin No. 1103 for Week 47 2019

### I. Wild Poliovirus Transmission

1. **Endemic countries (PAKISTAN & AFGHANISTAN):** The following was all reported this week:
  - Five new wild poliovirus type-1 (WPV1) cases from Pakistan;
  - Two new circulating vaccine-derived poliovirus type-2 (cVDPV2) cases from Pakistan; and
  - Six new positive VDPV2 from environmental samples all from Pakistan
  
- a. *Human samples:* Five new wild poliovirus cases reported this week. Total WPV1 cases in 2019 to date are 112 (21 from Afghanistan and 91 from Pakistan). This compares with 29 cases in 2018 in the same period (Afghanistan – 21 and Pakistan – 8).
  - Afghanistan:
 

In 2019 to date, 21 WPV1 cases are reported. They include 8 cases from Uruzgan province, 5 cases from Hilmand province, 3 from Kandahar province, 2 from Paktika province and 1 each from Kunar, Nangarhar and Badghis provinces. The most recent case has onset of paralysis on 17 October 2019.
  
  - Pakistan: Five new WPV1 cases and two cVDPV2 cases were reported this week and the details are as follows:
 

WPV1

    - Case (1): The case was reported from the newly infected district Shaheed Benazirabad, Sindh province, with date of onset 19 October 2019. The case is a 36-month old female child. The child received reportedly 3 OPV doses from routine and 7+ doses from Supplementary Immunization Activities (SIAs).
    - Case (2): The case was reported from the newly infected district Karachi Kamari, Sindh province, with date of onset 29 October 2019. The case is a 152-month old male child. The child received reportedly 3 OPV doses from routine and 7+ doses from SIAs.
    - Case (3): The case was reported from Lakkimarwat district, Khyber Pakhtunkhwa (KP) province, with date of onset 7 November 2019. The case is a 3-month old female child. The child did not receive any OPV doses neither from routine nor from SIAs.
    - Case (4): The case was reported from Jamshoro district, Sindh province, with date of onset 9 October 2019. The case is a 1-month old female child. The child did not receive any OPV doses neither from routine nor from SIAs. The index case was identified as WPV1 from a positive contact.
    - Case (5): The case was reported from Bannu district, KP province, with date of onset 31 October 2019. The case is a 10-month old male child. The child received reportedly 1 OPV dose from routine and 5 doses from SIAs.

In 2019 to date, 91 WPV1 cases are reported from Pakistan. They include 55 from Khyber Pakhtunkhwa (KP) province, 11 from KP Tribal Districts (KPTD), 13 from Sindh province, 7 from Balochistan province and 5 from Punjab province. The most recent case has onset of paralysis on 7 November 2019.

b. *Environmental samples*: Six new VDPV2 positive environmental samples all from Pakistan were reported this week:

- Afghanistan: In 2019 to date, there are 45 wild positive environmental samples with most recent positive sample collected on 28 October 2019.
- Pakistan: In 2019 to date, there are 300 positive environmental samples (289 WPV1, 9 cVDPV2, and 2 combined WPV1 and cVDPV2) with most recent positive sample collected on 29 October 2019.

**2. No WPV1 from human or environmental samples seen elsewhere since September 2016 in Nigeria in the AFR**

**II. Circulating Vaccine Derived Polioviruses (cVDPVs)**

1. PAKISTAN: Human: Two new cVDPV2 cases reported, one each from Kohistan Lower and Upper districts of KP.

Case 1: a female child aged 24 months has onset of paralysis on 11/10. The case is confirmed due to isolation of cVDPV2 from one of the contacts.

Case 2: a female child aged 60 months has onset of paralysis on 27/10. The case has reportedly received multiple doses of OPV but no IPV dose.

In 2019 to date, 11 cVDPV2 cases reported (onset of the most recent case is 3<sup>rd</sup> November). Cases include four from Diamir district of Gilgit-Baltistan (GB) province; two each from Torghar and Kohistan Lower, one each from Charsadda, Kohistan Upper districts in KP; and one from Islamabad.

Environment: Eight positive environmental samples for cVDPV2, the recent most sample collected on 16 October 2019.

In addition, cVDPV2 has been isolated from 16 healthy children and 6 contacts. Additional districts having cVDPV2 isolation from samples other than AFP cases are Rawalpindi, Lahore and Karachi.

2. SOMALIA: No new cVDPV2 or cVDPV3 isolates from human or environmental samples were reported this week. In 2019 to date, Somalia has reported three cVDPV2 cases. The most recent reported case has date of onset of paralysis on 8 May 2019.

In addition, cVDPV2 was isolated from healthy child sample collected during community sampling on 25 May 2019. aVDPV2 was isolated from an environmental sample on 3 February 2019.

In 2018: Somalia has reported a total of 12 cases due to cVDPVs, which include 5 due to cVDPV2, 6 due to cVDPV3 and 1 due to co-infection of cVDPV2 and cVDPV3. The last cVDPV3 was isolated from a sewage sample from Mogadishu collected on 23 August 2018.

**III. Surveillance performance indicators**

In 2019, 20 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 has a non-polio AFP rate of 1.2 and percentage of AFP cases with adequate stool specimens of 75%
- Tunisia has a percentage of AFP cases with adequate stool specimens of 70.6%
- In Yemen there are AFP cases pending final classification more than 90 days due to delayed lab results because of delay shipment of specimens to reference polio laboratories.

