

Highlights of Polio Fax Bulletin No. 1074 for Week 18 2019

I. Poliovirus Transmission

1. Endemic countries (PAKISTAN & AFGHANISTAN): Three new wild poliovirus type-1 (WPV1) cases and 5 new WPV1 positive environmental samples all from Pakistan reported this week.
 - a. Human samples: Three new WPV1 cases reported this week from Pakistan. Total WPV1 cases in 2019 to date are 18 (7 from Afghanistan and 11 from Pakistan). This compares with 10 cases in 2018 in the same period (Afghanistan – 8 and Pakistan – 2).
 - i. Afghanistan: In 2019 to date, seven WPV1 cases are reported, two each from provinces of Kandahar and Uruzgan and three from Hilmand. The most recent reported case has date of onset of paralysis on 3 April 2019.
 - ii. Pakistan: The three new WPV1 cases include:
 - Case No. 1: The case is a 120-month old male child from Lahore district, Punjab province, with date of paralysis onset 2 April 2019. The child has reportedly received a total of 10 oral polio vaccine (OPV) doses out of which three from routine and 7 from supplementary immunization activities (SIAs).
 - Case No. 2: The case is a 13-month old female child from Lahore district, Punjab province, with date of paralysis onset 17 April 2019. The child has reportedly received zero OPV dose.
 - Case No. 3: The case is a 12-month old female child from Bannu district, Khyber Pakhtunkhwa (KP) province, with date of paralysis onset 19 April 2019. The child has reportedly received a total of 7 OPV doses out of which 7 are from SIAs and none from routine.

In 2019 to date, 11 WPV1 cases are reported, four from KP, three each from KP Tribal Districts (KPTD) and Punjab, and one from Sindh. The most recent reported case has date of onset of paralysis on 19 April 2019.

- b. Environmental samples: Five new WPV1 positive environmental samples were reported this week all from Pakistan.
 - i. Afghanistan: In 2019 to date, there are 21 positive environmental samples with most recent positive sample collected on 23 March 2019.
 - ii. Pakistan: The five new WPV1 positive environmental samples reported this week include one from Islamabad province (from CDA district); one from KP province (from Mardan district); two from Punjab province (one each from DG Khan and Multan districts); and one from Sindh province (from Karachi Orangi town). In 2019 to date, there are 107 positive environmental samples with most recent positive sample collected on 18 April 2019.

II. Outbreak response countries

1. SOMALIA:

- No new cVDPV2 or 3 cases or isolates from human or environmental samples reported this week.
 - In 2019: to date, Somalia has reported one cVDPV2 case from Las Anod district from Sool province, with date of onset 15 March 2019 noting that one of its contacts is also identified as cVDPV2.
 - 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.
 - cVDPV2: cVDPV2 was isolated from 19 sewage samples in Mogadishu, the most recent sample collected on 11 October 2018.
 - cVDPV3
 - Human samples: the date of onset of the most recent cVDPV3 case is 7 September 2018.
 - Sewage samples: cVDPV3 has been isolated from 11 sewage samples in Mogadishu and date of specimen collection of the most recent is 23 August 2018.
 - Co-infection cVDPV2 and cVDPV3: The date of onset of the most recent coinfection case is 11 May 2018. In 2018, cVDPV2 and cVDPV3 were both isolated from 1 sewage sample in Mogadishu collected on 19 April 2018.

III. Other countries

TUNISIA:

- An iVDPV3 was reported from Zaghuan district/province with date of onset of paralysis on 10 March 2019. Case will be managed per WHO guidelines in vogue.

IV. Surveillance performance indicators

In 2018, 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, did not report any AFP case since April 2017.
- b. Morocco has a percentage of AFP cases with adequate stool specimens of 78%

In Yemen there are AFP cases pending final classification more than 90 days due to delay shipment of specimens due to insecurity and conflict.

