

Highlights of Polio Fax Bulletin No. 1069 for Week 13 2019

I. Poliovirus Transmission

1. Endemic countries (PAKISTAN & AFGHANISTAN):
 - a. Human samples: One new wild poliovirus type-1 (WPV1) case reported from Afghanistan this week. Total WPV1 cases in 2019 to date are 9 (3 from Afghanistan and 6 from Pakistan).
 - i. Afghanistan: One newly reported WPV1 case this week from Shahid-E-Hassas district, Uruzgan province, with date of onset 25 February 2019. New case is a 26-month male child who has received 3 OPV doses all during supplementary immunization activities (SIAs), none from routine and none during the past 12 months due to ban on house to house vaccination in this far-flung area under complete control of the anti-government elements. In 2019 to date three cases are reported, two from Kandahar province and one from Uruzgan province. The most recent reported case has date of onset of paralysis on 25 February 2019.
 - ii. Pakistan: No new wild poliovirus cases reported this week. In 2019 to date, the total number of WPV1 cases in Pakistan is currently six, two from Khyber Pakhtunkhwa (KP), two from KP Tribal Districts (KPTD), one from Punjab and one from Sindh. The most recent reported case has date of onset of paralysis on 25 February 2019.
 - b. Environmental samples: Seven new positive environmental samples for WPV1 were reported this week from Pakistan.
 - i. Afghanistan: No new WPV1 positive environmental samples. In 2019 to date, there are 15 positive environmental samples with most recent positive sample collected on 23 February 2019.
 - ii. Pakistan: The seven new WPV1 positive environmental samples reported this week include three from Sindh province (one from Hyderabad, one from Karachi Korangi town and one from Sukkur district); two from Punjab province (one from Lahore and one from Rawalpindi districts); and two from KP province (one from Mardan and one from Peshawar districts). In 2019 to date, there are 71 positive environmental samples with most recent positive sample collected on 18 March 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. In addition, 428 AFP cases with onset in 2018 and 167 cases with onset in 2019 are pending for classification due to pendency for laboratory testing. Relentless efforts are being made to ship specimen to different laboratories in the Global Polio Laboratory Network to clear backlog.

World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

1-Apr-19

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

Country	Reported AFP cases by week of onset - Week (13/19) / Ending on : 31/03/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	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	W12 24 Mar 19	W13 31 Mar 19
Afghanistan	3094	3378	890	79	81	81	70	86	70	77	79	72	62	47	9
Bahrain	18	35	5	1	0	1	0	0	0	1	0	1	0	0	1
Djibouti	4	0	0												
Egypt	1242	1246	299	27	30	26	22	24	20	20	40	31	28	4	
Iran	820	896	208	20	20	31	23	27	15	27	10	10	3	4	0
Iraq	699	1023	273	31	48	26	16	24	25	32	20	16	12	8	
Jordan ****	116	115	37	4	1	5	4	2	7	1	2	4	3		
Kuwait	69	72	13	1	1	2	1	0	1	0	1	3	2	0	
Lebanon ****	75	89	24	3	3	0	2	1	3	4	2	2	1	1	1
Libya	88	122	21	3	2	2	1	3	5	0	1	1	1	0	
Morocco	143	212	44	7	2	3	6	4	4	3	4	7	1		
Oman	40	28	3	0	0	1	0	1	0	0	1	0	0	0	
Pakistan	10319	12261	2921	285	355	272	254	279	276	250	221	222	199	61	0
Palestine ****	43	44	13	0	1	1	1	2	1	2	1	1	2	1	0
Qatar	18	10	0	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	276	241	60	7	4	7	6	4	5	3	6	6	8	0	
Somalia	345	353	73	5	3	10	7	13	3	4	7	7	6	3	
Sudan	570	578	122	19	10	10	9	8	10	12	18	7	9	0	0
Syria ****	362	362	105	11	5	8	9	17	14	13	9	8	5	2	
Tunisia	67	68	14	1	2	1	0	0	3	0	2	3	0	0	
U.A.E	58	40	12	0	2	2	2	0	1	1	0	1	1	0	0
Yemen	713	730	169	7	15	19	17	17	18	14	14	10	13	4	
Total EMR	19179	21903	5306	511	585	508	450	512	481	464	438	412	356	135	11

