

## Highlights of Polio Fax Bulletin No. 1164 for Week 03 2021

### I. Salient features this week

1. Polio eradication teams at the Regional and Country levels continue to contribute to the COVID19 Response, particularly in areas of surveillance (field and laboratory), data analysis, communications and coordination.
2. No new wild poliovirus (WPV) cases reported, but nine new WPV type-1 positive environmental samples reported this week from Pakistan all in 2021.
3. Circulating Vaccine Derived Poliovirus (cVDPV):
  - cVDPV1: One new cVDPV1 case reported in 2020 from Yemen this week.
  - cVDPV2: Ten new cVDPV2 cases with onset in 2020 (Pakistan – 6 and Sudan – 4) reported this week and thirty three new cVDPV2 positive environmental samples reported in 2020 (Afghanistan – 18 and Pakistan – 15). In addition, an earlier aVDPV2 from Somalia has been re-classified as cVDPV2.
4. Important: there is a new detection of VDPV2 isolate from environmental sample from Egypt (Alexandria) and another new VDPV2 isolation from an environmental sample in Iran (Sistan Balochistan province).

### II. Wild Poliovirus Type-1 (WPV1) Transmission

WPV1 transmission continues globally in only EMR in two polio-endemic countries, Pakistan and Afghanistan.

As of week 03 of 2021, no new WPV1 cases were reported. This compares with 17 cases in 2020 in the same period.

a. *Human samples*: No new wild poliovirus cases reported this week.

**Afghanistan**: No new wild poliovirus cases reported this week.

In 2020, **56 WPV1 cases** have been reported so far: 38 cases from South Region; 8 from West Region; 6 from Southeast Region; 2 from East Region; and one each from North and Badakhshan Regions. **The most recent case has onset of paralysis on 19 October 2020.**

**Pakistan**: No new wild poliovirus cases reported this week.

In 2020, **84 WPV1 cases** are reported, 26 from Balochistan province, 22 cases each from Khyber Pakhtunkhwa (KP) and Sindh provinces, and 14 from Punjab province. **The most recent case has onset of paralysis on 23 November 2020.**

b. *Environmental samples*: 9 new WPV1 positive environmental samples from Pakistan in 2021 reported this week.

- **Afghanistan**: In 2020, there are **35** WPV1 positive environmental samples including seven combined (WPV1 and cVDPV2) with most recent sample collected on 6 December 2020.

- **Pakistan**: In 2021, there are **12** WPV1 positive environmental samples with most recent sample collected on 13 January 2021.

In 2020, there are **434** WPV1 positive environmental samples including 86 mixture of WPV1 and cVDPV2 and 4 mixtures of WPV1 and aVDPV2. Most recent positive sample collected on 28 December 2020.

III. **Vaccine Derived Polioviruses (VDPVs)**: One new cVDPV1 case reported in 2020 from Yemen and 10 new cVDPV2 cases (Pakistan – 6 and Sudan – 4) reported in 2020, in addition to a confirmation of a cVDPV2 case that was earlier identified as aVDPV2 case in 2020 from Somalia. In 2020, a total number of 28 cVDPV1 cases reported from Yemen and a total number of 453 (255 from Afghanistan, 128 from Pakistan, 14 from Somalia and 56 from Sudan). This compares with 1 cVDPV1 case in Yemen and 25 cVDPV2 cases (22 from Pakistan and 3 from Somalia) in 2019 in the same period.

1. **Outbreaks**: Five countries have VDPVs outbreaks, four with cVDPV2 and one with cVDPV1.

**Afghanistan**: No new VDPV cases reported this week, but 17 new positive environmental samples in 2020 were reported.

In 2020 to date, there are **255 cVDPV2** cases; 115 from South Region, 70 reported from East Region, 28 from Southeast Region, 16 from Central Region, 15 from West Region, 6 from North Region and 4 from Northeast Region, 1 from Badakhshan Region. **The most recent case has onset on 21 November 2020.**

*Environment*: In 2020 to date, 167 cVDPV2 positive environmental samples including 7 mixture of WPV1 and cVDPV2 were reported. **The most recent cVDPV2 positive environmental sample was collected on 6 December 2020.** Also, there is 1 aVDPV2 isolate detected in the environment, sample collected on 27 September 2020.

