Highlights of Polio Fax Bulletin No. 1109 for Week 01_2020

I.   **Wild Poliovirus Transmission**
    Endemic countries (PAKISTAN & AFGHANISTAN): Following was reported this week:
    - 13 new wild poliovirus type-1 (WPV1) cases, 2 from Afghanistan and 11 from Pakistan
    - 14 new positive WPV1 environmental samples, 2 from Afghanistan and 12 from Pakistan

    a. *Human samples*: 13 new WPV1 cases reported this week. Total WPV1 cases in 2019 to date are 156 (28 from Afghanistan and 128 from Pakistan). This compares with 33 cases in 2018 in the same period (Afghanistan – 21 and Pakistan – 12).

    - Afghanistan: Two new WPV1 cases reported this week and details are as follows:
      Case (1): The case is from Bakwa district, Farah province, with date of onset 25 November 2019. The case is a 25-month old female child. The child received 7+ OPV doses from supplementary immunization activities (SIAs) and none from routine.
      Case (2): The case is from Shahwalikot district, Kandahar province, with date of onset 7 December 2019. The case is an 18-month old male child. The child did not receive any OPV doses neither from routine nor from SIAs.
      In 2019 to date, 28 WPV1 cases are reported. They include 9 cases from Uruzgan province, 5 cases from Hilmand province, 6 from Kandahar province, 2 each from Paktika and Farah provinces and 1 each from Kunar, Nangarhar, Badghis and Baghlan provinces. The most recent case has onset of paralysis on 7 December 2019.

    - Pakistan: Eleven new WPV1 cases reported this week and details are as follows:
      Case (1): The case is from Kambar district, Sindh province, with date of onset 2 November 2019. The case is a 24-month old female child. The child reportedly received 10 OPV doses out of which 3 doses were from routine and 7 doses from SIAs. The index case was identified as wild by a positive contact.
      Case (2): The case is from Bannu district, Khyber Pakhtunkhwa (KP) province, with date of onset 13 November 2019. The case is a 26-month old male child. The child reportedly received 7+ OPV doses all from SIAs and none from routine. The index case was identified as wild by a positive contact.
      Case (3): The case is from Killa Abdullah district, Balochistan province, with date of onset 19 November 2019. The case is a 70-month old male child. The child reportedly received 7 OPV doses all from SIAs and none from routine. The index case was identified as wild by a positive contact.
      Case (4): The case is from Mirpurkhas district, Sindh province, with date of onset 1 December 2019. The case is a 48-month old female child. The child reportedly received 7 OPV doses all from SIAs and none from routine. The index case was identified as wild by 2 positive contacts.
      Case (5): The case is from Dadu district, Sindh province, with date of onset 6 December 2019. The case is a 5-month old female child. The child received only 1 OPV dose from SIAs and none from routine.
      Case (6): The case is from DI Khan district, KP province, with date of onset 14 December 2019. The case is a 24-month old female child. The child reportedly received 7 OPV doses from SIAs and none from routine.
      Cases (7 & 8): The cases are from Tank district, KP province, with date of onset 15 and 18 December 2019 respectively. The cases are 30 and 5 month old female and male children. Both children did not receive any OPV doses neither from routine nor from SIAs due to refusal and they are sister and brother.

Case (9): The case is from Jaffarabad district, Balochistan province, with date of onset 18 December 2019. The case is a 16-month old male child. The child reportedly received a total of 9 OPV doses out of which 2 doses were from routine and 7 doses from SIAs.

Case (10): The case is from Mohmand district, KP Tribal Districts, with date of onset 20 December 2019. The case is a 6-month old male child. The child reportedly received a total 5 OPV doses out of which 3 doses were from routine and 2 from SIAs.

Case (11): The case is from Lakki Marwat district, KP province, with date of onset 22 December 2019. The case is an 18-month old male child. The child reportedly received 2 OPV doses from routine and 7+ doses from SIAs.

In 2019 to date, 128 WPV1 cases are reported from Pakistan. They include 77 from Khyber Pakhtunkhwa (KP) province, 12 from KP Tribal Districts (KPTD), 22 from Sindh province, 11 from Balochistan province and 6 from Punjab province. The most recent case has onset of paralysis on 22 December 2019.

b. *Environmental samples*: Nine new WPV1 positive environmental samples reported this week - all from Pakistan:
- Afghanistan: In 2019 to date, there are 52 wild positive environmental samples with most recent positive sample collected on 11 December 2019.
- Pakistan: In 2019 to date, there are 368 WPV1 positive environmental samples including 7 combined (WPV1 and cVDPV2) with most recent positive sample collected on 18 December 2019.

II. Circulating Vaccine Derived Polioviruses (cVDPVs)

1. PAKISTAN: No new cVDPV2 isolates from human or environmental samples were reported this week.
   In 2019 to date, 12 cVDPV2 cases reported (onset of the most recent case is 22nd November). Cases include four from Diamir district of Gilgit-Baltistan (GB) province; two each from Torghar and Kohistan Lower, one each from Charsadda, Kohistan Upper districts in KP; one each from Islamabad and Gujranwala district, Punjab province.
   Environment: Twenty five positive environmental samples for cVDPV2, the recent most sample collected on 4 December 2019 (including seven combined WPV1 and cVDPV2).
   In addition, cVDPV2 has been isolated form 16 healthy children and 8 contacts.