World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

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

Country	Reported AFP cases by week of onset - Week (18/19) / Ending on : 05/05/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	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	W14 07 Apr 19	W15 14 Apr 19	W16 21 Apr 19	W17 28 Apr 19	W18 05 May 19
Afghanistan	3094	3378	1255	70	78	81	73	68	71	75	86	65	52	56	6
Bahrain	18	35	6	0	1	0	1	0	0	1	0	1	0	0	0
Djibouti	4	0	0	0	0	0	0	0	0	0	0				
Egypt	1242	1246	446	20	20	40	31	31	23	43	28	24	13	16	1
Iran	820	896	311	15	27	11	15	14	7	16	25	23	15	4	0
Iraq	699	1023	384	25	32	21	17	17	15	18	26	19	21	13	
Jordan ****	116	115	60	7	1	2	4	5	4	4	6	2	3	2	
Kuwait	69	72	18	1	0	1	3	3	1	0	2	1	0	0	0
Lebanon ****	75	89	35	4	4	2	2	1	1	2	1	5	1	2	
Libya	88	122	28	5	0	1	1	1	1	1	2	1	1	1	
Morocco	143	212	59	4	3	3	9	3	2	5	4	1	0		
Oman	40	28	7	0	0	1	1	0	0	0	0	1	0	2	0
Pakistan	10319	12271	4090	283	263	249	248	257	282	220	205	198	164	17	0
Palestine ****	43	44	15	1	2	1	1	2	2	0	0	1	0	0	
Qatar	18	10	1	0	0	0	0	0	0	0	0	0	0		
Saudi Arabia	276	241	89	5	3	6	9	13	5	6	2	6	1	0	0
Somalia	345	353	122	3	4	7	8	9	14	6	12	6	6	4	0
Sudan	570	578	162	10	12	18	7	12	3	11	15	2	4	2	0
Syria ****	362	362	148	14	14	11	8	6	4	16	6	7	3	4	
Tunisia	67	68	16	4	0	2	3	0	1	0	0	0	0	0	
U.A.E	58	40	16	1	1	0	1	1	1	0	0	3	0	0	0
Yemen	713	730	251	18	15	14	10	16	11	12	16	16	21	5	
Total EMR	19179	21913	7519	490	480	471	452	459	448	436	436	382	305	128	7

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	05/05		Confirmed polio cases by month of onset											
			2018	2019	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	April 2019	May 2019
Afghanistan	14	21	8	7	2	3	2	3	2	1	0	2	1	3	1	
Bahrain	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			
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					
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	8	12	2	11	0	0	1	3	1	0	4	4	2	0	5	
Palestine ****	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			
Somalia	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		
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	0	0	
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Yemen	0	0	0	0												
Total EMR	22	33	10	18	2	3	3	6	3	1	4	6	3	3	6	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 (18/19) / Ending on : 05/05/2019

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	1	3356	0	16.6	1	0	93.8	21	0	1255	7	0	223	1025	0	18.0	19	2	93.9	7	0	05-05-2019
Bahrain	35	0	0	2	33	0	12.1	2	0	97.1	0	0	6	0	0	4	2	0	6.0	0	0	100.0	0	0	05-05-2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	0	0	0	0	0	0.0	0	0		0	0	10-04-2019	
Egypt	1246	0	0	2	1243	1	3.2	2	0	93.2	0	0	446	0	0	111	335	0	3.4	3	0	90.1	0	0	02-05-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	311	0	0	23	288	0	4.7	0	0	97.1	0	0	05-05-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	384	0	0	71	313	0	7.3	1	0	96.4	0	0	04-05-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	60	0	0	5	55	0	6.3	0	0	100.0	0	0	01-05-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	18	0	0	8	10	0	5.9	0	0	88.9	0	0	05-05-2019
Lebanon	89	0	0	1	88	0	4.8	1	0	96.6	0	0	35	0	0	14	21	0	5.5	3	0	85.7	0	0	03-05-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	28	0	0	3	25	0	3.3	0	0	100.0	0	0	04-05-2019
Morocco	212	0	0	1	211	0	2.4	1	0	77.8	0	0	59	0	0	41	18	0	1.9	11	4	67.8	0	0	22-04-2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	7	0	0	3	4	0	2.0	0	0	57.1	0	0	05-05-2019
Pakistan	12271	12	1	5	12253	0	15.7	5	0	87.1	12	0	4090	11	0	429	3650	0	15.3	38	0	90.1	11	0	05-05-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	15	0	0	8	7	0	2.3	0	0	100.0	0	0	29-04-2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	1	0	0	1	0	0	0.8	1	0	0.0	0	0	21-04-2019
Saudi Arabia	241	0	0	0	241	0	3.0	0	0	95.9	0	0	89	0	0	67	22	0	3.2	13	0	87.6	0	0	05-05-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	122	0	0	20	101	1	5.6	0	0	98.4	0	0	05-05-2019
Sudan	578	0	0	0	578	0	3.2	0	0	97.2	0	0	162	0	0	14	148	0	2.6	2	0	98.1	0	0	05-05-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.3	0	0	148	0	0	20	128	0	5.6	0	0	90.5	0	0	04-05-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	16	0	0	1	14	1	1.6	0	0	68.8	0	0	03-05-2019
U.A.E	40	0	0	2	38	0	3.2	2	1	97.5	0	0	16	0	0	6	10	0	3.7	0	0	87.5	0	0	05-05-2019
Yemen	730	0	0	378	352	0	5.2	378	344	91.6	0	0	251	0	0	248	3	0	5.2	77	72	90.4	0	0	04-05-2019
EMR	21913	33	1	392	21472	15	8.7	392	345	89.8	33	0	7519	18	0	1320	6179	2	8.7	168	78	91.5	18	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	448	1	0	26	61	54
BAH	2	0	0	0	0	0	0	0	0	0	0	0
DJI	0	0	0	0	0	0	0	0	0	0	0	0
EGY	495	0	0	11	58	17	174	0	0	6	7	57
IRN	145	0	0	3	6	0	43	0	0	0	2	0
IRQ	811	0	0	22	93	9	177	0	0	3	6	7
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	19	0	0	0	3	3
LIB	1	0	0	0	0	0	2	0	0	0	0	0
MOR	161	0	0	0	9	9	25	0	0	1	0	12
OMA	70	0	0	2	16	0	10	0	0	0	3	0
PAK	4209	3	0	207	882	0	1579	0	0	97	188	71
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	3	372	0	1	6	26	60
SUD	350	0	0	3	24	88	106	0	0	0	5	32
SYR	670	0	0	8	17	0	294	0	0	6	9	26
TUN	1	0	0	0	0	0	6	0	0	0	1	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	1558	0	0	0	0	1558	248	0	0	0	0	249
EMR	10756	7	10	360	1471	1709	3503	1	1	145	311	571

