

## Highlights of Polio Fax Bulletin No. 1100 for Week 44 2019

### I. Poliovirus Transmission

1. **Endemic countries (PAKISTAN & AFGHANISTAN):** Four new wild poliovirus cases reported this week, one from Afghanistan and three from Pakistan. Twenty-one new positive environmental samples were reported this week, one from Afghanistan and twenty from Pakistan.

a. *Human samples:* Four new wild poliovirus cases reported this week. Total WPV1 cases in 2019 to date are 100 (20 from Afghanistan and 80 from Pakistan). This compares with 28 cases in 2018 in the same period (Afghanistan – 20 and Pakistan – 8).

- Afghanistan: One new WPV1 case was reported this week and the details are as follows:

The case was reported from Bermal district, Paktika province, with date of onset 28 September 2019. The case is a 12-month old female child. The child received reportedly 4 doses of oral polio vaccine (OPV) all from supplementary immunization activities (SIAs) and none from routine.

In 2019 to date, 20 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 and Nangarhar provinces. The most recent case has onset of paralysis on 28 September 2019.

- Pakistan: Three new WPV1 case were reported this week and the details are as follows:

Case (1): The case was reported from newly infected district Sujawal, Sindh province, with date of onset 25 September 2019. The case is a 36-month old male child. The child received reportedly a total of 7 OPV doses all from SIAs and none from routine. The case was identified as wild by a positive contact as the index case died before stool specimens collection.

Case (2): The case was reported from Lakki Marwat district, Khyber Pakhtunkhwa (KP) province, with date of onset 8 October 2019. The case is a 9-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 the newly infected district Tank, KP province, with date of onset 11 October 2019. The case is a 14-month old male child. The child received reportedly a total of 10 OPV doses out of which 3 doses were from routine and 7 doses from SIAs.

In 2019 to date, 80 WPV1 cases are reported from Pakistan. They include 48 from Khyber Pakhtunkhwa (KP) province, 11 from KP Tribal Districts (KPTD), 9 from Sindh province, 7 from Balochistan province and 5 from Punjab province. The most recent case has onset of paralysis on 13 October 2019.

*Environmental samples:* Twenty-one new WPV1 positive environmental samples were reported this week, one from Afghanistan and twenty from Pakistan.

- Afghanistan: In 2019 to date, there are 43 positive environmental samples with most recent positive sample collected on 24 September 2019.
- Pakistan: In 2019 to date, there are 289 positive environmental samples with most recent positive sample collected on 21 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 1.0 and percentage of AFP cases with adequate stool specimens of 66.7%
- Tunisia has a percentage of AFP cases with adequate stool specimens of 72.3%
- 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 (44/19) / Ending on : 03/11/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W33 18 Aug 19	W34 25 Aug 19	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
Afghanistan	3094	3378	3122	76	81	60	71	80	74	55	60	77	59	47	12
Bahrain	18	35	13	0	0	0	0	0	0	1	0	0	1	0	0
Djibouti	4	0	3	0	0	1	0	0	0	0	0	0	0	0	0
Egypt	1242	1246	1094	23	29	25	16	28	33	27	21	27	36	26	2
Iran	820	896	784	22	17	13	18	21	26	15	20	8	3	1	
Iraq	699	1023	899	15	28	19	21	22	21	23	24	18	21	13	
Jordan ****	116	115	98	2	2	0	2	1	4	0	1	0	1	1	
Kuwait	69	72	36	0	0	2	3	0	2	1	1	0	1	0	1
Lebanon ****	75	89	67	0	1	0	2	0	1	1	2	2	0	1	
Libya	88	122	84	3	9	3	1	2	2	4	3	5	3	1	
Morocco	143	212	165	0	4	4	5	3	8	4	3	1			
Oman	40	28	21	1	1	0	1	0	0	2	1	1	1	1	0
Pakistan	10319	12276	11842	289	343	292	307	321	299	282	253	283	231	128	0
Palestine ****	43	44	48	1	1	1	1	1	4	0	1	1	0	0	
Qatar	18	10	6	0	0	0	1	0	0	0	1	0	0	0	0
Saudi Arabia	276	242	167	1	5	2	5	2	0	0	0	1	0	0	
Somalia	345	353	297	5	7	6	5	5	16	6	4	7	0	0	0
Sudan	570	579	477	10	18	16	15	12	12	14	21	14	17	9	0
Syria ****	362	362	295	3	5	4	8	6	8	2	5	3	4	3	
Tunisia	67	68	65	2	0	2	3	1	1	1	0	0	2	0	
U.A.E	58	40	32	1	1	2	0	1	1	1	1	0	0	0	0
Yemen	713	730	598	12	10	12	12	20	8	17	13	5	2	1	
<b>Total EMR</b>	<b>19179</b>	<b>21920</b>	<b>20213</b>	<b>466</b>	<b>562</b>	<b>464</b>	<b>497</b>	<b>526</b>	<b>520</b>	<b>456</b>	<b>435</b>	<b>453</b>	<b>382</b>	<b>232</b>	<b>15</b>