## World Health Organization – Regional Office for Eastern Mediterranean

## 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 (47/19) / Ending on : 24/11/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W36 08 Sep 19	W37 15 Sep 19	W38 22 Sep 19	W39 29 Sep 19	W40 06 Oct 19	W41 13 Oct 19	W42 20 Oct 19	W43 27 Oct 19	W44 03 Nov 19	W45 10 Nov 19	W46 17 Nov 19	W47 24 Nov 19
Afghanistan	3094	3378	3331	71	80	76	55	61	79	68	71	66	59	52	5
Bahrain	18	35	15	0	0	0	1	0	0	1	0	2	0	0	
Djibouti	4	0	4	0	0	0	0	0	0	0	0	1	0	0	
Egypt	1242	1246	1198	16	28	33	27	21	27	36	26	27	34	38	7
Iran	820	896	835	18	19	27	15	20	10	16	16	16	5	0	
Iraq	699	1023	979	21	22	21	24	25	19	23	23	29	27	9	1
Jordan ****	116	115	103	2	1	4	0	1	0	1	2	4	0	0	
Kuwait	69	72	41	3	0	2	1	1	0	1	0	1	0	1	1
Lebanon ****	75	89	72	2	0	1	1	2	2	0	1	2	1	2	
Libya	88	122	89	1	2	2	4	3	5	4	1	2	1	1	
Morocco	143	212	195	5	4	8	4	5	8	4	10	3	2	0	
Oman	40	28	22	1	0	0	2	1	1	1	1	0	1	0	
Pakistan	10319	12276	12629	307	322	302	287	262	296	264	300	267	205	64	0
Palestine ****	43	44	52	1	1	4	0	1	1	0	1	1	2	0	0
Qatar	18	10	7	1	0	0	0	1	0	0	0	0	1	0	0
Saudi Arabia	276	242	206	6	2	1	3	5	10	6	5	3	4	0	0
Somalia	345	353	321	5	5	16	6	4	7	5	6	4	3	5	1
Sudan	570	579	530	15	12	12	14	21	14	19	22	20	11	5	1
Syria ****	362	362	312	8	7	8	2	5	3	4	6	4	6	3	
Tunisia	67	68	68	3	1	1	1	0	1	2	0	0	0	0	
U.A.E	58	40	40	0	1	1	1	1	1	0	1	3	2	1	0
Yemen	713	730	655	12	20	8	17	13	9	7	10	19	13	7	
<b>Total EMR</b>	<b>19179</b>	<b>21920</b>	<b>21704</b>	<b>498</b>	<b>527</b>	<b>527</b>	<b>465</b>	<b>453</b>	<b>493</b>	<b>462</b>	<b>502</b>	<b>474</b>	<b>377</b>	<b>188</b>	<b>16</b>

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	24/11		Confirmed polio cases by month of onset											
			2018	2019	December 2018	January 2019	February 2019	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	September 2019	October 2019	November 2019
Afghanistan	14	21	21	21	0	2	1	3	1	5	1	2	2	3	1	
Bahrain	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		
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			
Iraq	0	0	0	0	0	0	0	0	0	0	0	0	0			
Jordan ****	0	0	0	0	0	0	0	0	0	0	0	0	0			
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0			
Lebanon ****	0	0	0	0	0	0	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						
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pakistan	8	12	8	91	4	4	2	0	11	11	16	12	14	5	14	2
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						
Somalia	0	0	0	0	0	0	0	0	0	0						
Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0			
Syria ****	0	0	0	0	0	0	0	0	0	0	0	0	0			
Tunisia	0	0	0	0	0	0	0	0	0	0	0	0	0			
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0			
Yemen	0	0	0	0			0									
<b>Total EMR</b>	<b>22</b>	<b>33</b>	<b>29</b>	<b>112</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>12</b>	<b>16</b>	<b>17</b>	<b>14</b>	<b>16</b>	<b>8</b>	<b>15</b>	<b>2</b>

\*\*\*\* UNRWA cases are included with those of country of residence

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Table 3: Investigation of AFP cases with paralysis onset in 2018 &amp; 2019 up to Week (47/19) / Ending on : 24/11/2019)

COUNTRY	2018											2019											Latest line List Date		
	AFP									Specimen	Wild cases ****		AFP									Specimen		Wild cases ****	
	Total AFP cases onset 2018	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 2019	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	3378	21	0	0	3357	0	16.6	0	0	93.8	21	0	3331	21	0	211	3099	0	18.2	28	0	94.2	21	0	17-11-2019
Bahrain	35	0	0	0	35	0	12.1	0	0	97.1	0	0	15	0	0	4	11	0	5.8	0	0	100.0	0	0	17-11-2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	4	0	0	4	0	1.2	2	1	75.0	0	0	17-11-2019	
Egypt	1246	0	0	0	1245	1	3.2	0	0	93.2	0	0	1198	0	0	188	1010	0	3.5	0	0	89.1	0	0	21-11-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	835	0	0	23	811	1	4.8	0	0	96.6	0	0	23-11-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	979	0	0	70	909	0	7.1	12	0	94.5	0	0	23-11-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	103	0	0	3	100	0	4.1	0	0	100.0	0	0	21-11-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	41	0	0	2	39	0	5.1	0	0	82.9	0	0	24-11-2019
Lebanon	89	0	0	0	89	0	4.8	0	0	96.6	0	0	72	0	0	17	55	0	4.3	8	0	86.1	0	0	20-11-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	89	0	0	4	85	0	3.9	1	0	98.9	0	0	23-11-2019
Morocco	212	0	0	0	212	0	2.4	0	0	77.4	0	0	195	0	0	47	148	0	2.4	31	5	81.5	0	0	19-11-2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	22	0	0	1	21	0	2.7	0	0	86.4	0	0	18-11-2019
Pakistan	12276	12	1	0	12263	0	15.7	0	0	87.0	12	0	12629	91	0	759	11768	11	17.9	170	0	87.5	91	0	24-11-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	52	0	0	9	43	0	3.1	0	0	98.1	0	0	24-11-2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	7	0	0	4	3	0	2.2	1	0	85.7	0	0	24-11-2019
Saudi Arabia	242	0	0	0	242	0	3.0	0	0	95.9	0	0	206	0	0	58	148	0	2.8	16	11	93.7	0	0	20-11-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	321	0	0	17	301	3	5.6	3	3	95.6	0	0	17-11-2019
Sudan	579	0	0	0	579	0	3.2	0	0	97.2	0	0	530	0	0	37	493	0	3.3	0	0	97.0	0	0	24-11-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.0	0	0	312	0	0	20	292	0	4.5	0	0	86.5	0	0	23-11-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	68	0	0	5	62	1	2.8	0	0	70.6	0	0	22-11-2019
U.A.E	40	0	0	0	40	0	3.2	0	0	97.5	0	0	40	0	0	18	22	0	3.6	6	0	90.0	0	0	24-11-2019
Yemen	730	0	0	119	611	0	5.2	119	110	91.6	0	0	655	0	0	496	159	0	5.2	351	321	89.9	0	0	23-11-2019
EMR	21920	33	1	119	21752	15	8.7	119	110	89.8	33	0	21704	112	0	1997	19579	16	9.6	629	341	89.8	112	0	
2017	19179	22	3	43	19035	76	7.7	43	34	88.9	22	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 &lt;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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Table 4 (a): Lab results of contacts' samples in EMR, 2018 - 2019

