

## **Highlights of Polio Fax Bulletin No. 1057 for Week 01 2019**

### **I. Poliovirus Transmission**

1. Endemic countries (PAKISTAN & AFGHANISTAN):
  - a. Human samples: No new wild poliovirus (WPV) cases reported this week. Total WPV type-1 cases for 2018 remains to date 29 cases (21 from Afghanistan and 8 from Pakistan).
    - i. Afghanistan: The total number of WPV1 cases in Afghanistan in 2018 to date remains 21 from six provinces (Hilmand-4 cases, Kandhar-9 cases, Kunar-3 cases, Nangarhar-2 cases, Uruzgan-2 cases and Nuristan-1 case). The most recent reported case has date of onset of paralysis on 6 November 2018.
    - ii. Pakistan: The total number of WPV1 cases in Pakistan in 2018 to date remains to be 8 from five infected districts in four provinces (Balochistan-3 cases, Khyber Pakhtunkhwa (KP)-1 case and Khyber Pakhtunkhwa Tribal District (KPTD)-3 cases and Sindh-1 case). Date of onset of paralysis of the most recent case is 7 October 2018.
  - b. Environmental samples: Eleven new positive environmental samples for WPV1 were reported this week, which include two from Afghanistan and nine from Pakistan.
    - i. Afghanistan: Two new positive environmental samples reported this week, both from Lashkargah district, Hilmand province. The total positive environmental samples from Afghanistan in 2018 to date are 76 with most recent positive sample collected on 6 December 2018.
    - ii. Pakistan: Nine new positive environmental samples reported this week these include two from Lahore and two from Rawalpindi districts, from Punjab province; one from Peshawar district from Khyber Pakhtunkhwa province (KP); one from Quetta and one from Kabdullah districts, from Balochistan province; and two from Karachi towns one from Gadap district and one from the newly infected district Korangi, from Sindh province. The total positive environmental samples from Pakistan in 2018 to date are 132 with most recent positive sample collected on 15 December 2018.

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

1. SOMALIA: no new 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 circulating vaccine derived polioviruses (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. One of the 19 samples has co-infection of cVDPV2 and cVDPV3.

- 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 12 sewage samples in Mogadishu and date of specimen collection of recent most positive sample is 23 August 2018. One of the above 12 samples has co-infection of cVDPV2 and cVDPV3.

### **III. Surveillance performance indicators**

1. In 2018, nineteen 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 72.7%
  - c. Oman has a percentage of AFP cases with adequate stool specimens of 75%
2. Yemen has the highest number of 2017 AFP cases, which are not yet finally classified (72). Also Somalia has one pending case from 2017.

## AFP SURVEILLANCE

8-Jan-19

Week 01, ending 06 January 2019

Number 1057

Table 1: Acute Flaccid Paralysis (AFP) cases by week of onset

Country	Reported AFP cases by week of onset - Week (01/19) / Ending on : 06/01/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W42 21 Oct 18	W43 28 Oct 18	W44 04 Nov 18	W45 11 Nov 18	W46 18 Nov 18	W47 25 Nov 18	W48 02 Dec 18	W49 09 Dec 18	W50 16 Dec 18	W51 23 Dec 18	W52 30 Dec 18	W01 06 Jan 19
Afghanistan	3094	3358	6	63	66	76	79	61	50	66	70	51	41	41	8
Bahrain	18	35	0	2	1	1	2	0	2	1	0	1	1	0	0
Djibouti	4	0	0	0	0	0	0	0	0	0	0				
Egypt	1242	1246	7	18	26	16	22	22	26	16	21	19	23	13	8
Iran	820	866	0	5	13	16	16	18	15	23	22	16	12	2	0
Iraq	699	1002	0	18	14	30	18	24	27	22	35	25	18	6	
Jordan ****	116	115	0	1	0	1	0	0	0	0	3	1	3	1	
Kuwait	69	74	0	2	3	1	2	3	2	4	2	1	4	0	0
Lebanon ****	75	88	0	1	1	1	2	2	0	5	2	1	0	1	
Libya	88	119	0	2	2	0	0	1	1	2	4	1	1	1	
Morocco	143	205	0	8	5	4	3	7	4	2	7	3	3		
Oman	40	28	0	1	0	1	0	0	0	1	0	0	1	0	
Pakistan	10319	11745	3	239	236	243	284	248	243	266	277	246	125	26	3
Palestine ****	43	43	0	1	0	0	1	0	0	1	0	1	0	0	0
Qatar	18	9	0	0	0	0	0	0	0	0					
Saudi Arabia	276	229	0	7	6	7	13	10	9	6	4	2	6	0	0
Somalia	345	349	0	6	7	4	8	6	4	3	6	4	6	3	1
Sudan	570	572	0	10	11	11	13	10	9	6	8	8	7	2	0
Syria ****	362	351	0	6	5	8	6	8	5	9	5	7	6	5	
Tunisia	67	64	0	0	1	1	1	0	0	0	0	0	0	0	
U.A.E	58	40	0	0	0	1	1	0	0	1	1	1	0	0	0
Yemen	713	724	2	21	24	21	18	13	15	18	14	12	14	10	2
<b>Total EMR</b>	<b>19179</b>	<b>21262</b>	<b>18</b>	<b>411</b>	<b>421</b>	<b>443</b>	<b>489</b>	<b>433</b>	<b>412</b>	<b>452</b>	<b>481</b>	<b>400</b>	<b>271</b>	<b>111</b>	<b>22</b>