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	03/11		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	20	20	0	2	1	3	1	5	1	2	2	3		
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	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				0						
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0			
Pakistan	8	12	8	80	4	4	2	0	11	11	16	12	14	5	5	
Palestine ****	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								
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			
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>28</b>	<b>100</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>5</b>	<b>0</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 (44/19) / Ending on : 03/11/2019)

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	3122	20	0	209	2893	0	18.2	25	3	94.4	20	0	03-11-2019
Bahrain	35	0	0	0	35	0	12.1	0	0	97.1	0	0	13	0	0	2	11	0	5.3	0	0	100.0	0	0	27-10-2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	3	0	0	3	0	1.0	1	0	66.7	0	0	03-11-2019	
Egypt	1246	0	0	0	1245	1	3.2	0	0	93.2	0	0	1094	0	0	115	979	0	3.4	3	0	90.5	0	0	31-10-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	784	0	0	13	770	1	4.9	0	0	96.6	0	0	02-11-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	899	0	0	63	836	0	7.0	13	0	94.7	0	0	01-11-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	98	0	0	5	93	0	4.2	0	0	100.0	0	0	31-10-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	36	0	0	2	34	0	4.8	0	0	80.6	0	0	03-11-2019
Lebanon	89	0	0	0	89	0	4.8	0	0	96.6	0	0	67	0	0	12	55	0	4.3	7	0	85.1	0	0	01-11-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	84	0	0	12	72	0	4.0	1	0	98.8	0	0	02-11-2019
Morocco	212	0	0	0	212	0	2.4	0	0	77.8	0	0	165	0	0	59	106	0	2.2	30	7	80.0	0	0	13-10-2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	21	0	0	2	19	0	2.7	0	0	85.7	0	0	03-11-2019
Pakistan	12276	12	1	0	12263	0	15.7	0	0	87.0	12	0	11842	80	0	918	10844	0	17.9	202	1	87.7	80	0	03-11-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	48	0	0	10	38	0	3.0	0	0	97.9	0	0	27-10-2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	6	0	0	3	3	0	2.0	0	0	83.3	0	0	03-11-2019
Saudi Arabia	242	0	0	0	242	0	3.0	0	0	95.9	0	0	167	0	0	42	125	0	2.5	25	11	89.8	0	0	27-10-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	297	0	0	11	283	3	5.6	3	3	95.6	0	0	27-10-2019
Sudan	579	0	0	0	579	0	3.2	0	0	97.2	0	0	477	0	0	30	447	0	3.2	0	0	97.3	0	0	03-11-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.0	0	0	295	0	0	16	279	0	4.5	0	0	86.1	0	0	02-11-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	65	0	0	4	60	1	2.8	0	0	72.3	0	0	01-11-2019
U.A.E	40	0	0	0	40	0	3.2	0	0	97.5	0	0	32	0	0	10	22	0	3.0	6	0	87.5	0	0	03-11-2019
Yemen	730	0	0	140	590	0	5.2	140	129	91.6	0	0	598	0	0	472	126	0	5.1	352	321	89.8	0	0	27-10-2019
EMR	21920	33	1	140	21731	15	8.7	140	129	89.8	33	0	20213	100	0	2013	18095	5	9.6	668	346	90.0	100	0	
2017	19179	22	3	72	19006	76	7.7	72	58	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	927	8	0	38	167	20
BAH	2	0	0	0	0	0	0	0	0	0	0	0
DJI	0	0	0	0	0	0	0	0	0	0	0	0
EGY	495	0	0	11	58	17	409	0	0	7	46	25
IRN	145	0	0	3	6	0	138	0	0	4	6	0
IRQ	811	0	0	22	93	9	468	0	0	7	14	20
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	59	0	0	3	1	17
OMA	70	0	0	2	16	0	65	0	0	2	20	12
PAK	4200	3	0	207	882	0	4387	12	0	164	792	180
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	897	0	1	37	99	41
SUD	350	0	0	3	24	88	315	0	0	0	26	66
SYR	670	0	0	8	17	0	640	0	0	10	36	21
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	370	0	0	0	0	169
<b>EMR</b>	<b>10760</b>	<b>7</b>	<b>10</b>	<b>360</b>	<b>1471</b>	<b>786</b>	<b>8722</b>	<b>20</b>	<b>1</b>	<b>272</b>	<b>1212</b>	<b>573</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 (43/2019) / Ending on : (27/10/2019)

