

## Highlights of Polio Fax Bulletin No. 1102 for Week 46 2019

### I. Poliovirus Transmission

1. **Endemic countries (PAKISTAN & AFGHANISTAN):** The following was all reported this week:
  - Five new wild poliovirus type-1 (WPV1) cases, one from Afghanistan and four from Pakistan;
  - Two new circulating vaccine-derived poliovirus type-2 (cVDPV2) cases from Pakistan; and
  - Four new WPV1 positive environmental samples, two each from Afghanistan and Pakistan

- a. *Human samples:* Five new wild poliovirus cases reported this week. Total WPV1 cases in 2019 to date are 107 (21 from Afghanistan and 86 from Pakistan). This compares with 29 cases in 2018 in the same period (Afghanistan – 21 and Pakistan – 8).

- Afghanistan: One new WPV1 case reported this week from the newly infected district of Balamurghab, and newly infected province Badghis, with date of onset 17 October 2019. The case is a 70-month old female child. The child received reportedly multiple of OPV doses, 5 doses from routine and more than 7 doses through Supplementary immunization activities (SIAs).

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: Four 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 Lakki Marwat district, Khyber Pakhtunkhwa (KP) province, with date of onset 23 October 2019. The case is a 32-month old male child. The child received reportedly a total of 7 OPV doses all from SIAs and none from routine.

- Case (2): The case was reported from Lakki Marwat district, KP province, with date of onset 23 October 2019. The case is a 2-month old male child. The child did not receive any OPV doses neither from routine nor from SIAs.

- Case (3): The case was reported from Jamsheed Town Karachi, Sindh province, with date of onset 24 October 2019. The case is a 24-month old male child. The child did not receive any OPV doses neither from routine nor from SIAs.

- Case (4): The case was reported from Lakki Marwat district, KP province, with date of onset 3 November 2019. The case is a 2-month old male child. The child did not receive any OPV doses neither from routine nor from SIAs.

In 2019 to date, 86 WPV1 cases are reported from Pakistan. They include 53 from Khyber Pakhtunkhwa (KP) province, 11 from KP Tribal Districts (KPTD), 10 from Sindh province, 7 from Balochistan province and 5 from Punjab province. The most recent case has onset of paralysis on 3 November 2019.

### cVDPV2

- Case (1): The case was reported from Tor Ghar district, KP province, with date of onset 28 October 2019. The case is a 13-month old male child. The child received reportedly a total of 7 OPV doses all from SIAs and none from routine.

- Case (2): The case was reported from Charsada district, KP province, with date of onset 3 November 2019. The case is a 47-month old male child. The child reportedly received a total of 8 OPV doses out of which 1 dose was from routine and 7 from SIAs.

In 2019 to date, Pakistan reported 9 cVDPV2 cases that include 4 from Diamir district, 2 from Tor Ghar, and one each from Kohistan, Islamabad and Charsada districts. Date of onset of paralysis of these cases are between 7 July and 3 November 2019.

In addition, cVDPV2 has been isolated from 16 healthy children and 6 contacts.

*Environmental samples:* Four new WPV1 positive environmental samples, two each from Afghanistan and 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 294 positive environmental samples (289 WPV1, 3 cVDPV2, and 2 combined WPV1 and cVDPV2) with most recent positive sample collected on 29 October 2019.

## **2. Outbreak response countries**

- 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.