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	06/01		Confirmed polio cases by month of onset											
			2018	2019	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019
Afghanistan	14	21	3	0	3	1	1	0	2	3	2	3	2	1		
Bahrain	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Djibouti	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0					
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	8	8	0	0	0	1	1	1	0	0	1	3	1	0		
Palestine ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Qatar	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Somalia	0	0	0	0	0	0	0	0	0	0	0	0				
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	0		
Yemen	0	0	0	0												
<b>Total EMR</b>	<b>22</b>	<b>29</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</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>0</b>	<b>0</b>

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

## World Health Organization – Regional Office for Eastern Mediterranean

## AFP SURVEILLANCE

Week 01, ending 06 January 2019

8-Jan-19

Number 1057

Table 3: Investigation of AFP cases with paralysis onset in 2018 &amp; 2019 up to Week (01/19) / Ending on : 06/01/2019)

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	3358	21	0	215	3122	0	16.5	18	2	94.0	21	0	6	0	0	6	0	0	1.8	0	0	100.0	0	0	06/01/2019
Bahrain	35	0	0	12	23	0	12.1	1	0	97.1	0	0	0	0	0	0	0	0	0.0	0	0		0	0	06/01/2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	0	0	0	0	0	0.0	0	0		0	0	09/12/2018	
Egypt	1246	0	0	85	1160	1	3.2	7	1	91.9	0	0	7	0	0	7	0	0	1.1	0	0	0.0	0	0	05/01/2019
Iran	866	0	0	20	845	1	4.5	0	0	97.1	0	0	0	0	0	0	0	0.0	0	0		0	0	06/01/2019	
Iraq	1002	0	0	76	926	0	6.6	10	0	90.3	0	0	0	0	0	0	0	0.0	0	0		0	0	04/01/2019	
Jordan	115	0	0	5	110	0	4.1	0	0	100.0	0	0	0	0	0	0	0	0.0	0	0		0	0	03/01/2019	
Kuwait	74	0	0	7	67	0	8.3	0	0	86.5	0	0	0	0	0	0	0	0.0	0	0		0	0	06/01/2019	
Lebanon	88	0	0	8	80	0	4.7	1	0	95.5	0	0	0	0	0	0	0	0.0	0	0		0	0	04/01/2019	
Libya	119	0	0	4	115	0	4.7	0	0	96.6	0	0	0	0	0	0	0	0.0	0	0		0	0	04/01/2019	
Morocco	205	0	0	82	123	0	2.3	47	6	72.7	0	0	0	0	0	0	0	0.0	0	0		0	0	28/12/2018	
Oman	28	0	0	1	27	0	3.2	0	0	75.0	0	0	0	0	0	0	0	0.0	0	0		0	0	30/12/2018	
Pakistan	11745	8	1	584	11152	0	15.0	129	0	88.5	8	0	3	0	0	3	0	0	0.2	0	0	100.0	0	0	07/01/2019
Palestine	43	0	0	3	40	0	2.3	0	0	93.0	0	0	0	0	0	0	0	0.0	0	0		0	0	06/01/2019	
Qatar	9	0	0	0	9	0	2.5	0	0	100.0	0	0	0	0	0	0	0	0.0	0	0		0	0	02/12/2018	
Saudi Arabia	229	0	0	69	160	0	2.8	0	0	95.6	0	0	0	0	0	0	0	0.0	0	0		0	0	07/01/2019	
Somalia	349	0	0	21	316	12	5.5	1	1	98.3	0	0	0	0	0	0	0	0.0	0	0		0	0	06/01/2019	
Sudan	572	0	0	16	556	0	3.2	1	0	97.4	0	0	0	0	0	0	0	0.0	0	0		0	0	06/01/2019	
Syria	351	0	0	31	320	0	4.5	1	0	88.0	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2019	
Tunisia	64	0	0	4	60	0	2.4	1	1	81.3	0	0	0	0	0	0	0	0.0	0	0		0	0	03/01/2019	
U.A.E	40	0	0	3	37	0	3.2	0	0	97.5	0	0	0	0	0	0	0	0.0	0	0		0	0	06/01/2019	
Yemen	724	0	0	634	90	0	5.1	442	409	91.6	0	0	2	0	0	2	0	0	0.9	0	0	100.0	0	0	06/01/2019
EMR	21262	29	1	1880	19338	14	8.5	659	420	90.5	29	0	18	0	0	18	0	0	0.4	0	0	61.1	0	0	
2017	19179	22	3	73	19007	76	7.7	73	59	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

