

Highlights of Polio Fax Bulletin No. 1089 for Week 33 2019

I. Poliovirus Transmission

1. **Endemic countries (PAKISTAN & AFGHANISTAN):** One new wild poliovirus type-1 (WPV1) case reported this week from Afghanistan; and one new positive environmental sample from Pakistan was also reported this week.

a. *Human samples:* One new WPV1 case reported this week from Afghanistan. Total WPV1 cases in 2019 to date are 66 (13 from Afghanistan and 53 from Pakistan). This compares with 18 cases in 2018 in the same period (Afghanistan – 14 and Pakistan – 4).

- Afghanistan:

The new wild poliovirus type-1 case was reported from Chora district, Uruzgan province, with date of onset 16 July 2019. The case is a 9-month old female child. The child received reportedly a total of 5 Oral Polio Vaccine (OPV) doses out of which 1 was from routine and 4 from supplementary immunization activities (SIAs).

In 2019 to date, 13 WPV1 cases are reported from Afghanistan. They include five cases each from Hilmand and Uruzgan provinces, two from Kandahar province and one from Kunar province. The most recent case has onset of paralysis on 16 July 2019.

- Pakistan:

In 2019 to date, 53 WPV1 cases are from Pakistan. They include 32 from Khyber Pakhtunkhwa (KP) province, 9 from KP Tribal Districts (KPTD), 5 from Punjab province, 4 from Balochistan province and 3 from Sindh province. The most recent case has onset of paralysis on 21 July 2019.

b. *Environmental samples:* one new WPV1 positive environmental sample was reported this week from Pakistan.

- Afghanistan: In 2019 to date, there are 29 positive environmental samples with most recent positive sample collected on 24 July 2019.

- Pakistan: The new WPV1 positive environmental sample reported this week is from Balochistan province (from Quetta district). In 2019 to date, there are 189 positive environmental samples with most recent positive sample collected on 28 July 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, 19 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 0.9 and percentage of AFP cases with adequate stool specimens of 50%.
- Morocco has a percentage of AFP cases with adequate stool specimens of 77.5%.
- Qatar has a non-polio AFP rate of 1.3 and percentage of AFP cases with adequate stool specimens of 66.7%.
- 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.

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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 (33/19) / Ending on : 18/08/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W22 02 Jun 19	W23 09 Jun 19	W24 16 Jun 19	W25 23 Jun 19	W26 30 Jun 19	W27 07 Jul 19	W28 14 Jul 19	W29 21 Jul 19	W30 28 Jul 19	W31 04 Aug 19	W32 11 Aug 19	W33 18 Aug 19
Afghanistan	3094	3378	2337	58	63	87	87	83	78	75	79	67	65	19	5
Bahrain	18	35	11	1	1	1	0	0	0	0	1	0	0	0	0
Djibouti	4	0	2	0	0	0	0	1	0	0	0	0	0	1	0
Egypt	1242	1246	794	19	18	36	29	20	33	28	23	28	14	1	
Iran	820	896	572	15	19	13	16	15	20	19	21	8	5	0	0
Iraq	699	1023	663	21	14	29	27	20	30	18	21	21	11		
Jordan ****	116	115	84	1	3	2	2	3	0	2	1	1	0	0	
Kuwait	69	72	25	1	1	1	2	1	1	0	0	0	0	0	0
Lebanon ****	80	95	56	2	2	2	1	0	1	2	2	2	2	1	
Libya	88	122	47	0	4	2	0	1	0	1	3	1	1	0	
Morocco	143	212	129	1	2	5	5	3	3	4	7	3	1		
Oman	40	28	12	0	2	0	1	0	1	0	0	0			
Pakistan	10319	12276	8269	216	237	337	327	272	312	313	277	253	110	3	0
Palestine ****	43	44	35	3	3	1	2	0	1	5	0	0	0	0	
Qatar	18	10	3	1	0	0	0	0	0	0	1	0	0		
Saudi Arabia	276	241	128	1	1	1	1	1	0	0	0	0			
Somalia	345	353	232	1	9	9	6	8	8	7	7	8	3	6	0
Sudan	570	579	310	4	5	12	19	11	10	23	8	14	3		
Syria ****	362	362	239	6	1	9	5	4	8	11	7	6	4	1	
Tunisia	67	68	45	4	1	2	2	0	3	0	2	2	0	0	
U.A.E	58	40	24	0	0	0	0	0	1	2	0	1	1	0	0
Yemen	713	730	460	12	10	16	15	19	28	26	10	7	4	0	
Total EMR	19184	21925	14477	367	396	565	547	462	538	536	470	422	224	32	5