2. 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.
   aVDPV2 was isolated from an environmental sample collected on 3 February 2019.
   2 cVDPVs were isolated from environmental samples collected on 10 November 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.

III. Surveillance performance indicators

In 2019, 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.
- Djibouti has a non-polio AFP rate of 1.4
- Tunisia has a percentage of AFP cases with adequate stool specimens of 75.3%
- In Yemen there are AFP cases pending final classification more than 90 days due to delayed lab results because of delay in shipment of specimens to reference polio laboratories and high workload in the labs.

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

Country	Total AFP 2018	Total AFP 2019	Total AFP to date, 2020	W42 20 Oct 19	W43 27 Oct 19	W44 03 Nov 19	W45 10 Nov 19	W46 17 Nov 19	W47 24 Nov 19	W48 01 Dec 19	W49 08 Dec 19	W50 15 Dec 19	W51 22 Dec 19	W52 29 Dec 19	W01 05 Jan 20
Afghanistan	3378	3738	2	68	73	68	64	62	54	79	76	63	65	47	8
Bahrain	35	17	0	1	0	2	0	1	0	0	1	0	0	0	0
Djibouti	0	5	0	0	0	1	0	0	1	0	0	0	0		
Egypt	1246	1341	3	36	26	27	34	39	34	28	31	26	18	11	4
Iran	896	1039	0	16	26	24	31	43	33	25	24	18	10	7	
Iraq	1023	1149	0	23	24	29	28	26	36	34	31	19	24	8	
Jordan ****	115	113	0	1	2	4	0	1	2	0	4	1	1	1	
Kuwait	72	46	0	1	0	1	0	1	1	1	3	1	0	0	0
Lebanon ****	89	86	0	0	1	1	2	2	1	1	4	1	3	4	
Libya	122	105	0	4	1	2	1	1	2	1	3	4	3	3	
Morocco	212	247	0	5	10	3	4	4	9	10	13	6	4	2	
Oman	28	28	0	1	1	0	1	0	1	1	3	1	0	0	0
Pakistan	12276	14662	0	279	314	300	301	317	330	309	330	329	227	56	1
Palestine ****	44	61	0	0	2	1	2	0	2	3	1	0	2	0	0
Qatar	10	9	0	0	0	0	1	0	0	0	0	0	2	0	0
Saudi Arabia	242	228	0	6	5	3	7	2	5	3	5	3	1	0	
Somalia	353	359	0	5	6	6	4	7	5	3	11	7	4	4	0
Sudan	579	583	0	19	21	20	11	11	14	13	6	13	3		
Syria ****	362	371	0	4	6	6	6	3	13	8	11	16	8	1	
Tunisia	68	77	0	4	1	0	1	1	2	2	0	0	0		
U.A.E	40	47	0	0	1	3	2	2	1	3	1	1	0	0	0
Yemen	730	758	0	8	10	20	16	17	16	12	25	19	8	8	
Total EMR	*21920*	*25069*	*5*	*481*	*530*	*521*	*516*	*540*	*562*	*536*	*583*	*528*	*383*	*152*	*13*

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2018	Total year 2019	05/01 2019	05/01 2020	February 2019	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019	January 2020
Afghanistan	21	28	1	0	1	3	1	5	1	2	2	3	1	6	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				
Egypt	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			
Iraq	0	0	0	0	0	0	0	0	0	0	0	0				
Jordan ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0		0	0	
Lebanon ****	0	0	0	0	0	0	0	0	0	0	0	0	0			
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Morocco	0	0	0	0					0			0				
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	12	128	0	0	2	0	11	11	16	12	14	5	16	23	14	
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				
Somalia	0	0	0	0	0	0	0	0	0		0	0	0			
Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0			
Syria ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Tunisia	0	0	0	0	0	0	0	0	0	0	0	0	0			
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0			
Yemen	0	0	0	0		0										
Total EMR	*33*	*156*	*1*	*0*	*3*	*3*	*12*	*16*	*17*	*14*	*16*	*8*	*17*	*29*	*15*	*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 2019 & 2020 up to Week (01/20) / Ending on : 05/01/2020)