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	1	6-Mar-19
2018 Total		1	6-Mar-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	SANGIN	1	6-Mar-19	6-Mar-19
	2019 Total				1	6-Mar-19
2018	AFG	NANGARHAR	PACHIERAGAM	1	17-Jul-18	17-Jul-18
		URUZGAN	SHAHID-E-HASSA	1	8-Jul-18	8-Jul-18
	PAK	FATA	BAJOUR	1	1-Sep-18	1-Sep-18
		BALUCHISTAN	DUKKI	1	15-Apr-18	15-Apr-18
2018 Total				4	15-Apr-18	01-Sep-18

Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (18/2019) / Ending on : (05/05/2019)

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	1181	102	9	137	848	87		6	71						77				1	11%	100%	100%	98%	05/05/2019	
Bahrain	NPL Oman / CDC																								06/05/2019	
Djibouti	NPL Kenya / CDC																								10/04/2019	
Egypt***	RRL Egypt	430	25		21	343	24	17		12						17			1	1	6%	98%	100%	99%	05/05/2019	
Iran	NPL Iran / CDC	334	6		5	291	32			2						4					2%	100%	100%	99%	04/05/2019	
Iraq	RRL Egypt	385	4		39	304	35	3		2						2					10%	100%	100%	33%	02/05/2019	
Jordan	NPL Jordan / RRL EGYPT	61			8	49	4														15%	100%			05/05/2019	
Kuwait	RRL Kuwait / RIVM	23			1	15	1	6													11%	88%		100%	04/05/2019	
Lebanon	NPL Jordan / RRL EGYPT	31	1		2	27	1									1					8%	100%	100%	0%	05/05/2019	
Libya	RRL Tunisia / RIVM	25			1	23		1													2%	100%		100%	25/04/2019	
Morocco	NPL Morocco / RRL Tunisia	59			1	50	7	1													2%	100%		100%	26/04/2019	
Oman	NPL Oman / CDC	6			1	4	1														17%	100%		100%	06/05/2019	
Pakistan	RRL Pakistan	4042	180	25	441	3165	230	4	11	120						126			2	1	3	9%	100%	100%	98%	05/05/2019
Palestine & UNRWA		15			3	11	1														21%	38%		100%	29/04/2019	
Qatar	NPL Oman / CDC	1				1															0%	100%		100%	06/05/2019	
Saudi Arabia	NPL Saudi Arabia / CDC	92	2			75	5	10								2					1%	95%	100%	100%	28/04/2019	
Somalia	NPL Kenya / CDC	122	5		12	85	9	11		2			1			3					12%	20%		100%	05/05/2019	
Sudan	NPL Sudan / RRL Egypt	159	1		28	120	10									1					15%	73%	100%	50%	05/05/2019	
Syria	NPL Syria / RRL Egypt	144	12		3	118	9	2		5						5					3%	100%	100%	50%	02/05/2019	
Tunisia	RRL Tunisia	16			1	14		1													11%	100%		100%	25/04/2019	
U.A.E	NPL Oman / CDC	15			1	11	3														8%	100%		42%	06/05/2019	
Yemen	NPL Kenya / CDC																								04/05/2019	
Total EMR 2019		7141	338	34	705	5554	458	57	17	214			1		238			3	2	4	9%	98%	100%	98%		
Total EMR 2018		20744	902	90	3513	16217		18	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	45
	PENDING					20
	WILD	20	2	42	83	21
AFG Total		149	185	316	336	86
EGY	NEGATIVE	495	528	522	539	159
	PENDING					1
	VDPV2	3	1			
EGY Total		498	529	522	540	184
IRN	NEGATIVE				6	54
	PENDING				6	54
IRN Total					12	108
JOR	NEGATIVE		2	32	36	8
	PENDING					5
JOR Total			2	32	36	13
LEB	NEGATIVE		4	27	45	9
	PENDING					7
LEB Total			4	27	45	16
PAK	NEGATIVE	347	462	523	534	105
	PENDING					31
	WILD	79	59	105	139	107
	WILD & VDPV2	5	3	1		
	VDPV2	8	5	4		
PAK Total		439	529	633	673	243
SOM	NEGATIVE				34	181
	PENDING					4
	VDPV2			2	20	1
	VDPV3					12
SOM Total				36	213	20
SYR	NEGATIVE			4	102	42
	PENDING					11
SYR Total				4	102	53
Grand Total		1086	1249	1576	1999	629

