

## **Highlights of Polio Fax Bulletin No. 1067 for Week 11 2019**

### **I. Poliovirus Transmission**

1. Endemic countries (PAKISTAN & AFGHANISTAN):
  - a. Human samples: No new wild poliovirus (WPV) cases reported this week. Total WPV1 cases in 2019 to date remains to be 6 (2 from Afghanistan and 4 from Pakistan).
    - i. Afghanistan: In 2019 to date two cases are reported, both from Kandahar province. The most recent reported case has date of onset of paralysis on 12 January 2019.
    - ii. Pakistan: In 2019 to date, four cases are reported, two from Khyber Pakhtunkhwa (KP), one from KP Tribal District (KPTD) and one from Punjab. The most recent reported case has date of onset of paralysis on 20 January 2019.
  - b. Environmental samples: Thirteen new positive environmental samples for WPV1 were reported this week, five from Afghanistan and eight from Pakistan.
    - i. Afghanistan: Five new WPV1 positive environmental samples reported this week include three from Hilmand province, (two from Nahr-E-Saraj and one from Lashkargah districts); one from Jalalabad district (Nangarhar province); and one from Kandahar district (Kandahar province). In 2019 to date, there are 15 positive environmental samples with most recent positive sample collected on 23 February 2019.
    - ii. Pakistan: The eight new WPV1 positive environmental samples reported this week include three from Sindh province, (one from Jacobabad, one from Sukkur districts and one from Karachi Orangi town); two from Punjab province (one from Lahore and one from Faisalabad districts); one from Quetta district (Balochistan province); one from Peshawar district (KP province); and one from South Waziristan district (KPTD). In 2019 to date, there are 50 positive environmental samples with most recent positive sample collected on 25 February 2019.

### **II. Outbreak response countries**

1. SOMALIA:
  - No new circulating vaccine derived poliovirus (cVDPV) type-2 or type-3 isolates from human or environmental samples this week.
  - a. In 2018 to date, 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.

- b. cVDPV2:
  - i. The date of onset of the most recent cVDPV2 case is 2 September 2018.
  - ii. In 2018 so far, cVDPV2 has been isolated from 19 sewage samples in Mogadishu and date of specimen collection of recent most positive sample is 11 October 2018.
- c. cVDPV3:
  - i. The date of onset of the most recent cVDPV3 case is 7 September, 2018.
  - ii. In 2018 so far, cVDPV3 isolated from 11 sewage samples in Mogadishu and date of specimen collection of recent most positive sample is 23 August 2018.
- d. Co-infection cVDPV2 and cVDPV3:
  - i. The date of onset of the most recent coinfection is 11 May 2018.
  - ii. In 2018 so far, cVDPV2 and cVDPV3 coinfection is isolated from 1 sewage samples in Mogadishu and date of specimen collection of recent most positive sample is 19 April, 2018.

### III. Surveillance performance indicators

1. In 2018 to date, 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.
  - a. Djibouti is missing both indicators. Djibouti, did not report any AFP case since April 2017.
  - b. Morocco has a percentage of AFP cases with adequate stool specimens of 77.8%
2. Yemen has 72 AFP cases which are not yet finally classified in 2017.

## 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 (11/19) / Ending on : 17/03/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W52 30 Dec 18	W01 06 Jan 19	W02 13 Jan 19	W03 20 Jan 19	W04 27 Jan 19	W05 03 Feb 19	W06 10 Feb 19	W07 17 Feb 19	W08 24 Feb 19	W09 03 Mar 19	W10 10 Mar 19	W11 17 Mar 19
Afghanistan	3094	3378	746	52	78	79	81	81	68	85	70	74	73	56	3
Bahrain	18	35	4	0	0	1	0	1	0	0	0	1	0	1	0
Djibouti	4	0	0												
Egypt	1242	1246	238	13	28	27	30	25	22	24	20	20	36	7	
Iran	820	896	192	19	18	20	20	31	23	27	15	23	8	7	0
Iraq	699	1023	247	21	18	31	48	26	16	24	25	32	18	11	1
Jordan ****	116	115	34	1	4	4	1	5	4	2	7	1	2	4	
Kuwait	69	72	11	0	1	1	1	2	1	0	1	0	1	3	0
Lebanon ****	75	89	21	2	1	3	3	0	2	1	3	4	2	2	
Libya	88	122	19	2	3	3	2	2	1	3	5	0	0	1	
Morocco	143	212	26	5	5	7	2	3	6	4	1	0	0		
Oman	40	28	2	0	0	0	0	1	0	1	0	0	0	0	0
Pakistan	10319	12252	2505	250	279	284	355	269	254	269	273	243	198	110	2
Palestine ****	43	44	8	0	0	0	1	1	1	2	1	2	0	0	
Qatar	18	10	0	1	0	0	0	0	0	0	0	0	0	0	
Saudi Arabia	276	241	45	2	5	7	4	7	6	4	6	2	5	0	
Somalia	345	353	58	5	6	5	3	10	7	13	3	3	5	4	0
Sudan	570	578	105	6	10	19	10	10	9	8	10	12	15	2	0
Syria ****	362	362	95	11	5	11	5	8	9	17	14	13	8	6	0
Tunisia	67	68	11	0	3	1	2	1	0	0	3	0	2	0	
U.A.E	58	40	10	0	2	0	2	1	2	0	1	1	0	1	0
Yemen	713	730	140	15	22	7	15	19	17	17	18	13	9	4	
<b>Total EMR</b>	<b>19179</b>	<b>21894</b>	<b>4517</b>	<b>405</b>	<b>488</b>	<b>510</b>	<b>585</b>	<b>503</b>	<b>448</b>	<b>501</b>	<b>476</b>	<b>444</b>	<b>382</b>	<b>219</b>	<b>6</b>