COUNTRY	Total AFP cases onset 2019	Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV	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 2020	Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV	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	Latest line List Date
Afghanistan	3738	28	1	194	3515	0	18.3	25	0	94.1	28	0	2	0	0	2	0	0	0.7	0	0	100.0	0	0	05/01/2020
Bahrain	17	0	0	6	11	0	5.9	1	1	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2020
Djibouti	5	0	0	5	0	0	1.4	3	2	80.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	23/12/2019
Egypt	1341	0	0	87	1254	0	3.5	0	0	92.1	0	0	3	0	0	3	0	0	0.6	0	0	0.0	0	0	02/01/2020
Iran	1039	0	0	34	1004	1	5.1	1	0	96.9	0	0	0	0	0	0	0	0	0.0	0	0		0	0	04/01/2020
Iraq	1149	0	0	78	1071	0	7.5	8	0	94.2	0	0	0	0	0	0	0	0	0.0	0	0		0	0	03/01/2020
Jordan	113	0	0	3	110	0	4.0	0	0	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	02/01/2020
Kuwait	46	0	0	2	44	0	5.2	0	0	89.1	0	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2020
Lebanon	86	0	0	22	64	0	4.6	8	0	84.9	0	0	0	0	0	0	0	0	0.0	0	0		0	0	03/01/2020
Libya	105	0	0	12	93	0	4.2	0	0	99.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	04/01/2020
Morocco	247	0	0	63	184	0	2.8	36	5	81.4	0	0	0	0	0	0	0	0	0.0	0	0		0	0	03/01/2020
Oman	28	0	0	2	26	0	3.1	0	0	89.3	0	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2020
Pakistan	14662	128	2	868	13652	12	18.6	158	0	87.4	128	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2020
Palestine	61	0	0	13	48	0	3.2	0	0	98.4	0	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2020
Qatar	9	0	0	4	5	0	2.5	1	0	88.9	0	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2020
Saudi Arabia	228	0	0	42	186	0	2.8	2	1	93.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	30/04/2019
Somalia	359	0	0	19	337	3	5.6	3	3	95.5	0	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2020
Sudan	583	0	0	19	564	0	3.2	0	0	97.3	0	0	0	0	0	0	0	0	0.0	0	0		0	0	26/12/2019
Syria	371	0	0	33	338	0	4.8	1	0	88.4	0	0	0	0	0	0	0	0	0.0	0	0		0	0	04/01/2020
Tunisia	77	0	0	6	70	1	2.8	1	1	75.3	0	0	0	0	0	0	0	0	0.0	0	0		0	0	13/12/2019
U.A.E	47	0	0	25	22	0	3.7	10	1	89.4	0	0	0	0	0	0	0	0	0.0	0	0		0	0	05/01/2020
Yemen	758	0	0	330	428	0	5.4	162	138	89.3	0	0	0	0	0	0	0	0	0.0	0	0		0	0	04/01/2020
EMR	25069	156	3	1867	23026	17	9.9	420	152	89.9	156	0	5	0	0	5	0	0	0.1	0	0	40.0	0	0	
2018	21920	33	1	85	21786	15	8.7	85	80	89.8	33	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 seperately as wild isolates

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COUNTRY	# OF CONTACTS	2019 LAB RESULTS					# OF CONTACTS	2020 LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1134	8	0	48	199	28	0	0	0	0	0	0
BAH	0	0	0	0	0	0	0	0	0	0	0	0
DJI	1	0	0	0	0	1	0	0	0	0	0	0
EGY	498	0	0	8	54	29	0	0	0	0	0	0
IRN	213	0	0	4	7	0	0	0	0	0	0	0
IRQ	603	0	0	9	36	42	0	0	0	0	0	0
JOR	0	0	0	0	0	0	0	0	0	0	0	0
KUW	0	0	0	0	0	0	0	0	0	0	0	0
LEB	24	0	0	3	2	0	0	0	0	0	0	0
LIB	6	0	0	0	3	0	0	0	0	0	0	0
MOR	76	0	0	3	1	26	0	0	0	0	0	0
OMA	74	0	0	2	26	2	0	0	0	0	0	0
PAK	5416	23	7	214	925	178	0	0	0	0	0	0
PAL	0	0	0	0	0	0	0	0	0	0	0	0
QAT	0	0	0	0	0	0	0	0	0	0	0	0
SAA	0	0	0	0	0	0	0	0	0	0	0	0
SOM	1077	0	1	45	129	56	6	0	0	0	0	6
SUD	388	0	0	0	31	82	0	0	0	0	0	0
SYR	808	0	0	12	36	61	0	0	0	0	0	0
TUN	26	0	0	0	2	0	0	0	0	0	0	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	413	0	0	0	0	212	0	0	0	0	0	0
EMR	**10757**	**31**	**8**	**345**	**1452**	**719**	**6**	**0**	**0**	**0**	**0**	**6**

Table 4 (B): Most recent wild contacts in EMRO, 2019-2020

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2019	Afghanistan	8	17/Aug/19
	Pakistan	23	26/Dec/19
2019 Total		**31**	**26/Dec/19**

Table 4 (C): Number of distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2019-2020

YEAR	COUNTRY	PROVINCE	DISTRICT	COUNT	First case	Last case
2019	AFG	URUZGAN	TIRINKOT	1	2-Aug-19	2-Aug-19
		HILMAND	MUSAQALAH	1	05-Jun-19	05-Jun-19
			SANGIN	1	06-Mar-19	06-Mar-19
	PAK	SINDH	KHIORANGI	1	28-Aug-19	28-Aug-19
			SUJAWAL	1	25-Sep-19	25-Sep-19
			JAMSHORO	1	09-Oct-19	09-Oct-19
			T. ALLAHYAR	1	10-Nov-19	10-Nov-19
			KAMBAR	1	02-Nov-19	02-Nov-19
			MIRPURKHAS	1	01-Dec-19	01-Dec-19
		BALOCHSITAN	MASTUNG	1	18-Nov-19	18-Nov-19
			KILLABDULLAH	2	2-Jul-19	19-Nov-19
		KHYBER PAKHTUNKHWA (KP)	BANNU	1	13-Nov-19	13-Nov-19
			SWABI	1	17-Nov-19	17-Nov-19
			TANK	1	30-Oct-19	30-Oct-19
			LAKKIMRWAT	3	27-May-19	04-Oct-19
			TORGHAR	1	25-May-19	25-May19
2019 Total				**19**	**06-Mar-19**	**01-Dec-19**