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-Jun	25-Jun	
				KABUL	3	26-Feb	26-Jun	
				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
	PISHIN	1	2-Dec				2-Dec	
	QUETTA	13	13-Feb				20-Dec	
	KABDULAH	8	1-Jan				15-Dec	
	ISLAMABAD	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
		KHIGQBAL	1				13-Sep	13-Sep
		KHIKORANGI	1				14-Dec	14-Dec
	FATA	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				
BANOCHISTAN		BAJOUR	5	19-May	25-Oct			
		WAZIR-S	2	26-Nov	27-Dec			
		KHYBER PAKHTOON	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-Feb	4-Oct		
	VDPV3	BANADIR	WABERI	7	1-Mar	11-Oct		
			HAMAR WEYN	6	11-Feb	5-Apr		
			HODAN	1	1-Feb	1-Feb		
SOM Total	32	4-Jan	11-Oct					
2018 Total				254	1-Jan	27-Dec		
2019	AFG	WILD	HILMAND	LASHKARGAH	2	23-Feb	20-Mar	
				NAHR-E-SARAJ	3	6-Jan	26-Jan	
				KANDAHAR	11	6-Jan	23-Mar	
				NANGARHAR	5	26-Jan	23-Mar	
	AFG Total	21	6-Jan	23-Mar				
	PAK	WILD	BALOCHISTAN	KHUZDAR	1	20-Mar	20-Mar	
				LORALAI	1	17-Mar	17-Mar	
				PISHIN	1	2-Feb	2-Feb	
				QUETTA	10	1-Jan	1-Apr	
				KABDULAH	7	1-Jan	1-Apr	
				ISLAMABAD	1	12-Apr	12-Apr	
				PUNJAB	FAISALABAD	2	3-Jan	6-Feb
					LAHORE	17	5-Jan	12-Apr
					MULTAN	2	18-Feb	18-Apr
				SINDH	RAWALPINDI	5	10-Jan	11-Apr
					DGKHAN	1	8-Apr	8-Apr
					HYDERABAD	4	24-Jan	8-Apr
					JACOBABAD	2	24-Jan	12-Feb
					KAMBAR	1	7-Mar	7-Mar
					KHIBALDIA	3	2-Jan	1-Apr
					KHIGADAP	8	8-Jan	10-Apr
					KHIGQBAL	2	11-Apr	15-Apr
					KHIKORANGI	3	18-Feb	12-Apr
					KHILANDHI	2	19-Feb	18-Mar
				FATA	KHISITE	4	3-Jan	2-Apr
					SUKKUR	4	23-Jan	5-Apr
					KHILIAQAT	3	7-Feb	3-Apr
KHISADDAR					4	7-Jan	5-Apr	
BANOCHISTAN	WAZIR-S	3	22-Jan		21-Mar			
	KURRAM	1	15-Jan		15-Jan			
	KHYBER PAKHTOON	BANNU	3		28-Jan	28-Mar		
DIKHAN		3	8-Jan		9-Apr			
KOHAT		1	27-Feb		27-Feb			
MARDAN	2	16-Mar	15-Apr					
PESHAWAR	6	11-Jan	18-Mar					
PAK Total	107	1-Jan	18-Apr					
SOM	VDPV2	BANADIR	HODAN	1	3-Feb	3-Feb		
SOM Total	1	3-Feb	3-Feb					
2019 Total				129	1-Jan	18-Apr		