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	3059	228	22	474	2228	107		17	170						163		1	1	1	1	14%	96%	100%	98%	03/11/2019
Bahrain	NPL Oman / CDC	11			2	9																14%	100%		0%	04/11/2019
Djibouti	NPL Kenya / CDC	3					3																			03/11/2019
Egypt**	RRL Egypt	1060	35	6	104	852	50	13		15						20			9	3		10%	96%	100%	99%	31/10/2019
Iran	NPL Iran / CDC	798	12		20	748	17	1		3	1					9						3%	100%	100%	98%	02/11/2019
Iraq	RRL Egypt	972	14		115	788	43	13		5						9						11%	99%	100%	69%	31/10/2019
Jordan	NPL Jordan / RRL EGYPT	100			14	83	3	1														15%	100%			03/11/2019
Kuwait	RRL Kuwait / RIVM	40			2	33		5														6%	89%		100%	31/10/2019
Lebanon	NPL Jordan / RRL EGYPT	63	1		7	52	3									1						11%	100%	100%	0%	03/11/2019
Libya	RRL Tunisia / RIVM	86			2	74	10															2%	99%		99%	01/11/2019
Morocco	NPL Morocco / RRL Tunisia	175	2		3	156	14									2						2%	99%	100%	95%	01/11/2019
Oman	NPL Oman / CDC	21			3	15	2	1														25%	100%		100%	04/11/2019
Pakistan	RRL Pakistan	11520	416	43	1952	8647	437	13	73	239						236			5	1	7	15%	97%	99%	97%	03/11/2019
Palestine & UNRWA		48			6	41		1														13%	35%		100%	27/10/2019
Qatar	NPL Oman / CDC	6				6																0%	100%		100%	04/11/2019
Saudi Arabia	NPL Saudi Arabia / CDC	198	4		2	180	10	2								4						2%	95%	100%	100%	04/11/2019
Somalia	NPL Kenya / CDC	297	22		58	207		10		7			9	3		8					2	20%	14%		98%	27/10/2019
Sudan	NPL Sudan / RRL Egypt	459	6		61	361	13	18		5						2						12%	68%	100%	63%	27/10/2019
Syria	NPL Syria / RRL Egypt	286	12		16	246	8	4		5						9						6%	100%	100%	54%	31/10/2019
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%	04/11/2019
Yemen	NPL Kenya / CDC																									27/10/2019
<b>Total EMR 2019</b>		19293	752	71	2848	14802	725	85	90	449	1		9	3		463		1	15	5	10	13%	95%	100%	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

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

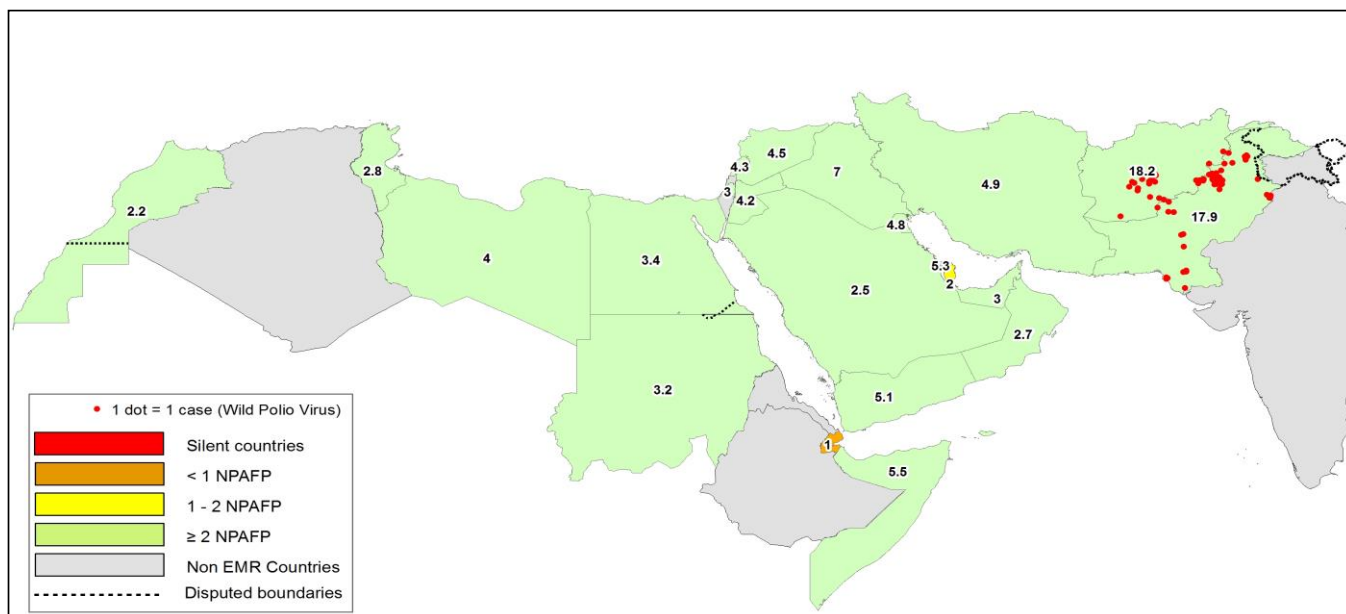
**Table 6: Environmental isolate by year and type**