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	31/03		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	3	1	0	2	3	2	3	2	1		2	1	
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	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			
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			
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pakistan	8	12	1	6	1	1	0	0	1	3	1	0	4	4	2	
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	0
Saudi Arabia	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			
Yemen	0	0	0	0												
Total EMR	22	33	8	9	2	1	2	3	3	6	3	1	4	6	3	0

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

AFP SURVEILLANCE

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Table 3: Investigation of AFP cases with paralysis onset in 2018 & 2019 up to Week (13/19) / Ending on : 31/03/2019)

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
		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	16	3341	0	16.6	16	1	93.7	21	0	890	3	0	208	679	0	17.8	0	0	93.8	3	0	24-03-2019
Bahrain	35	0	0	5	30	0	12.1	5	0	97.1	0	0	5	0	0	5	0	0	7.0	0	0	100.0	0	0	24-03-2019
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	299	0	0	101	198	0	3.2	0	0	89.6	0	0	24-03-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	208	0	0	8	200	0	4.4	0	0	96.2	0	0	17-03-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	273	0	0	38	235	0	7.2	0	0	97.8	0	0	22-03-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	37	0	0	8	29	0	5.4	0	0	100.0	0	0	21-03-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	13	0	0	11	2	0	5.9	0	0	69.2	0	0	17-03-2019
Lebanon	89	0	0	1	88	0	4.8	1	0	96.6	0	0	24	0	0	7	17	0	5.2	0	0	87.5	0	0	22-03-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	21	0	0	3	18	0	3.4	0	0	100.0	0	0	23-03-2019
Morocco	212	0	0	1	211	0	2.4	1	0	77.8	0	0	44	0	0	32	12	0	2.0	0	0	54.5	0	0	22-03-2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	3	0	0	1	2	0	1.4	0	0	66.7	0	0	24-03-2019
Pakistan	12261	12	1	41	12207	0	15.7	40	0	87.1	12	0	2921	6	0	506	2409	0	15.1	0	0	91.4	6	0	24-03-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	13	0	0	12	1	0	2.8	0	0	100.0	0	0	24-03-2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	01-04-2019
Saudi Arabia	241	0	0	1	240	0	3.0	0	0	95.9	0	0	60	0	0	51	9	0	3.0	0	0	88.3	0	0	20-03-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	73	0	0	15	58	0	4.7	0	0	95.9	0	0	24-03-2019
Sudan	578	0	0	0	578	0	3.2	0	0	97.2	0	0	122	0	0	35	87	0	2.8	0	0	98.4	0	0	24-03-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.3	0	0	105	0	0	26	79	0	5.5	0	0	89.5	0	0	23-03-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	14	0	0	5	8	1	2.0	0	0	85.7	0	0	22-03-2019
U.A.E	40	0	0	2	38	0	3.2	2	1	97.5	0	0	12	0	0	5	7	0	3.9	0	0	91.7	0	0	17-03-2019
Yemen	730	0	0	428	302	0	5.2	427	385	91.6	0	0	169	0	0	167	2	0	4.9	0	0	89.3	0	0	24-03-2019
EMR	21903	33	1	497	21357	15	8.7	494	387	89.8	33	0	5306	9	0	1244	4052	1	8.6	0	0	92.0	9	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	284	0	0	12	38	30
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	111	0	0	3	2	30
IRN	145	0	0	3	6	0	32	0	0	0	1	0
IRQ	811	0	0	22	93	9	126	0	0	3	5	15
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	13	0	0	0	0	10
LIB	1	0	0	0	0	0	0	0	0	0	0	0
MOR	161	0	0	0	9	9	19	0	0	1	0	9
OMA	70	0	0	2	16	0	10	0	0	0	3	0
PAK	4209	3	0	207	882	0	1165	0	0	75	92	95
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	2	227	0	0	1	16	47
SUD	350	0	0	3	24	88	73	0	0	0	3	35
SYR	670	0	0	8	17	0	193	0	0	0	4	22
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	187	0	0	0	0	188
EMR	10754	7	10	360	1471	1707	2444	0	0	95	164	481

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
2018 Total		7	12-10-18

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
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
2018 Total				4	15-04-18	01-09-18

Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (13/2019) / Ending on : (31/03/2019)

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	813	57	1	82	577	96	2	3	41						38				1	10%	100%	100%	99%	23/03/2019	
Bahrain	NPL Oman / CDC																								25/03/2019	
Djibouti	NPL Kenya / CDC																								09/12/2018	
Egypt***	RRL Egypt	307	14		10	208	52	23		8						9					4%	97%	100%	100%	21/03/2019	
Iran	NPL Iran / CDC	230	5		3	205	16	1		1						4					1%	100%	100%	100%	16/03/2019	
Iraq	RRL Egypt	274	2		27	215	22	8								1					10%	100%	100%	100%	24/03/2019	
Jordan	NPL Jordan / RRL EGYPT	43			6	32	5														16%	100%			24/03/2019	
Kuwait	RRL Kuwait / RIVM	13			1	9		3													18%	100%		100%	10/03/2019	
Lebanon	NPL Jordan / RRL EGYPT	20	1		1	18															6%	100%			24/03/2019	
Libya	RRL Tunisia / RIVM	19			1	17	1														3%	100%		100%	15/03/2019	
Morocco	NPL Morocco / RRL Tunisia	32			1	25		6													4%	100%		100%	15/03/2019	
Oman	NPL Oman / CDC	2				2															15%	100%		100%	25/03/2019	
Pakistan	RRL Pakistan	2902	121	14	225	2194	335	13	6	88						85			2	1	7%	100%	100%	98%	23/03/2019	
Palestine & UNRWA		13			3	5	4	1													38%	25%		100%	24/03/2019	
Qatar	NPL Oman / CDC	1				1															0%	100%		100%	25/03/2019	
Saudi Arabia	NPL Saudi Arabia / CDC	60	1			44	12	3								1					0%	91%	100%	100%	17/03/2019	
Somalia	NPL Kenya / CDC	72	2		7	49	7	7		1						2					12%	17%		100%	25/03/2019	
Sudan	NPL Sudan / RRL Egypt	119	1		16	72	4	26													15%	96%		100%	10/03/2019	
Syria	NPL Syria / RRL Egypt	104	8		2	84	8	2													2%	100%			20/03/2019	
Tunisia	RRL Tunisia	16	1		1	12	2									1					14%	100%	100%	100%	15/03/2019	
U.A.E	NPL Oman / CDC	10			1	3		6													25%	100%		50%	25/03/2019	
Yemen	NPL Kenya / CDC																								24/03/2019	
Total EMR 2019		5050	213	15	387	3772	564	101	9	139						141			2	1	1	7%	98%	100%	99%	
Total EMR 2018		20744	902	90	3512	16214		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	32
	PENDING					20
	WILD	20	2	42	83	15
AFG Total		149	185	316	336	67
EGY	NEGATIVE	495	528	522	539	106
	PENDING					1
	VDPV2	3	1			
EGY Total		498	529	522	540	133
IRN	NEGATIVE				6	54
IRN Total					6	54
JOR	NEGATIVE		2	32	19	5
	PENDING					17
JOR Total			2	32	36	9
LEB	NEGATIVE		4	27	11	3
	PENDING					34
LEB Total			4	27	45	8
PAK	NEGATIVE	347	462	523	534	74
	PENDING					24
	WILD	79	59	105	139	71
	WILD & VDPV2	5	3	1		
	VDPV2	8	5	4		
PAK Total		439	529	633	673	169
SOM	NEGATIVE				34	181
	PENDING					4
	VDPV2				2	20
	VDPV3					12
SOM Total				36	213	16
SYR	NEGATIVE				4	102
	PENDING					24
SYR Total				4	102	40
Grand Total		1086	1249	1576	1999	456