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	18/08		Confirmed polio cases by month of onset												
			2018	2019	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	
Afghanistan	14	21	14	13	3	2	1	0	2	1	3	1	5			1	
Bahrain	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	0	
Egypt	0	0	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	0	0		
Iraq	0	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	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	0		
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Morocco	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	4	53	3	1	0	4	4	2	0	11	11	16	9		
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						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	0	0		
Syria ****	0	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		
U.A.E	0	0	0	0	0	0	0		0	0	0	0	0	0			
Yemen	0	0	0	0	0												
Total EMR	22	33	18	66	6	3	1	4	6	3	3	12	16	16	10	0	

**** 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 & 2019 up to Week (33/19) / Ending on : 18/08/2019

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	2337	13	0	231	2093	0	18.2	23	3	94.2	13	0	18-08-2019
Bahrain	35	0	0	0	35	0	12.1	0	0	97.1	0	0	11	0	0	11	0	0	6.0	7	7	100.0	0	0	18-08-2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	2	0	0	2	0	0	0.9	0	0	50.0	0	0	18-08-2019
Egypt	1246	0	0	2	1243	1	3.2	2	0	93.2	0	0	794	0	0	102	692	0	3.3	2	0	89.5	0	0	08-08-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	572	0	0	16	556	0	4.7	0	0	95.8	0	0	18-08-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	663	0	0	58	605	0	6.9	6	0	95.0	0	0	08-08-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	84	0	0	4	80	0	4.8	0	0	100.0	0	0	15-08-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	25	0	0	0	25	0	4.5	0	0	84.0	0	0	18-08-2019
Lebanon	95	0	0	4	91	0	5.1	4	1	92.6	0	0	56	0	0	13	43	0	4.8	6	0	87.5	0	0	16-08-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	47	0	0	7	40	0	3.0	0	0	97.9	0	0	17-08-2019
Morocco	212	0	0	1	211	0	2.4	1	0	77.8	0	0	129	0	0	56	73	0	2.3	33	10	77.5	0	0	02-08-2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	12	0	0	1	11	0	2.0	0	0	83.3	0	0	28-07-2019
Pakistan	12276	12	1	0	12263	0	15.7	0	0	87.0	12	0	8269	53	0	740	7476	0	16.7	124	0	88.2	53	0	18-08-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	35	0	0	15	20	0	2.9	0	0	100.0	0	0	04-08-2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	3	0	0	2	1	0	1.3	0	0	66.7	0	0	04-08-2019
Saudi Arabia	241	0	0	0	241	0	3.0	0	0	95.9	0	0	128	0	0	46	82	0	2.5	40	4	90.6	0	0	01-08-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	232	0	0	22	207	3	5.8	0	0	97.0	0	0	18-08-2019
Sudan	579	0	0	0	579	0	3.2	0	0	97.2	0	0	310	0	0	25	285	0	2.7	4	3	97.7	0	0	08-08-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.3	0	0	239	0	0	26	213	0	4.9	1	0	86.2	0	0	17-08-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	45	0	0	8	36	1	2.5	2	2	82.2	0	0	16-08-2019
U.A.E	40	0	0	0	40	0	3.2	0	0	97.5	0	0	24	0	0	8	16	0	3.0	2	0	83.3	0	0	18-08-2019
Yemen	730	0	0	141	589	0	5.2	141	129	91.6	0	0	460	0	0	455	5	0	5.2	297	271	90.9	0	0	17-08-2019
EMR	21925	33	1	148	21728	15	8.7	148	130	89.8	33	0	14477	66	0	1848	12559	4	9.2	547	300	90.3	66	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 <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	699	4	0	29	130	15
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	327	0	0	7	32	41
IRN	145	0	0	3	6	0	107	0	0	2	4	0
IRQ	811	0	0	22	93	9	364	0	0	7	11	21
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	22	0	0	0	3	0
LIB	1	0	0	0	0	0	2	0	0	0	0	0
MOR	161	0	0	0	9	9	49	0	0	1	0	19
OMA	70	0	0	2	16	0	23	0	0	1	8	5
PAK	4200	3	0	207	882	0	3067	6	0	141	487	149
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	1051	0	10	49	133	0	703	0	1	13	85	71
SUD	350	0	0	3	24	88	209	0	0	0	9	62
SYR	670	0	0	8	17	0	509	0	0	10	24	43
TUN	1	0	0	0	0	0	10	0	0	0	2	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	1558	0	0	0	0	1459	301	0	0	0	0	302
EMR	10758	7	10	360	1471	1609	6392	10	1	211	795	728

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	4	20/Jun/19
	Pakistan	6	21/Jul/19
2019 Total		10	21/Jul/19
2018	Afghanistan	4	7/Aug/18
	Pakistan	3	12/Oct/18
2018 Total		7	12/Oct/18