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Table 5: **Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (52/2019) / Ending on : (31/12/2019)**

Country	Polio laboratories ITD / Nucleotide Sequencing (Nucleotide Sequencing performed by EGY, PAK, TUN, CDC and RIVM laboratories)	AFP cases with specimens	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**	Latest report Date
			L20B+	L20B+NPEV			received <=14 days	received >14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Afghanistan	RRL Pakistan	3675	289	28	573	2689	97		25	209						201		1	2	1	5	14%	96%	100%	98%	05/01/2020
Bahrain	NPL Oman / CDC	11			2	9																14%	100%		0%	30/12/2019
Djibouti	NPL Kenya / CDC	5						5																		23/12/2019
Egypt***	RRL Egypt	1309	35	8	129	1105	25	7		16						21	1		11	3		9%	96%	100%	99%	02/01/2020
Iran	NPL Iran / CDC	1034	13		22	978	10	11		3	1					10						3%	100%	100%	99%	28/12/2019
Iraq	RRL Egypt	1219	16		160	982	37	26		12						13						12%	99%	80%	97%	02/01/2020
Jordan	NPL Jordan / RRL EGYPT	113			16	95	2															15%	99%		100%	05/01/2020
Kuwait	RRL Kuwait / RIVM	51			2	49																6%	92%		100%	06/01/2020
Lebanon	NPL Jordan / RRL EGYPT	79	1		10	64	1	3								1						13%	100%	100%	0%	05/01/2020
Libya	RRL Tunisia / RIVM	103			6	95	2															6%	99%		99%	04/01/2020
Morocco	NPL Morocco / RRL Tunisia	228	2		3	215	8									2						1%	100%	100%	95%	03/01/2020
Oman	NPL Oman / CDC	29			4	23	1	1														21%	100%		100%	30/12/2019
Pakistan	RRL Pakistan	14239	579	50	2324	10892	392	6	112	273			24	11		284			5	1	42	14%	97%	99%	97%	05/01/2020
Palestine & UNRWA		61			7	49	1	4														13%	33%		100%	05/01/2020
Qatar	NPL Oman / CDC	7				7																0%	100%		100%	30/12/2019
Saudi Arabia	NPL Saudi Arabia / CDC	237	4		2	215	14	2								4						1%	95%	100%	100%	05/01/2020
Somalia	NPL Kenya / CDC	359	25		70	245	7	12		7			12	3		9						21%	14%		98%	29/12/2019
Sudan	NPL Sudan / RRL Egypt	597	8		81	490	17	1		5						2				1		12%	76%	100%	63%	05/01/2020
Syria	NPL Syria / RRL Egypt	360	14		16	307	14	9		5						10						6%	100%	100%	53%	04/01/2020
Tunisia	RRL Tunisia	69			5	63	1															10%	100%		99%	04/01/2020
U.A.E	NPL Oman / CDC	38			4	34																9%	100%		53%	30/12/2019
Yemen	NPL Kenya / CDC	174	3		11	42		118														20%	4%		0%	04/01/2020
Total EMR 2019		23997	989	86	3447	18648	629	205	137	530	1		36	14		557	1	1	18	6	47	13%	95%	99%	97%	
Total EMR 2018		20791	903	90	3514	16236		44	29	590	3		6	6 #		628	7 #		22	2	3	14%	92%	99%	97%	

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

** This indicator reflects surveillance and laboratory activities

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

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Table 6: Environmental isolate by year and type

Count of IDCODE		YYYY				
COUNTRY	LAB RESULTS	2016	2017	2018	2019	2020
⊟ AFG	Wild	2	42	83	52	
	EV/SL	177	265	248	183	
	Negative	6	9	5	3	
	Pending				21	
AFG Total		185	316	336	259	
⊟ EGY	EV/SL	492	481	508	651	
	Negative	36	41	32	35	
	Pending				14	2
EGY Total		528	522	540	700	2
⊟ IRN	Wild				3	
	EV/SL		5	51	62	
	Negative		1	3	3	
	Pending				3	
IRN Total			6	54	71	
⊟ JOR	EV/SL	2	29	36	33	
	Negative		2			
	Pending				3	
JOR Total		2	31	36	36	
⊟ KUW	EV/SL			3	3	
	Pending				8	
KUW Total				3	11	
⊟ LEB	EV/SL	2	26	44	37	
	Negative	2	1	1	3	
	Pending				7	
LEB Total		4	27	45	47	
⊟ PAK	Wild	60	106	139	361	
	Wild+cVDPV2	2			7	
	cVDPV2	2			18	
	aVDPV2	3	4		1	
	EV/SL	456	523	531	395	
	Negative	6		3	4	
	Pending				44	4
PAK Total		529	633	673	830	4
⊟ SOM	cVDPV2		2	19	2	
	cVDPV3			11		
	aVDPV2			2	1	
	EV/SL		20	43	25	
	Negative		14	138	27	
	Pending				8	4
SOM Total			36	213	63	4
⊟ SUD	EV/SL			15	37	
	Negative				1	
	Pending				22	
SUD Total				15	60	
⊟ SYR	EV/SL		4	81	146	
	Negative			21	29	
	Pending				9	
SYR Total			4	102	184	
TOTAL		1248	1575	2017	2261	10

