

Highlights of Polio Fax Bulletin No. 1092 for Week 36 2019

I. Poliovirus Transmission

1. **Endemic countries (PAKISTAN & AFGHANISTAN):** Five new wild poliovirus type-1 (WPV1) cases reported this week, one from Afghanistan and four from Pakistan. Twenty eight new positive environmental samples reported this week all from Pakistan.

a. *Human samples:* Five new WPV1 cases reported this week one from Afghanistan and four from Pakistan. Total WPV1 cases in 2019 to date are 78 (16 from Afghanistan and 62 from Pakistan). This compares with 21 cases in 2018 in the same period (Afghanistan – 16 and Pakistan – 5).

- Afghanistan:

One new WPV1 case was reported this week from Tirinkot district, Uruzgan province, with date of onset 2 August 2019. The case is a 14-month old female child. The child received reportedly a total of 4 OPV doses all from routine and none from supplementary immunization activities (SIAs). The case had negative lab results and was identified as wild by 2 positive contacts.

In 2019 to date, 16 WPV1 cases are reported. They include 8 cases from Uruzgan province, 5 cases from Hilmand province, 2 from Kandahar province and 1 from Kunar province. The most recent case has onset of paralysis on 2 August 2019.

- Pakistan:

Four new WPV1 cases were reported this week and their details are as follows:

- Case (1): The case was reported from Lakki Marwat district, Khyber Pakhtunkhwa (KP) province, with date of onset 5 August 2019. The case is a 5-month old female child. The child received reportedly a total of 2 OPV doses all from SIAs and none from routine.

- Case (2): The case was reported from Killa Abdullah district, Balochistan province, with date of onset 8 August 2019. The case is a 17-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 Karachi Orangi town, Sindh province, with date of onset 20 August 2019. The case is an 8-month old female child. The child received reportedly a total of 6 OPV doses – out of which 2 doses were from routine and 4 from SIAs.

- Case (4): The case was reported from South Waziristan district, KP Tribal Districts (KPTD), with date of onset 20 August 2019. The case is a 10-month old male child. The child did not receive any OPV doses neither from routine nor from SIAs.

In 2019 to date, 62 WPV1 cases are reported from Pakistan. They include 35 from Khyber Pakhtunkhwa (KP) province, 11 from KP Tribal Districts (KPTD),

6 from Sindh province, and 5 each from Punjab and Balochistan provinces. The most recent case has onset of paralysis on 20 August 2019.

Environmental samples: No new WPV1 positive environmental samples were reported this week.

- Afghanistan: In 2019 to date, there are 29 positive environmental samples with most recent positive sample collected on 24 July 2019.
- Pakistan: In 2019 to date, there are 217 positive environmental samples with most recent positive sample collected on 26 August 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, 18 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 0.8 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 1.6 and percentage of AFP cases with adequate stool specimens of 75%.
- Tunisia has a percentage of AFP cases with adequate stool specimens of 75%.
- 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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Table 1: Acute Flaccid Paralysis (AFP) cases by week of onset

Country	Reported AFP cases by week of onset - Week (36/19) / Ending on : 08/09/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	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	W34 25 Aug 19	W35 01 Sep 19	W36 08 Sep 19
Afghanistan	3094	3378	2538	87	83	78	75	81	68	78	37	73	74	24	1
Bahrain	18	35	11	0	0	0	0	1	0	0	0	0	0	0	
Djibouti	4	0	2	0	1	0	0	0	0	0	1	0	0		
Egypt	1242	1246	881	29	20	33	28	23	28	15	7	23	29	25	3
Iran	820	896	645	16	15	20	19	24	17	15	23	19	9	0	
Iraq	699	1023	723	27	21	30	18	22	22	12	6	15	23	12	
Jordan ****	116	115	88	2	3	0	2	1	1	0	0	2	2	0	
Kuwait	69	72	25	2	1	1	0	0	0	0	0	0	0	0	0
Lebanon ****	80	95	56	1	0	1	2	2	2	2	1	0	1	0	
Libya	88	122	58	0	1	0	1	3	2	1	1	3	5	2	
Morocco	143	212	129	5	3	3	4	7	3	1					
Oman	40	28	14	1	0	1	0	0	0	0	0	1	1		
Pakistan	10319	12276	9304	329	272	316	319	289	296	247	230	248	275	71	2
Palestine ****	43	44	37	2	0	1	5	0	1	1	0	0	0		
Qatar	18	10	4	0	0	0	0	1	0	0	1	0	0	0	0
Saudi Arabia	276	241	128	1	1	0	0	0	0						
Somalia	345	353	251	6	8	8	7	9	8	4	7	5	5	5	
Sudan	570	579	347	19	11	10	23	8	14	8	4	10	15	3	
Syria ****	362	362	250	5	4	8	12	7	6	5	2	2	4	2	
Tunisia	67	68	48	3	0	3	0	2	2	0	1	0	0	0	
U.A.E	58	40	25	0	0	1	2	0	1	1	0	1	0	0	
Yemen	713	730	497	15	19	28	26	12	8	14	8	11	3	1	
Total EMR	19184	21925	16061	550	463	542	543	492	479	404	329	413	446	145	6