COUNTRY	2018						2019					
	# OF CONTACTS	LAB RESULTS					# OF CONTACTS	LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1009	4	0	52	217	0	1032	8	0	42	180	68
BAH	2	0	0	0	0	0	0	0	0	0	0	0
DJI	0	0	0	0	0	0	1	0	0	0	0	1
EGY	495	0	0	11	58	17	430	0	0	7	46	43
IRN	145	0	0	3	6	0	160	0	0	4	6	0
IRQ	811	0	0	22	93	9	503	0	0	7	21	14
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	229	0	0	3	16	22	24	0	0	0	3	2
LIB	1	0	0	0	0	0	6	0	0	0	3	0
MOR	161	0	0	0	9	9	67	0	0	3	1	17
OMA	70	0	0	2	16	0	70	0	0	2	26	4
PAK	4200	3	0	207	882	0	4586	13	7	174	839	82
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	5	0	0	0	0	5	0	0	0	0	0	0
SOM	1052	0	10	49	133	0	969	0	1	43	109	53
SUD	350	0	0	3	24	88	359	0	0	0	31	83
SYR	670	0	0	8	17	0	683	0	0	11	36	31
TUN	1	0	0	0	0	0	20	0	0	0	2	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	1559	0	0	0	0	636	386	0	0	0	0	185
<b>EMR</b>	<b>10760</b>	<b>7</b>	<b>10</b>	<b>360</b>	<b>1471</b>	<b>786</b>	<b>9296</b>	<b>21</b>	<b>8</b>	<b>293</b>	<b>1303</b>	<b>583</b>

Table 4 (B): Most recent wild contacts in EMRO, 2018 - 2019

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2019	Afghanistan	8	17-Aug-19
	Pakistan	13	2-Nov-19
<b>2019 Total</b>		<b>21</b>	<b>2-Nov-19</b>
2018	Afghanistan	4	7-Aug-18
	Pakistan	3	12-Oct-18
<b>2018 Total</b>		<b>7</b>	<b>12-Oct-18</b>

Table 4 (C): Number and distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2018-2019

YEAR	COUNTRY	PROVINCE	DISTRICT	COUNT	First case	Last case
2019	AFG	URUZGAN	TIRINKOT	1	02-Aug-19	02-Aug-19
		HILMAND	MUSAQALAH	1	05-Jun-19	05-Jun-19
			SANGIN	1	06-Mar-19	06-Mar-19
	PAK	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
			KILLABDULLAH	1	02-Jul-19	02-Jul-19
			KHYBER PAKHTUNKHWA (KP)	LAKKIMRWAT	3	27-May-19
			TORGHAR	1	25-May-19	25-May-19
	<b>2019 Total</b>				<b>11</b>	<b>06-Mar-19</b>
2018	AFG	NANGARHAR	PACHIERAGAM	1	17-Jul-18	17-Jul-18
		URUZGAN	SHAHID-E-HASSA	1	08-Jul-18	08-Jul-18
	PAK	KHYBER PAKHTUNKHWA TRIBAL DISTRICTS (KPTD)	BAJOUR	1	01-Sep-18	01-Sep-18
		BALOCHSITAN	DUKKI	1	15-Apr-18	15-Apr-18
<b>2018 Total</b>				<b>4</b>	<b>15-Apr-18</b>	<b>01-Sep-18</b>

Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (47/2019) / Ending on : (24/11/2019)

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	3280	243	24	518	2380	116	1	18	179						176		1	2	1	1	14%	96%	100%	98%	24/11/2019
Bahrain	NPL Oman / CDC	11			2	9																14%	100%		0%	19/11/2019
Djibouti	NPL Kenya / CDC	4						4																		17/11/2019
Egypt**	RRL Egypt	1156	35	6	108	898	63	46		15						20			9	3		10%	96%	100%	99%	21/11/2019
Iran	NPL Iran / CDC	855	12		21	783	6	33		3	1					9						3%	100%	100%	99%	16/11/2019
Iraq	RRL Egypt	1050	14		136	846	36	18		7						13						12%	99%	87%	88%	21/11/2019
Jordan	NPL Jordan / RRL EGYPT	104			15	88	1	1														15%	100%		100%	17/11/2019
Kuwait	RRL Kuwait / RIVM	45			2	39	4															7%	90%		100%	24/11/2019
Lebanon	NPL Jordan / RRL EGYPT	66	1		7	55	2	1								1						11%	100%	100%	0%	17/11/2019
Libya	RRL Tunisia / RIVM	91			6	82	3															7%	99%		99%	23/11/2019
Morocco	NPL Morocco / RRL Tunisia	181	2		3	166		10								2						2%	99%	100%	94%	08/11/2019
Oman	NPL Oman / CDC	22			4	17		1														24%	100%		100%	19/11/2019
Pakistan	RRL Pakistan	12241	447	44	2082	9355	300	4	83	248					10	243			5	1	3	15%	97%	99%	97%	24/11/2019
Palestine & UNRWA		52			7	42	2	1														14%	36%		100%	24/11/2019
Qatar	NPL Oman / CDC	6				6																0%	100%		100%	19/11/2019
Saudi Arabia	NPL Saudi Arabia / CDC	198	4		2	180		12								4						2%	95%	100%	100%	04/11/2019
Somalia	NPL Kenya / CDC	321	23		62	220	8	8		7			10	3		8					1	20%	14%		98%	17/11/2019
Sudan	NPL Sudan / RRL Egypt	528	6		72	413	34	3		5						2						13%	72%	100%	63%	24/11/2019
Syria	NPL Syria / RRL Egypt	304	13		16	261	14			5						9						6%	100%	100%	57%	21/11/2019
Tunisia	RRL Tunisia	65			5	59	1															11%	100%		98%	23/11/2019
U.A.E	NPL Oman / CDC	28			3	25																11%	100%		39%	19/11/2019
Yemen	NPL Kenya / CDC	5					5																			23/11/2019
<b>Total EMR 2019</b>		20613	800	74	3071	15924	595	143	101	469	1		10	13		487		1	16	5	5	13%	95%	99%	97%	
<b>Total EMR 2018</b>		20746	902	90	3513	16220		17	29	590	3		6	6 #		628	7 #		22	1	3	14%	92%	99%	97%	
* Specimens from all sources including non-AFP cases, excluding environmental samples									# Somalia in 2018 has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 & 1 coinfection cVDPV2/cVDPV3)																	
** This indicator reflects surveillance and laboratory activities																										