Country	Status	2015	2016	2017	2018	2019
AFG	NEGATIVE	129	183	274	253	145
	PENDING					24
	WILD	20	2	42	83	43
<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	594
	PENDING	2				18
	VDPV2	3	1			
<b>EGY Total</b>		<b>498</b>	<b>529</b>	<b>522</b>	<b>540</b>	<b>612</b>
JOR	NEGATIVE		2	32	36	27
	PENDING					3
<b>JOR Total</b>			<b>2</b>	<b>32</b>	<b>36</b>	<b>30</b>
LEB	NEGATIVE		4	27	45	30
	PENDING					6
<b>LEB Total</b>			<b>4</b>	<b>27</b>	<b>45</b>	<b>36</b>
PAK	NEGATIVE	347	462	523	534	310
	PENDING					24
	WILD	79	59	105	139	289
	WILD & VDPV2	5	3	1		
	VDPV2	8	5	4		
<b>PAK Total</b>		<b>439</b>	<b>529</b>	<b>633</b>	<b>673</b>	<b>623</b>
SOM	NEGATIVE			34	181	43
	PENDING					3
	VDPV2			2	20	1
	VDPV3					12
<b>SOM Total</b>				<b>36</b>	<b>213</b>	<b>47</b>
SYR	NEGATIVE		4	102	130	
	PENDING					22
<b>SYR Total</b>			<b>4</b>	<b>102</b>	<b>152</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					10
<b>SUD Total</b>					<b>15</b>	<b>45</b>
<b>Grand Total</b>		<b>1086</b>	<b>1249</b>	<b>1576</b>	<b>2017</b>	<b>1823</b>

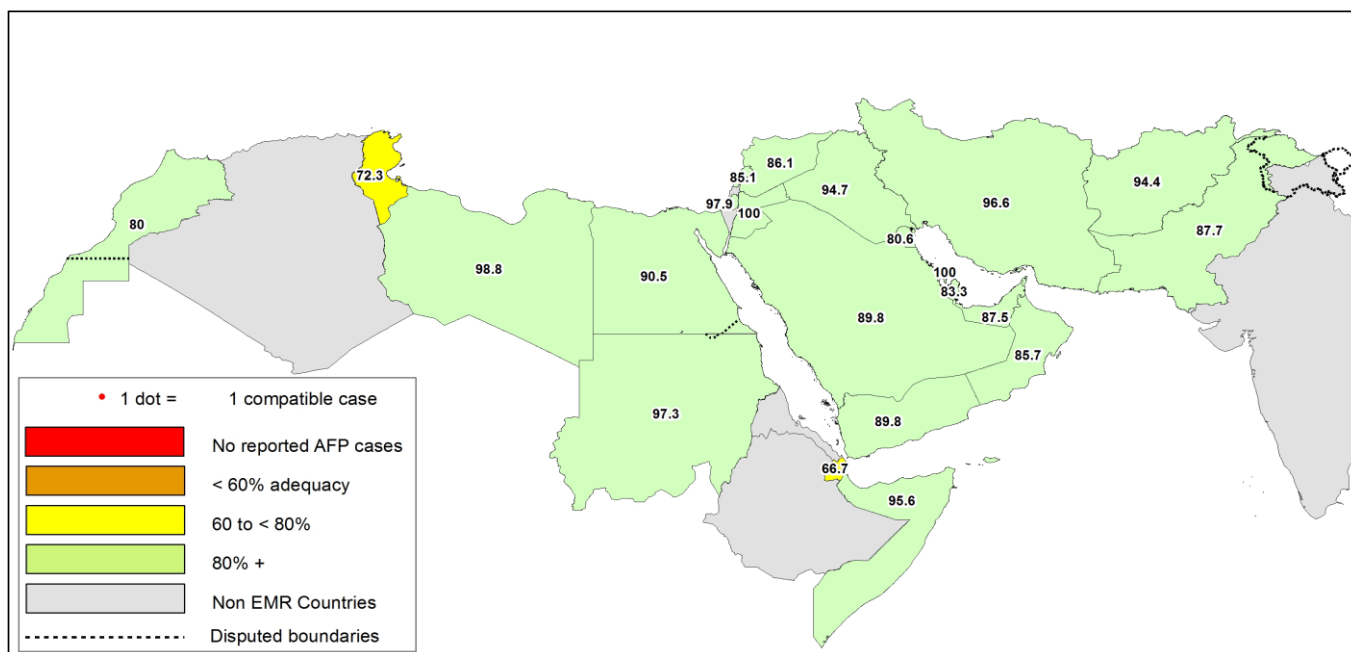
**Table 7: Environmental Wild/VDPV isolate by site**