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 05/05/2019

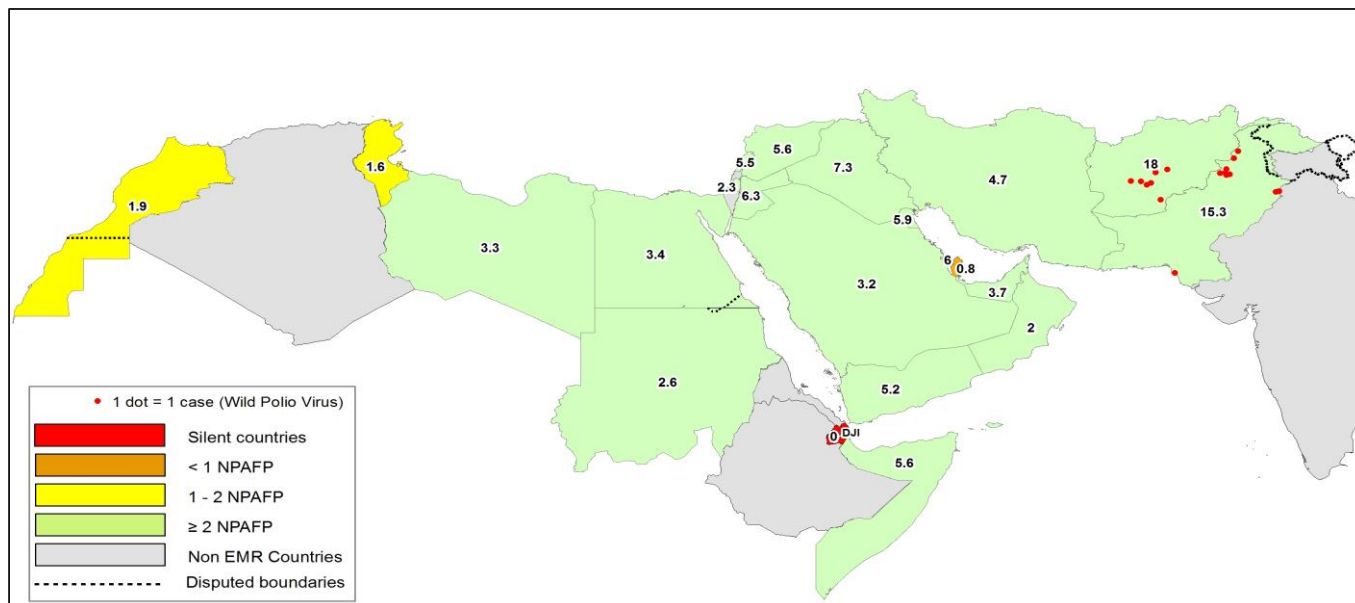


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 05/05/2019

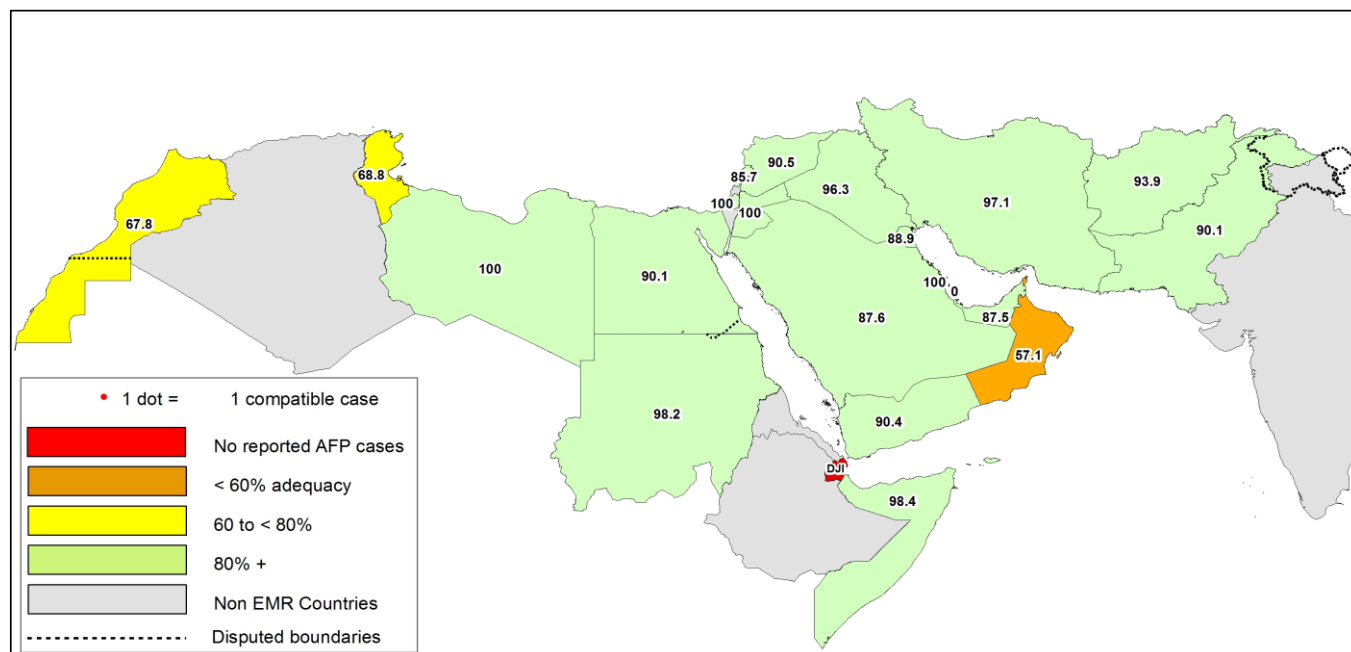


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019

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	7	4-Jan-19	3-Apr-19
	PAK	11	15-Jan-19	19-Apr-19
2019 Total		18	4-Jan-19	19-Apr-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 - 05/05/2019

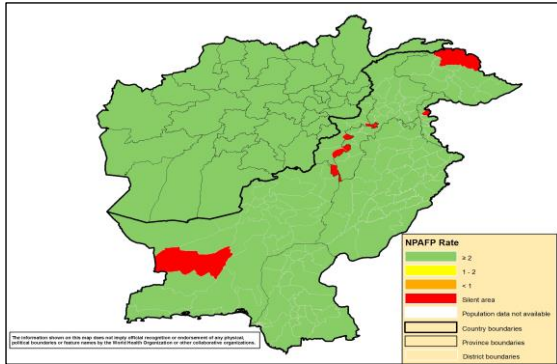


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 05/05/2019