## **II. 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 (46/19) / Ending on : 17/11/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W35 01 Sep 19	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
Afghanistan	3094	3378	3264	60	71	80	76	55	61	78	68	69	64	46	8
Bahrain	18	35	15	0	0	0	0	1	0	0	1	0	2	0	0
Djibouti	4	0	4	1	0	0	0	0	0	0	0	0	1	0	0
Egypt	1242	1246	1154	25	16	28	33	27	21	27	36	26	26	31	5
Iran	820	896	799	13	18	20	27	15	19	9	11	4	4		
Iraq	699	1023	949	19	21	22	21	24	25	19	23	21	27	11	
Jordan ****	116	115	103	0	2	1	4	0	1	0	1	2	4	0	
Kuwait	69	72	36	2	3	0	2	1	1	0	1	0	1	0	
Lebanon ****	75	89	69	0	2	0	1	1	2	2	0	1	1	1	
Libya	88	122	89	3	1	2	2	4	3	5	4	1	2	1	1
Morocco	143	212	195	4	5	4	8	4	5	8	4	10	3	2	
Oman	40	28	22	0	1	0	0	2	1	1	1	1	0	1	0
Pakistan	10319	12276	12335	290	304	323	301	288	260	293	257	293	216	58	1
Palestine ****	43	44	51	1	1	1	4	0	1	1	0	1	0	2	
Qatar	18	10	7	0	1	0	0	0	1	0	0	0	0	1	0
Saudi Arabia	276	242	201	2	6	2	1	3	5	10	5	4	2	2	0
Somalia	345	353	313	6	5	5	16	6	4	7	4	5	4	2	1
Sudan	570	579	515	16	15	12	12	14	21	14	19	21	17	7	0
Syria ****	362	362	306	4	8	7	8	2	5	3	4	6	4	3	
Tunisia	67	68	68	2	3	1	1	1	0	1	2	0	0	0	
U.A.E	58	40	38	2	0	1	1	1	1	1	0	1	3	1	0
Yemen	713	730	629	12	12	20	8	17	13	8	5	10	12	4	
<b>Total EMR</b>	<b>19179</b>	<b>21920</b>	<b>21162</b>	<b>462</b>	<b>495</b>	<b>529</b>	<b>526</b>	<b>466</b>	<b>450</b>	<b>487</b>	<b>446</b>	<b>476</b>	<b>393</b>	<b>173</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	17/11		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	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	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						
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pakistan	8	12	8	86	4	4	2	0	11	11	16	12	14	5	10	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	0	
Saudi Arabia	0	0	0	0	0	0	0	0	0	0						
Somalia	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			
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>107</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>11</b>	<b>1</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 (46/19) / Ending on : 17/11/2019)

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	3264	21	0	210	3033	0	18.2	27	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	5.9	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	1154	0	0	147	1007	0	3.5	1	0	89.9	0	0	14-11-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	799	0	0	17	781	1	4.7	0	0	96.5	0	0	09-11-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	949	0	0	75	874	0	7.1	12	0	94.4	0	0	14-11-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	103	0	0	5	98	0	4.2	0	0	100.0	0	0	14-11-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	36	0	0	2	34	0	4.6	0	0	86.1	0	0	10-11-2019
Lebanon	89	0	0	0	89	0	4.8	0	0	96.6	0	0	69	0	0	14	55	0	4.2	7	0	85.5	0	0	15-11-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	89	0	0	9	80	0	4.0	1	0	98.9	0	0	16-11-2019
Morocco	212	0	0	0	212	0	2.4	0	0	77.8	0	0	195	0	0	47	148	0	2.5	30	5	81.5	0	0	15-11-2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	22	0	0	1	21	0	2.8	0	0	86.4	0	0	18-11-2019
Pakistan	12276	12	1	0	12263	0	15.7	0	0	87.0	12	0	12335	86	0	754	11486	9	17.9	152	0	87.8	86	0	17-11-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	51	0	0	11	40	0	3.1	0	0	98.0	0	0	14-11-2019
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	17-11-2019
Saudi Arabia	242	0	0	0	242	0	3.0	0	0	95.9	0	0	201	0	0	56	145	0	2.8	13	8	93.5	1	0	17-11-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	313	0	0	15	295	3	5.6	3	3	95.8	0	0	17-11-2019
Sudan	579	0	0	0	579	0	3.2	0	0	97.2	0	0	515	0	0	34	481	0	3.3	0	0	96.9	0	0	17-11-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.0	0	0	306	0	0	18	288	0	4.5	0	0	85.9	0	0	16-11-2019
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	15-11-2019
U.A.E	40	0	0	0	40	0	3.2	0	0	97.5	0	0	38	0	0	16	22	0	3.4	6	0	89.5	0	0	17-11-2019
Yemen	730	0	0	119	611	0	5.2	119	110	91.6	0	0	629	0	0	470	159	0	5.1	341	312	90.0	0	0	16-11-2019
EMR	21920	33	1	119	21752	15	8.7	119	110	89.8	33	0	21162	107	0	1918	19123	14	9.6	596	329	90.0	108	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	972	8	0	40	173	43
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	415	0	0	7	46	28
IRN	145	0	0	3	6	0	147	0	0	4	6	0
IRQ	811	0	0	22	93	9	497	0	0	7	18	29
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	3	0	0	0	0	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	4510	12	6	173	827	81
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	945	0	1	42	109	47
SUD	350	0	0	3	24	88	352	0	0	0	30	76
SYR	670	0	0	8	17	0	669	0	0	11	36	29
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	376	0	0	0	0	175
<b>EMR</b>	<b>10760</b>	<b>7</b>	<b>10</b>	<b>360</b>	<b>1471</b>	<b>786</b>	<b>9068</b>	<b>20</b>	<b>7</b>	<b>289</b>	<b>1277</b>	<b>532</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	12	19-Oct-19
<b>2019 Total</b>		<b>20</b>	<b>19-Oct-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	
		BALOCHSITAN	SUJAWAL	1	25-Sep-19	25-Sep-19	
			KILLABDULLAH	1	02-Jul-19	02-Jul-19	
			LAKKIMRWAT	3	27-May-19	04-Oct-19	
	KHYBER PAKHTUNKHWA (KP)	TORGHAR	1	25-May-19	25-May-19		
<b>2019 Total</b>				<b>10</b>	<b>06-Mar-19</b>	<b>04-Oct-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 (46/2019) / Ending on : (17/11/2019)