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	HERAT	1	25-Jun	25-Jun	
			KABUL	KABUL	3	26-Feb	26-Jun	
			KANDAHAR	KANDAHAR	42	8-Jan	26-Dec	
			KHOST	MATUN	1	25-Sep	25-Sep	
			KUNAR	ASADABAD	2	24-Apr	25-Sep	
			NANGARHAR	BEHSUD	3	28-Jan	25-Oct	
			JALALABAD	JALALABAD	19	27-Jan	26-Dec	
			AFG Total		83	8-Jan	26-Dec	
	PAK	WILD	BALOCHISTAN	LORALAI	LORALAI	2	17-Mar	17-Aug
				PISHIN	PISHIN	1	2-Dec	2-Dec
				QUETTA	QUETTA	13	13-Feb	20-Dec
				KABDULAH	KABDULAH	8	1-Jan	15-Dec
				ISLAMABAD	CDA	7	10-Jan	10-Nov
				PUNJAB	LAHORE	12	11-Jun	18-Dec
					RAWALPINDI	15	10-Jan	14-Dec
					DGKHAN	2	12-Feb	12-Sep
				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					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	
FATA				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				
	KOHAT	5	5-Jan	27-Sep				
	MARDAN	2	15-Oct	15-Nov				
KHYBER PAKHTOONKHW	NOWSHERA	2	18-Sep	18-Oct				
	PESHAWAR	23	10-Jan	26-Dec				
	PAK Total		139	1-Jan	27-Dec			
SOM	VDPV2	BANADIR	HAMAR WEYN	HAMAR WEYN	11	4-Jan	20-Sep	
			HODAN	HODAN	2	22-Feb	4-Oct	
			WABERI	WABERI	7	1-Mar	11-Oct	
			HAMAR WEYN	HAMAR WEYN	6	11-Feb	5-Apr	
			HODAN	HODAN	1	1-Feb	1-Feb	
WABERI	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	1	23-Feb	23-Feb	
			NAHR-E-SARAJ	3	6-Jan	26-Jan		
			KANDAHAR	9	6-Jan	23-Feb		
			NANGARHAR	2	26-Jan	23-Feb		
	AFG Total		15	6-Jan	23-Feb			
	PAK	WILD	BALOCHISTAN	QUETTA	QUETTA	7	1-Jan	28-Feb
				KABDULAH	KABDULAH	5	1-Jan	6-Mar
				FAISALABAD	2	3-Jan	6-Feb	
				LAHORE	13	5-Jan	18-Mar	
				RAWALPINDI	4	10-Jan	14-Mar	
				SINDH	HYDERABAD	3	24-Jan	11-Mar
					JACOBABAD	2	24-Jan	12-Feb
					KHIBALDIA	2	2-Jan	5-Mar
					KHIGADAP	6	8-Jan	11-Mar
				KHIKORANGI	2	18-Feb	15-Mar	
				KHILANDHI	1	19-Feb	19-Feb	
				KHISITE	3	3-Jan	4-Mar	
				SUKKUR	3	23-Jan	13-Mar	
				KHILIAQAT	2	7-Feb	6-Mar	
				KHISADDAR	3	7-Jan	7-Mar	
FATA				WAZIR-S	2	22-Jan	25-Feb	
	KURRAM	1	15-Jan	15-Jan				
	BANNU	2	28-Jan	4-Mar				
KHYBER PAKHTOONKHW	DIKHAN	1	8-Jan	8-Jan				
	KOHAT	1	27-Feb	27-Feb				
	MARDAN	1	16-Mar	16-Mar				
	PESHAWAR	5	11-Jan	12-Mar				
PAK Total		71	1-Jan	18-Mar				
SOM	VDPV2	BANADIR	HODAN	1	3-Feb	3-Feb		
SOM Total		1	3-Feb	3-Feb				
2019 Total				87	1-Jan	18-Mar		