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	
				MATUN	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	
				CDA	7	10-Jan	10-Nov	
				PUNJAB	LAHORE	12	11-Jun	18-Dec
					RAWALPINDI	15	10-Jan	14-Dec
					DGKHAN	2	12-Feb	12-Sep
					HYDERABAD	1	9-Feb	9-Feb
				SINDH	JACOBABAD	3	12-Feb	12-Sep
					KAMBAR	3	7-Apr	9-Jul
KHIBALDIA					2	1-Aug	4-Sep	
KHIGADAP					15	15-Feb	11-Dec	
KHYBER PAKHTUNKHWA				KHIGIQBAL	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			
		BANNU	4	31-Mar	27-Dec			
		KOHAT	5	5-Jan	27-Sep			
	MARDAN	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		
			HODAN	1	1-Feb	1-Feb		
VDPV3	BANADIR	HODAN	5	8-Mar	23-Aug			
		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	7	23-Feb	24-Sep	
				NAHR-E-SARAJ	6	6-Jan	24-Sep	
				KANDAHAR	23	6-Jan	24-Sep	
				NANGARHAR	7	26-Jan	23-Sep	
	<b>AFG Total</b>				<b>43</b>	<b>6-Jan</b>	<b>24-Sep</b>	
	PAK	WILD	BALOCHISTAN	KHUZDAR	2	20-Mar	20-Oct	
				LORALAI	1	17-Mar	17-Mar	
				PISHIN	5	2-Feb	2-Oct	
				QUETTA	31	1-Jan	20-Oct	
				ZHOB	1	16-Oct	16-Oct	
				DBUGTI	2	19-Aug	19-Sep	
				KABDULAH	12	1-Jan	15-Oct	
				NSIRABAD	1	21-Oct	21-Oct	
				ISLAMABAD	CDA	3	12-Apr	21-Aug
					FAISALABAD	4	3-Jan	3-Sep
					LAHORE	48	5-Jan	15-Oct
					MULTAN	5	18-Feb	18-Sep
				PUNJAB	RAWALPINDI	11	10-Jan	11-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				
	KHIGIQBAL	10	11-Apr	17-Oct				
	KHIKORANGI	9	18-Feb	18-Oct				
	KHILANDHI	8	19-Feb	21-Oct				
	KHISITE	10	3-Jan	7-Oct				
	SUKKUR	11	23-Jan	3-Oct				
	KHILIAQAT	8	7-Feb	10-Oct				
KP TRIBAL DISTRICTS	KHISADDAR	10	7-Jan	9-Oct				
	WAZIR-S	5	22-Jan	28-May				
	KURRAM	1	15-Jan	15-Jan				
	BANNU	8	28-Jan	27-Sep				
KHYBER PAKHTUNKHWA	DIKHAN	4	8-Jan	11-Jun				
	KOHAT	1	27-Feb	27-Feb				
	MARDAN	4	16-Mar	15-Jun				
	PESHAWAR	10	11-Jan	11-Oct				
<b>PAK Total</b>				<b>289</b>	<b>1-Jan</b>	<b>21-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>336</b>	<b>1-Jan</b>	<b>21-Oct</b>		

**Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 03/11/2019**



**Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 03/11/2019**



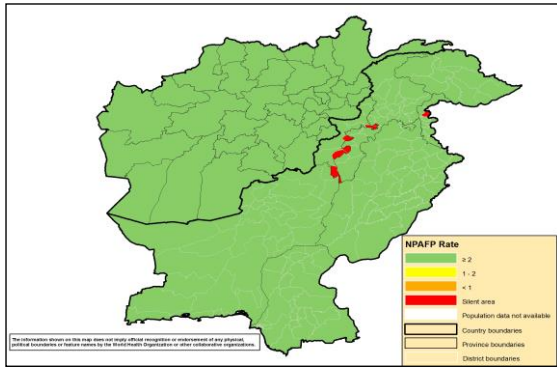
**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019**

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	20	4-Jan-19	28-Sep-19
	PAK	80	15-Jan-19	13-Oct-19
<b>2019 Total</b>		<b>100</b>	<b>4-Jan-19</b>	<b>13-Oct-19</b>

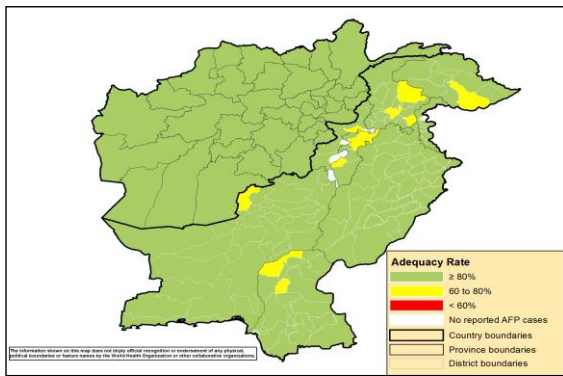
Last reported wild Polio P3 from Pakistan with date of onset 18/04/2012



**Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2019 - 03/11/2019**

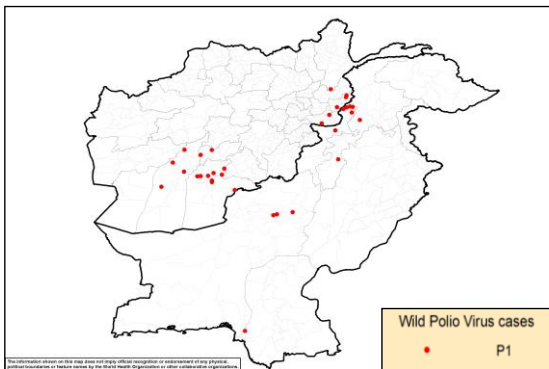


**Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 03/11/2019**

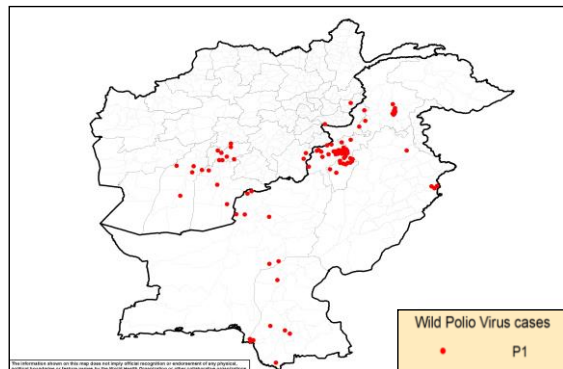


**Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan**

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



**5(b) 01/01/2019 - 03/11/2019**



## World Health Organization – Regional Office for Eastern Mediterranean

## AFP SURVEILLANCE

Week 44, ending 3 November 2019

4-Nov-19

Number 1100

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

ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
<b>2018</b>	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>
<b>2019</b>	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
	URUZGAN	SPINBOLDAK	1	4-Jan-19	4-Jan-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
	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>20</b>	<b>4-Jan-19</b>	<b>28-Sep-19</b>