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	3189	236	23	506	2321	103	1	17*	174						170		1	2	1	1	14%	96%	100%	98%	16/11/2019
Bahrain	NPL Oman / CDC	11			2	9																14%	100%		0%	12/11/2019
Djibouti	NPL Kenya / CDC	4					1	3																		17/11/2019
Egypt**	RRL Egypt	1114	35	6	105	884	47	37		15						20			9	3		10%	96%	100%	99%	14/11/2019
Iran	NPL Iran / CDC	855	12		21	783	35	4		3	1					9						3%	100%	100%	99%	16/11/2019
Iraq	RRL Egypt	1021	14		127	816	40	24		7						13						12%	99%	87%	81%	14/11/2019
Jordan	NPL Jordan / RRL EGYPT	104			15	88	1	1														15%	100%		100%	17/11/2019
Kuwait	RRL Kuwait / RIVM	41			2	35		4														7%	89%		100%	17/11/2019
Lebanon	NPL Jordan / RRL EGYPT	66	1		7	55	3									1						11%	100%	100%	0%	17/11/2019
Libya	RRL Tunisia / RIVM	86			2	74		10														2%	99%		99%	01/11/2019
Morocco	NPL Morocco / RRL Tunisia	181	2		3	166	6	4								2						2%	99%	100%	94%	08/11/2019
Oman	NPL Oman / CDC	22			4	16	1	1														28%	100%		100%	12/11/2019
Pakistan	RRL Pakistan	12004	436	43	2044	9120	336	11	79	243					9	238			5	1	5	15%	97%	99%	97%	16/11/2019
Palestine & UNRWA		51			7	41	2	1														15%	36%		100%	14/11/2019
Qatar	NPL Oman / CDC	6				6																0%	100%		100%	12/11/2019
Saudi Arabia	NPL Saudi Arabia / CDC	198	4		2	180		12								4						2%	95%	100%	100%	04/11/2019
Somalia	NPL Kenya / CDC	313	22		60	216	6	9		7			10	3		8						20%	14%		98%	17/11/2019
Sudan	NPL Sudan / RRL Egypt	513	6		71	404	29	3		5						2						13%	72%	100%	63%	17/11/2019
Syria	NPL Syria / RRL Egypt	298	13		16	257	10	2		5						9						6%	100%	100%	57%	14/11/2019
Tunisia	RRL Tunisia	63			4	54		5														8%	100%		98%	01/11/2019
U.A.E	NPL Oman / CDC	28			3	22		3														12%	100%		44%	12/11/2019
Yemen	NPL Kenya / CDC	5						5																		16/11/2019
<b>Total EMR 2019</b>		20173	781	72	3001	15547	625	135	96	459	1		10	12		476		1	16	5	6	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

\*\* This indicator reflects surveillance and laboratory activities

\* Notification received from National EOC Afghanistan of 1 new WPV1 case from Badghis province, that will show in laboratory table in next week bulletin