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	08/09		Confirmed polio cases by month of onset											
			2018	2019	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	September 2019
Afghanistan	14	21	16	16	2	1	0	2	1	3	1	5	1	2	1	
Bahrain	0	0	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	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	
Kuwait	0	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	0	0	0	0	0	0	
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pakistan	8	12	5	62	1	0	4	4	2	0	11	11	16	12	6	
Palestine ****	0	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	0	0	0	0	
Somalia	0	0	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	0	0	0	0	
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Yemen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total EMR	22	33	21	78	3	1	4	6	3	3	12	16	17	14	7	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 (36/19) / Ending on : 08/09/2019

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	0	3357	0	16.6	0	0	93.8	21	0	2538	16	0	238	2284	0	18.1	34	3	94.2	16	0	05/09/2019
Bahrain	35	0	0	0	35	0	12.1	0	0	97.1	0	0	11	0	0	11	0	0	5.5	9	9	100.0	0	0	05/09/2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	2	0	0	2	0	0	0.8	0	0	50.0	0	0	31/08/2019
Egypt	1246	0	0	2	1243	1	3.2	2	0	93.2	0	0	881	0	0	107	774	0	3.4	1	0	88.0	0	0	05/09/2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	645	0	0	29	616	0	4.9	0	0	96.1	0	0	07/09/2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	723	0	0	61	662	0	6.9	8	0	95.0	0	0	06/09/2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	88	0	0	3	85	0	4.6	0	0	100.0	0	0	05/09/2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	25	0	0	0	25	0	4.1	0	0	84.0	0	0	08/09/2019
Lebanon	95	0	0	4	91	0	5.1	4	1	92.6	0	0	56	0	0	9	47	0	4.4	5	0	87.5	0	0	06/09/2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	58	0	0	13	45	0	3.4	1	0	98.3	0	0	07/09/2019
Morocco	212	0	0	1	211	0	2.4	1	0	77.8	0	0	129	0	0	56	73	0	2.1	36	11	77.5	0	0	02/08/2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	14	0	0	2	12	0	2.2	0	0	92.9	0	0	28/08/2019
Pakistan	12276	12	1	0	12263	0	15.7	0	0	87.0	12	0	9304	62	0	816	8426	0	17.2	166	0	88.9	62	0	08/09/2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	37	0	0	12	25	0	2.9	1	0	100.0	0	0	25/08/2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	4	0	0	3	1	0	1.6	1	0	75.0	0	0	08/09/2019
Saudi Arabia	241	0	0	0	241	0	3.0	0	0	95.9	0	0	128	0	0	46	82	0	2.3	43	6	90.6	0	0	01/08/2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	251	0	0	21	227	3	5.7	0	0	95.6	0	0	07/09/2019
Sudan	579	0	0	0	579	0	3.2	0	0	97.2	0	0	347	0	0	28	319	0	2.8	3	3	97.7	0	0	05/09/2019
Syria	362	0	0	0	362	0	4.7	0	0	87.3	0	0	250	0	0	11	239	0	4.7	0	0	86.0	0	0	06/09/2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	48	0	0	3	44	1	2.5	0	0	75.0	0	0	06/09/2019
U.A.E	40	0	0	0	40	0	3.2	0	0	97.5	0	0	25	0	0	9	16	0	2.9	3	0	84.0	0	0	01/09/2019
Yemen	730	0	0	140	590	0	5.2	140	129	91.6	0	0	497	0	0	398	99	0	5.1	238	213	89.9	0	0	31/08/2019
EMR	21925	33	1	147	21729	15	8.7	147	130	89.8	33	0	16061	78	0	1878	14101	4	9.3	549	245	90.5	78	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	814	6	0	32	145	42
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	354	0	0	7	36	33
IRN	145	0	0	3	6	0	116	0	0	3	4	0
IRQ	811	0	0	22	93	9	386	0	0	7	14	18
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	3	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	0
PAK	4200	3	0	207	882	0	3460	6	0	150	591	200
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	1	759	0	1	19	88	63
SUD	350	0	0	3	24	88	237	0	0	0	16	43
SYR	670	0	0	8	17	0	540	0	0	10	26	23
TUN	1	0	0	0	0	0	13	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	308	0	0	0	0	309
EMR	10759	7	10	360	1471	1610	7084	12	1	230	933	750