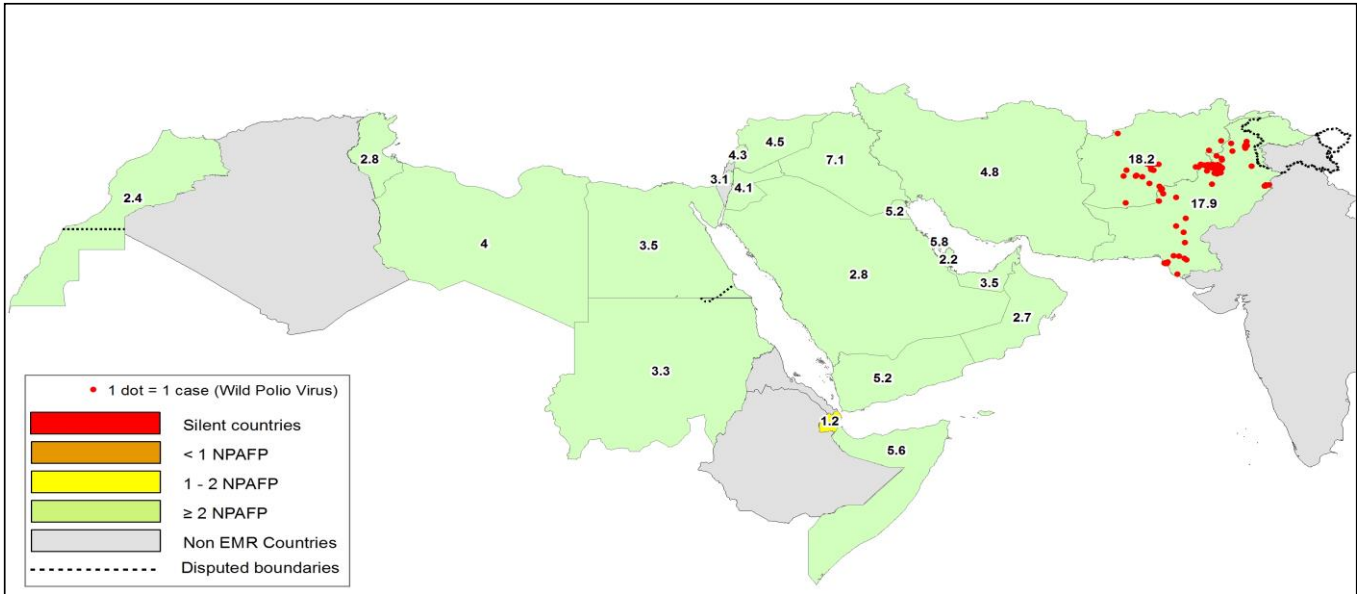
Table 6: Environmental isolate by year and type

Country	Status	2015	2016	2017	2018	2019
AFG	NEGATIVE	129	183	274	253	166
	PENDING					1
	WILD	20	2	42	83	45
<b>AFG Total</b>		<b>149</b>	<b>185</b>	<b>316</b>	<b>336</b>	<b>212</b>
EGY	NEGATIVE	493	528	522	540	604
	PENDING	2				40
	VDPV2	3	1			
<b>EGY Total</b>		<b>498</b>	<b>529</b>	<b>522</b>	<b>540</b>	<b>644</b>
JOR	NEGATIVE			2	32	36
	PENDING					4
<b>JOR Total</b>				<b>2</b>	<b>32</b>	<b>36</b>
LEB	NEGATIVE		4	27	45	34
	PENDING					6
<b>LEB Total</b>			<b>4</b>	<b>27</b>	<b>45</b>	<b>40</b>
PAK	NEGATIVE	347	462	523	534	328
	PENDING					55
	WILD	79	59	105	139	289
	WILD & VDPV2	5	3	1		2
	VDPV2	8	5	4		9
<b>PAK Total</b>		<b>439</b>	<b>529</b>	<b>633</b>	<b>673</b>	<b>683</b>
SOM	NEGATIVE			34	181	46
	PENDING					4
	VDPV2				2	20
	VDPV3				12	
<b>SOM Total</b>				<b>36</b>	<b>213</b>	<b>51</b>
SYR	NEGATIVE		4	102	141	
	PENDING					23
<b>SYR Total</b>				<b>4</b>	<b>102</b>	<b>164</b>
IRN	NEGATIVE			6	54	58
	WILD					3
<b>IRN Total</b>				<b>6</b>	<b>54</b>	<b>61</b>
KUW	NEGATIVE				3	
	PENDING					5
<b>KUW Total</b>					<b>3</b>	<b>5</b>
SUD	NEGATIVE				15	35
	PENDING					15
<b>SUD Total</b>					<b>15</b>	<b>50</b>
<b>Grand Total</b>		<b>1086</b>	<b>1249</b>	<b>1576</b>	<b>2017</b>	<b>1942</b>