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	HILMAND	MUSAQALAH	1	05-Jun-19	05-Jun-19
		HILMAND	SANGIN	1	06-Mar-19	06-Mar-19
	PAK	BALOCHSITAN	KILLABDULLAH	1	02-Jul-19	02-Jul-19
		KHYBER PAKHTUNKHWA (KP)	LAKKIMRWT	1	27-May-19	27-May-19
		KHYBER PAKHTUNKHWA (KP)	TORGHAR	1	25-May-19	25-May-19
2019 Total				5	06-Mar-19	02-Jul-19
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
2018 Total				4	15-Apr-18	01-Sep-18

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Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (33/2019) / Ending on : (18/08/2019)

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	2267	160	21	354	1657	68	7	11	115						114		1	1		8	14%	99%	100%	98%	18/08/2019
Bahrain	NPL Oman / CDC																									19/08/2019
Djibouti	NPL Kenya / CDC						1	1																		18/08/2019
Egypt***	RRL Egypt	773	30	3	62	624	13	41		14						19			5	2		9%	95%	100%	99%	08/08/2019
Iran	NPL Iran / CDC	596	8		11	560	16	1		2						5		1				3%	100%	100%	98%	17/08/2019
Iraq	RRL Egypt	666	10		81	528	14	33		4						6						11%	100%	100%	75%	08/08/2019
Jordan	NPL Jordan / RRL EGYPT	85			12	72	1	1														15%	100%			18/08/2019
Kuwait	RRL Kuwait / RIVM	31			2	25		4														8%	85%		100%	08/08/2019
Lebanon	NPL Jordan / RRL EGYPT	52	1		5	46									1							10%	100%	100%	0%	18/08/2019
Libya	RRL Tunisia / RIVM	47			1	42		4														1%	100%		98%	09/08/2019
Morocco	NPL Morocco / RRL Tunisia	122	1		2	112	2	5							1							2%	100%	100%	96%	09/08/2019
Oman	NPL Oman / CDC	12			2	9		1														21%	100%		100%	19/08/2019
Pakistan	RRL Pakistan	8072	350	40	1220	6172	241	38	50	209						217			5	1	4	13%	100%	99%	97%	18/08/2019
Palestine & UNRWA		35			5	29		1														15%	38%		100%	04/08/2019
Qatar	NPL Oman / CDC	3				2	1															0%	100%		100%	19/08/2019
Saudi Arabia	NPL Saudi Arabia / CDC	135	4			123		8								4						1%	95%	100%	100%	08/07/2019
Somalia	NPL Kenya / CDC	232	9		45	156	9	13		4			1	3		4						21%	16%		99%	18/08/2019
Sudan	NPL Sudan / RRL Egypt	308	5		42	241	8	12		1						2						12%	56%	100%	25%	18/08/2019
Syria	NPL Syria / RRL Egypt	232	12		10	203	6	1		5						9						6%	100%	100%	50%	18/08/2019
Tunisia	RRL Tunisia	41			3	32	1	5														10%	100%		100%	09/08/2019
U.A.E	NPL Oman / CDC	17			3	14																18%	100%		53%	19/08/2019
Yemen	NPL Kenya / CDC																									17/08/2019
Total EMR 2019		13728	590	64	1860	10647	381	176	61	354			1	3		382		2	11	3	12	12%	97%	100%	97%	
Total EMR 2018		20746	902	90	3513	16220		17	29	590	3		6	6 #		628	7 #		22	1	3	14%	92%	99%	97%	

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

Somalia in 2018 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	118
	PENDING					2
	WILD	20	2	42	83	29
AFG Total		149	185	316	336	149
EGY	NEGATIVE	495	528	522	540	394
	PENDING					82
	VDPV2	3	1			
EGY Total		498	529	522	540	476
IRN	NEGATIVE			6	54	47
	WILD					3
IRN Total				6	54	50
JOR	NEGATIVE		2	32	36	21
JOR Total			2	32	36	21
LEB	NEGATIVE		4	27	45	25
	PENDING					3
LEB Total			4	27	45	28
PAK	NEGATIVE	347	462	523	534	241
	PENDING					21
	WILD	79	59	105	139	189
	WILD & VDPV2	5	3	1		
	VDPV2	8	5	4		
PAK Total		439	529	633	673	451
SOM	NEGATIVE			34	181	30
	PENDING					5
	VDPV2				2	20
	VDPV3					12
SOM Total				36	213	36
SUD	NEGATIVE				15	23
	PENDING					12
SUD Total					15	35
SYR	NEGATIVE			4	102	100
	PENDING					9
SYR Total				4	102	109
Grand Total		1086	1249	1576	2014	1355