Table 7: Environmental Wild/VDPV isolate by site 2019-2020

YEAR	COUNTRY	LAB RESULTS	PROVINCE	Count	First date	Last date
⊟ 2019	⊟ AFG	⊟ Wild	HILMAND	18	6/Jan/19	25/Nov/19
			KANDAHAR	23	6/Jan/19	24/Sep/19
			NANGARHAR	11	26/Jan/19	11/Dec/19
	AFG Total			52	6/Jan/19	11/Dec/19
	⊟ IRN	⊟ Wild	S & B	3	22/Apr/19	20/May/19
	IRN Total			3	22/Apr/19	20/May/19
	⊟ PAK	⊟ Wild	BALOCHISTAN	68	1/Jan/19	15/Dec/19
			FATA	8	15/Jan/19	4/Dec/19
			ISLAMABAD	3	12/Apr/19	21/Aug/19
			KPAKHTUNKHWA	30	8/Jan/19	7/Dec/19
			PUNJAB	97	5/Jan/19	17/Dec/19
			SINDH	155	2/Jan/19	18/Dec/19
		⊟ Wild+cVDPV2	PUNJAB	4	6/Aug/19	15/Nov/19
			SINDH	3	7/Oct/19	7/Nov/19
		⊟ cVDPV2	GBALTISTAN	5	24/Aug/19	6/Nov/19
			ISLAMABAD	1	12/Nov/19	12/Nov/19
			KPAKHTUNKHWA	6	9/Oct/19	27/Nov/19
			PUNJAB	6	21/Aug/19	4/Dec/19
		⊟ aVDPV2	PUNJAB	1	11/Apr/19	11/Apr/19
	PAK Total			387	1/Jan/19	18/Dec/19
	⊟ SOM	⊟ cVDPV2	BANADIR	2	10/Nov/19	10/Nov/19
		⊟ aVDPV2	BANADIR	1	3/Feb/19	3/Feb/19
	SOM Total			3	3/Feb/19	10/Nov/19
2019 Total				445	1/Jan/19	18/Dec/19
TOTAL				445	1/Jan/19	18/Dec/19