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	6	17/Aug/19
	Pakistan	6	21/Jul/19
2019 Total		12	17/Aug/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	URUZGAN	TIRINKOT	1	2-Aug-19	2-Aug-19
		HILMAND	MUSAQALAH	1	5-Jun-19	5-Jun-19
		HILMAND	SANGIN	1	6-Mar-19	6-Mar-19
	PAK	BALOCHSITAN	KILLABDULLAH	1	2-Jul-19	2-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				6	06-Mar-19	02-Aug-19
2018	AFG	NANGARHAR	PACHIERAGAM	1	17-Jul-18	17-Jul-18
		URUZGAN	SHAHID-E-HASSA	1	8-Jul-18	8-Jul-18
	PAK	KHYBER PAKHTUNKHWA TRIBAL DISTRICTS (KPTD)	BAJOUR	1	1-Sep-18	1-Sep-18
		BALOCHSITAN	DUKKI	1	15-Apr-18	15-Apr-18
		2018 Total				4

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Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (36/2019) / Ending on : (08/09/2019)

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	2507	184	21	386	1789	127		13	141						129		1	1		3	14%	95%	100%	98%	07/09/2019
Bahrain	NPL Oman / CDC																									03/09/2019
Djibouti	NPL Kenya / CDC	2					2																			31/08/2019
Egypt***	RRL Egypt	849	31	5	77	679	49	8		14						19			8	2		10%	95%	100%	99%	08/09/2019
Iran	NPL Iran / CDC	649	9		13	621	6			2						6		1				3%	100%	100%	99%	07/09/2019
Iraq	RRL Egypt	736	11		95	577	45	8		5						9						12%	100%	100%	67%	05/09/2019
Jordan	NPL Jordan / RRL EGYPT	88			12	76		1														14%	100%			08/09/2019
Kuwait	RRL Kuwait / RIVM	32			2	25	1	4														8%	85%		100%	08/09/2019
Lebanon	NPL Jordan / RRL EGYPT	55	1		6	48										1						11%	100%	100%	0%	08/09/2019
Libya	RRL Tunisia / RIVM	48			1	47																1%	98%		98%	21/08/2019
Morocco	NPL Morocco / RRL Tunisia	132	1		2	119	7	3								1						2%	100%	100%	96%	06/09/2019
Oman	NPL Oman / CDC	14			2	10	1	1														20%	100%		100%	03/09/2019
Pakistan	RRL Pakistan	9145	364	41	1462	6789	474	9	57 *	217						224			5	1	1	14%	97%	99%	97%	07/09/2019
Palestine & UNRWA		37			6	30		1														17%	38%		100%	25/08/2019
Qatar	NPL Oman / CDC	4				4																0%	100%		100%	03/09/2019
Saudi Arabia	NPL Saudi Arabia / CDC	135	4			123		8								4						1%	95%	100%	100%	08/07/2019
Somalia	NPL Kenya / CDC	251	14		48	171	10	8		4		3	3			4					3	21%	16%		99%	07/09/2019
Sudan	NPL Sudan / RRL Egypt	344	6		49	266	23			5						2						13%	58%	100%	63%	05/09/2019
Syria	NPL Syria / RRL Egypt	240	12		12	212	4			5						9						6%	100%	100%	50%	05/09/2019
Tunisia	RRL Tunisia	44			3	39		2														9%	100%		98%	21/08/2019
U.A.E	NPL Oman / CDC	17			3	14																18%	100%		53%	03/09/2019
Yemen	NPL Kenya / CDC																									31/08/2019
Total EMR 2019		15329	637	67	2179	11639	747	55	70	393			3	3		408		2	14	3	7	13%	94%	99%	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

** This indicator reflects surveillance and laboratory activities

* Notification received from National EOC Pakistan of 2 new WPV1 cases that will show in laboratory table in next week bulletin

Somalia in 2018 so far has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 & 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	120
	PENDING					19
	WILD	20	2	42	83	29
AFG Total		149	185	316	336	168
EGY	NEGATIVE	493	528	522	540	493
	PENDING	2				36
	VDPV2	3	1			
EGY Total		498	529	522	540	529
IRN	NEGATIVE			6	54	47
	PENDING					3
	WILD					3
IRN Total			6	54	53	
JOR	NEGATIVE		2	32	36	22
	PENDING					2
JOR Total			2	32	36	24
LEB	NEGATIVE		4	27	45	26
	PENDING					6
LEB Total			4	27	45	32
PAK	NEGATIVE	347	462	523	534	261
	PENDING					16
	WILD	79	59	105	139	217
	WILD & VDPV2	5	3	1		
	VDPV2	8	5	4		
PAK Total		439	529	633	673	494
SOM	NEGATIVE			34	181	35
	PENDING					4
	VDPV2			2	20	1
	VDPV3				12	
SOM Total			36	213	40	
SUD	NEGATIVE				15	25
	PENDING					15
SUD Total					15	40
SYR	NEGATIVE			4	102	111
	PENDING					10
SYR Total				4	102	121
Grand Total		1086	1249	1576	2014	1501