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	17/03		Confirmed polio cases by month of onset											
			2018	2019	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019
Afghanistan	14	21	7	2	1	0	2	3	2	3	2	1		2		
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				
Egypt	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	0	0	
Kuwait	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			
Oman	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
Pakistan	8	12	1	4	1	1	0	0	1	3	1	0	4	4		
Palestine ****	0	0	0	0	0	0	0	0	0	0	0	0				
Qatar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	0				
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			
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				
Yemen	0	0	0	0												
<b>Total EMR</b>	<b>22</b>	<b>33</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>0</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 (11/19) / Ending on : 17/03/2019

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		Wild P1 Poliovirus	Wild P3 Poliovirus
		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	26	3331	0	16.6	16	1	93.7	21	0	746	2	0	210	534	0	17.7	0	0	94.4	2	0	10-03-2019
Bahrain	35	0	0	6	29	0	12.1	5	0	97.1	0	0	4	0	0	4	0	0	6.6	0	0	100.0	0	0	10-03-2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	0	0	0	0	0	0	0.0	0	0		0	0	09-12-2018
Egypt	1246	0	0	2	1243	1	3.2	2	0	93.2	0	0	238	0	0	81	157	0	3.0	0	0	88.7	0	0	07-03-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	192	0	0	35	157	0	4.8	0	0	96.4	0	0	10-03-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	247	0	0	72	175	0	7.8	0	0	98.0	0	0	10-03-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	34	0	0	6	28	0	5.8	0	0	100.0	0	0	10-03-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	11	0	0	9	2	0	6.0	0	0	72.7	0	0	10-03-2019
Lebanon	89	0	0	1	88	0	4.8	1	0	96.6	0	0	21	0	0	10	11	0	5.4	0	0	85.7	0	0	08-03-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	19	0	0	9	10	0	3.6	0	0	100.0	0	0	09-03-2019
Morocco	212	0	0	6	206	0	2.4	6	0	77.8	0	0	26	0	0	21	5	0	1.4	0	0	57.7	0	0	08-03-2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	2	0	0	0	2	0	1.1	0	0	100.0	0	0	03-03-2019
Pakistan	12252	12	1	139	12100	0	15.7	92	0	87.2	12	0	2505	4	0	635	1866	0	15.4	0	0	91.5	4	0	10-03-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	8	0	0	8	0	0	2.0	0	0	100.0	0	0	10-03-2019
Qatar	10	0	0	1	9	0	2.8	0	0	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	10-03-2019
Saudi Arabia	241	0	0	1	240	0	3.0	0	0	95.9	0	0	45	0	0	41	4	0	2.7	0	0	88.9	0	0	10-03-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	58	0	0	12	46	0	4.4	0	0	98.3	0	0	10-03-2019
Sudan	578	0	0	0	578	0	3.2	0	0	97.2	0	0	105	0	0	18	87	0	2.8	0	0	97.1	0	0	10-03-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.3	0	0	95	0	0	35	60	0	5.9	0	0	91.6	0	0	10-03-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	11	0	0	5	6	0	1.8	0	0	81.8	0	0	08-03-2019
U.A.E	40	0	0	2	38	0	3.2	2	1	97.5	0	0	10	0	0	6	4	0	3.8	0	0	90.0	0	0	10-03-2019
Yemen	730	0	0	452	278	0	5.2	422	380	91.6	0	0	140	0	0	138	2	0	4.8	0	0	91.4	0	0	09-03-2019
EMR	21894	33	1	636	21209	15	8.7	546	382	89.9	33	0	4517	6	0	1355	3156	0	8.6	0	0	92.4	6	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	249	0	0	6	26	54
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	78	0	0	0	2	9
IRN	145	0	0	3	6	0	28	0	0	0	1	0
IRQ	811	0	0	22	93	9	123	0	0	3	3	33
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	218	0	0	3	16	20	7	0	0	0	0	4
LIB	1	0	0	0	0	0	0	0	0	0	0	0
MOR	157	0	0	0	9	9	9	0	0	0	0	9
OMA	70	0	0	2	16	0	10	0	0	0	3	0
PAK	4209	3	0	207	882	0	1051	0	0	69	61	176
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	1050	0	10	49	133	5	182	0	0	1	10	39
SUD	350	0	0	3	24	88	64	0	0	0	3	26
SYR	670	0	0	8	17	0	176	0	0	0	4	43
TUN	1	0	0	0	0	0	4	0	0	0	0	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	1557	0	0	0	0	1557	155	0	0	0	0	156
<b>EMR</b>	<b>10750</b>	<b>7</b>	<b>10</b>	<b>360</b>	<b>1471</b>	<b>1710</b>	<b>2136</b>	<b>0</b>	<b>0</b>	<b>79</b>	<b>113</b>	<b>549</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
2018	Afghanistan	4	07-08-18
	Pakistan	3	12-10-18
<b>2018 Total</b>		<b>7</b>	<b>12-10-18</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
2018	AFG	NANGARHAR	PACHIERAGAM	1	17-07-18	17-07-18
		URUZGAN	SHAHID-E-HASSA	1	08-07-18	08-07-18
	PAK	FATA	BAJOUR	1	01-09-18	01-09-18
		BALUCHISTAN	DUKKI	1	15-04-18	15-04-18
<b>2018 Total</b>				<b>4</b>	<b>15-04-18</b>	<b>01-09-18</b>