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 31/12/2019
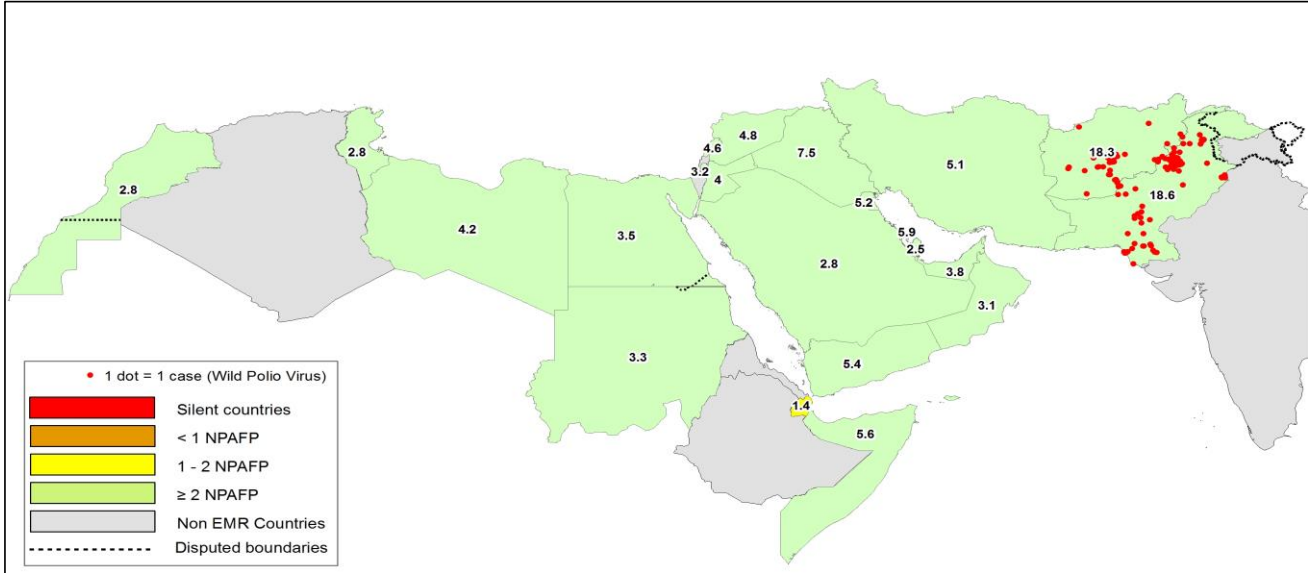
Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 31/12/2019
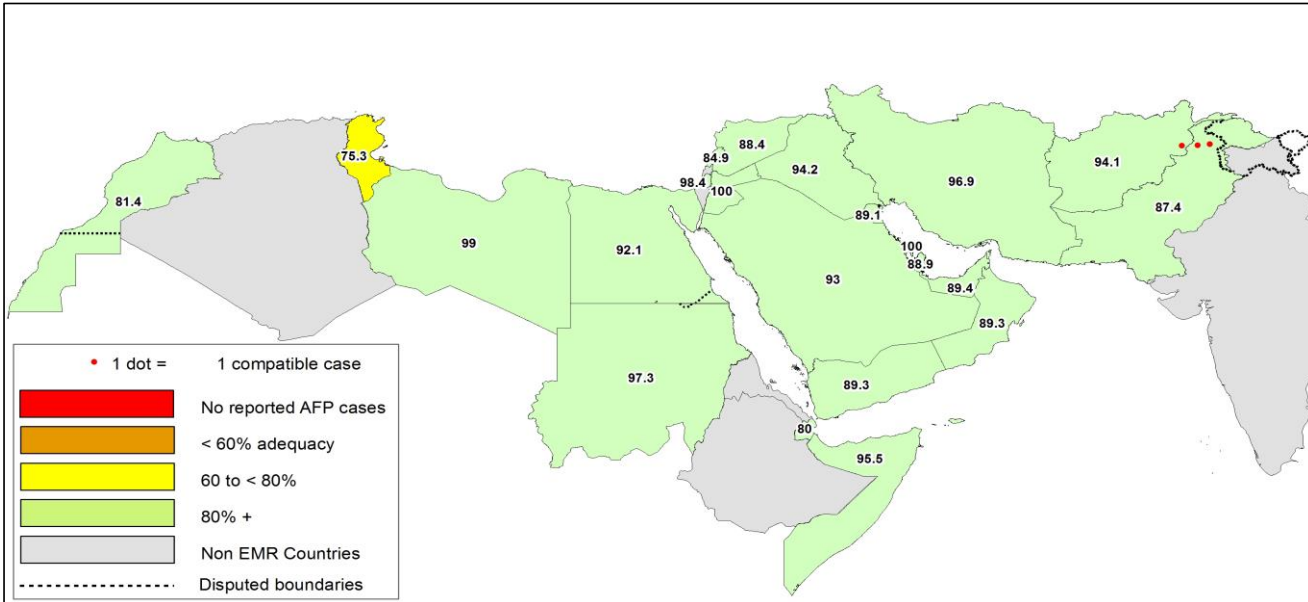

**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2019 - 2020**

Year	COUNTRY	Count	First Case	Last Case
2019	AFG	28	4-Jan-19	7-Dec-19
	PAK	128	15-Jan-19	22-Dec-19
2019 Total		156	4-Jan-19	22-Dec-19

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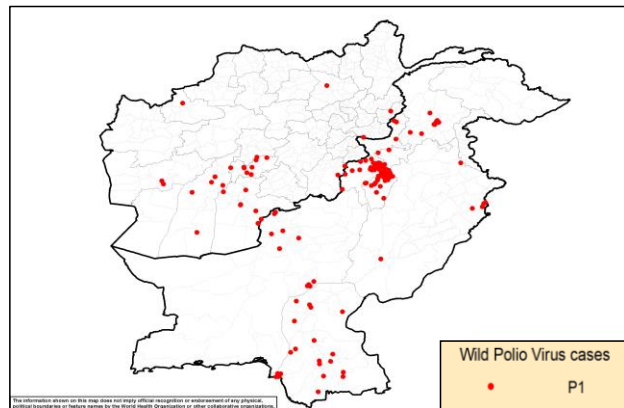**Week 01, ending 05 January 2020**   Number 1109

Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2019 - 31/12/2019
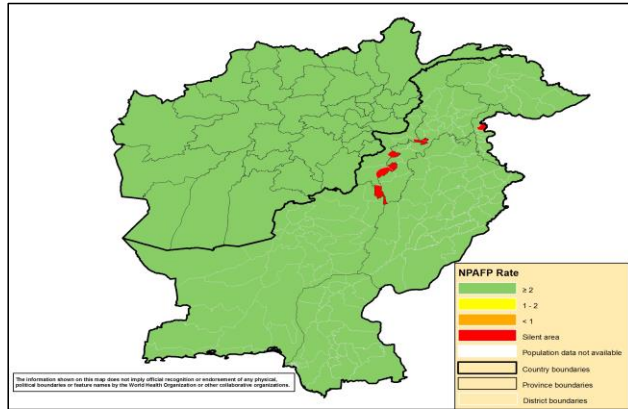
Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 31/12/2019
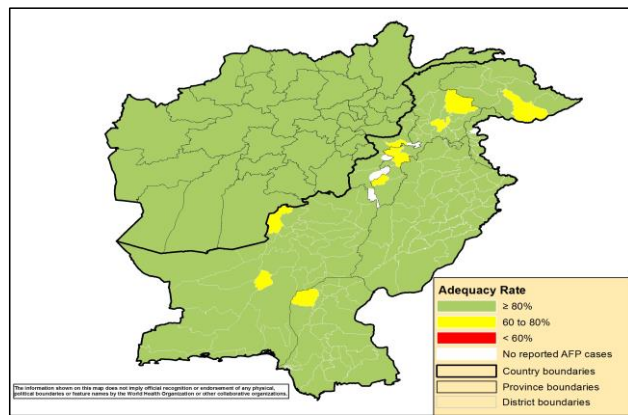
Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan 01/01/2019 - 31/12/2019