Table 7: Environmental Wild/VDPV isolate by site

Country	COUNTRY	Status	PROVINCE	DISTRICT	Count	First date	Last date			
2018	AFG	WILD	HILMAND	LASHKARGAH	12	8/Jan	26/Dec			
				HIRAT	1	25/Jan	25/Jan			
				KABUL	3	26/Jan	26/Jan			
				KANDAHAR	42	8/Jan	26/Dec			
				KHOST	1	25/Sep	25/Sep			
				KUNAR	2	24/Apr	25/Sep			
				NANGARHAR	3	28/Jan	25/Oct			
				JALALABAD	19	27/Jan	26/Dec			
				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/Jan				20/Dec			
	KABDULAH	8	1/Jan				15/Dec			
	ISLAMABAD	7	10/Jan				10/Nov			
	PUNJAB	12	11/Jan				18/Dec			
	RAWALPINDI	15	10/Jan				14/Dec			
	DGKHAN	2	12/Jan				12/Sep			
	HYDERABAD	1	9/Jan				9/Jan			
	JACOBABAD	3	12/Jan				12/Sep			
	KAMBAR	3	7/Apr				9/Jul			
	KHIBALDIA	2	1/Aug				4/Sep			
	KHIGADAP	15	15/Jan				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/Jan				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						
	KHYBER PAKHTOONKHUWA	BANNU	4	31/Mar	27/Dec					
		KOHAT	5	5/Jan	27/Sep					
MARDAN	2	15/Oct	15/Nov							
NOWSHERA	2	18/Sep	18/Oct							
PESHAWAR	23	10/Jan	26/Dec							
PAK Total				139	1/Jan	27/Dec				
SOM	VDPV2	BANADIR	HAMAR WEYN	11	4/Jan	20/Sep				
			HODAN	2	22/Jan	4/Oct				
	VDPV3	BANADIR	WABERI	7	1/Mar	11/Oct				
			HAMAR WEYN	6	11/Jan	5/Apr				
HODAN	1	1/Jan	1/Jan							
WABERI	5	8/Mar	23/Aug							
SOM Total				32	4/Jan	11/Oct				
2018 Total				254	1/Jan	27/Dec				
2019	AFG	WILD	HILMAND	LASHKARGAH	4	23/Jan	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	KHUZZAR	1	20/Mar	20/Mar			
				LORALAI	1	17/Mar	17/Mar			
				PISHIN	3	2/Jan	2/Jan			
				QUETTA	23	1/Jan	20/Aug			
				BUGTI	1	19/Aug	19/Aug			
				KABDULAH	8	1/Jan	19/Apr			
				ISLAMABAD	3	12/Apr	21/Aug			
				PUNJAB	3	3/Jan	17/Jul			
				LAHORE	37	5/Jan	19/Aug			
				MULTAN	4	18/Jan	18/Jul			
				RAWALPINDI	9	10/Jan	22/Jul			
				DGKHAN	1	8/Apr	8/Apr			
				DADU	3	2/May	5/Aug			
				HYDERABAD	8	24/Jan	6/Aug			
				JACOBABAD	3	24/Jan	5/Aug			
				KAMBAR	4	7/Mar	8/Aug			
				KHIBALDIA	6	2/Jan	6/Aug			
				KHIGADAP	20	8/Jan	20/Aug			
				KHIGIQBAL	7	11/Apr	22/Aug			
				KHIKORANGI	7	18/Jan	23/Aug			
				KHILANDHI	6	19/Jan	26/Aug			
				KHISITE	8	3/Jan	5/Aug			
SUKKUR	7	23/Jan	7/Aug							
KHILIAQAT	6	7/Jan	9/Aug							
KHISADDAR	8	7/Jan	7/Aug							
KP TRIBAL DISTRICTS	WAZIR-S	5	22/Jan	28/May						
	KURRAM	1	15/Jan	15/Jan						
	BANNU	7	28/Jan	1/Aug						
KHYBER PAKHTOONKHUWA	DIKHAN	4	9/Jan	11/Jan						
	KOHAT	1	27/Jan	27/Jan						
	MARDAN	4	16/Mar	15/Jan						
	PESHAWAR	8	11/Jan	10/Jul						
	PAK Total				217	1/Jan	26/Aug			
SOM	VDPV2	BANADIR	HODAN	1	3/Jan	3/Jan				
SOM Total				1	3/Jan	3/Jan				
IRN	WILD	S & B	IRANSHAHR	3	22/Apr	20/May				
IRN Total				3	22/Apr	20/May				
2019 Total				250	1/Jan	26/Aug				