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 31/03/2019

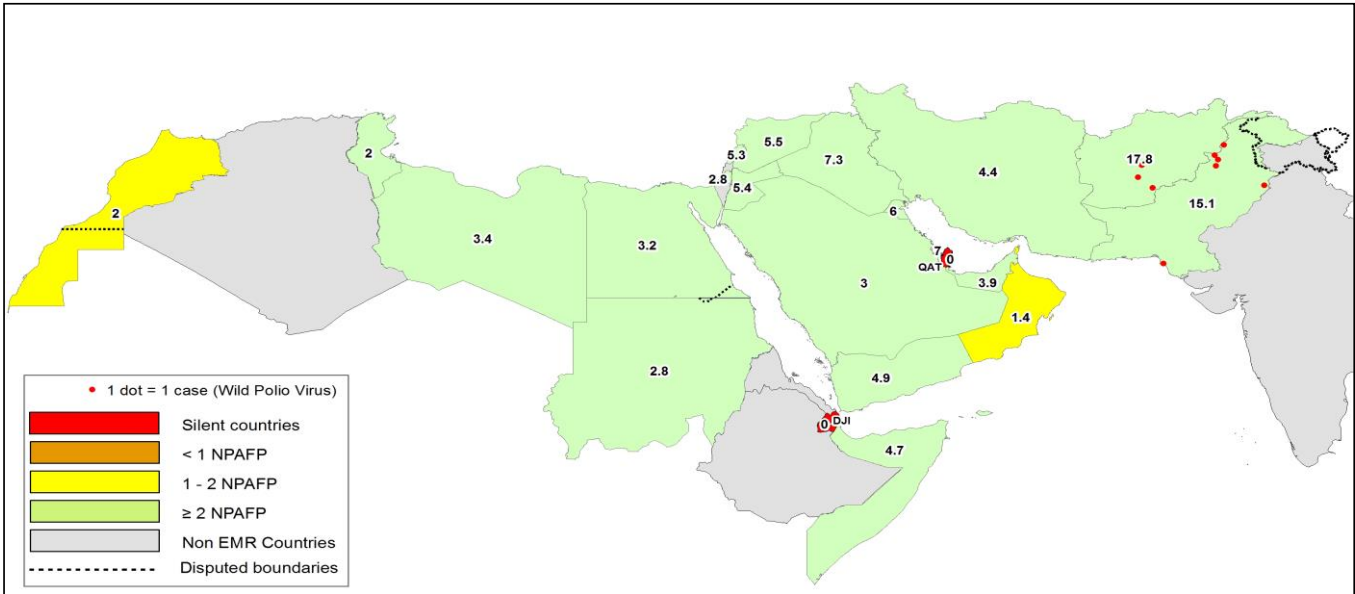


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 31/03/2019

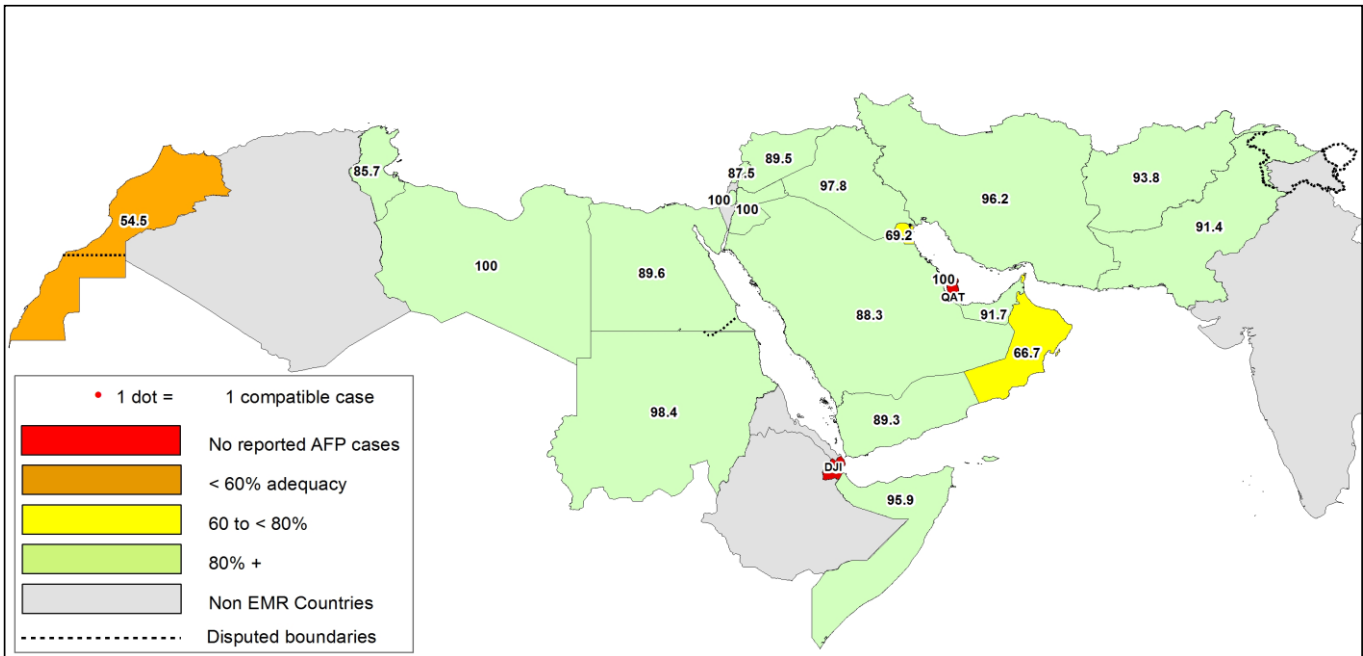


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	21	1-Jan-18	6-Nov-18
	PAK	12	8-Mar-18	31-Dec-18
2018 Total		33	1-Jan-18	31-Dec-18
2019	AFG	3	4-Jan-19	25-Feb-19