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	
				AFG Total	83	8-Jan	26-Dec	
	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	
				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	
				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	5	19-May	25-Oct					
BAJOUR	2	26-Nov	27-Dec					
WAZIR-S	4	31-Mar	27-Dec					
KHYBER PAKHTOONKHUWA	5	5-Jan	27-Sep					
MARDAN	2	15-Oct	15-Nov					
NOWSHERA	2	18-Sep	18-Oct					
PESHAWAR	23	10-Jan	26-Dec					
PAK Total	139	1-Jan	27-Dec					
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		
SOM Total	32	4-Jan	11-Oct					
2018 Total				254	1-Jan	27-Dec		
2019	AFG	WILD	HILMAND	LASHKARGAH	4	23-Feb	24-Jul	
				NAHR-E-SARAJ	3	6-Jan	26-Jan	
				KANDAHAR	17	6-Jan	24-Jul	
				NANGARHAR	5	26-Jan	23-Mar	
				AFG Total	29	6-Jan	24-Jul	
	PAK	WILD	BALOCHISTAN	KHUZDAR	1	20-Mar	20-Mar	
				LORALAI	1	17-Mar	17-Mar	
				PISHIN	3	2-Feb	2-Jul	
				QUETTA	20	1-Jan	28-Jul	
				KABDULAH	8	1-Jan	19-Apr	
				CDA	2	12-Apr	2-May	
				FAISALABAD	3	3-Jan	17-Jul	
				LAHORE	32	5-Jan	18-Jul	
				MULTAN	4	18-Feb	18-Jul	
				RAWALPINDI	9	10-Jan	22-Jul	
				DGKHAN	1	8-Apr	8-Apr	
				SINDH	DADU	2	2-May	3-Jul
				HYDERABAD	7	24-Jan	10-Jul	
				JACOBABAD	2	24-Jan	12-Feb	
				KAMBAR	3	7-Mar	8-Jul	
				KHIBALDIA	5	2-Jan	11-Jun	
				KHIGADAP	17	8-Jan	12-Jul	
				KHIGIQBAL	5	11-Apr	19-Jun	
				KHIKORANGI	6	18-Feb	17-Jul	
				KHILANDHI	5	19-Feb	18-Jul	
	KHISITE	7	3-Jan	3-Jul				
	SUKKUR	5	23-Jan	15-May				
KHILIAQAT	5	7-Feb	8-Jul					
KHISADDAR	7	7-Jan	10-Jul					
KP TRIBAL DISTRICTS	WAZIR-S	5	22-Jan	28-May				
KURRAM	1	15-Jan	15-Jan					
KHYBER PAKHTOONKHUWA	BANNU	6	28-Jan	27-Jun				
DIKHAN	4	8-Jan	11-Jun					
KOHAT	1	27-Feb	27-Feb					
MARDAN	4	16-Mar	15-Jun					
PESHAWAR	8	11-Jan	10-Jul					
PAK Total	189	1-Jan	28-Jul					
SOM	VDPV2	BANADIR	HODAN	1	3-Feb	3-Feb		
SOM Total				1	3-Feb	3-Feb		
IRN	WILD	S & B	IRANSHAHR	3	22-Apr	20-May		
IRN Total				3	22-Apr	20-May		
2019 Total				222	1-Jan	28-Jul		