**Pakistan**: Six new cVDPV2 cases and 15 environmental samples in 2020 reported this week.

The newly 6 reported cVDPV2 cases are from: two each from Sindh province (1 each from Kambar and Khairpur districts), Punjab province (1 each from Mbdin and Okara districts) and Balochistan province (1 each from Kila Abdullah and Pishin districts).

In 2020, there are **128** cVDPV2 cases reported: 43 from Sindh province, 42 from KP province, 25 from Punjab province and 18 from Balochistan province, with **most recent case's onset on 15 December 2020**. In addition to 7 aVDPV2 cases, 6 from Punjab province and 1 from Sindh province, with most recent case's onset on 11 September 2020.

**Environment:** In 2020, there are **124** positive environmental samples for cVDPV2 so far (including 86 mixture of WPV1 and cVDPV2), the **most recent sample collected on 15 December 2020**. Also, there are 15 aVDPV2 isolates detected in the environment samples, which include four combined (WPV1 + aVDPV2). The most recent aVDPV2 positive environmental sample was collected on 10 December 2020.

#### **SOMALIA:**

The confirmed cVDPV2 case is from Borama district, Awdal province, with date of onset 1 August 2020.

In 2020 to date, **14** cVDPV2 cases reported, 7 from Banadir province, 2 from Bay and 1 each from Lower Juba, Middle Shabelle, Galbeed, Hiran and Awdal provinces, with **most recent date of onset 25 October 2020**.

Also, there are **26** cVDPV2 positive environmental samples reported, the most recent collected on 24 October 2020.

**SUDAN:** Four new cVDPV2 cases in 2020 reported this week and no new environmental samples reported.

The 4 new cVDPV2 cases are reported from: 2 from South Kordofan State (1 each from Alabasiya and Rashad localities), one each from North Kordofan State (Um Rawaba locality) and North Darfur State (Kotum locality).

In 2020 to date, **56** cVDPV2 cases reported. **The most recent case has onset of paralysis on 2 December 2020**.

A total of **11** environmental samples have been positive for cVDPV2 so far, all from Khartoum with most recent collection on 6 September 2020.

**YEMEN:** One new cVDPV1 case reported this week.

The newly reported cVDPV1 case is from Kitaf Wa Buga district, Saadah province, with date of onset 26 July 2020.

In 2020 to date, **28** cVDPV1 cases are reported. 27 cases are from Saadah province and 1 case from Sana'a City province. **The most recent case has onset of paralysis on 6 August 2020**.

- 2. VDPV Events:** There are two countries currently having VDPV Event due to VDPV2. Response per WHO's SOPs are ongoing.

**Egypt:** In 2020, an aVDPV2 positive environmental sample from Giza province (Al Eshreen site) was collected on 21 September 2020 and a new VDPV2 positive environmental sample from Alexandria province (Gharab site) was collected on **10 January 2021**. Both isolates are under investigation to determine the appropriate response. The isolates are genetically related with earlier virus seen in Sudan consequent to importation from Chad. Discussions are underway to conduct a type-2 containing oral polio vaccine response given the increasing risk for cVDPV2 transmission.

**Iran:** In 2020, Iran reported 3 VDPV2 positive environmental samples, one from Zaboul district (Zaboul site) and two from Zehedan district (Shirabad site), Sistan & Balochistan province. The isolates are genetically related with earlier viruses seen in Afghanistan and Pakistan. Given the risk for multiple importations and local circulation is high and increasing, two mOP2 rounds are scheduled in month of February 2021. **Date of most recent sample collection is 25 December 2020**.

#### **IV. Surveillance performance indicators**

In 2020, 14 out 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.

- Morocco and Tunisia are missing both indicators as their non-polio AFP rates are 0.8 and 1.3 and their percentage of AFP cases with adequate stool specimens is 68.7%, and 57.9%, respectively.
- Djibouti, Jordan, Oman, Palestine and United Arab Emirates have a non-polio AFP rate of 1.4, 0.8, 1.9, 0.9 and 1.5 respectively.
- Qatar has AFP cases with adequate stool specimens is 33.3%.