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 08/09/2019

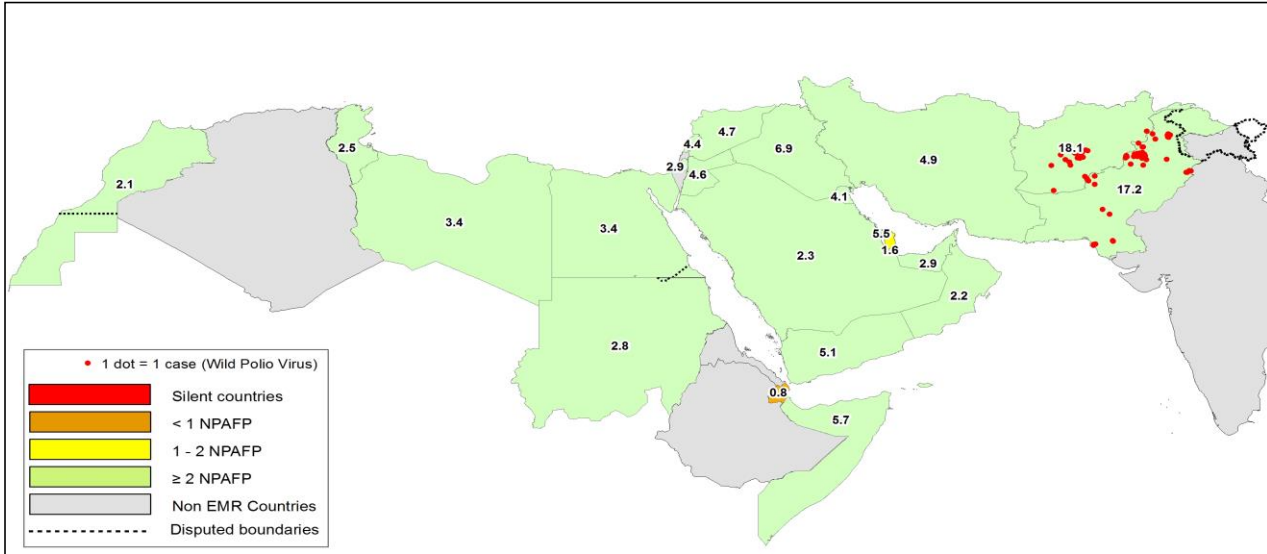


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 08/09/2019

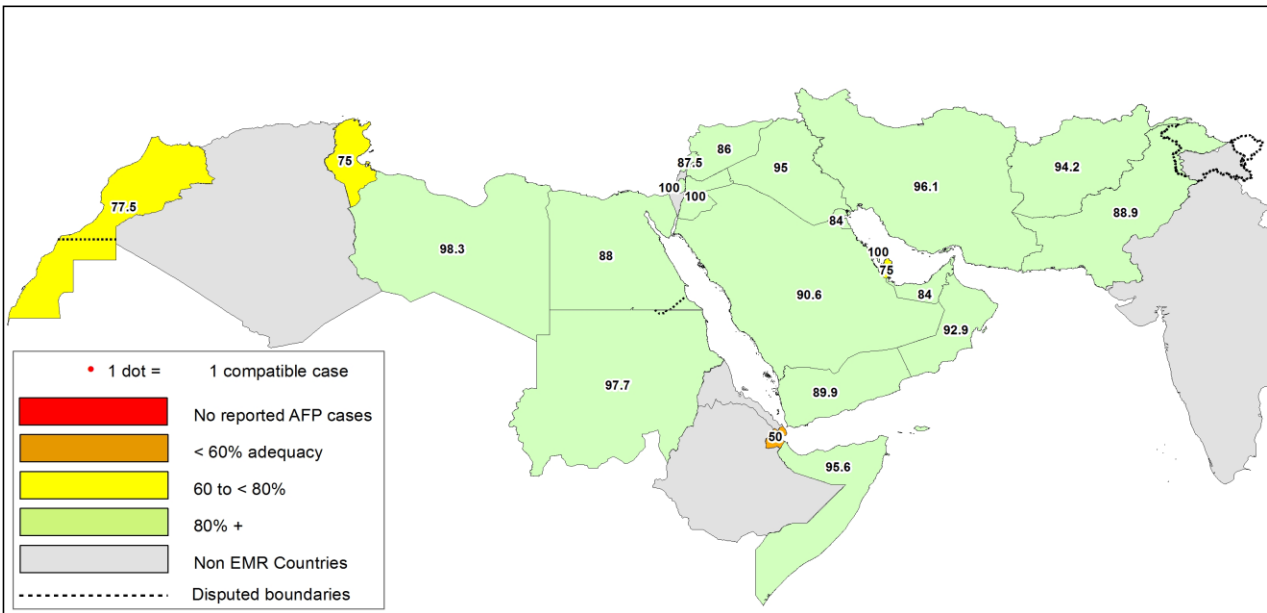


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019

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	16	4-Jan-19	2-Aug-19
	PAK	62	15-Jan-19	20-Aug-19
2019 Total		78	4-Jan-19	20-Aug-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 - 08/09/2019

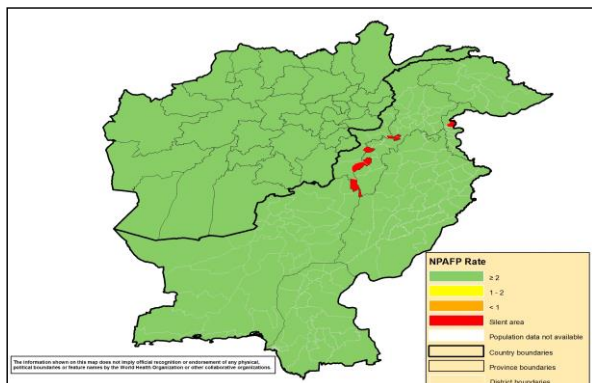