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**Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (11/2019) / Ending on : (17/03/2019)**

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	706	35	1	58	476	136		2	27						20						9%	100%	100%	99%	09/03/2019
Bahrain	NPL Oman / CDC																									10/03/2019
Djibouti	NPL Kenya / CDC																									09/12/2018
Egypt***	RRL Egypt	241	3		9	168	52	9		1						2						5%	97%	100%	100%	07/03/2019
Iran	NPL Iran / CDC	200	2		3	176	19									2						2%	100%	100%	100%	09/03/2019
Iraq	RRL Egypt	248	2		26	179	39	2								1						11%	100%	100%	100%	07/03/2019
Jordan	NPL Jordan / RRL EGYPT	34			6	23	5															20%	100%			07/03/2019
Kuwait	RRL Kuwait / RIVM	13			1	9	2	1														18%	100%		100%	10/03/2019
Lebanon	NPL Jordan / RRL EGYPT	20	1		1	13	5															8%	100%			07/03/2019
Libya	RRL Tunisia / RIVM	18			1	17																3%	100%		100%	01/03/2019
Morocco	NPL Morocco / RRL Tunisia	32			1	25	5	1														4%	100%		100%	01/03/2019
Oman	NPL Oman / CDC	2				2																15%	100%		100%	10/03/2019
Pakistan	RRL Pakistan	2495	103	11	147	1750	473	10	4	75						73		2	1	1		6%	100%	100%	99%	09/03/2019
Palestine & UNRWA		8				3	5															0%	67%		100%	10/03/2019
Qatar	NPL Oman / CDC	1				1																0%	100%		100%	10/03/2019
Saudi Arabia	NPL Saudi Arabia / CDC	48	1			34	11	2								1						0%	91%	100%	100%	10/03/2019
Somalia	NPL Kenya / CDC	58	2		7	37	7	5		1						2						15%	13%		100%	10/03/2019
Sudan	NPL Sudan / RRL Egypt	93	1		14	57	6	17														16%	94%		100%	10/03/2019
Syria	NPL Syria / RRL Egypt	94	5			70	16	4														1%	100%			07/03/2019
Tunisia	RRL Tunisia	14			1	9	4															17%	100%		100%	01/03/2019
U.A.E	NPL Oman / CDC	10			1	3	6															25%	100%		50%	10/03/2019
Yemen	NPL Kenya / CDC																									09/03/2019
<b>Total EMR 2019</b>		4335	155	12	276	3052	786	56	6	104						101		2	1	1		7%	98%	100%	99%	
<b>Total EMR 2018</b>		20743	902	90	3511	16213	1	22	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 so far has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 & 1 coinfection cVDPV2/cVDPV3)																	
** This indicator reflects surveillance and laboratory activities																										