World Health Organization – Regional Office for Eastern Mediterranean  
AFP SURVEILLANCE  
Week 01, ending 06 January 2019

8-Jan-19  
Number 1057

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	1003	4	0	52	214	39	0	0	0	0	0	0
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	54	37	0	0	0	0	0	0
IRN	140	0	0	3	5		0	0	0	0	0	0
IRQ	799	0	0	21	89	35	0	0	0	0	0	0
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	15	26	0	0	0	0	0	0
LIB	1	0	0	0	0	0	0	0	0	0	0	0
MOR	136	0	0	0	9	13	0	0	0	0	0	0
OMA	71	0	0	2	16		0	0	0	0	0	0
PAK	4159	3	0	195	868	122	0	0	0	0	0	0
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	1040	0	10	49	122	61	3	0	0	0	0	3
SUD	344	0	0	2	24	82	0	0	0	0	0	0
SYR	657	0	0	8	14	49	1	0		0	0	1
TUN	15	0	0	0	0	1	0	0	0	0	0	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	1550	0	0	0	0	1550	2	0	0	0	0	2
<b>EMR</b>	<b>10620</b>	<b>7</b>	<b>10</b>	<b>346</b>	<b>1430</b>	<b>2019</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</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>

## AFP SURVEILLANCE

Week 01, ending 06 January 2019

8-Jan-19

Number 1057

**Table 5: Laboratory investigation of AFP cases with paralysis onset in 2018 up to Week (52/18) / Ending on : (31/12/2018)**