# Somalia in 2018 has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 &amp; 1 coinfection cVDPV2/cVDPV3)

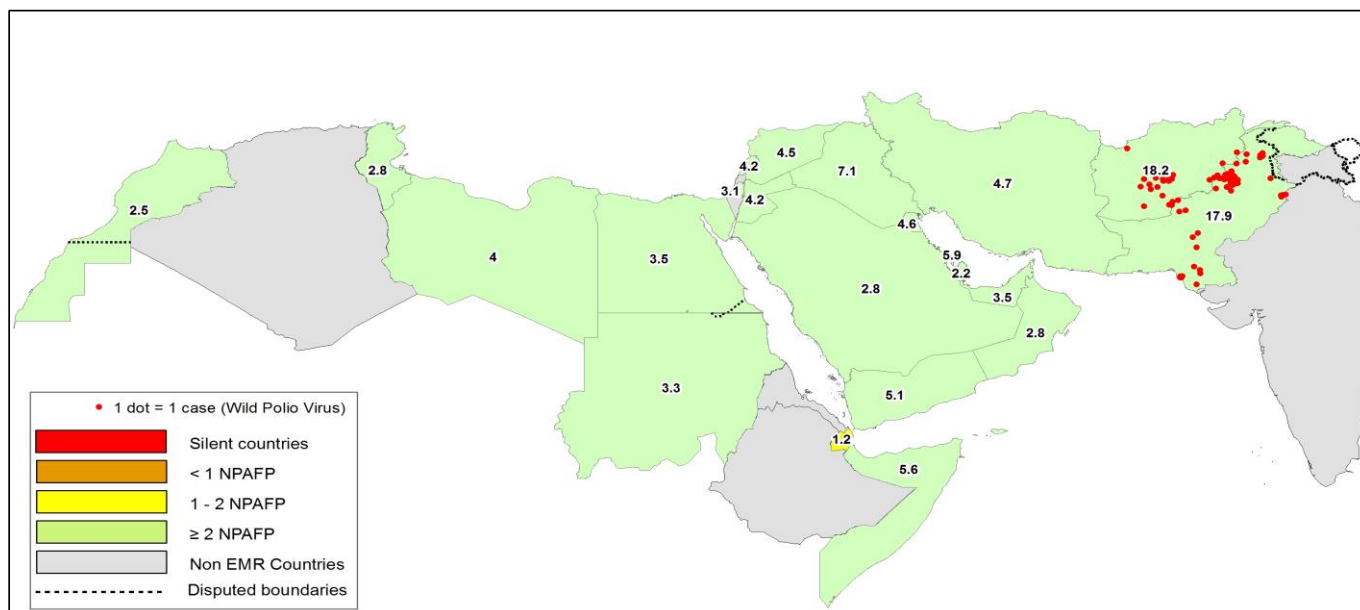
**Table 6: Environmental isolate by year and type**

Country	Status	2015	2016	2017	2018	2019
AFG	NEGATIVE	129	183	274	253	161
	PENDING					6
	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	603
	PENDING	2				25
	VDPV2	3	1			
<b>EGY Total</b>		<b>498</b>	<b>529</b>	<b>522</b>	<b>540</b>	<b>628</b>
JOR	NEGATIVE		2	32	36	28
	PENDING					4
<b>JOR Total</b>			<b>2</b>	<b>32</b>	<b>36</b>	<b>32</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	327
	PENDING					25
	WILD	79	59	105	139	289
	WILD & VDPV2	5	3	1		2
	VDPV2	8	5	4		3
<b>PAK Total</b>		<b>439</b>	<b>529</b>	<b>633</b>	<b>673</b>	<b>646</b>
SOM	NEGATIVE			34	161	46
	PENDING					4
	VDPV2			2	20	1
	VDPV3				12	
	<b>SOM Total</b>			<b>36</b>	<b>213</b>	<b>51</b>
SYR	NEGATIVE		4	102	137	
	PENDING					23
<b>SYR Total</b>			<b>4</b>	<b>102</b>	<b>160</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>1885</b>