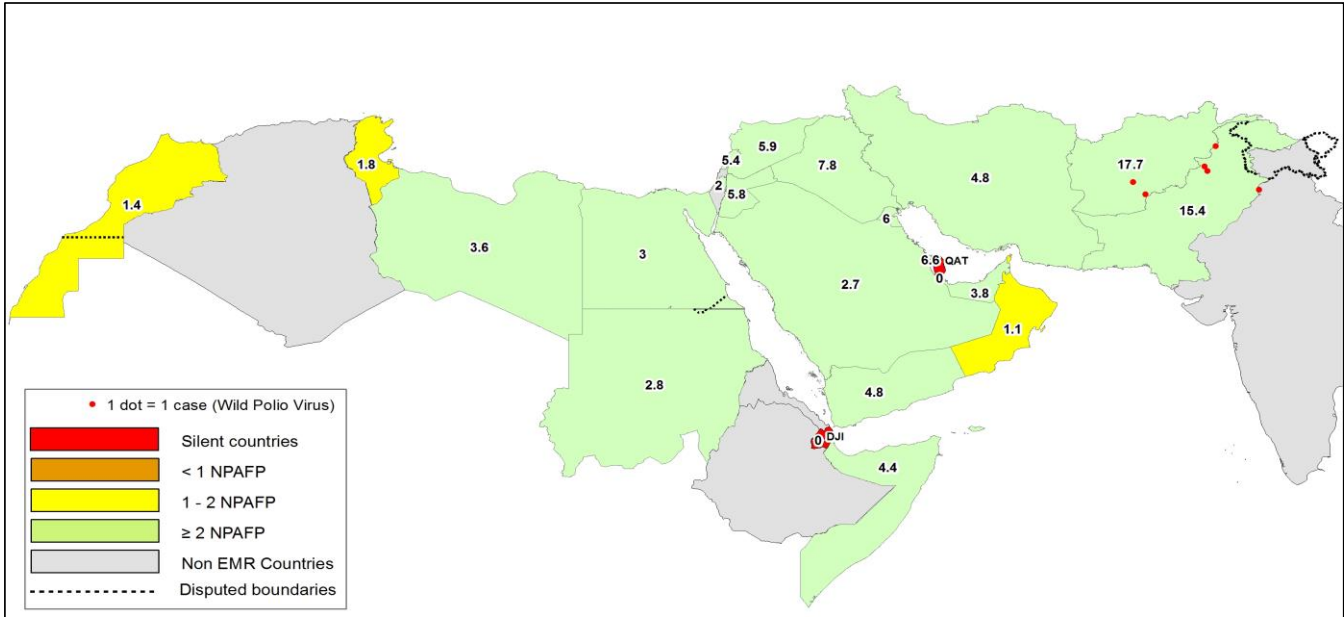
**Table 6: Environmental isolate by year and type**

Country	Status	2015	2016	2017	2018	2019
AFG	NEGATIVE	129	183	274	253	30
	PENDING					3
	WILD	20	2	42	83	15
<b>AFG Total</b>		<b>149</b>	<b>185</b>	<b>316</b>	<b>336</b>	<b>48</b>
EGY	NEGATIVE	495	528	522	539	81
	PENDING					1
	VDPV2	3	1			
<b>EGY Total</b>		<b>498</b>	<b>529</b>	<b>522</b>	<b>540</b>	<b>112</b>
IRN	NEGATIVE			6	54	14
				6	54	14
JOR	NEGATIVE		2	32	19	4
	PENDING				17	3
<b>JOR Total</b>			<b>2</b>	<b>32</b>	<b>36</b>	<b>7</b>
LEB	NEGATIVE		4	27	11	3
	PENDING				34	5
<b>LEB Total</b>			<b>4</b>	<b>27</b>	<b>45</b>	<b>8</b>
PAK	NEGATIVE	347	462	523	534	54
	PENDING					44
	WILD	79	59	105	139	50
	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>148</b>
SOM	NEGATIVE			34	181	11
	PENDING					4
	VDPV2			2	20	1
	VDPV3				12	
<b>SOM Total</b>				<b>36</b>	<b>213</b>	<b>16</b>
SYR	NEGATIVE			4	102	14
	PENDING					17
<b>SYR Total</b>				<b>4</b>	<b>102</b>	<b>31</b>
<b>Grand Total</b>		<b>1086</b>	<b>1249</b>	<b>1576</b>	<b>1999</b>	<b>384</b>