## 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 (03/21) / Ending on : 24/01/2021														
	Total AFP 2019	Total AFP 2020	Total AFP to date, 2021	W45 8 Nov 20	W46 15 Nov 20	W47 22 Nov 20	W48 29 Nov 20	W49 6 Dec 20	W50 13 Dec 20	W51 20 Dec 20	W52 27 Dec 20	W53 03 Jan 21	W01 10 Jan 21	W02 17 Jan 21	W03 24 Jan 21
Afghanistan	3768	3966	150	85	78	65	85	79	67	76	58	68	74	37	1
Bahrain	17	15	0	0	0	1	0	0	1	1	0	0	0	0	0
Djibouti	5	5	0	0	0	1	0	0	0	0	0	0	0	0	0
Egypt	1343	1008	37	27	20	24	30	24	28	38	9	11	12	13	3
Iran	1070	618	18	9	7	7	15	15	19	15	13	23	5	1	
Iraq	1157	474	41	7	10	10	10	20	11	13	10	12	14	19	
Jordan ****	113	32	1	0	0	0	0	0	0	0	0	0	1	0	
Kuwait	48	36	2	0	0	1	0	1	2	1	1	0	2	0	
Lebanon ****	87	49	3	0	0	2	2	0	2	1	0	1	1	0	1
Libya	107	95	0	1	2	0	1	3	1	2	0	0	0		
Morocco	247	83	0	2	0	0	0	1	0	0					
Oman	30	22	0	0	1	0	0	0	1	0	1	0	0	0	
Pakistan	15218	11851	329	235	230	214	234	227	187	171	181	174	190	58	2
Palestine ****	62	16	0	0	0	0	1	2	0	1	0	0	0		
Qatar	9	9	0	0	1	0	0	0	0	0	0	0	0	0	
Saudi Arabia	236	200	6	9	10	9	10	5	8	8	6	5	3	2	0
Somalia	361	375	5	8	5	6	7	2	7	7	3	2	3	0	1
Sudan	608	731	22	13	15	28	16	14	12	9	14	13	11	2	
Syria ****	377	343	6	6	11	6	3	8	5	3	6	0	3	3	
Tunisia	79	38	1	1	2	1	1	0	0	0	0	1	0	0	
U.A.E	50	19	0	0	0	0	0	0	0	0	0	0	0	0	
Yemen	779	824	25	28	26	15	25	22	18	16	13	11	12	7	
<b>Total EMR</b>	<b>25771</b>	<b>20809</b>	<b>646</b>	<b>431</b>	<b>418</b>	<b>390</b>	<b>440</b>	<b>423</b>	<b>369</b>	<b>362</b>	<b>315</b>	<b>321</b>	<b>331</b>	<b>142</b>	<b>8</b>

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2019	Total year 2020	24/01		Confirmed polio cases by month of onset											
			2020	2021	February 2020	March 2020	April 2020	May 2020	June 2020	July 2020	August 2020	September 2020	October 2020	November 2020	December 2020	January 2021
Afghanistan	29	56	2	0	3	7	0	12	10	7	6	6	3	0		
Bahrain	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	147	84	15	0	17	7	6	6	6	6	5	7	4	2		
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	
<b>Total EMR</b>	<b>176</b>	<b>140</b>	<b>17</b>	<b>0</b>	<b>20</b>	<b>14</b>	<b>6</b>	<b>18</b>	<b>16</b>	<b>13</b>	<b>11</b>	<b>13</b>	<b>7</b>	<b>2</b>	<b>0</b>	

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

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Table 3: Investigation of AFP cases with paralysis onset in 2020 &amp; 2021 up to Week (03/21) / Ending on : 24/01/2021)