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 08/09/2019

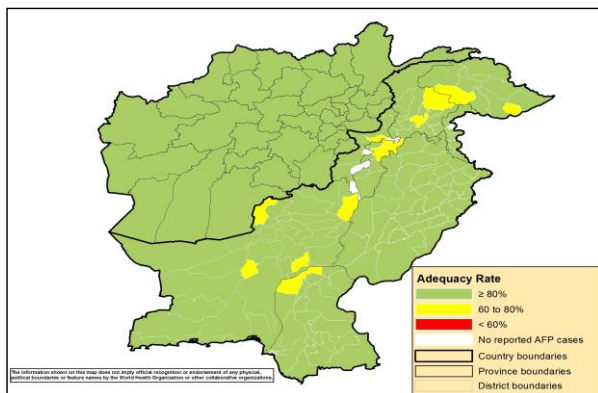
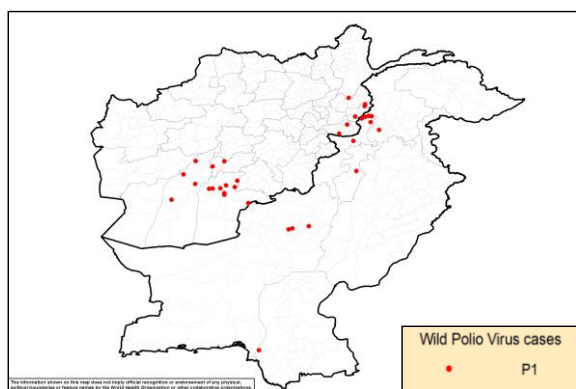
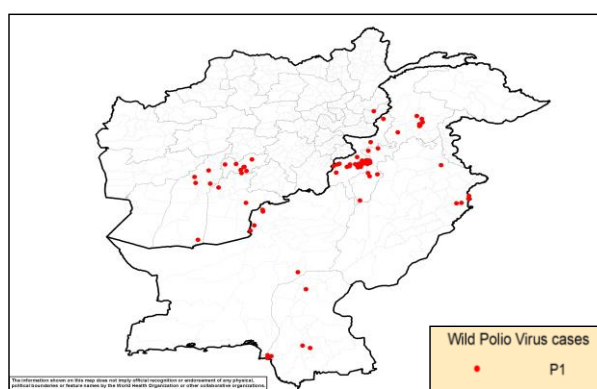


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2019 - 08/09/2019



World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

Week 36, ending 08 September 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	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
	KANDAHAR	GHORAK	1	12-Jan-19	12-Jan-19
		SPINBOLDAK	1	4-Jan-19	4-Jan-19
2019 Total			16	4-Jan-19	2-Aug-19