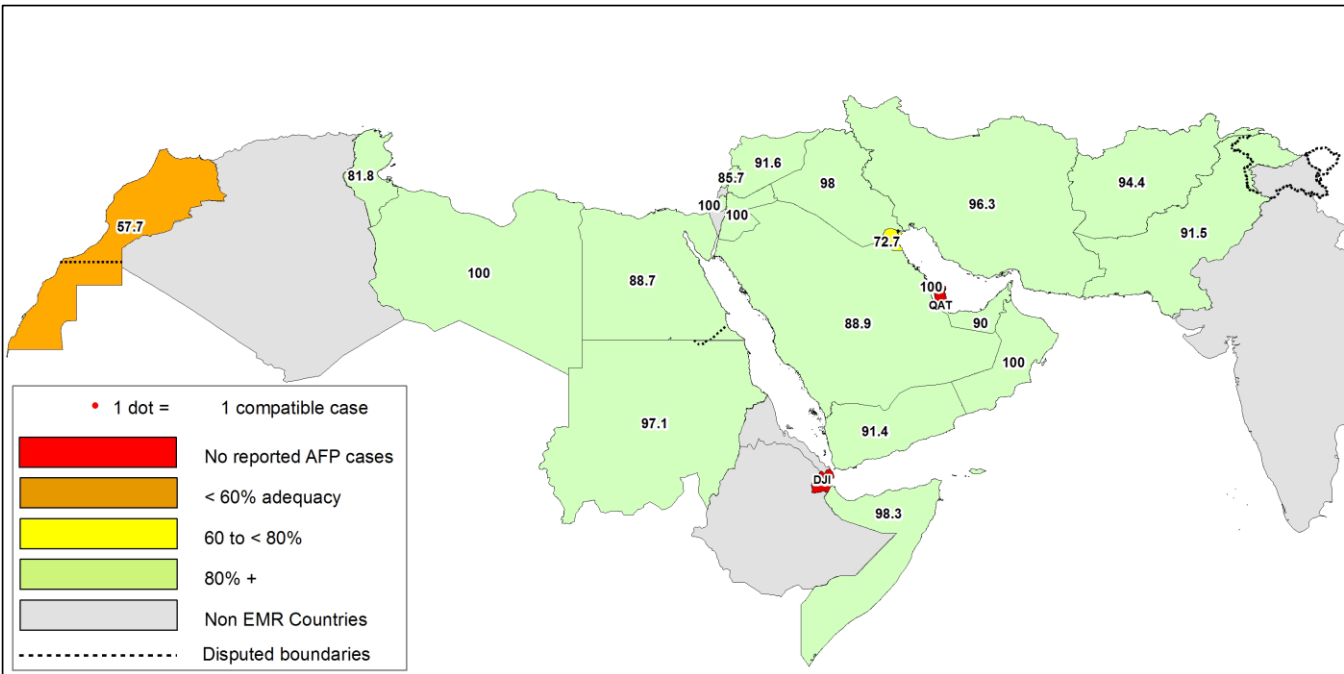
**Table 7: Environmental Wild/VDPV isolate by site**