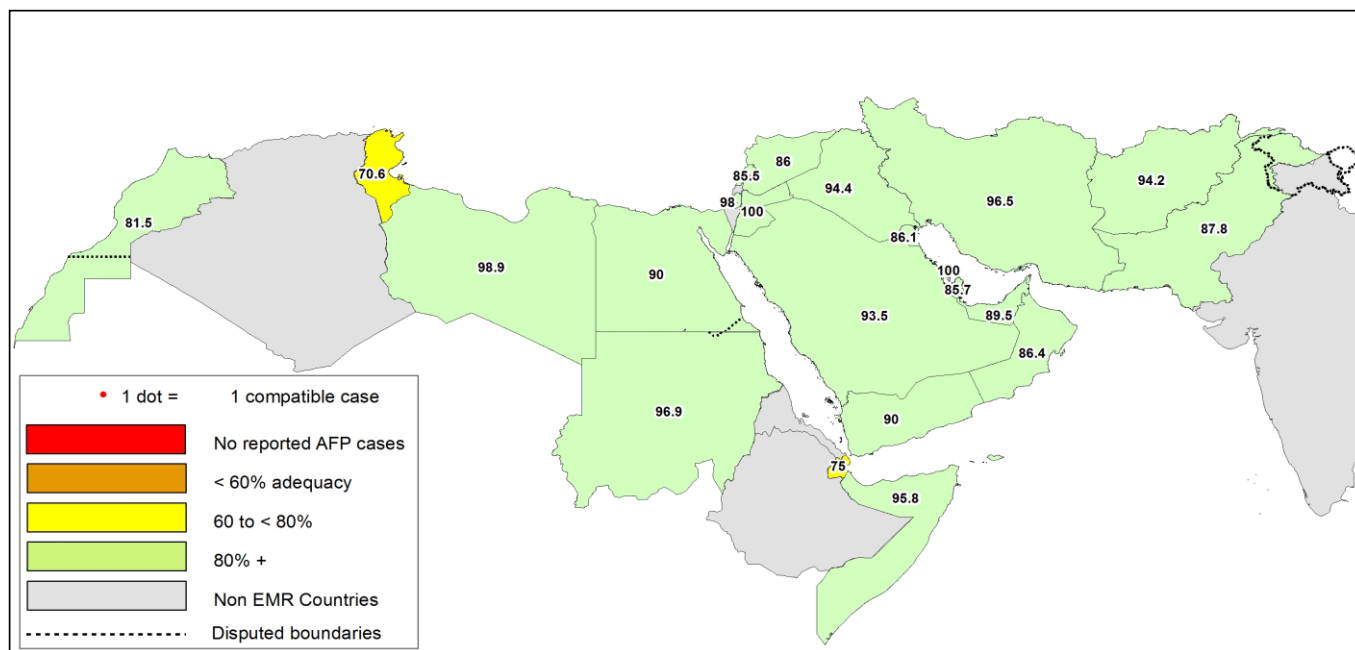
**Table 7: Environmental Wild/VDPV isolate by site**

Country	COUNTRY	Status	PROVINCE	DISTRICT	Count	First date	Last date	
2018	AFG	WILD	HILMAND	LASHKARGAH	12	8-Jan	26-Dec	
				HIRAT	1	25-Jun	25-Jun	
				KABUL	3	26-Feb	25-Jun	
				KANDAHAR	42	8-Jan	26-Dec	
				KHOST	1	25-Sep	25-Sep	
				KUNAR	2	24-Apr	25-Sep	
				NANGARHAR	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	12	11-Jun	18-Dec	
				RAWALPINDI	15	10-Jan	14-Dec	
				DGKHAN	2	12-Feb	12-Sep	
				SINDH	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	
				KHIGQBAL	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				5	19-May	25-Oct		
WAZIR-S				2	26-Nov	27-Dec		
KHYBER PAKHTUNKHWA				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		
	VDPV3	BANADIR	WABERI	7	1-Mar	11-Oct		
			HAMAR WEYN	6	11-Feb	5-Apr		
	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	
				<b>AFG Total</b>				<b>45</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	
				ZHOIB	1	16-Oct	16-Oct	
				DBUGTI	2	19-Aug	19-Sep	
				KABDULAH	12	1-Jan	15-Oct	
				NSIRABAD	1	21-Oct	21-Oct	
				ISLAMABAD	3	12-Apr	21-Aug	
				PUNJAB	4	3-Jan	3-Sep	
				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	
				DGKHAN	2	8-Apr	12-Sep	
				SINDH	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	
KHIGQBAL				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	5	22-Jan	28-May					
KURRAM	1	15-Jan	15-Jan					
KHYBER PAKHTUNKHWA	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	1	6-Aug	6-Aug				
	SINDH	1	7-Oct	7-Oct				
VDPV2	PUNJAB	3	11-Apr	12-Sep				
<b>PAK Total</b>				<b>294</b>	<b>1-Jan</b>	<b>29-Oct</b>		
SOM	VDPV2	BANADIR	HODAN	1	3-Feb	3-Feb		
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>343</b>	<b>1-Jan</b>	<b>29-Oct</b>		

**Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 17/11/2019**



**Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 17/11/2019**



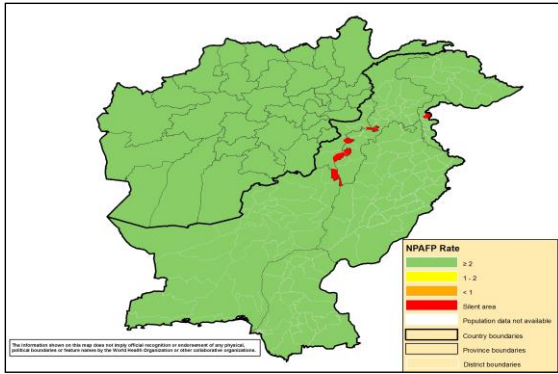
**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019**

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	86	15-Jan-19	3-Nov-19
<b>2019 Total</b>		<b>108</b>	<b>4-Jan-19</b>	<b>3-Nov-19</b>

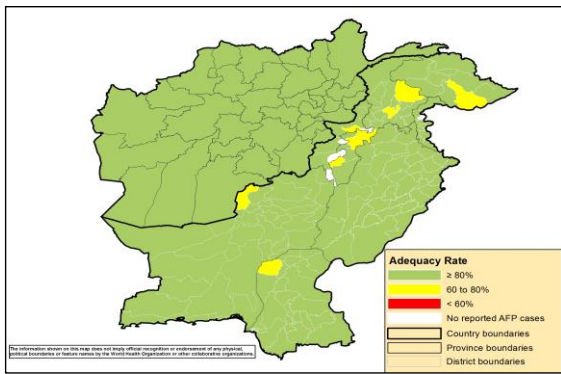
Last reported wild Polio P3 from Pakistan with date of onset 18/04/2012



**Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2019 - 17/11/2019**

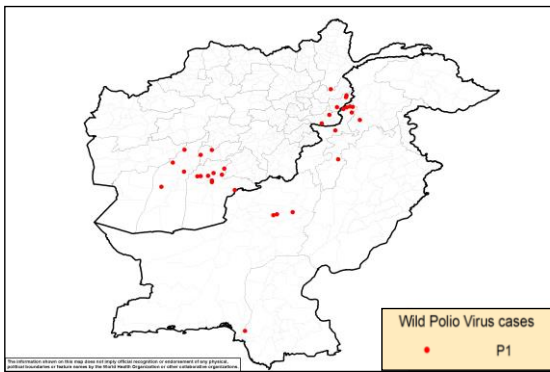


**Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 17/11/2019**

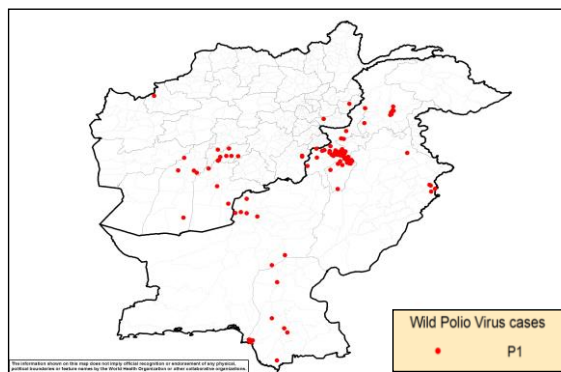


**Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan**

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



**5(b) 01/01/2019 - 17/11/2019**



## World Health Organization – Regional Office for Eastern Mediterranean

## AFP SURVEILLANCE

Week 46, ending 17 November 2019

18-Nov-19

Number 1102

**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**

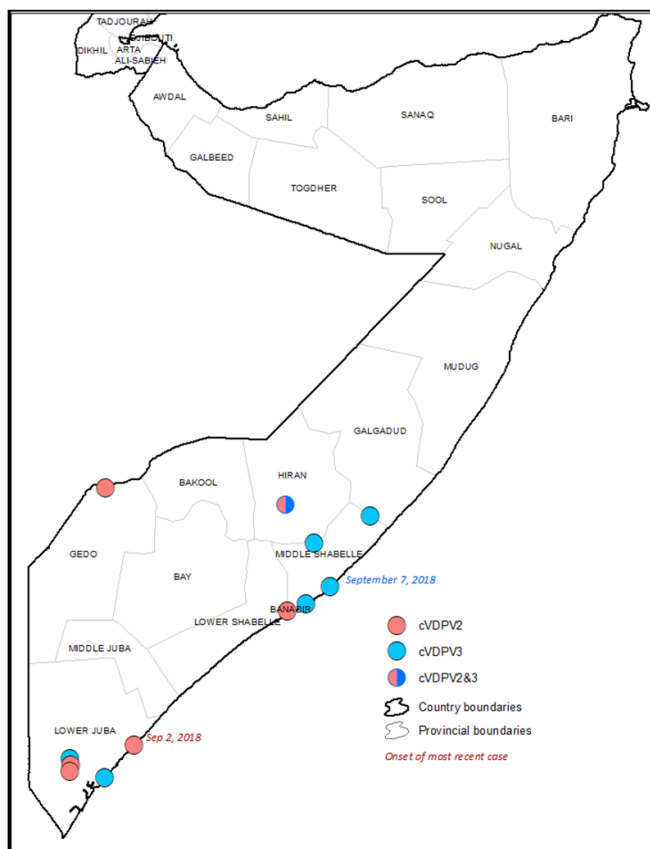
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case	
2018	KP TRIBAL DISTRICTS	BAJOUR	5	1-Sep-18	31-Dec-18	
		KHYBER	1	25-Sep-18	25-Sep-18	
	KHYBER PAKHTUNKHWA	LAKKIMRWT	1	16-Dec-18	16-Dec-18	
		CHARSADA	1	1-Aug-18	1-Aug-18	
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18	
BALOCHISTAN	DUKKI	3	8-Mar-18	18-May-18		
<b>2018 Total</b>			<b>12</b>	<b>8-Mar-18</b>	<b>31-Dec-18</b>	
2019	KHYBER PAKHTUNKHWA	LAKKIMRWT	17	27-May-19	3-Nov-19	
		TANK	1	11-Oct-19	11-Oct-19	
		TORGHAR	7	25-May-19	13-Sep-19	
		BANNU	23	15-Jan-19	19-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	
		DIKHAN	1	5-May-19	5-May-19	
		SINDH	KHIJAMSHEED	1	24-Oct-19	24-Oct-19
			SUJAWAL	1	25-Sep-19	25-Sep-19
	KHIORANGI		2	20-Aug-19	26-Aug-19	
	JAMSHORO		1	23-Aug-19	23-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	
	BALOCHISTAN	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>86</b>	<b>15-Jan-19</b>	<b>3-Nov-19</b>	

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

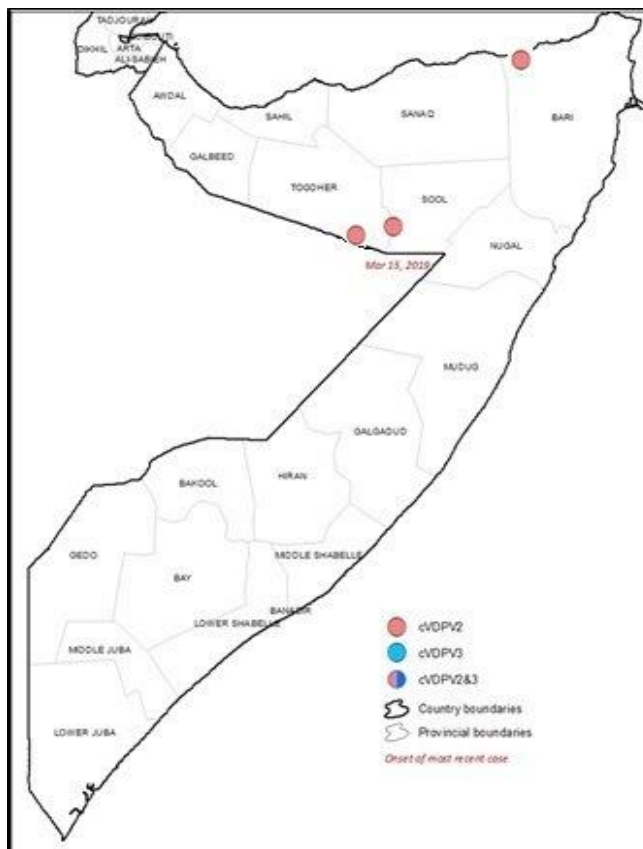
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3		
				Count	First Case	Last Case	Count	First Case	Last Case
PAK	2019	KHYBER PAKHTUNKHWA	CHARSADA	1	03-Nov-19	03-Nov-19			
			KOHISTANLOWER	1	06-Oct-19	06-Oct-19			
			TORGHAR	2	04-Sep-19	28-Oct-19			
			ISLAMABAD	1	11-Sep-19	11-Sep-19			
			GILGIT BALTISTAN	4	07-Jul-19	28-Aug-19			
SOM	2019	BARI	BOSSASO	1	08-May-19	08-May-19			
			TOGDHER	1	21-Apr-19	21-Apr-19			
			SOOL	1	15-Mar-19	15-Mar-19			
<b>Total 2019</b>				<b>12</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**