COUNTRY	2020											2021											Latest line List Date		
	AFP									Specimen	Wild cases ****		AFP									Specimen		Wild cases ****	
	Total AFP cases onset 2020	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 2021	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	3966	56	1	173	3479	258	18.5	67	5	92.6	56	0	150	0	0	138	12	0	10.8	0	0	95.3	0	0	24/01/2021
Bahrain	15	0	0	3	12	0	5.0	0	0	93.3	0	0	0	0	0	0	0	0	0.0	0	0		0	0	24/01/2021
Djibouti	5	0	0	4	1	0	1.4	3	0	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	17/01/2021
Egypt	1008	0	0	21	987	0	2.6	0	0	94.7	0	0	37	0	0	37	0	0	1.4	0	0	56.8	0	0	21/01/2021
Iran	618	0	0	8	610	0	3.0	0	0	98.2	0	0	18	0	0	8	10	0	1.3	0	0	100.0	0	0	23/01/2021
Iraq	474	0	0	7	467	0	2.9	0	0	93.7	0	0	41	0	0	36	5	0	3.9	0	0	100.0	0	0	23/01/2021
Jordan	32	0	0	0	32	0	0.8	0	0	96.9	0	0	1	0	0	1	0	0	0.4	0	0	100.0	0	0	21/01/2021
Kuwait	36	0	0	1	35	0	4.1	0	0	88.9	0	0	2	0	0	2	0	0	3.4	0	0	100.0	0	0	17/01/2021
Lebanon	49	0	0	5	44	0	2.6	0	0	89.8	0	0	3	0	0	3	0	0	2.5	0	0	33.3	0	0	21/01/2021
Libya	95	0	0	11	83	1	3.6	0	0	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	16/01/2021
Morocco	83	0	0	39	44	0	0.8	35	11	68.7	0	0	0	0	0	0	0	0	0.0	0	0		0	0	24/12/2020
Oman	22	0	0	0	22	0	1.9	0	0	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	17/01/2021
Pakistan	11851	84	15	456	11163	135	15.1	169	4	86.1	84	0	329	0	0	288	41	0	6.4	0	0	92.4	0	0	24/01/2021
Palestine	16	0	0	8	8	0	0.9	4	0	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	10/01/2021
Qatar	9	0	0	7	2	0	2.1	6	0	33.3	0	0	0	0	0	0	0	0	0.0	0	0		0	0	23/01/2021
Saudi Arabia	200	0	0	60	140	0	2.4	2	0	96.0	0	0	6	0	0	6	0	0	1.1	0	0	100.0	0	0	24/01/2021
Somalia	375	0	0	19	341	15	4.6	2	1	94.4	0	0	5	0	0	5	0	0	0.9	0	0	100.0	0	0	24/01/2021
Sudan	731	0	0	40	635	56	3.8	6	0	93.0	0	0	22	0	0	22	0	0	1.8	0	0	100.0	0	0	21/01/2021
Syria	343	0	0	6	337	0	4.3	1	0	91.0	0	0	6	0	0	6	0	0	1.1	0	0	100.0	0	0	23/01/2021
Tunisia	38	0	0	3	35	0	1.3	1	0	57.9	0	0	1	0	0	1	0	0	0.5	0	0	100.0	0	0	22/01/2021
U.A.E	19	0	0	2	17	0	1.5	2	2	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	17/01/2021
Yemen	824	0	1	205	590	28	5.9	33	22	89.1	0	0	25	0	0	25	0	0	2.7	0	0	96.0	0	0	23/01/2021
EMR	20809	140	17	1078	19084	493	8.0	331	45	89.0	140	0	646	0	0	578	68	0	3.8	0	0	92.1	0	0	
2019	25771	176	7	0	25559	29	10.2	0	0	89.5	176	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 &lt;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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COUNTRY	2020						2021					
	# OF CONTACTS	LAB RESULTS					# OF CONTACTS	LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1252	14	61	52	270	18	88	0	0	1	2	64
BAH	1	0	0	0	0	0	0	0	0	0	0	0
DJI	2	0	0	0	0	0	0	0	0	0	0	0
EGY	330	0	0	12	32	12	15	0	0	0	0	15
IRN	46	0	0	0	0	0	4	0	0	0	0	0
IRQ	168	0	0	4	10	0	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	5	0	0	0	0	0	0	0	0	0	0	0
LIB	2	0	0	0	0	0	0	0	0	0	0	0
MOR	8	0	0	0	0	4	0	0	0	0	0	0
OMA	64	0	0	2	8	3	0	0	0	0	0	0
PAK	4653	21	16	378	788	8	193	0	0	1	5	147
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	18	0	0	0	0	6	0	0	0	0	0	0
SOM	872	0	9	16	116	17	0	0	0	0	0	0
SUD	364	0	18	2	8	242	4	0	0	0	0	4
SYR	280	0	0	11	15	0	0	0	0	0	0	0
TUN	6	0	0	0	0	2	0	0	0	0	0	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	230	0	0	0	29	58	18	0	0	0	0	18
<b>EMR</b>	<b>8301</b>	<b>35</b>	<b>104</b>	<b>477</b>	<b>1276</b>	<b>370</b>	<b>322</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>248</b>