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

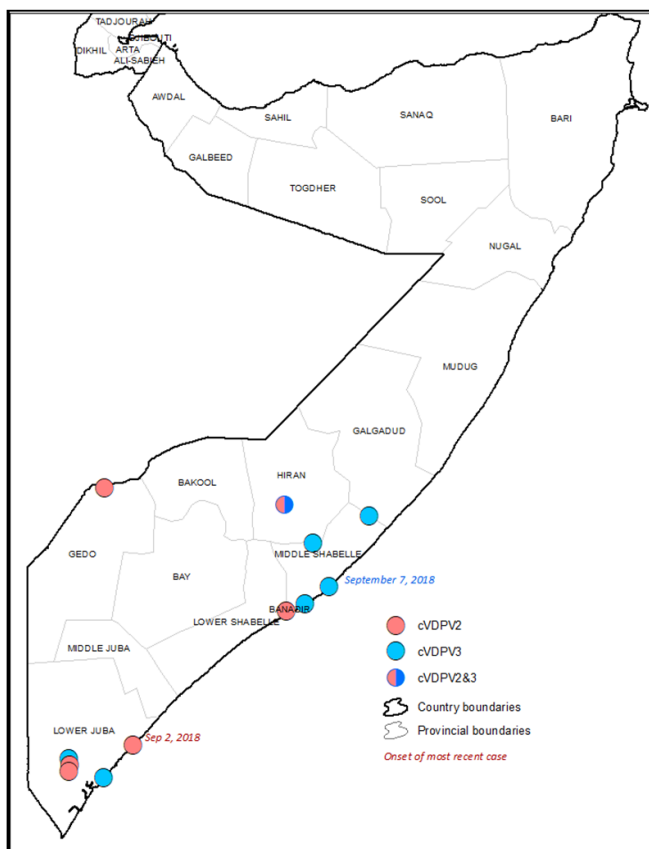
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case	
<b>2018</b>	KP TRIBAL DISTRICTS	BAJOUR	5	01-09-18	31-12-18	
		KHYBER	1	25-09-18	25-09-18	
	KHYBER PAKHTUNKHWA	LAKKIMRWT	1	16-12-18	16-12-18	
		CHARSADA	1	01-08-18	01-08-18	
	SINDH	KHIGADAP	1	22-09-18	22-09-18	
BALUCHISTAN	DUKKI	3	08-03-18	18-05-18		
<b>2018 Total</b>			<b>12</b>	<b>08-03-18</b>	<b>31-12-18</b>	
<b>2019</b>	KHYBER PAKHTUNKHWA	LAKKIMRWT	12	27-05-19	13-10-19	
		TANK	1	11-10-19	11-10-19	
		TORGHAR	7	25-05-19	13-09-19	
		BANNU	23	15-01-19	19-08-19	
		HANGU	2	20-01-19	28-07-19	
		CHARSADA	1	21-07-19	21-07-19	
		SHANGLA	1	18-05-19	18-05-19	
		DIKHAN	1	05-05-19	05-05-19	
		BALUCHISTAN	HARNAI	1	27-09-19	27-09-19
			JAFARABAD	2	28-05-19	13-09-19
	KABDULAH		3	09-06-19	08-08-19	
	QUETTA		1	06-07-19	06-07-19	
	SINDH		SUJAWAL	1	25-09-19	25-09-19
	SINDH	KHIORANGI	2	20-08-19	26-08-19	
		JAMSHORO	1	23-08-19	23-08-19	
		HYDERABAD	2	20-07-19	05-08-19	
		KHIGIQBAL	1	29-04-19	29-04-19	
		LARKANA	1	17-04-19	17-04-19	
		KHILAYARI	1	25-02-19	25-02-19	
		KP TRIBAL DISTRICTS	WAZIR-S	1	20-08-19	20-08-19
	WAZIR-N		8	04-04-19	21-07-19	
	KHYBER		1	14-02-19	14-02-19	
	BAJOUR		1	18-01-19	18-01-19	
	PUNJAB	LAHORE	4	20-01-19	22-06-19	
		JHELUM	1	21-06-19	21-06-19	
	<b>2019 Total</b>			<b>80</b>	<b>15-01-19</b>	<b>13-10-19</b>

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

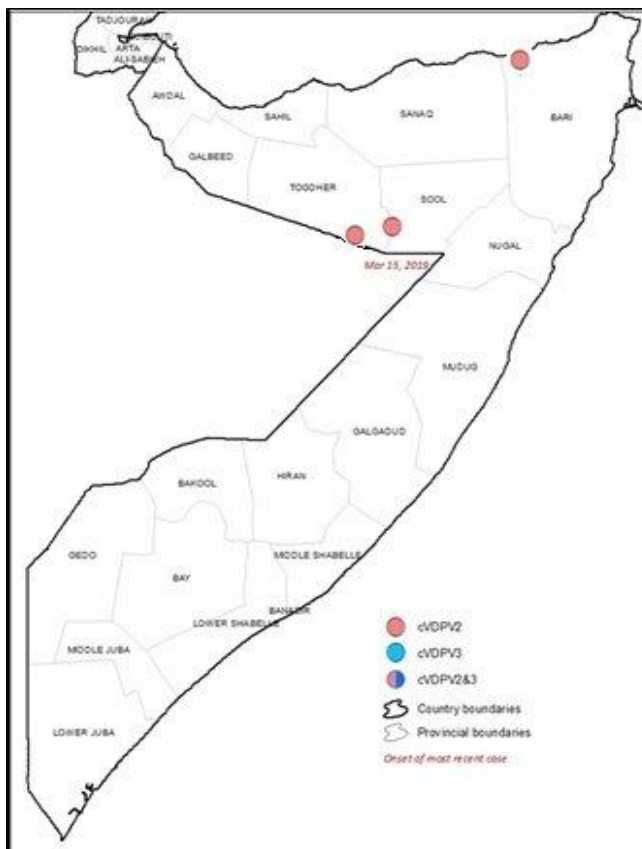
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3			
				Count	First Case	Last Case	Count	First Case	Last Case	
SOM	2019	BARI	BOSSASO	1	08-May-19	08-May-19				
		TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19				
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19				
	<b>Total 2019</b>				<b>3</b>	<b>15-Mar-19</b>	<b>8-May-19</b>			
	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 WARSHEIKH				1	29-Jun-18	29-Jun-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**