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 18/08/2019

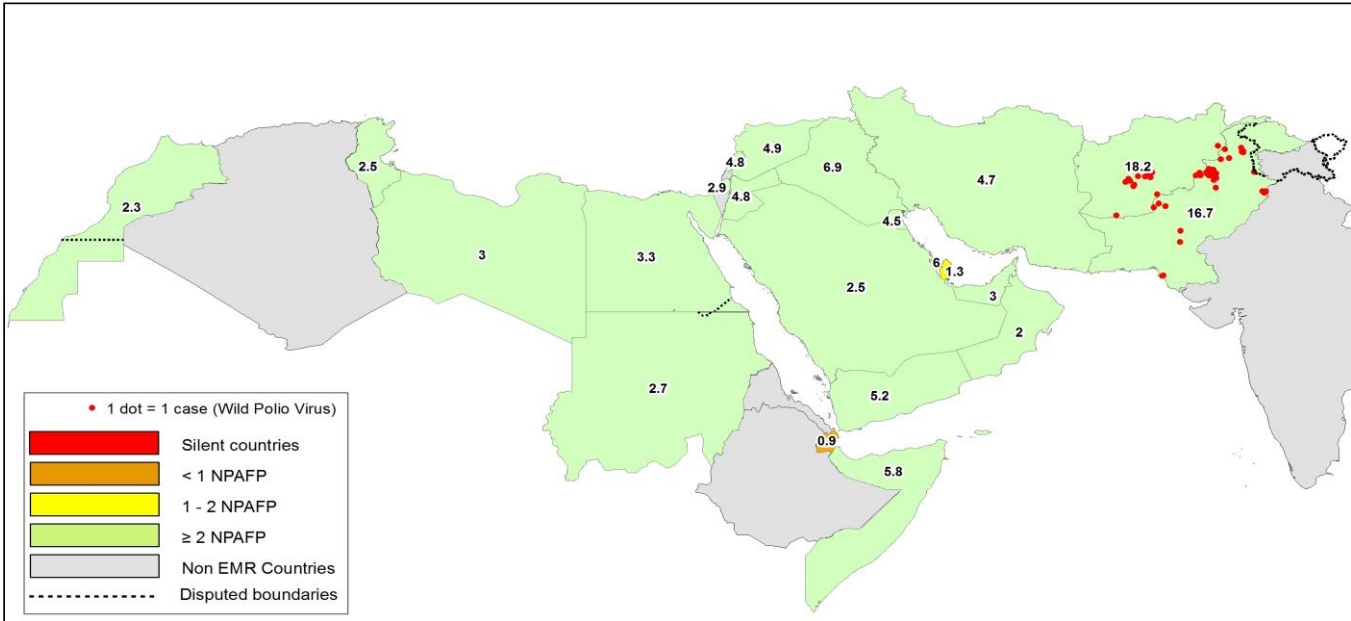


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 18/08/2019

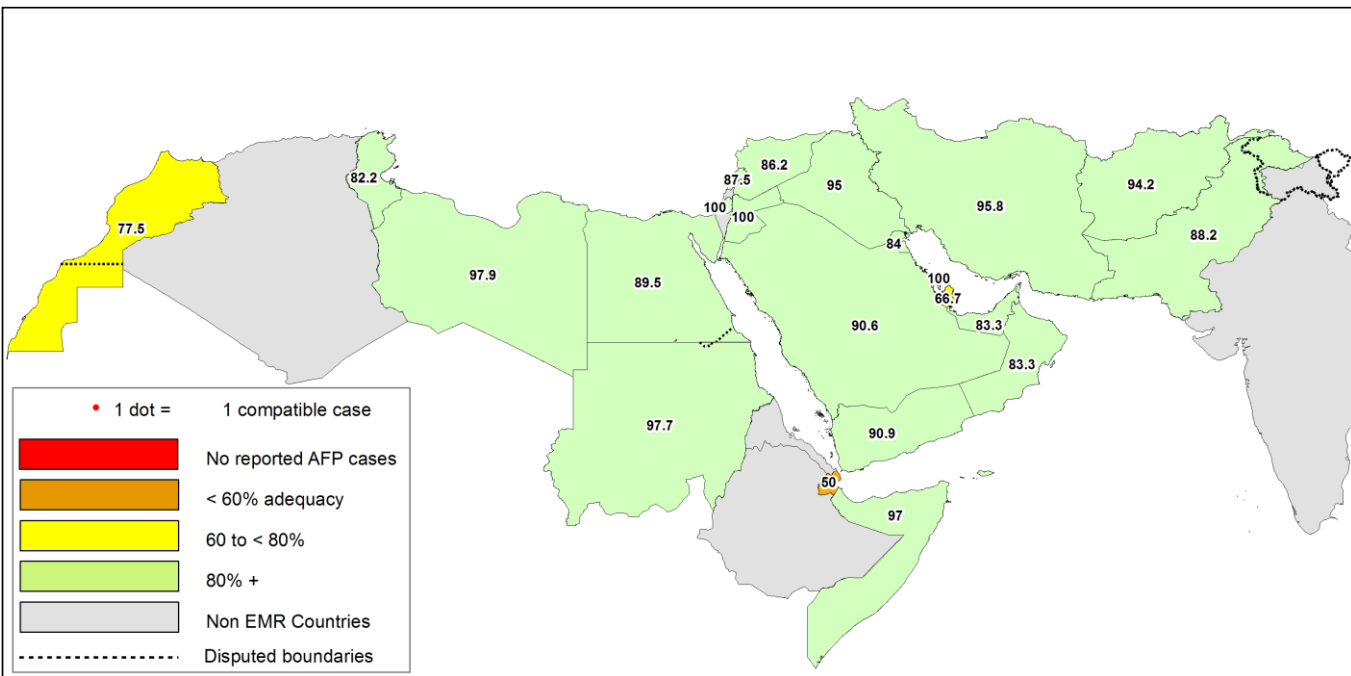


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	21	1-Jan-18	6-Nov-18
	PAK	12	8-Mar-18	31-Dec-18
2018 Total		33	1-Jan-18	31-Dec-18
2019	AFG	13	4-Jan-19	16-Jul-19
	PAK	53	15-Jan-19	21-Jul-19
2019 Total		66	4-Jan-19	21-Jul-19