	PAK	6	15-Jan-19	25-Feb-19
2019 Total		9	4-Jan-19	25-Feb-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 - 31/03/2019

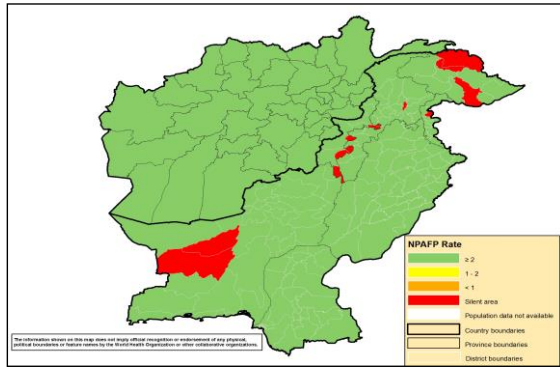


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 31/03/2019

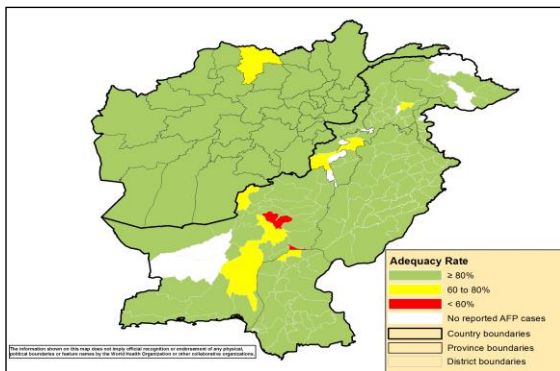
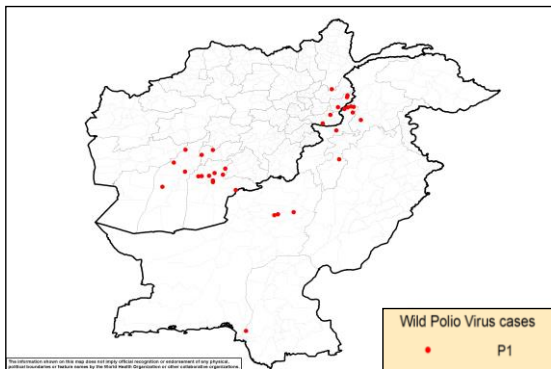
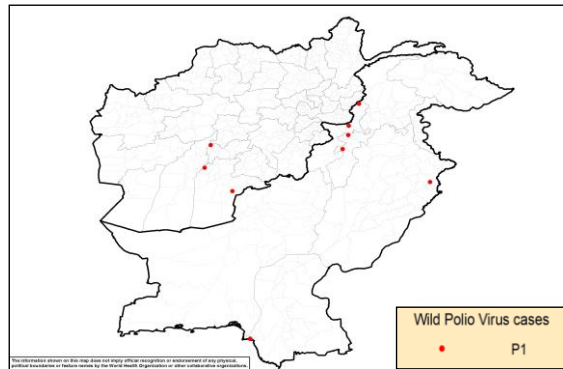