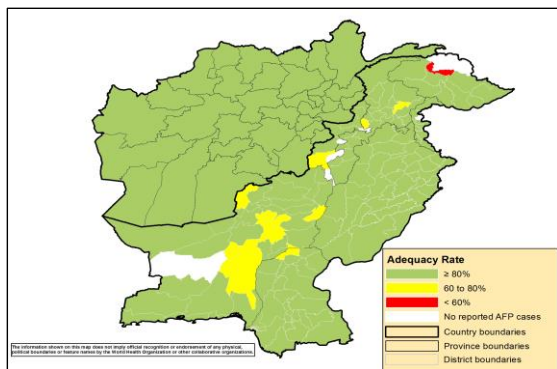
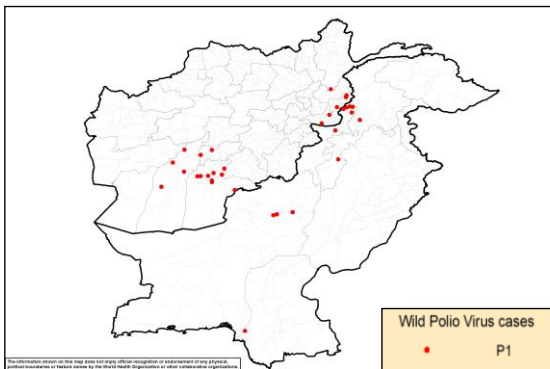
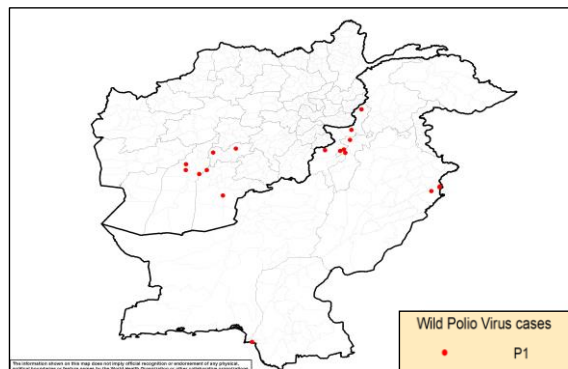


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2019 - 05/05/2019



World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

Week 18, ending 5 May 2019

6-May-19

Number 1074

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	HILMAND	NAWZAD	1	3-Apr-19	3-Apr-19
		WASHER	1	23-Mar-19	23-Mar-19
		SANGIN	1	6-Mar-19	6-Mar-19
	URUZGAN	CHORA	1	20-Mar-19	20-Mar-19
		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			7	4-Jan-19	3-Apr-19