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 - 18/08/2019

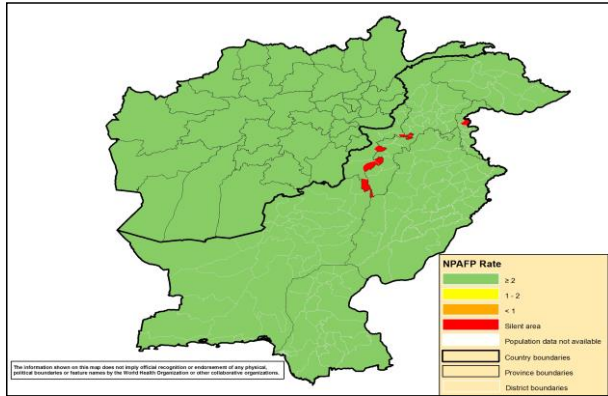


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 18/08/2019

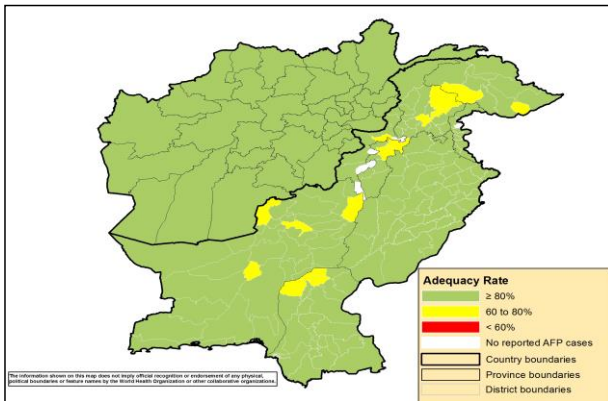
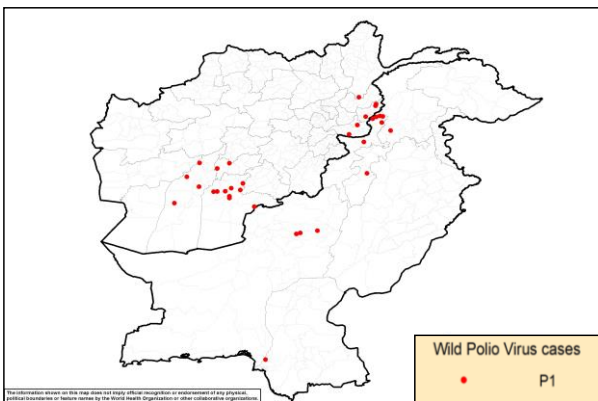
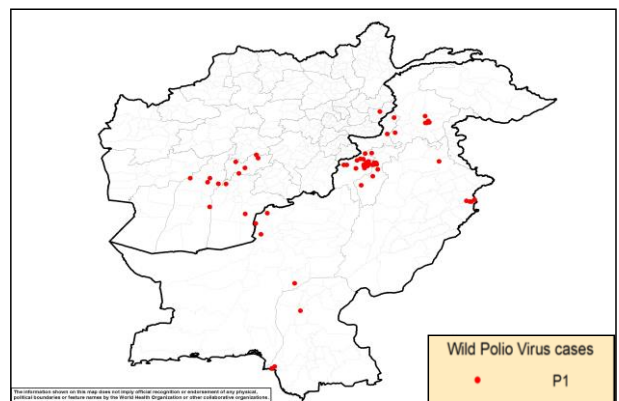


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2019 - 18/08/2019



World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

Week 33, ending 18 August 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	
2018 Total			21	1-Jan-18	6-Nov-18
2019	URUZGAN	CHORA	2	20-Mar-19	16-Jul-19
		TIRINKOT	2	19-May-19	19-May-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
	KANDAHAR	GHORAK	1	12-Jan-19	12-Jan-19
		SPINBOLDAK	1	4-Jan-19	4-Jan-19
	2019 Total			13	4-Jan-19