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>
	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		
				LAHORE	12	11-Jun	18-Dec		
				RAWALPINDI	15	10-Jan	14-Dec		
				DGKHAN	2	12-Feb	12-Sep		
				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		
				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			
KHIMALIR				1	13-Sep	13-Sep			
BAJOUR				5	19-May	25-Oct			
WAZIR-S				2	26-Nov	27-Dec			
BANNU				4	31-Mar	27-Dec			
KOCHAT	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				
			2						
<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	1	23-Feb	23-Feb		
				NAHR-E-SARAJ	3	6-Jan	26-Jan		
				KANDAHAR	9	6-Jan	23-Feb		
				JALALABAD	2	26-Jan	23-Feb		
	<b>AFG Total</b>				<b>15</b>	<b>6-Jan</b>	<b>23-Feb</b>		
	PAK	WILD	BALOCHISTAN	QUETTA	6	1-Jan	23-Feb		
				KABDULAH	4	1-Jan	16-Feb		
				FAISALABAD	2	3-Jan	6-Feb		
				LAHORE	8	5-Jan	18-Feb		
				RAWALPINDI	3	10-Jan	11-Feb		
				HYDERABAD	2	24-Jan	11-Feb		
				JACOBABAD	2	24-Jan	12-Feb		
				KHIBALDIA	1	2-Jan	2-Jan		
				KHIGADAP	4	8-Jan	11-Feb		
				KHIKORANGI	1	18-Feb	18-Feb		
				KHILANDHI	1	19-Feb	19-Feb		
				KHISITE	2	3-Jan	6-Feb		
				SUKKUR	2	23-Jan	13-Feb		
				KHILIAQAT	1	7-Feb	7-Feb		
				KHISADDAR	2	7-Jan	8-Feb		
				WAZIR-S	2	22-Jan	25-Feb		
				KURRAM	1	15-Jan	15-Jan		
				BANNU	1	28-Jan	28-Jan		
DIKHAN				1	8-Jan	8-Jan			
PESHAWAR				4	11-Jan	25-Feb			
<b>PAK Total</b>							<b>50</b>	<b>1-Jan</b>	<b>25-Feb</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>
<b>2019 Total</b>					<b>66</b>	<b>1-Jan</b>	<b>25-Feb</b>		

**Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 17/03/2019**



**Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 17/03/2019**



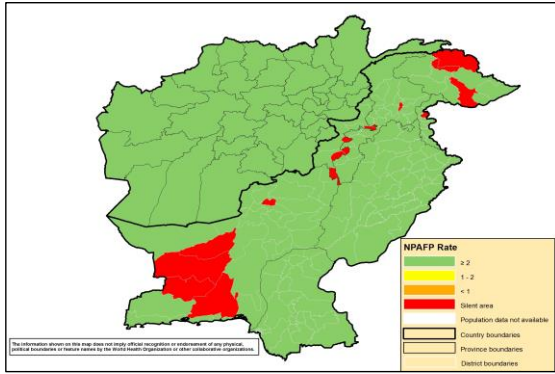
**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019**

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	2	4-Jan-19	12-Jan-19
	PAK	4	15-Jan-19	20-Jan-19
<b>2019 Total</b>		<b>6</b>	<b>4-Jan-19</b>	<b>20-Jan-19</b>

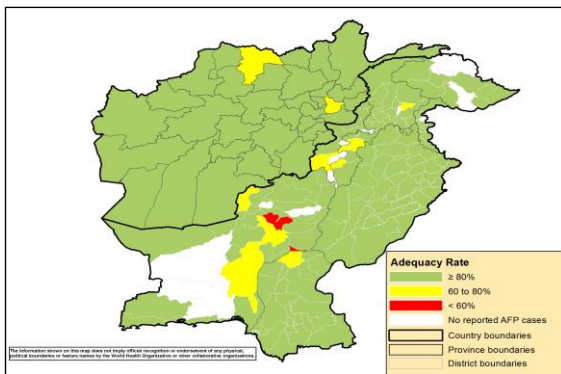
Last reported wild Polio P3 from Pakistan with date of onset 18/04/2012



**Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2019 - 17/03/2019**

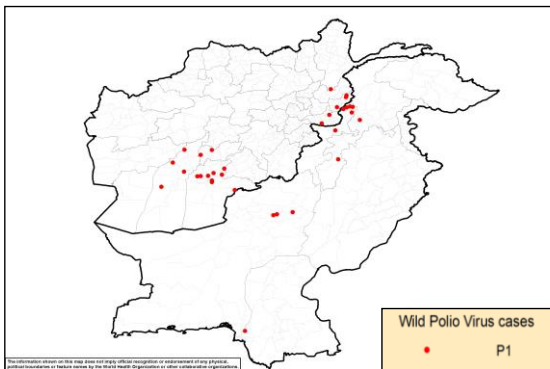


**Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 17/03/2019**

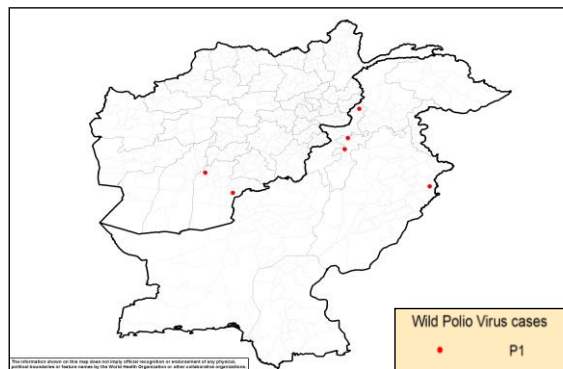


**Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan**

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



**5(b) 01/01/2019 - 17/03/2019**



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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	KANDAHAR	GHORAK	1	12-Jan-19	12-Jan-19		
		SPINBOLDAK	1	4-Jan-19	4-Jan-19		
<b>2019 Total</b>			<b>2</b>	<b>4-Jan-19</b>	<b>12-Jan-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	FATA	BAJOUR	5	1-Sep-18	31-Dec-18	
		KHYBER	1	25-Sep-18	25-Sep-18	
	KHYBER PAKHTOON	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	PUNJAB	LAHORE	1	20-Jan-19	20-Jan-19	
	KHYBER PAKHTOON	HANGU	1	20-Jan-19	20-Jan-19	
		BANNU	1	15-Jan-19	15-Jan-19	
	FATA	BAJOUR	1	18-Jan-19	18-Jan-19	
<b>2019 Total</b>			<b>4</b>	<b>15-Jan-19</b>	<b>20-Jan-19</b>	

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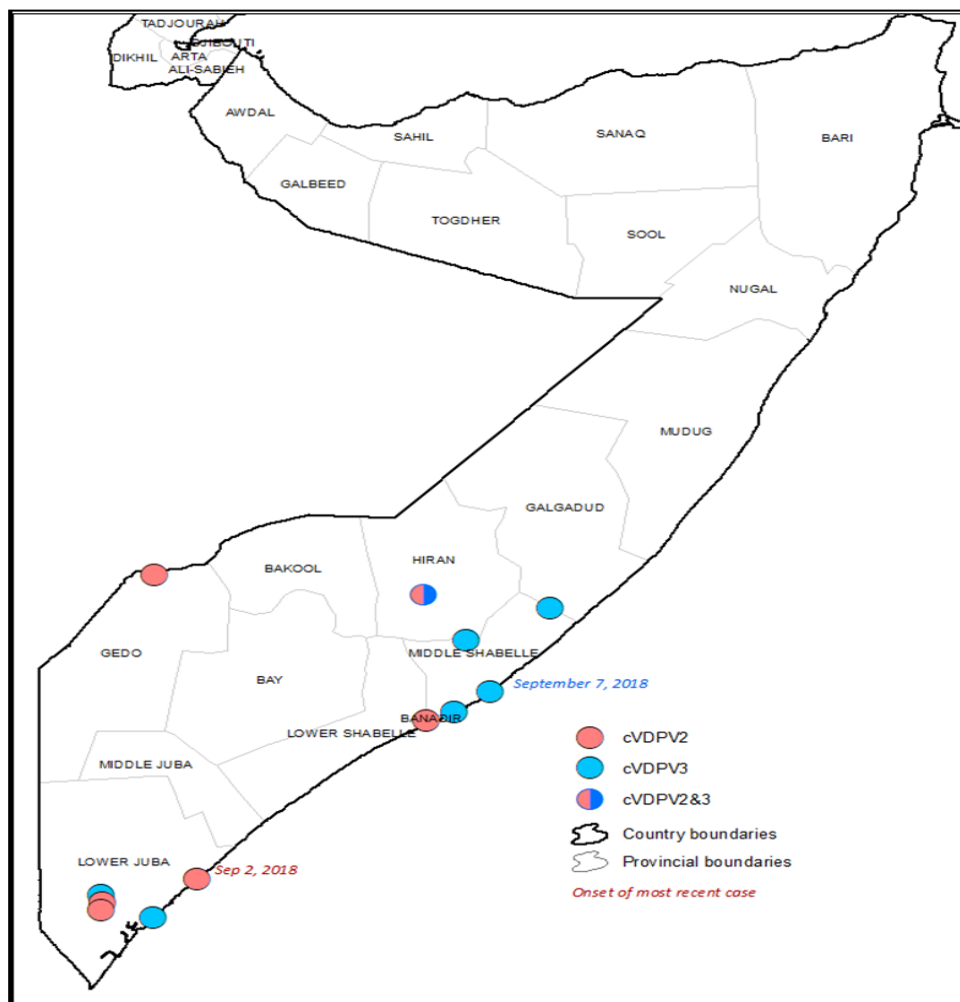
18-Mar-19  
Number 1067