Country	Polio laboratories  (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+INPEV			received < / = 14 days	received > 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Afghanistan	RRL Pakistan	3302	220	23	605	2368	85	1		19	166									16%	90%	100%	98%	05/01/2019		
Bahrain	NPL Oman / CDC	31			1	30														3%	100%		52%	24/12/2018		
Djibouti	NPL Kenya / CDC																							09/12/2018		
Egypt***	RRL Egypt	1214	33	6	156	980	37	2		16	1								8	1	12%	95%	100%	98%	03/01/2019	
Iran	NPL Iran / CDC	797	17		22	734		24		11	1									1		2%	100%	100%	99%	05/01/2019
Iraq	RRL Egypt	1008	18		120	809	34	27		11											12%	100%	100%	76%	03/01/2019	
Jordan	NPL Jordan / RRL EGYPT	115	4		9	101	1			3											10%	100%	100%	100%	06/01/2019	
Kuwait	RRL Kuwait / RIVM	71	2		4	59		6													6%	95%		97%	25/12/2018	
Lebanon	NPL Jordan / RRL EGYPT	92	2		7	81		2		2											9%	100%	100%	67%	06/01/2019	
Libya	RRL Tunisia / RIVM	117	2		11	101	3			1											9%	100%	100%	97%	04/01/2019	
Morocco	NPL Morocco / RRL Tunisia	186	2		4	173	6	1													3%	93%	0%	94%	04/01/2019	
Oman	NPL Oman / CDC	27			6	21															23%	93%		100%	24/12/2018	
Pakistan	RRL Pakistan	11486	491	58	2361	8236	275	62	6	325										12	3	18%	92%	99%	97%	05/01/2019
Palestine & UNRWA		43			6	37															14%	56%		100%	06/01/2019	
Qatar	NPL Oman / CDC	9			1	8															11%	88%		100%	24/12/2018	
Saudi Arabia	NPL Saudi Arabia / CDC	248	2		8	223	14	1													2%	94%	100%	100%	07/01/2019	
Somalia	NPL Kenya / CDC	349	38	2	33	257	5	14		16			5	6 #							11%	14%		100%	06/01/2019	
Sudan	NPL Sudan / RRL Egypt	568	7		52	501	4	4		5										2		10%	96%	100%	86%	30/12/2018
Syria	NPL Syria / RRL Egypt	344	6		11	305	10	12		3											4%	100%	100%	67%	30/12/2018	
Tunisia	RRL Tunisia	69			2	66	1														2%	99%		97%	04/01/2019	
U.A.E	NPL Oman / CDC	38			4	34															9%	89%		84%	24/12/2018	
Yemen	NPL Kenya / CDC																								06/01/2019	
<b>Total EMR 2018</b>		20114	844	89	3423	15124	475	156	25	559	2		5	6		591	7	1	22	1	8	15%	92%	99%	97%	
<b>Total EMR 2017</b>		13527	558	50	2219	10038	608	55	15	369	1		4	4		394	3	1	12	1	1	15%	89%	99%	97%	

\* Specimens from all sources including non-AFP cases, excluding environmental samples

\*\* This indicator reflects surveillance and laboratory activities

\* In 2017, 41 cVDPV2 were isolated from Syria by other Global Polio Laboratories Network (GPLN)

Syria reported a total of 74 cVDPV2 cases in 2017 out of which 8 were identified by positive contacts

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

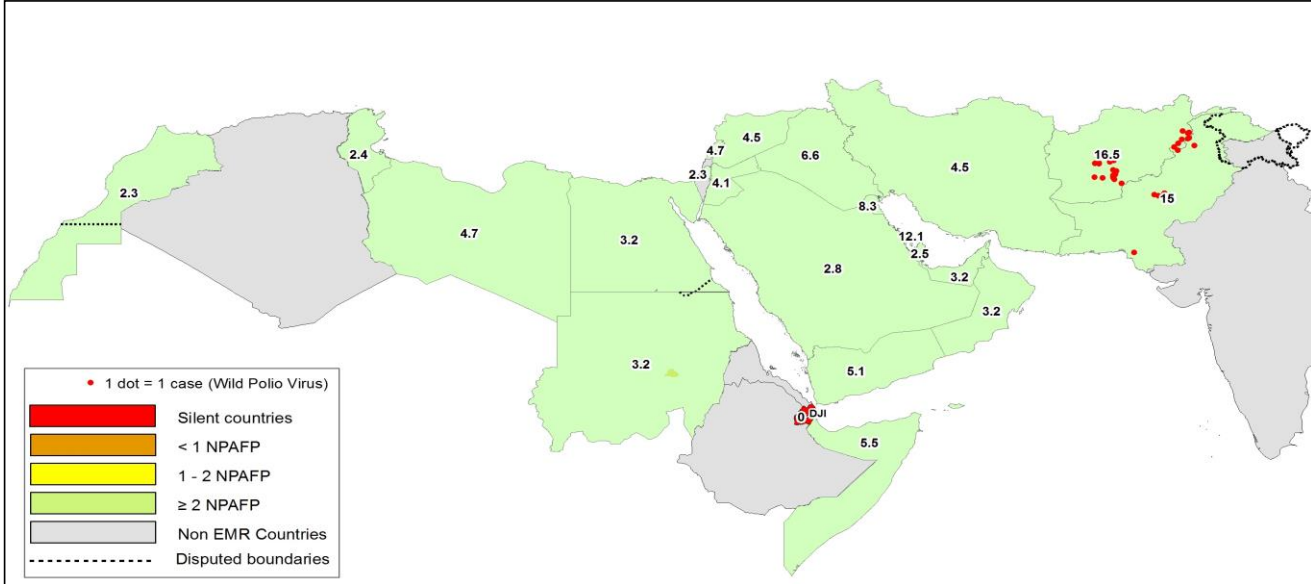
**Table 6: Environmental isolate by year and type**