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Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2019-2020

ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2019	KANDAHAR	SHAHWALIKOT	1	7-Dec-19	7-Dec-19
		SPINBOLDAK	2	4-Jan-19	22-Nov-19
		KANDAHAR	2	17-Aug-19	10-Nov-19
		GHORAK	1	12-Jan-19	12-Jan-19
	FARAH	BAKWA	2	14-Nov-19	25-Nov-19
	BAGHLAN	PUL-E- KHUMRI	1	14-Nov-19	14-Nov-19
	URUZGAN	KHASURUZGAN	1	2-Nov-19	2-Nov-19
		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
	BADGHIS	BALAMURGHAB	1	17-Oct-19	17-Oct-19
	PAKTIKA	BERMEL	2	15-Sep-19	28-Sep-19
	NANGARHAR	KHOGYANI	1	18-Sep-19	18-Sep-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
2019 Total			**28**	**4-Jan-19**	**7-Dec-19**

Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2019-2020

| ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2019	KHYBER PAKHTUNKHWA	LAKKIMRWT	30	27-May-19	22-Dec-19
		TANK	6	11-Oct-19	18-Dec-19
		DIKHAN	3	5-May-19	14-Dec-19
		BANNU	26	15-Jan-19	30-Nov-19
		SWABI	1	17-Nov-19	17-Nov-19
		TORGHAR	7	25-May-19	13-Sep-19
		HANGU	2	20-Jan-19	28-Jul-19
		CHARSADA	1	21-Jul-19	21-Jul-19
		SHANGLA	1	18-May-19	18-May-19
	KP TRIBAL DISTRICTS	MOHMAND	1	20-Dec-19	20-Dec-19
		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
	BALOCHISTAN	JAFARABAD	3	28-May-19	18-Dec-19
		NSIRABAD	1	5-Dec-19	5-Dec-19
		KABDULAH	4	9-Jun-19	19-Nov-19
		MASTUNG	1	18-Nov-19	18-Nov-19
		HARNAI	1	27-Sep-19	27-Sep-19
		QUETTA	1	6-Jul-19	6-Jul-19
	SINDH	DADU	1	6-Dec-19	6-Dec-19
		MIRPURKHAS	3	17-Nov-19	1-Dec-19
		BADIN	1	28-Nov-19	28-Nov-19
		T.ALLAHYAR	1	10-Nov-19	10-Nov-19
		LARKANA	2	17-Apr-19	9-Nov-19
		KAMBAR	1	2-Nov-19	2-Nov-19
		KHIKAMARI	1	29-Oct-19	29-Oct-19
		SUKKUR	1	27-Oct-19	27-Oct-19
		KHIJAMSHEED	1	24-Oct-19	24-Oct-19
		SBENAZIRABAD	1	19-Oct-19	19-Oct-19
		JAMSHORO	2	23-Aug-19	9-Oct-19
		SUJAWAL	1	25-Sep-19	25-Sep-19
		KHIORANGI	2	20-Aug-19	26-Aug-19
		HYDERABAD	2	20-Jul-19	5-Aug-19
		KHIGIQBAL	1	29-Apr-19	29-Apr-19
		KHILAYARI	1	25-Feb-19	25-Feb-19
	PUNJAB	MUZFARGARH	1	26-Nov-19	26-Nov-19
		LAHORE	4	20-Jan-19	22-Jun-19
		JHELUM	1	21-Jun-19	21-Jun-19
2019 Total			**128**	**15-Jan-19**	**22-Dec-19**

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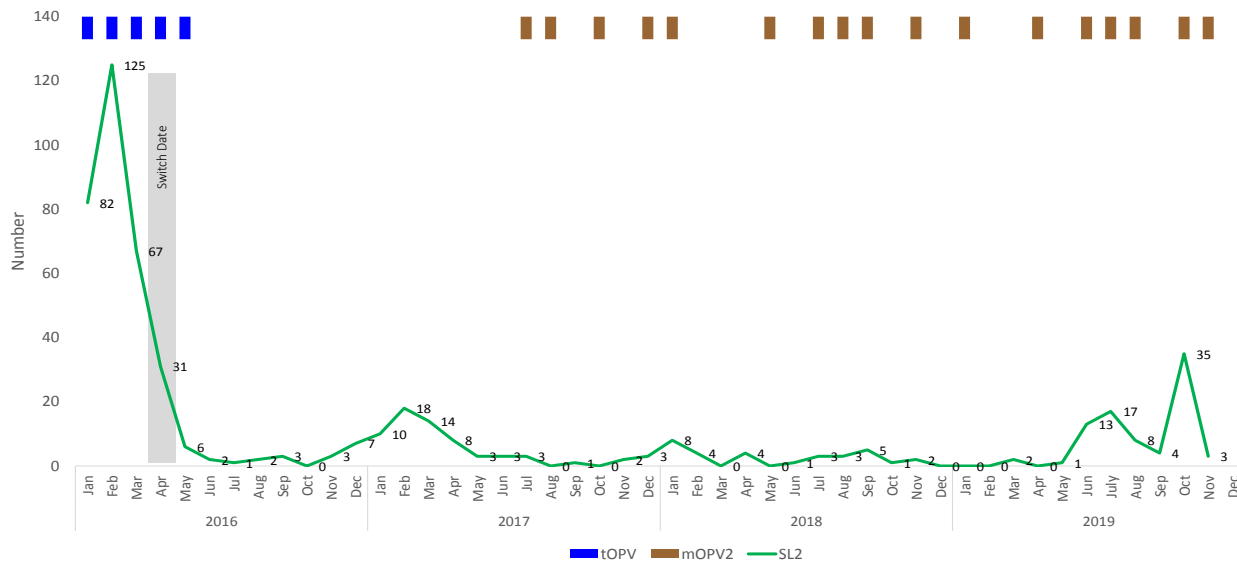**Week 01, ending 05 January 2020**