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

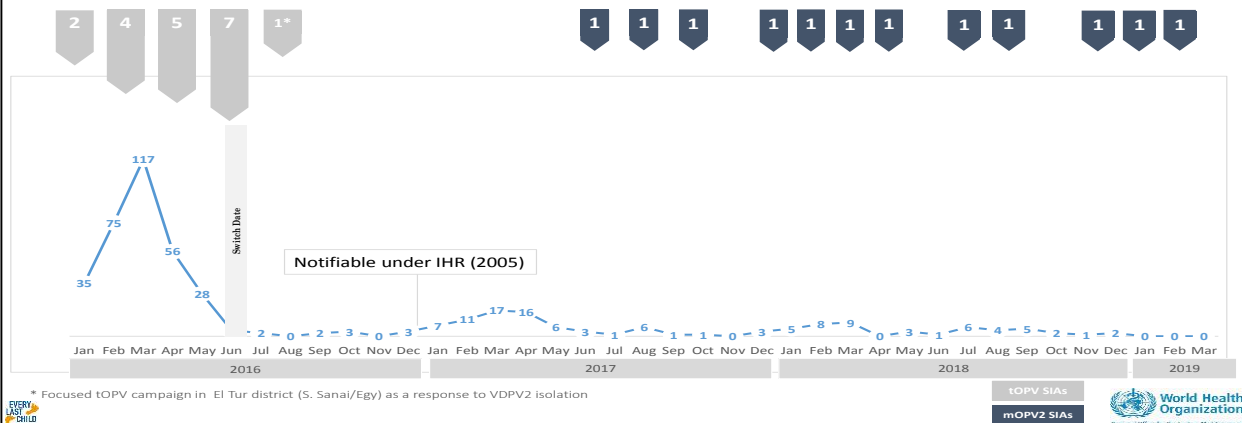
Year	COUNTRY	PROVINCE	DISTRICT	cVDPV2			cVDPV3		
				Count	First Case	Last Case	Count	First Case	Last Case
2018	SOM	LOWER JUBA	Jamaame West	1	02-Sep-18	02-Sep-18			
			KISMAYO	2	29-Jul-18	30-Jul-18	2	24-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD				1	07-Sep-18	07-Sep-18
			MAHADAY WARSHEIKH				1	29-Jun-18	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					
SOM Total				6	11-May-18	2-Sep-18	7	11-May-18	7-Sep-18
<b>2018 Total</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>

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

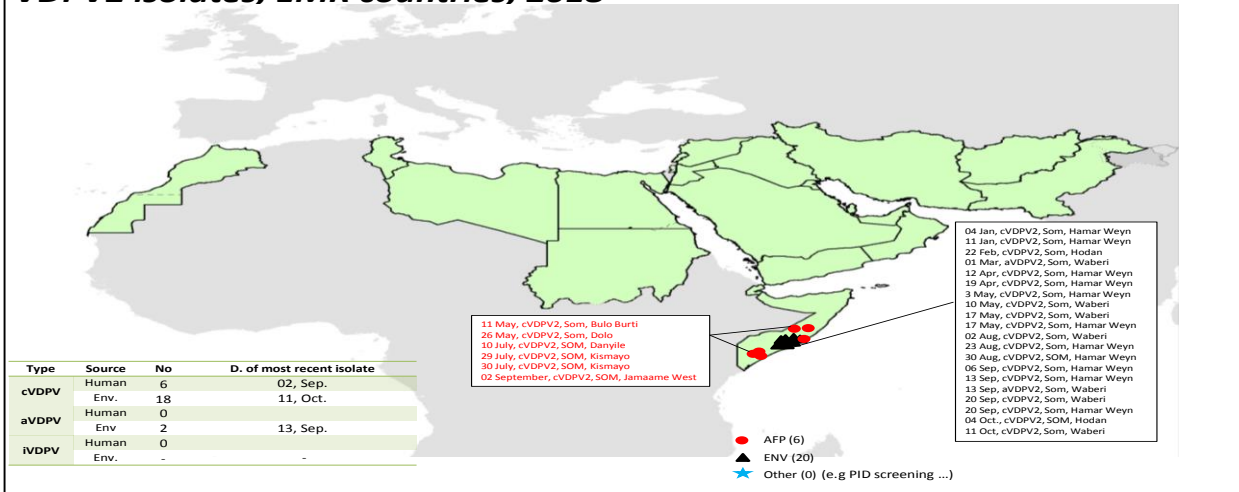
**Figure 6: Somalia cVDPV cases by type and district 01/01/2018 - 17/03/2019**



### Sabin Like Type-2 Poliovirus Isolates (H & E) EMR, 2016-19



### VDPV2 isolates, EMR countries, 2018



### VDPV2 isolates, EMR countries, 2019