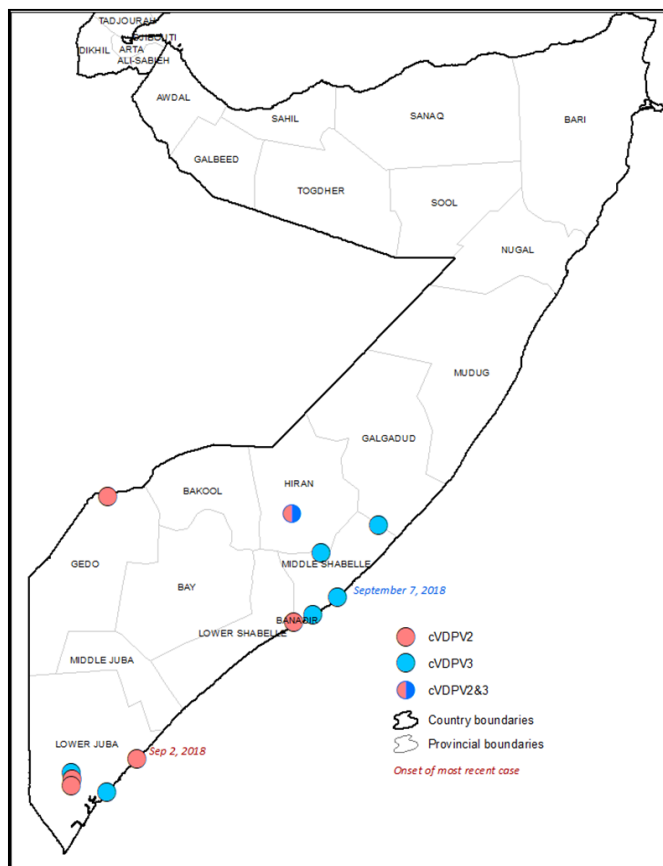
Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2018-2019					
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	KP TRIBAL DISTRICTS	BAJOUR	5	1-Sep-18	31-Dec-18
		KHYBER	1	25-Sep-18	25-Sep-18
	KHYBER PAKHTUNKHUWA	LAKKIMRWT	1	16-Dec-18	16-Dec-18
		CHARSADA	1	1-Aug-18	1-Aug-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
	BALOCHISTAN	DUKKI	3	8-Mar-18	18-May-18
2018 Total			12	8-Mar-18	31-Dec-18
2019	KP TRIBAL DISTRICTS	WAZIR-S	1	20-Aug-19	20-Aug-19
		WAZIR-N	8	4-Apr-19	21-Jul-19
		KHYBER	1	14-Feb-19	14-Feb-19
		BAJOUR	1	18-Jan-19	18-Jan-19
	SINDH	KHIORANGI	1	20-Aug-19	20-Aug-19
		HYDERABAD	2	20-Jul-19	5-Aug-19
		KHIGIQBAL	1	29-Apr-19	29-Apr-19
		LARKANA	1	17-Apr-19	17-Apr-19
		KHILAYARI	1	25-Feb-19	25-Feb-19
	BALOCHISTAN	KABDULAH	3	9-Jun-19	8-Aug-19
		QUETTA	1	6-Jul-19	6-Jul-19
		JAFARABAD	1	28-May-19	28-May-19
	KHYBER PAKHTUNKHUWA	LAKKIMRWT	3	27-May-19	5-Aug-19
		BANNU	22	15-Jan-19	2-Aug-19
		HANGU	2	20-Jan-19	28-Jul-19
		CHARSADA	1	21-Jul-19	21-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
		PUNJAB	LAHORE	4	20-Jan-19
JHELUM	1	21-Jun-19	21-Jun-19		
2019 Total			62	15-Jan-19	20-Aug-19

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

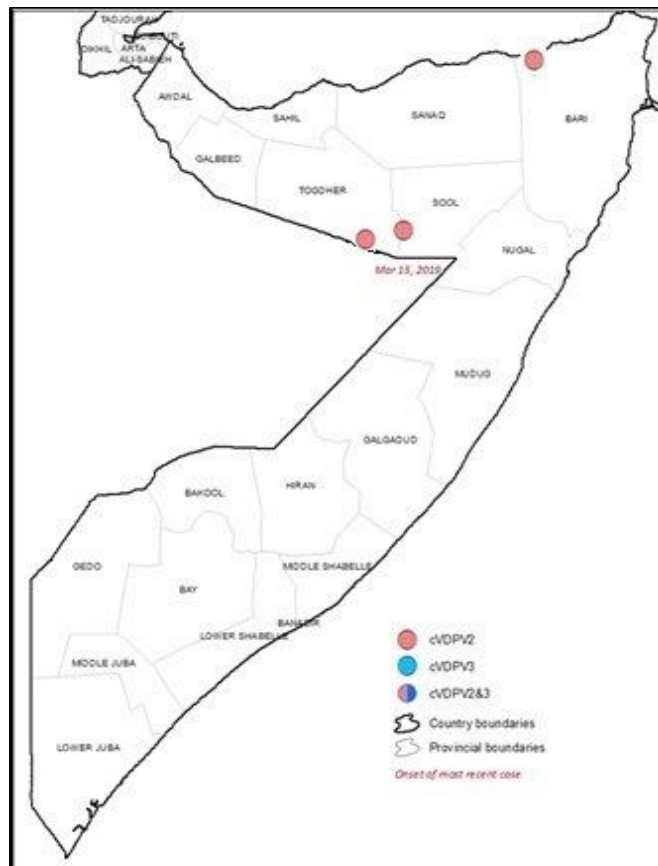
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3			
				Count	First Case	Last Case	Count	First Case	Last Case	
SOM	2019	BARI	BOSSASO	1	08-May-19	08-May-19				
		TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19				
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19				
	Total 2019				3	15-Mar-19	8-May-19			
	2018	LOWER JUBA	JAMAAME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