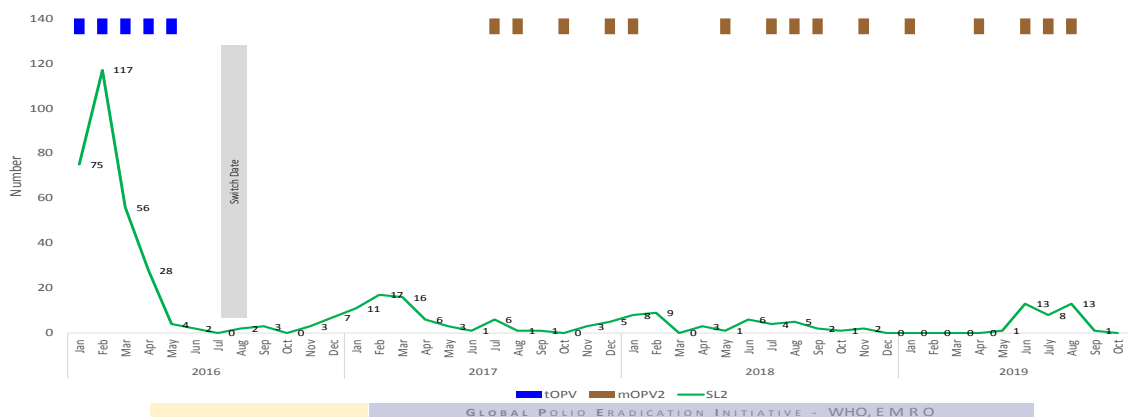
**6(a) 01/01/2018 - 31/12/2018**



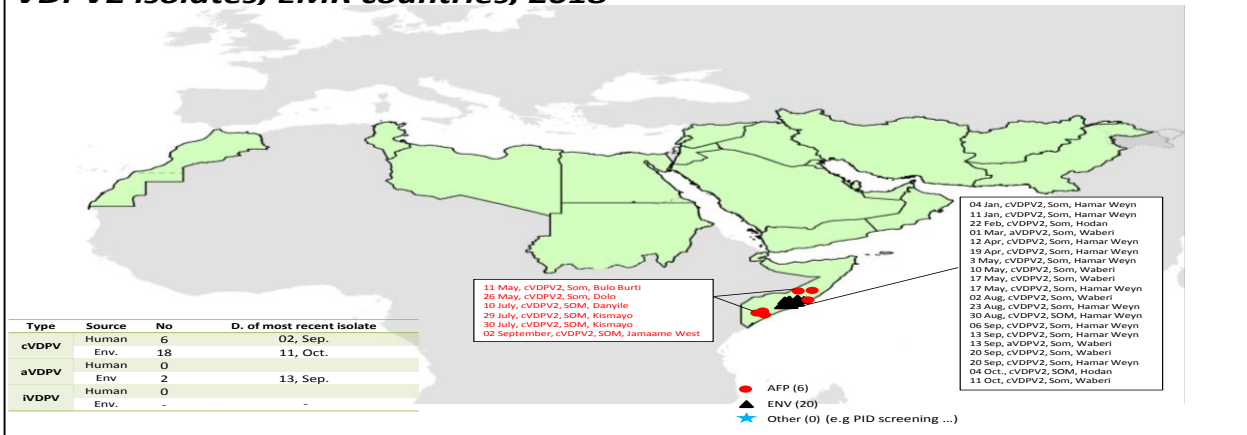
**6(b) 01/01/2019 - 17/11/2019**



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