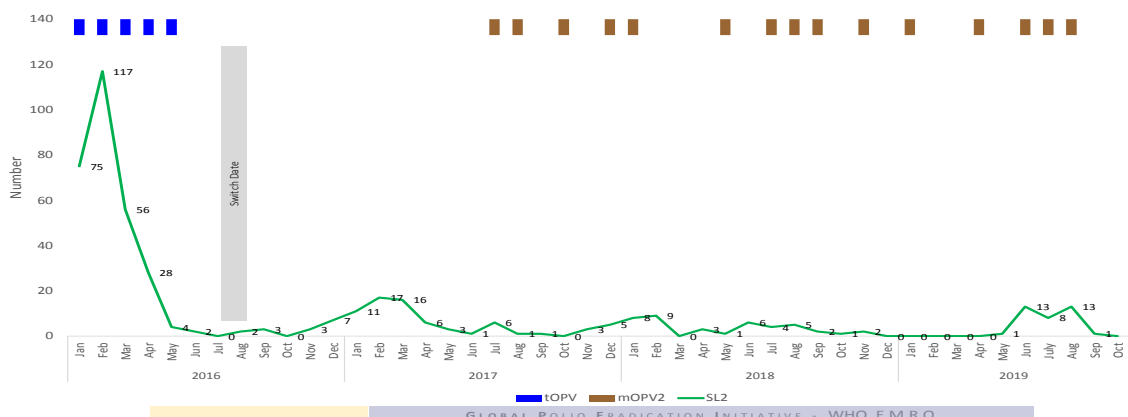
**6(a) 01/01/2018 - 31/12/2018**



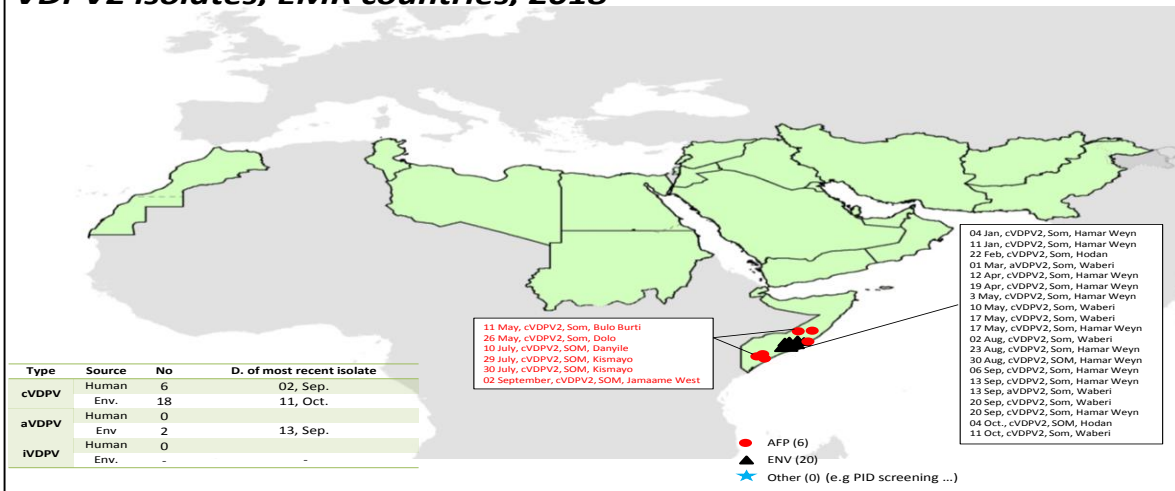
**6(b) 01/01/2019 - 03/11/2019**



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