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

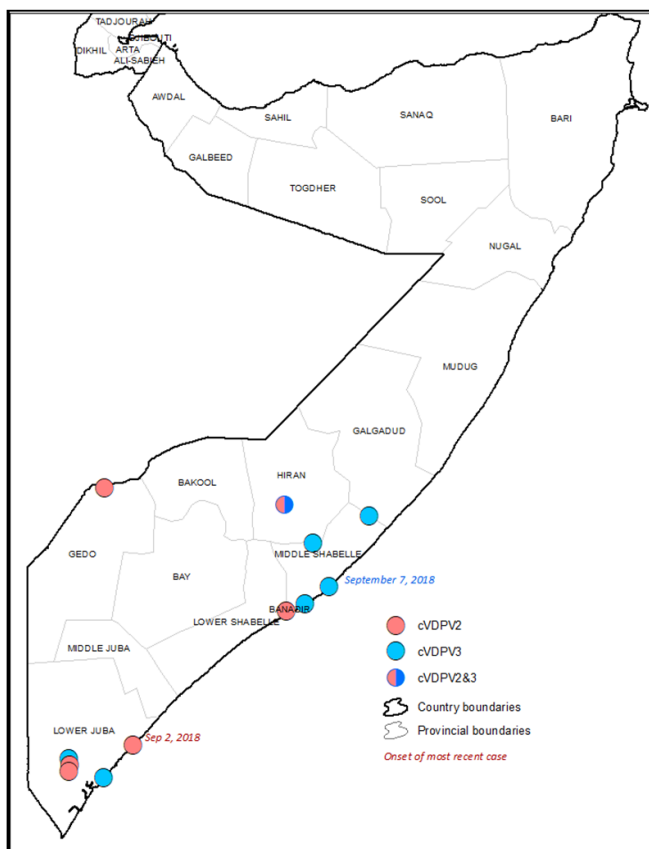
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	KP TRIBAL DISTRICTS	BAJOUR	5	1-Sep-18	31-Dec-18
		KHYBER	1	25-Sep-18	25-Sep-18
	KHYBER PAKHTOONKHWA	LAKKIMRWT	1	16-Dec-18	16-Dec-18
		CHARSADA	1	1-Aug-18	1-Aug-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
	BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18
2018 Total			12	8-Mar-18	31-Dec-18
2019	KHYBER PAKHTOONKHWA	CHARSADA	1	21-Jul-19	21-Jul-19
		BANNU	21	15-Jan-19	19-Jul-19
		LAKKIMRWT	2	27-May-19	1-Jul-19
		TORGHAR	5	25-May-19	17-Jun-19
		SHANGLA	1	18-May-19	18-May-19
		DIKHAN	1	5-May-19	5-May-19
		HANGU	1	20-Jan-19	20-Jan-19
		KP TRIBAL DISTRICTS	WAZIR-N	7	4-Apr-19
	KHYBER		1	14-Feb-19	14-Feb-19
	BAJOUR		1	18-Jan-19	18-Jan-19
	BALUCHISTAN	QUETTA	1	6-Jul-19	6-Jul-19
		KABDULAH	2	9-Jun-19	2-Jul-19
		JAFARABAD	1	28-May-19	28-May-19
	PUNJAB	LAHORE	4	20-Jan-19	22-Jun-19
		JHELUM	1	21-Jun-19	21-Jun-19
	SINDH	KHIGIQBAL	1	29-Apr-19	29-Apr-19
		LARKANA	1	17-Apr-19	17-Apr-19
		KHILAYARI	1	25-Feb-19	25-Feb-19
	2019 Total			53	15-Jan-19

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

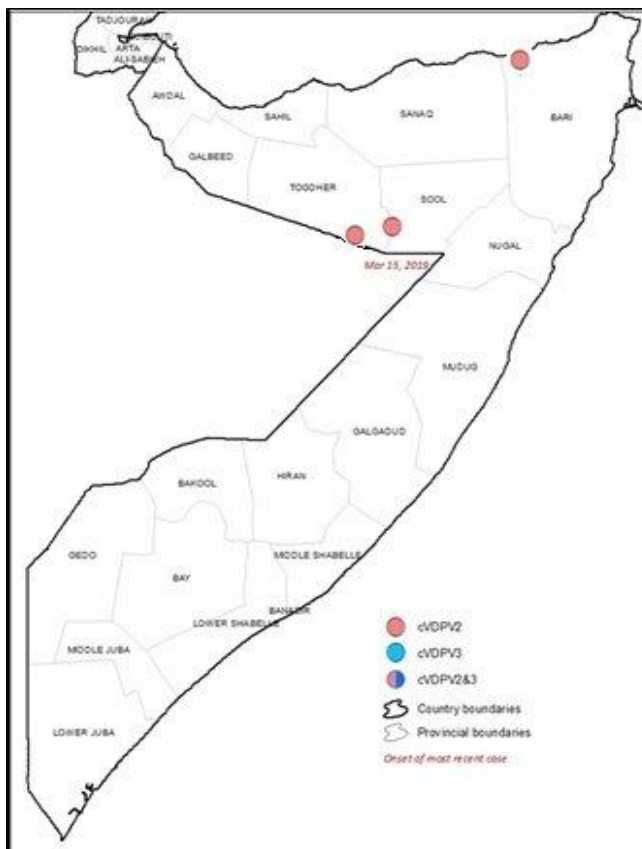
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3			
				Count	First Case	Last Case	Count	First Case	Last Case	
SOM	2019	BARI	BOSSASO	1	08-May-19	08-May-19				
		TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19				
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19				
	Total 2019				3	15-Mar-19	8-May-19			
	2018	LOWER JUBA	JAMAAME 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				
	Total 2018				6	11-May-18	2-Sep-18	7	11-May-18	7-Sep-18