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2019 - 31/03/2019



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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		
2018 Total			21	1-Jan-18	6-Nov-18	
2019	URUZGAN	SHAHID-E-HASSAS	1	25-Feb-19	25-Feb-19	
	KANDAHAR	GHORAK	1	12-Jan-19	12-Jan-19	
		SPINBOLDAK	1	4-Jan-19	4-Jan-19	
2019 Total			3	4-Jan-19	25-Feb-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	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	
2018 Total			12	8-Mar-18	31-Dec-18	
2019	SINDH	KHILAYARI	1	25-Feb-19	25-Feb-19	
	FATA	KHYBER	1	14-Feb-19	14-Feb-19	
		BAJOUR	1	18-Jan-19	18-Jan-19	
	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	
2019 Total			6	15-Jan-19	25-Feb-19	

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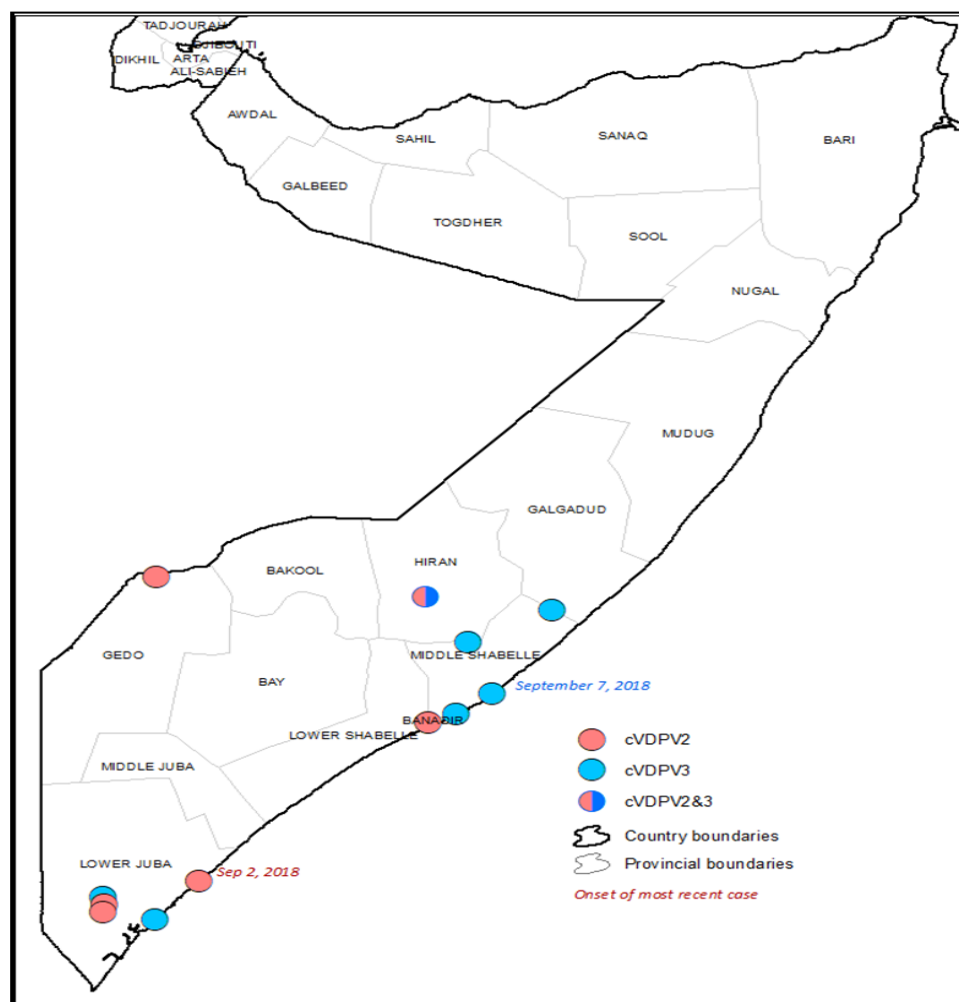
1-Apr-19
Number 1069