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

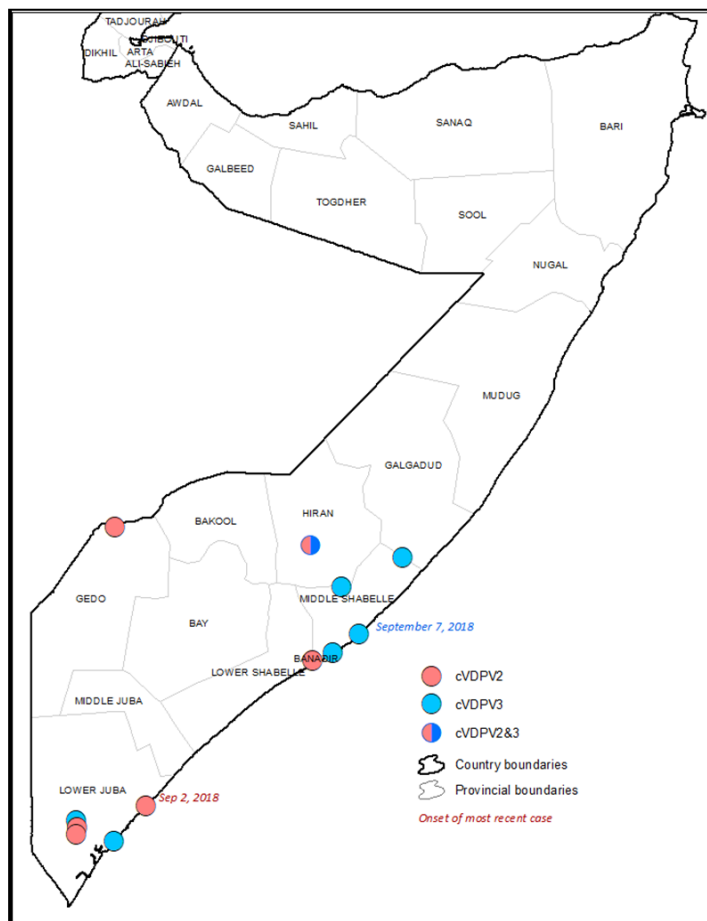
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	FATA	BAJOUR	5	01-09-18	31-12-18
		KHYBER	1	25-09-18	25-09-18
	KHYBER PAKHTOON	LAKKIMRWT	1	16-12-18	16-12-18
		CHARSADA	1	01-08-18	01-08-18
	SINDH	KHIGADAP	1	22-09-18	22-09-18
	BALUCHISTAN	DUKKI	3	08-03-18	18-05-18
2018 Total			12	8-Mar-18	31-Dec-18
2019	KHYBER PAKHTOON	BANNU	3	15-01-19	19-04-19
		HANGU	1	20-01-19	20-01-19
	PUNJAB	LAHORE	3	20-01-19	17-04-19
	FATA	WAZIR-N	1	04-04-19	04-04-19
		KHYBER	1	14-02-19	14-02-19
		BAJOUR	1	18-01-19	18-01-19
	SINDH	KHILAYARI	1	25-02-19	25-02-19
2019 Total			11	15-Jan-19	19-Apr-19

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

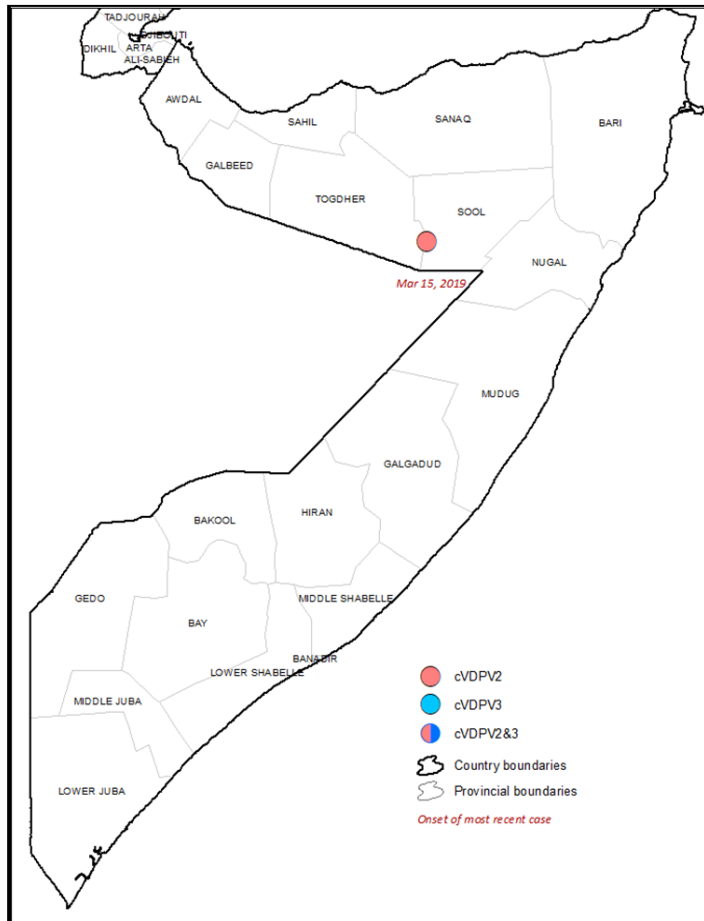
		Province	District	cVDPV2		cVDPV3			
SOM	2019	SOOL	Las Anod	1	15-Mar-19	15-Mar-19			
		Total 2019			1	15-Mar-19	15-Mar-19		
	2018	LOWER JUBA	Jamaame West KISMAYO	1	02-Sep-18	02-Sep-18			
				2	29-Jul-18	30-Jul-18	2	24-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD MAHADAY WARSHEIKH				1	07-Sep-18	07-Sep-18
							1	29-Jun-18	29-Jun-18
					2	16-May-18	23-May-18		
		BANADIR	DANYILE	1	10-Jul-18	10-Jul-18			
	HIRAN	BULO BURTII	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