Figure 6: Somalia cVDPV cases by type and district

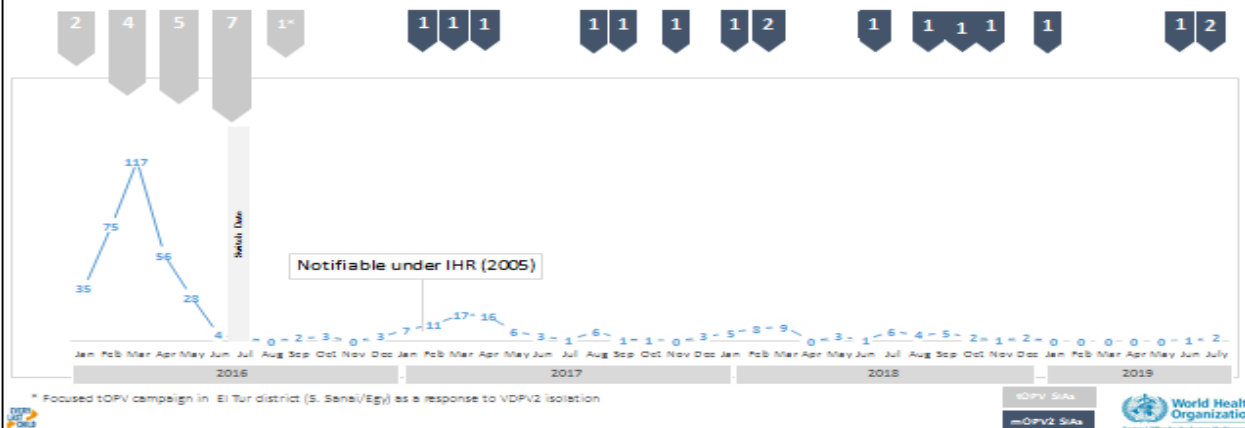
6(a) 01/01/2018 - 31/12/2018



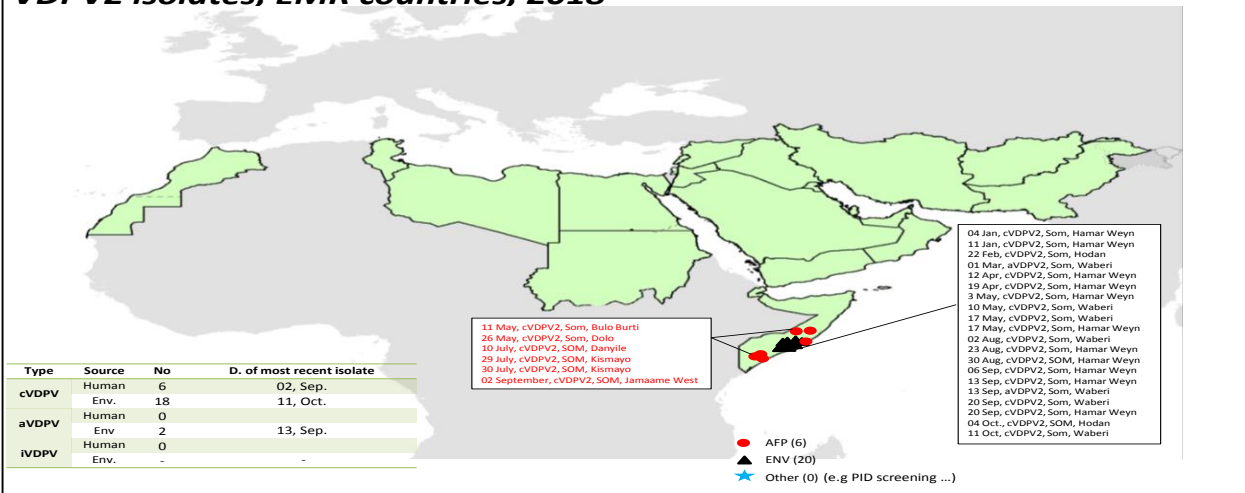
6(b) 01/01/2019 - 18/08/2019



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



VDPV2 isolates, EMR countries, 2018



VDPV2 isolates, EMR countries, 2019