Country	Status	2015	2016	2017	2018
AFG	NEGATIVE	129	183	274	240
	PENDING				20
	WILD	20	2	42	76
<b>AFG Total</b>		<b>149</b>	<b>185</b>	<b>316</b>	<b>336</b>
EGY	NEGATIVE	495	528	522	512
	PENDING				21
	VDPV2	3	1		
<b>EGY Total</b>		<b>498</b>	<b>529</b>	<b>522</b>	<b>533</b>
IRN	NEGATIVE			6	50
	PENDING				2
<b>IRN Total</b>				<b>6</b>	<b>52</b>
JOR	NEGATIVE		2	32	18
	PENDING				18
<b>JOR Total</b>			<b>2</b>	<b>32</b>	<b>36</b>
LEB	NEGATIVE		4	27	10
	PENDING				35
<b>LEB Total</b>			<b>4</b>	<b>27</b>	<b>45</b>
PAK	NEGATIVE	347	462	523	511
	PENDING				30
	WILD	79	59	105	132
	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>
SOM	NEGATIVE			34	181
	VDPV2			2	20
	VDPV3				12
<b>SOM Total</b>				<b>36</b>	<b>213</b>
SYR	NEGATIVE			4	85
	PENDING				15
<b>SYR Total</b>				<b>4</b>	<b>100</b>
<b>Grand Total</b>		<b>1086</b>	<b>1249</b>	<b>1576</b>	<b>1988</b>

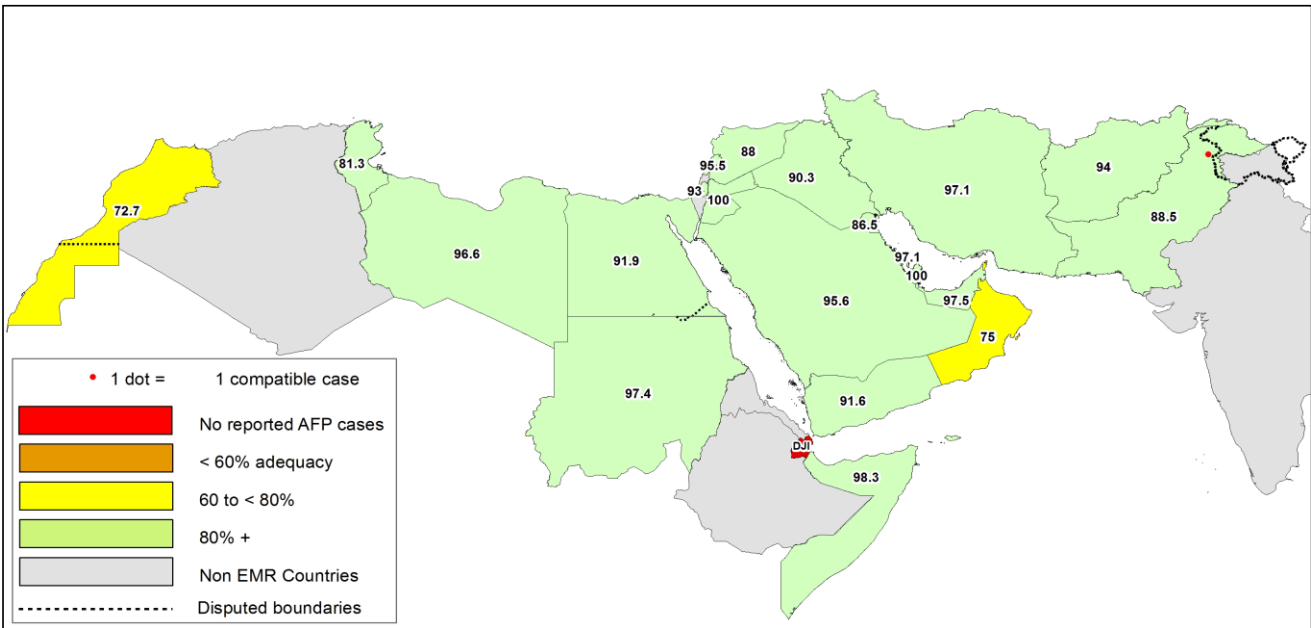
**Table 7: Environmental Wild/VDPV isolate by site**