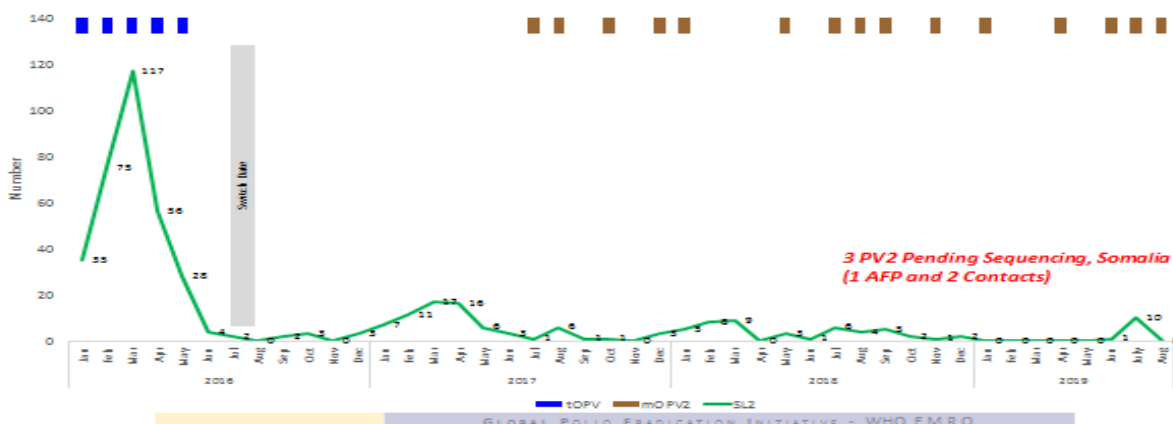
6(a) 01/01/2018 - 31/12/2018



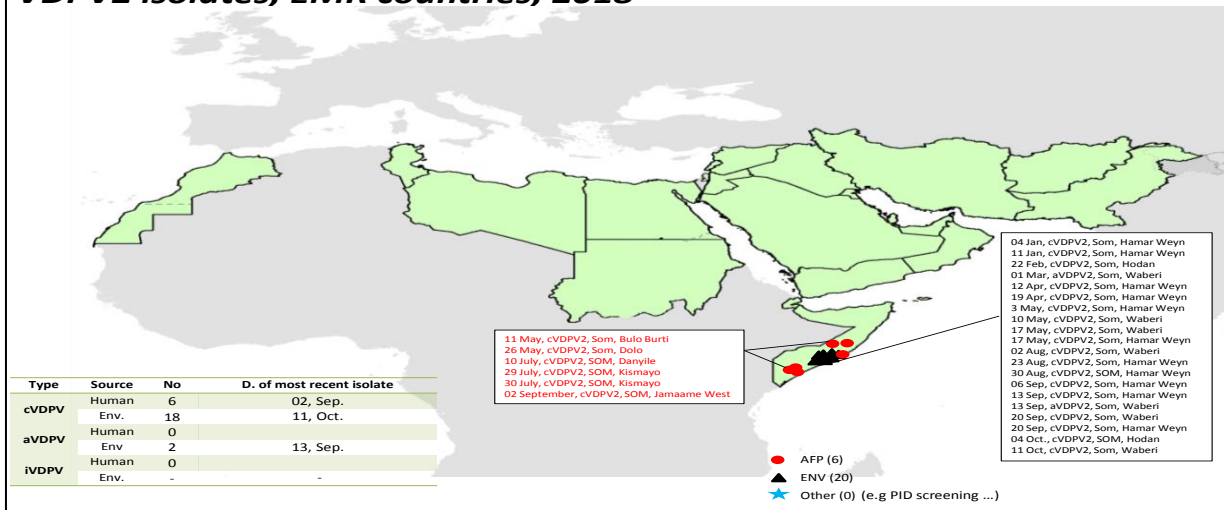
6(b) 01/01/2019 - 08/09/2019



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