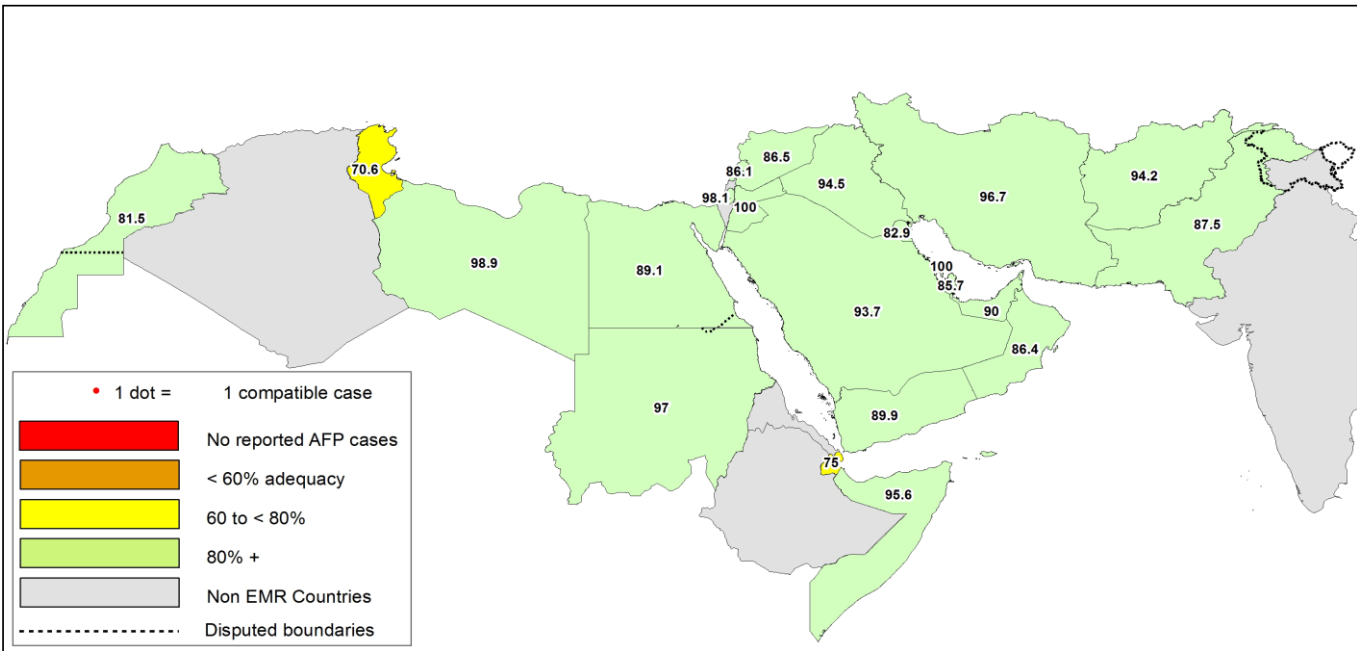
Table 7: Environmental Wild/VDPV isolate by site

Country	COUNTRY	Status	PROVINCE	DISTRICT	Count	First date	Last date			
2018	AFG	WILD	HILMAND	LASHKARGAH	12	8-Jan	26-Dec			
				HERAT	1	25-Jun	25-Jun			
				KABUL	3	26-Feb	26-Jun			
				KANDAHAR	42	8-Jan	26-Dec			
				KHOST	1	25-Sep	25-Sep			
				ASADABAD	2	24-Apr	25-Sep			
				BEHSUD	3	28-Jan	25-Oct			
				JALALABAD	19	27-Jan	26-Dec			
				<b>AFG Total</b>				<b>83</b>	<b>8-Jan</b>	<b>26-Dec</b>
				PAK	WILD	BALOCHISTAN	LORALAI	2	17-Mar	17-Aug
	PISHIN	1	2-Dec				2-Dec			
	QUETTA	13	13-Feb				20-Dec			
	KABDULAH	8	1-Jan				15-Dec			
	ISLAMABAD	7	10-Jan				10-Nov			
	PUNJAB	LAHORE	12				11-Jun	18-Dec		
		RAWALPINDI	15				10-Jan	14-Dec		
		DSKHAH	2				12-Feb	12-Sep		
		SINDH	HYDERABAD				1	9-Feb	9-Feb	
			JACOBABAD				3	12-Feb	12-Sep	
			KAMBAR				3	7-Apr	9-Jul	
		KHIBALDIA	2				1-Aug	4-Sep		
		KHIGADAP	15				15-Feb	11-Dec		
		KHIGOBAL	1				13-Sep	13-Sep		
		KHIKORANGI	1				14-Dec	14-Dec		
	KHILANDHI	3	10-Jan				30-Jul			
	KHISITE	2	1-Jan				3-Sep			
	SUKKUR	2	8-Feb				9-Nov			
	KHILIAQAT	2	7-Mar				7-Nov			
	KHISADDAR	1	10-Sep				10-Sep			
	KP TRIBAL DISTRICTS	BAJOUR	5				19-May	25-Oct		
		WAZIR-S	2				26-Nov	27-Dec		
	KHYBER PAKHTUNKHUWA	BANNU	4				31-Mar	27-Dec		
KOHAT		5	5-Jan	27-Sep						
MARDAN		2	15-Oct	15-Nov						
NOWSHERA	2	18-Sep	18-Oct							
PESHAWAR	23	10-Jan	26-Dec							
<b>PAK Total</b>				<b>139</b>	<b>1-Jan</b>	<b>27-Dec</b>				
SOM	VDPV2	BANADIR	HAMAR WEYN	11	4-Jan	20-Sep				
			HODAN	2	22-Feb	4-Oct				
			WABERI	7	1-Mar	11-Oct				
			HAMAR WEYN	6	11-Feb	5-Apr				
VDPV3	BANADIR	HODAN	1	1-Feb	1-Feb					
		WABERI	5	8-Mar	23-Aug					
<b>SOM Total</b>				<b>32</b>	<b>4-Jan</b>	<b>11-Oct</b>				
<b>2018 Total</b>				<b>254</b>	<b>1-Jan</b>	<b>27-Dec</b>				
2019	AFG	WILD	HILMAND	LASHKARGAH	8	23-Feb	28-Oct			
				NAHR-E-SARAJ	7	6-Jan	28-Oct			
				KANDAHAR	23	6-Jan	24-Sep			
				NANGARHAR	7	26-Jan	23-Sep			
				JALALABAD	7	26-Jan	23-Sep			
	<b>AFG Total</b>				<b>45</b>	<b>6-Jan</b>	<b>28-Oct</b>			
	PAK	WILD	BALOCHISTAN	KHUZDAR	2	20-Mar	20-Oct			
				LORALAI	1	17-Mar	17-Mar			
				PISHIN	5	2-Feb	2-Oct			
				QUETTA	32	1-Jan	28-Oct			
				ZHOB	1	16-Oct	16-Oct			
				DBGUTI	2	19-Aug	19-Sep			
				KABDULAH	12	1-Jan	15-Oct			
				ISLAMABAD	1	21-Oct	21-Oct			
				PUNJAB	CDA	3	12-Apr	21-Aug		
					FAISALABAD	4	3-Jan	3-Sep		
				SINDH	LAHORE	47	5-Jan	15-Oct		
					MULTAN	5	18-Feb	18-Sep		
					RAWALPINDI	11	10-Jan	25-Oct		
					RAJANPUR	1	20-Sep	20-Sep		
					BAHAWALPUR	1	28-Aug	28-Aug		
					DSKHAH	2	8-Apr	12-Sep		
					DADU	5	2-May	10-Oct		
					HYDERABAD	10	24-Jan	7-Oct		
					JACOBABAD	5	24-Jan	18-Oct		
					KAMBAR	6	7-Mar	3-Oct		
					KHIBALDIA	8	2-Jan	8-Oct		
					KHIGADAP	26	8-Jan	15-Oct		
					KHIGOBAL	10	11-Apr	17-Oct		
				KHIKORANGI	9	18-Feb	18-Oct			
				KHILANDHI	8	19-Feb	21-Oct			
				KHISITE	9	3-Jan	11-Sep			
SUKKUR				11	23-Jan	3-Oct				
KHILIAQAT				8	7-Feb	10-Oct				
KHISADDAR				10	7-Jan	9-Oct				
KP TRIBAL DISTRICTS				WAZIR-S	5	22-Jan	28-May			
	KURRAM	1	15-Jan	15-Jan						
KHYBER PAKHTUNKHUWA	BANNU	9	28-Jan	29-Oct						
	DIKHAN	4	8-Jan	11-Jun						
	KOHAT	1	27-Feb	27-Feb						
	MARDAN	4	16-Mar	15-Jun						
PESHAWAR	10	11-Jan	11-Oct							
WILD & VDPV2	PUNJAB	LAHORE	1	6-Aug	6-Aug					
		SINDH	1	7-Oct	7-Oct					
VDPV2	PUNJAB	RAWALPINDI	4	11-Apr	12-Sep					
		GBALTISTAN	3	26-Aug	16-Oct					
		GILGIT	1	24-Aug	24-Aug					
KHYBER PAKHTUNKHUWA	ABOTABAD	1	9-Oct	9-Oct						
<b>PAK Total</b>				<b>300</b>	<b>1-Jan</b>	<b>29-Oct</b>				
SOM	VDPV2	BANADIR	HODAN	1	3-Feb	3-Feb				
<b>SOM Total</b>				<b>1</b>	<b>3-Feb</b>	<b>3-Feb</b>				
IRN	WILD	S & B	IRANSHAHR	3	22-Apr	20-May				
<b>IRN Total</b>				<b>3</b>	<b>22-Apr</b>	<b>20-May</b>				
<b>2019 Total</b>				<b>349</b>	<b>1-Jan</b>	<b>29-Oct</b>				

**Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 24/11/2019**



**Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 24/11/2019**



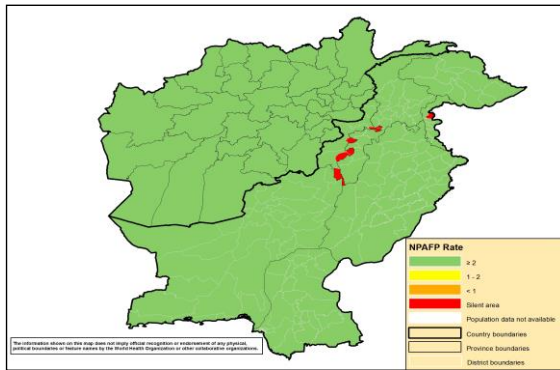
**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019**

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	21	1-Jan-18	6-Nov-18
	PAK	12	8-Mar-18	31-Dec-18
<b>2018 Total</b>		<b>33</b>	<b>1-Jan-18</b>	<b>31-Dec-18</b>
2019	AFG	21	4-Jan-19	17-Oct-19
	PAK	91	15-Jan-19	7-Nov-19
<b>2019 Total</b>		<b>112</b>	<b>4-Jan-19</b>	<b>7-Nov-19</b>

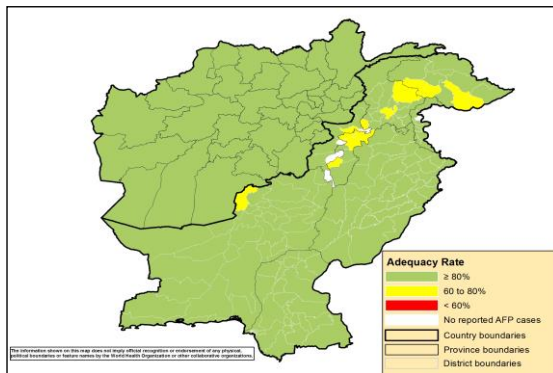
Last reported wild Polio P3 from Pakistan with date of onset 18/04/2012



**Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2019 - 24/11/2019**

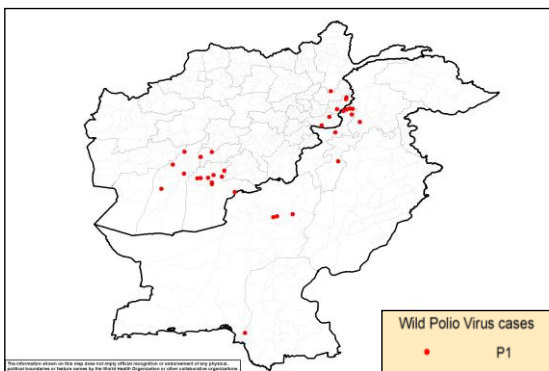


**Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 24/11/2019**

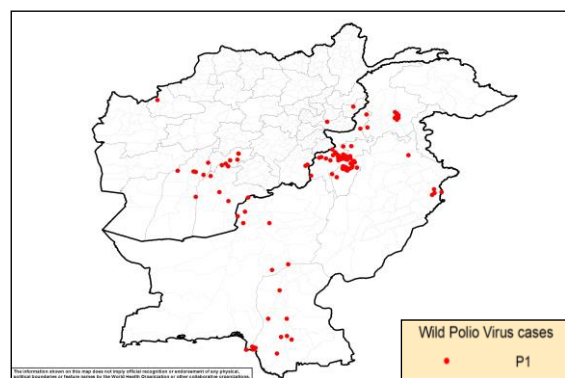


**Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan**

**5(a) 01/01/2018 - 31/12/2018**



**5(b) 01/01/2019 - 24/11/2019**



## World Health Organization – Regional Office for Eastern Mediterranean

## AFP SURVEILLANCE

Week 47, ending 24 November 2019

25-Nov-19

Number 1103

**Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2018-2019**

ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	HILMAND	NAWZAD	3	1-Sep-18	6-Nov-18
		NAD-E-ALI	1	1-Jun-18	1-Jun-18
	URUZGAN	SHAHID-E-HASSAS	2	8-Jul-18	9-Oct-18
	NURISTAN	PORUNS	1	26-Sep-18	26-Sep-18
	KANDAHAR	MAYWAND	1	24-Sep-18	24-Sep-18
		KANDAHAR	2	11-Aug-18	27-Aug-18
		ARGHANDAB (K)	1	17-Jul-18	17-Jul-18
		SHAHWALIKOT	3	5-Jan-18	27-Apr-18
		KHAKREZ	1	25-Feb-18	25-Feb-18
		SPINBOLDAK	1	6-Jan-18	6-Jan-18
	NANGARHAR	PACHIERAGAM	1	17-Jul-18	17-Jul-18
		KAMA	1	1-Jan-18	1-Jan-18
	KUNAR	CHAWKAY	1	22-Jun-18	22-Jun-18
GHAZIABAD		2	14-Feb-18	3-Mar-18	
<b>2018 Total</b>			<b>21</b>	<b>1-Jan-18</b>	<b>6-Nov-18</b>
2019	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
	KANDAHAR	KANDAHAR	1	17-Aug-19	17-Aug-19
		GHORAK	1	12-Jan-19	12-Jan-19
		SPINBOLDAK	1	4-Jan-19	4-Jan-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
	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
	KUNAR	WATAPUR	1	8-May-19	8-May-19
<b>2019 Total</b>			<b>21</b>	<b>4-Jan-19</b>	<b>17-Oct-19</b>

**Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2018-2019**

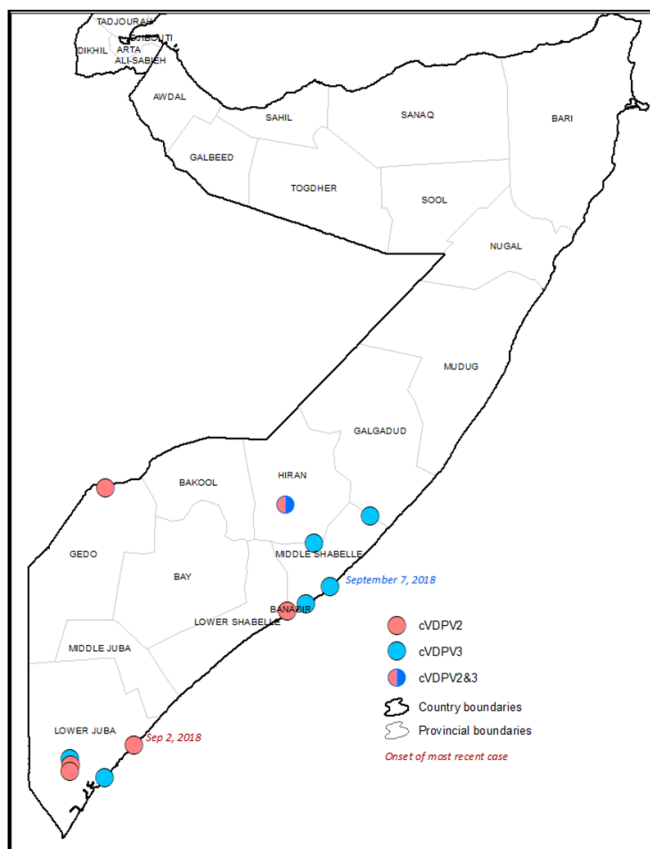
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case	
2018	KP TRIBAL DISTRICTS	BAJOUR	5	1-Sep-18	31-Dec-18	
		KHYBER	1	25-Sep-18	25-Sep-18	
	KHYBER PAKHTUNKHWA	LAKKIMRWT	1	16-Dec-18	16-Dec-18	
		CHARSADA	1	1-Aug-18	1-Aug-18	
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18	
	BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18	
<b>2018 Total</b>			<b>12</b>	<b>8-Mar-18</b>	<b>31-Dec-18</b>	
2019	KHYBER PAKHTUNKHWA	LAKKIMRWT	18	27-May-19	7-Nov-19	
		BANNU	24	15-Jan-19	31-Oct-19	
		TANK	1	11-Oct-19	11-Oct-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	
		DIKHAN	1	5-May-19	5-May-19	
		SINDH	KHIKAMARI	1	29-Oct-19	29-Oct-19
			KHIJAMSHEED	1	24-Oct-19	24-Oct-19
	SBENAZIRABAD		1	19-Oct-19	19-Oct-19	
	JAMSHORO		2	23-Aug-19	9-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	
	LARKANA		1	17-Apr-19	17-Apr-19	
	KHILAYARI		1	25-Feb-19	25-Feb-19	
	BALUCHISTAN	HARNAI	1	27-Sep-19	27-Sep-19	
		JAFARABAD	2	28-May-19	13-Sep-19	
		KABDULAH	3	9-Jun-19	8-Aug-19	
		QUETTA	1	6-Jul-19	6-Jul-19	
	KP TRIBAL DISTRICTS	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	
	PUNJAB	LAHORE	4	20-Jan-19	22-Jun-19	
JHELUM		1	21-Jun-19	21-Jun-19		
<b>2019 Total</b>			<b>91</b>	<b>15-Jan-19</b>	<b>7-Nov-19</b>	

**Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2018-2019**

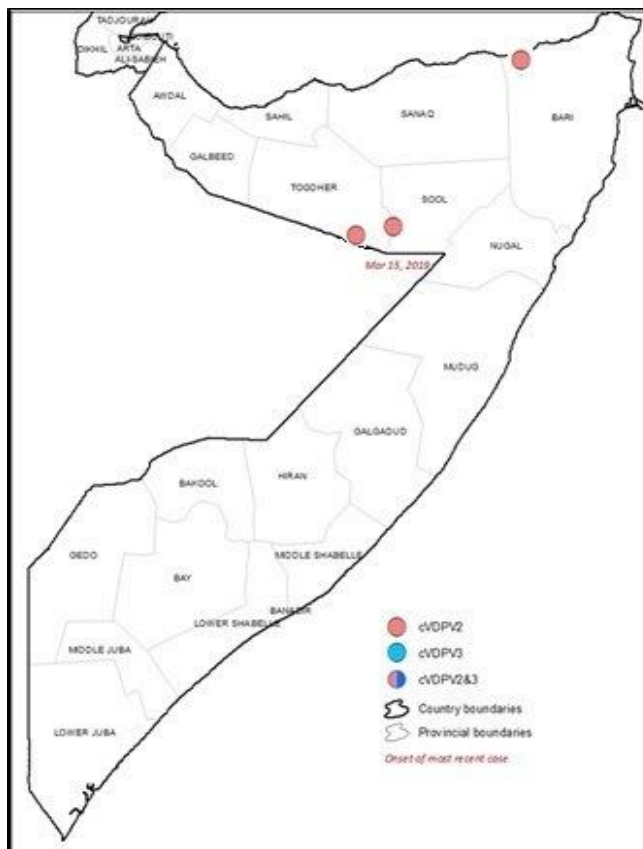
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3		
				Count	First Case	Last Case	Count	First Case	Last Case
PAK	2019	KHYBER PAKHTUNKHWA	CHARSADA	1	03-Nov-19	03-Nov-19			
			KOHISTANUPPER	1	27-Oct-19	27-Oct-19			
			KOHISTANLOWER	2	06-Oct-19	11-Oct-19			
			TORGHAR	2	04-Sep-19	28-Oct-19			
		ISLAMABAD	CDA	1	11-Sep-19	11-Sep-19			
		GILGIT BALTISTAN	DIAMER	4	07-Jul-19	28-Aug-19			
SOM	2019	BARI	BOSSASO	1	08-May-19	08-May-19			
		TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19			
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19			
<b>Total 2019</b>				<b>14</b>	<b>15-Mar-19</b>	<b>3-Nov-19</b>			
SOM	2018	LOWER JUBA	JAMAAME WEST	1	02-Sep-18	02-Sep-18			
			KISMAYO	2	29-Jul-18	30-Jul-18	2	4-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD				1	07-Sep-18	07-Sep-18
			MAHADAY				1	29-Jun-18	29-Jun-18
			WARSHEIKH				2	16-May-18	23-May-18
		BANADIR	DANYILE	1	10-Jul-18	10-Jul-18			
		HIRAN	BULO BURTI	1	11-May-18	11-May-18	1	11-May-18	11-May-18
GEDO	DOLO	1	26-May-18	26-May-18					
<b>Total 2018</b>				<b>6</b>	<b>11-May-18</b>	<b>2-Sep-18</b>	<b>7</b>	<b>11-May-18</b>	<b>7-Sep-18</b>

**Figure 6: Somalia cVDPV cases by type and district**

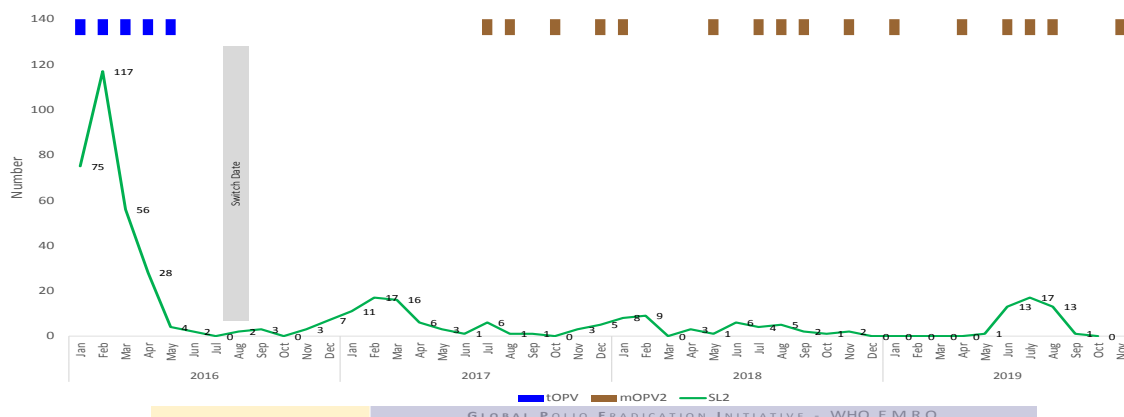
**6(a) 01/01/2018 - 31/12/2018**



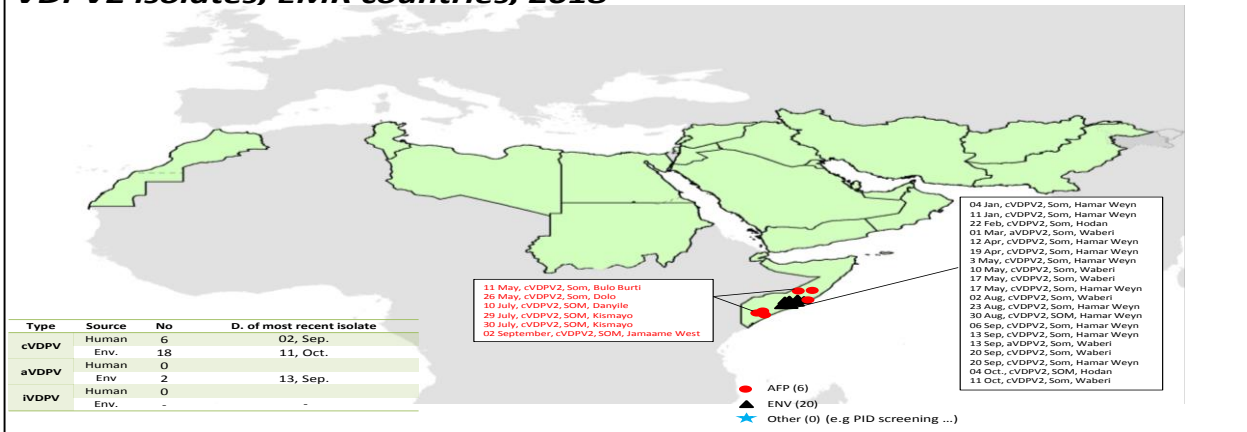
**6(b) 01/01/2019 - 24/11/2019**



Sabin like type-2 poliovirus isolates (H&E) and vaccine types used during SIAs, EMRO, 2016 to 2019



VDPV2 isolates, EMR countries, 2018



VDPV2 isolates, EMR countries, 2019