Country	COUNTRY	Status	PROVINCE	DISTRICT	Count	First date	Last date	
2018	AFG	WILD	HILMAND	LASHKARGAH	10	8/Jan	6/Dec	
				HIRAT	HERAT	1	25/Jun	25/Jun
				KABUL	KABUL	3	26/Feb	26/Jun
				KANDAHAR	KANDAHAR	39	8/Jan	6/Dec
				KHOST	MATUN	1	25/Sep	25/Sep
				KUNAR	ASADABAD	2	24/Apr	25/Sep
				NANGARHAR	BEHSUD	3	28/Jan	25/Oct
					JALALABAD	17	27/Jan	27/Nov
	<b>AFG Total</b>				<b>76</b>	<b>8/Jan</b>	<b>6/Dec</b>	
	PAK	WILD	BALOCHISTAN	KABDULLAH	2	1/Dec	15/Dec	
				LORALAI	2	17/Mar	17/Aug	
				PISHIN	1	2/Dec	2/Dec	
				QUETTA	12	13/Feb	12/Dec	
				KABDULAH	6	1/Jan	15/Nov	
				ISLAMABAD	CDA	7	10/Jan	10/Nov
				PUNJAB	LAHORE	11	11/Jun	11/Dec
					RAWALPINDI	15	10/Jan	14/Dec
					DGKHAN	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	14	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				
	FATA	BAJOUR	5	19/May	25/Oct			
		WAZIR-S	1	26/Nov	26/Nov			
	KHYBER PAKHTUNKHWA	BANNU	3	31/Mar	27/Nov			
		KOHAT	5	5/Jan	27/Sep			
		MARDAN	2	15/Oct	15/Nov			
		NOWSHERA	2	18/Sep	18/Oct			
		PESHAWAR	21	10/Jan	11/Dec			
<b>PAK Total</b>				<b>132</b>	<b>1/Jan</b>	<b>15/Dec</b>		
SOM	VDPV2	BANADIR	HAMAR WEYN	11	4/Jan	20/Sep		
			HODAN	2	22/Feb	4/Oct		
			WABERI	7	1/Mar	11/Oct		
			VDPV3	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>240</b>	<b>1/Jan</b>	<b>15/Dec</b>		

**Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2018 - 31/12/2018**



**Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2018 - 31/12/2018**



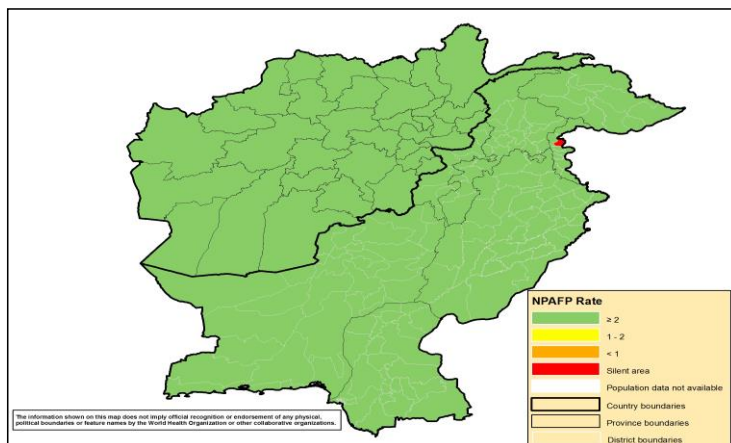
**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019**

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	21	1-Jan-18	6-Nov-18
	PAK	8	8-Mar-18	7-Oct-18
2018 Total		29	1-Jan-18	6-Nov-18