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

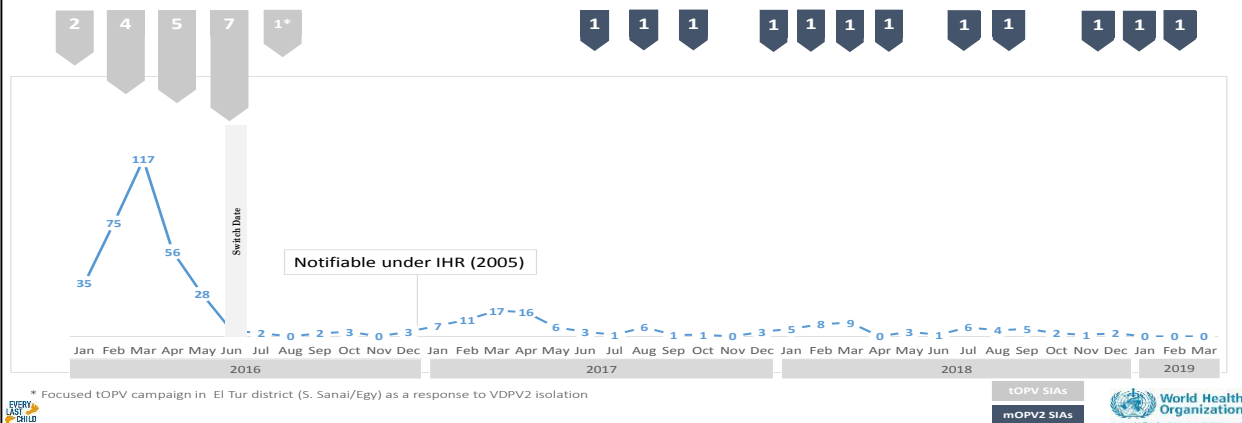
Year	COUNTRY	PROVINCE	DISTRICT	cVDPV2			cVDPV3		
				Count	First Case	Last Case	Count	First Case	Last Case
2018	SOM	LOWER JUBA	Jamaame West	1	02-Sep-18	02-Sep-18			
			KISMAYO	2	29-Jul-18	30-Jul-18	2	24-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD				1	07-Sep-18	07-Sep-18
			MAHADAY WARSHAIKH				1	29-Jun-18	29-Jun-18
		BANADIR	DANYILE	1	10-Jul-18	10-Jul-18			
		HIRAN	BULO BURTU	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
2018 Total				6	11-May-18	2-Sep-18	7	11-May-18	7-Sep-18

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

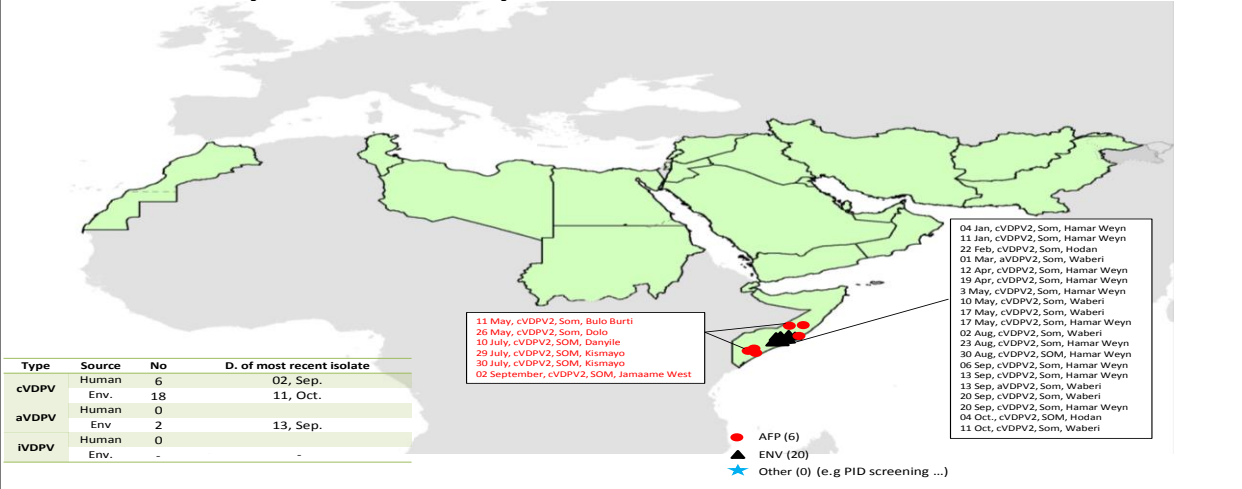
Figure 6: Somalia cVDPV cases by type and district 01/01/2018 - 31/03/2019



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



VDPV2 isolates, EMR countries, 2018



VDPV2 isolates, EMR countries, 2019