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Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2019-2020						
					cVDPV2	
COUNTRY	YEAR	PROVINCE	DISTRICT	Count	First Case	Last Case
PAK	**2019**	PUNJAB	GUJRANWALA	1	22-Nov-19	22-Nov-19
		KHYBER PAKHTUNKHWA	CHARSADA	1	3-Nov-19	3-Nov-19
			KOHISTANUPPER	1	27-Oct-19	27-Oct-19
			KOHISTANLOWER	2	6-Oct-19	11-Oct-19
			TORGHAR	2	4-Sep-19	28-Oct-19
		ISLAMABAD	CDA	1	11-Sep-19	11-Sep-19
		GILGIT BALTISTAN	DIAMER	4	7-Jul-19	28-Aug-19
SOM		BARI	BOSSASO	1	8-May-19	8-May-19
		TOGDHER	BUHODLE	1	21-Ap-19	21-Ap-19
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19
Total 2019				**15**	**15-Mar-19**	**22-Nov-19**

Figure 6: Somalia cVDPV cases by type and district 01/01/2019 - 31/12/2019
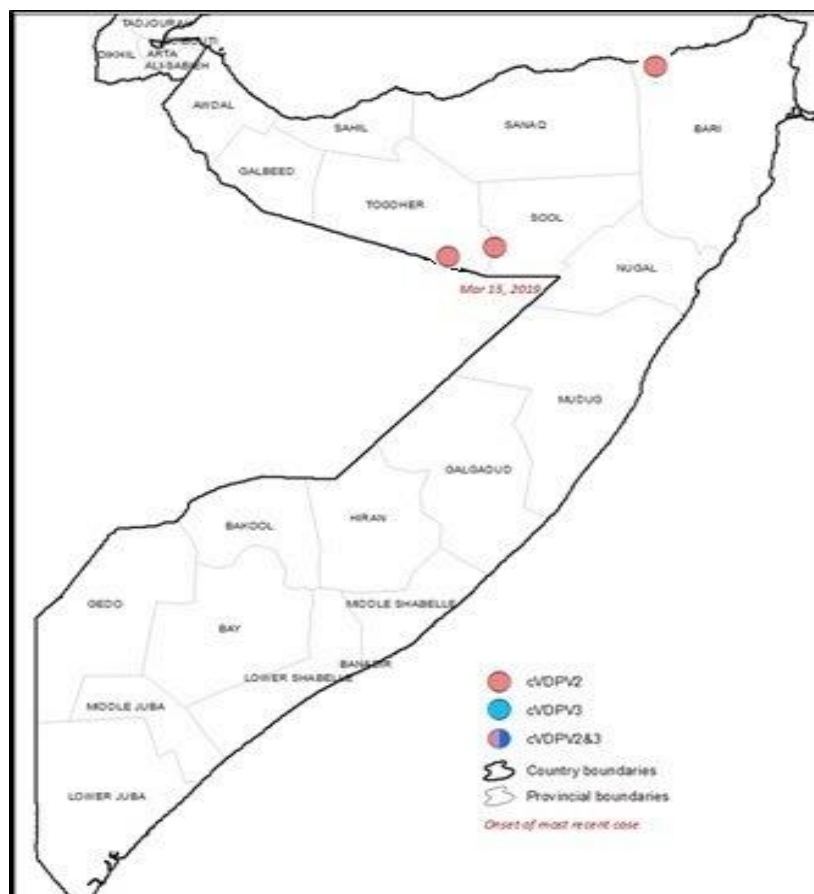
Sabin like type-2 poliovirus isolates (H&E) and vaccine types used during SIAs, EMRO, 2016 to 2019

VDPV2 isolates, EMR countries, 2019

Source/Country	cVDPV2		aVDPV2	
	n	Most recent	n	Most recent
PAK				
Human	12	26-Nov-19		
Env	25	04-Dec-19	1	11-Apr-19
SOM				
Human	3	08-May-19		
Env	2	10-Nov-19	1	03-Feb-19