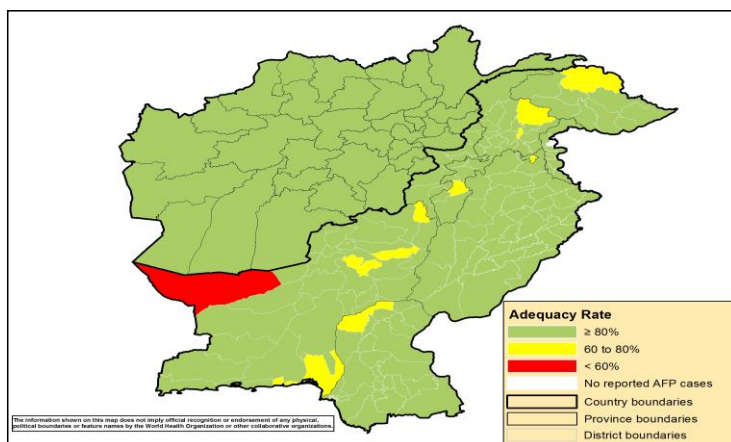
Last reported wild Polio P3 from Pakistan with date of onset 18/04/2012



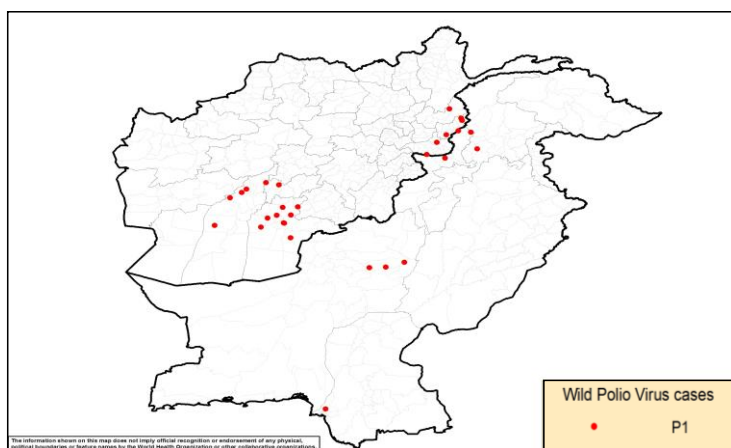
**Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2018 - 31/12/2018**



**Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2018 - 31/12/2018**



**Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan 01/01/2018 - 31/12/2018**



World Health Organization – Regional Office for Eastern Mediterranean  
AFP SURVEILLANCE  
Week 01, ending 06 January 2019

8-Jan-19  
Number 1057

**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
2018 Total			21	1-Jan-18	6-Nov-18

**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	2	1-Sep-18	7-Oct-18
		KHYBER	1	25-Sep-18	25-Sep-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
	KHYBER PAKHTOON	CHARSADA	1	1-Aug-18	1-Aug-18
	BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18
2018 Total			8	8-Mar-18	7-Oct-18

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**AFP SURVEILLANCE**  
 Week 01, ending 06 January 2019