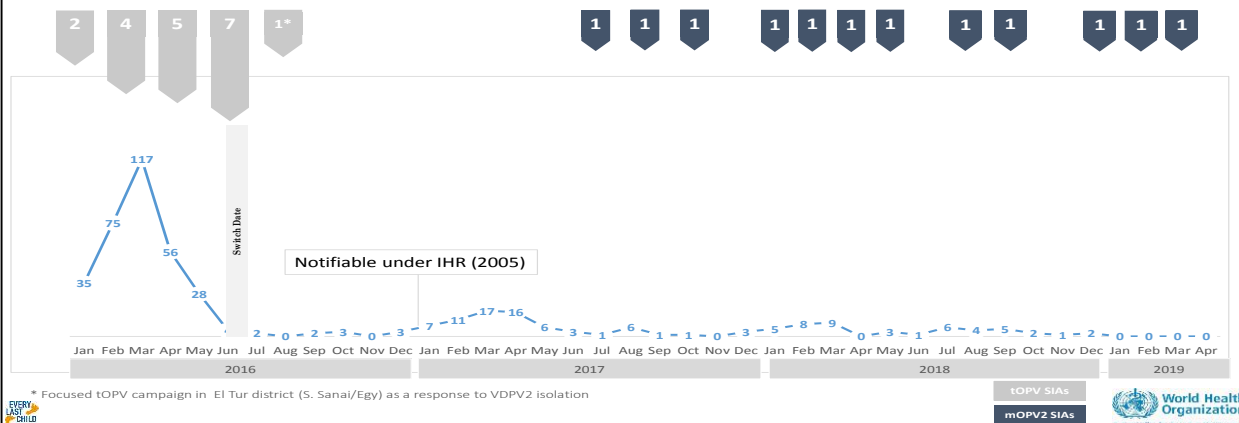
6(a) 01/01/2018 - 31/12/2018



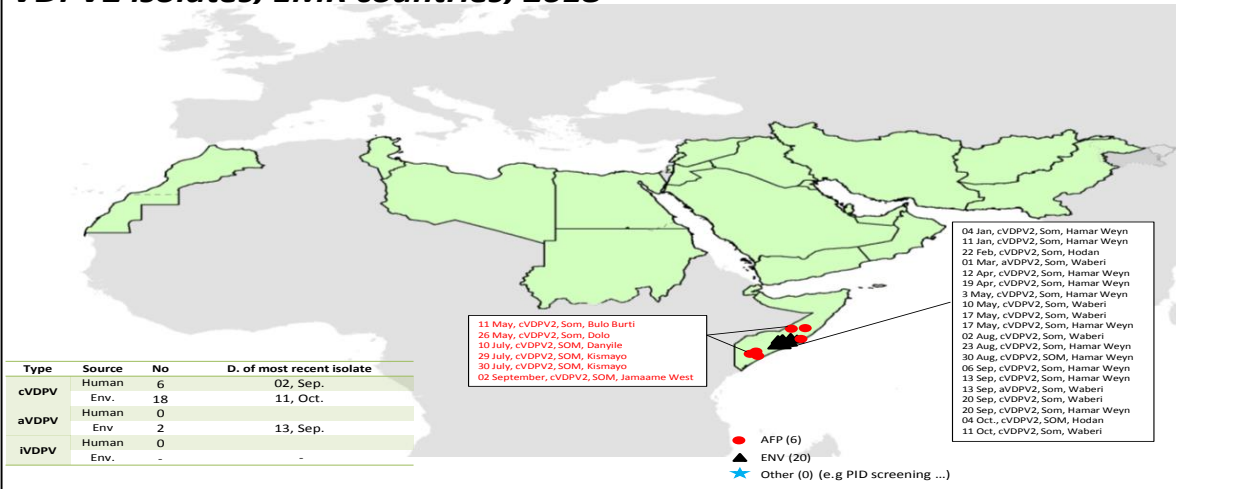
6(b) 01/01/2019 - 05/05/2019



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



VDPV2 isolates, EMR countries, 2018



VDPV2 isolates, EMR countries, 2019