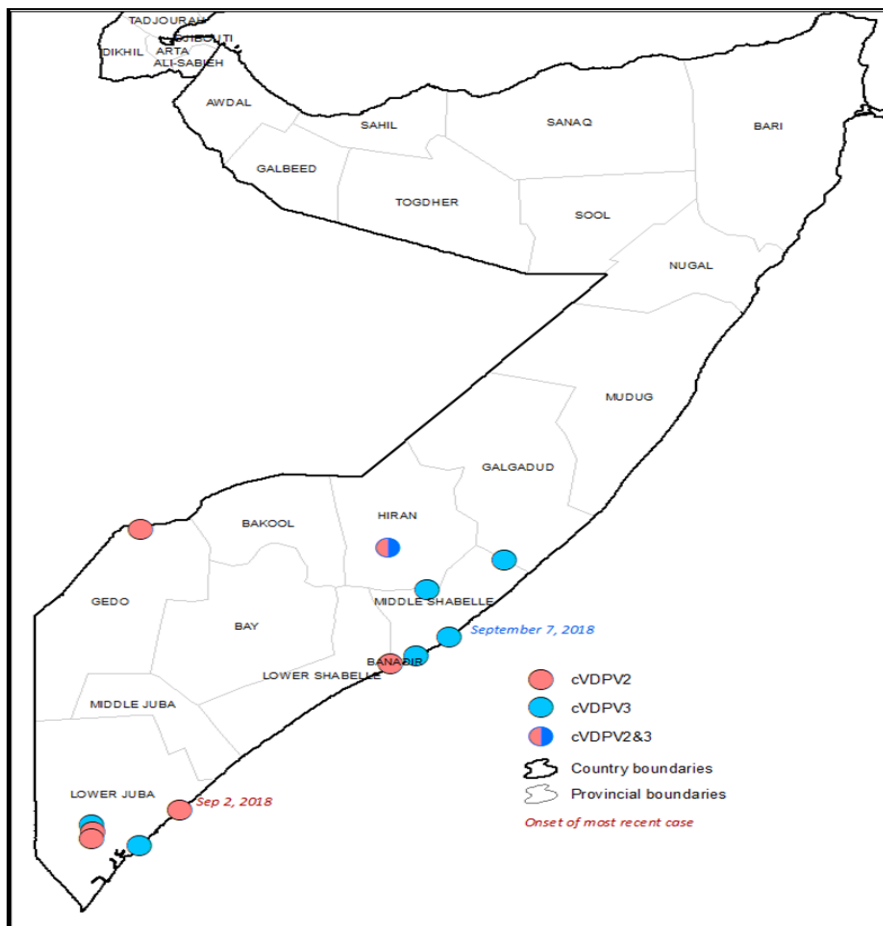
8-Jan-19  
 Number 1057

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

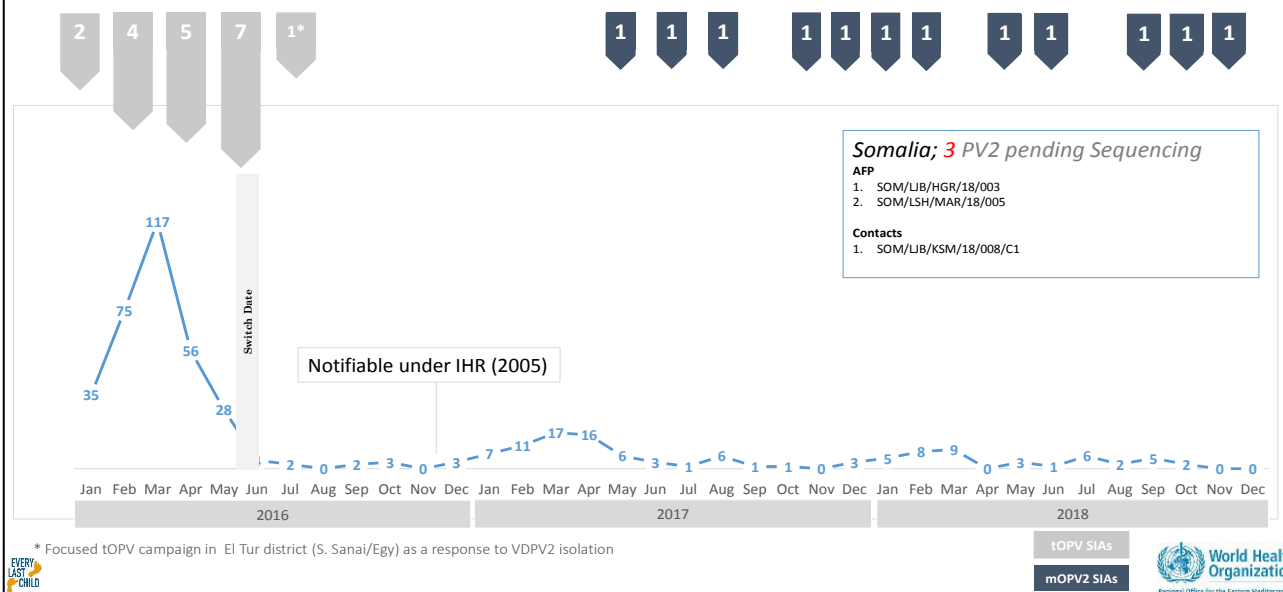
Year	COUNTRY	PROVINCE	DISTRICT	cVDPV2			cVDPV3		
				Count	First Case	Last Case	Count	First Case	Last Case
2018	SOM	LOWER JUBA	Jamaame West	1	02-Sep-18	02-Sep-18			
			KISMAYO	2	29-Jul-18	30-Jul-18	2	24-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD				1	07-Sep-18	07-Sep-18
			MAHADAY				1	29-Jun-18	29-Jun-18
			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>SOM 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>
<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 - 06/01/2019**



### Sabin Like Type-2 Poliovirus Isolates (H & E) EMR, 2016-17-18



### VDPV2 isolates, EMR countries, 2018