Table 4 (B): Most recent wild contacts in EMRO, 2020-2021

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2020	Afghanistan	14	26/Jul/20
	Pakistan	21	14/Dec/20
<b>2020 Total</b>		<b>35</b>	<b>14/Dec/20</b>

Table 4 (C): Number of distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2020-2021

YEAR	COUNTRY	PROVINCE	DISTRICT	COUNT	First case	Last case
2020	AFG	KANDAHAR	NESH	1	23-May-20	23-May-20
			HILMAND	1	04-Jan-20	04-Jan-20
			NIMROZ	1	28-Feb-20	28-Feb-20
			FARAH	1	06-May-20	06-May-20
	PAK	BALOCHISTAN	KSAIFULLAH	1	01-Sep-20	01-Sep-20
			PUNJAB	1	24-Jul-20	24-Jul-20
			LAHORE	2	18-Jan-20	05-Jul-20
			DG KHAN	1	20-Jan-20	20-Jan-20
			KHAYBER PAKHTUNKHWA (KP)	2	07-Feb-20	14-Jul-20
	SINDH	2	07-Feb-20	14-Jul-20		
	<b>2020 Total</b>				<b>11</b>	<b>04-Jan-20</b>

Table 5: Laboratory investigation of AFP cases with paralysis onset in 2020 up to Week (53/2020) / Ending on : (31/12/2020)

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	3930	533	24	680	2671	19	1	53	113			79	228		93	1		2	1	44	17%	95%	99%	97%	24/01/2021
Bahrain	NPL Oman / CDC	10			1	9																9%	100%		0%	21/01/2021
Djibouti	NPL Kenya / CDC	5						1															0%		100%	17/01/2021
Egypt***	RRL Egypt	988	28	13	118	824	3	2		13						16		10	4		11%	96%	100%	99%	24/01/2021	
Iran	NPL Iran / CDC	622	10		6	604	2			6						6					1%	100%	100%	99%	23/01/2021	
Iraq	RRL Egypt	472	1		43	425	2			2											9%	96%	67%	98%	22/01/2021	
Jordan	NPL Jordan / RRL EGYPT	32			5	27															16%	100%		100%	14/01/2021	
Kuwait	RRL Kuwait / RIVM	38				35		3													1%	86%		94%	21/01/2021	
Lebanon	NPL Jordan / RRL EGYPT	48			5	39	4														11%	98%		100%	14/01/2021	
Libya	RRL Tunisia / RIVM	97	5			92				1						4	1				0%	99%	100%	54%	21/01/2021	
Morocco	NPL Morocco / RRL Tunisia	70			1	69															1%	86%		87%	22/01/2021	
Oman	NPL Oman / CDC	23			3	20															12%	100%		100%	21/01/2021	
Pakistan	RRL Pakistan	11575	917	51	1857	8654	87	6	76	188			371	124		288		1	13	5	7	14%	95%	98%	97%	24/01/2021
Palestine & UNRWA		16				16															0%	44%		100%	10/01/2021	
Qatar	NPL Oman / CDC	3				3															0%	100%		100%	21/01/2021	
Saudi Arabia	NPL Saudi Arabia / CDC	199	1			198										1					0%	99%	100%	97%	17/01/2021	
Somalia	NPL Kenya / CDC	375	22	5	61	268	1	17		3	1		11		15						19%	6%		95%	24/01/2021	
Sudan	NPL Sudan / RRL Egypt	732	63		85	553	10	22		2			40	51		1					13%	98%	100%	59%	23/01/2021	
Syria	NPL Syria / RRL Egypt	339	14	2	16	306	1														4%	100%			23/01/2021	
Tunisia	RRL Tunisia	30				29		1													0%	100%		97%	21/01/2021	
U.A.E	NPL Oman / CDC	16				16															0%	100%		50%	21/12/2021	
Yemen	NPL Kenya / CDC	504	44	1	103	321	32	3		5	17					13		13		1	21%	98%	49%	0%	23/01/2021	
<b>Total EMR 2020</b>		20124	1638	96	2984	15179	161	56	129	333	18		490	414		437	2	14	25	11	51	14%	94%	97%	94%	
<b>Total EMR 2019</b>		24918	1057	100	3669	20057		23	152	576	1		46	25		629	1	3	21	6		13%	95%	99%	96%	

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

\*\* This indicator reflects surveillance and laboratory activities

**Table 6: Environmental isolate by year and type**

COUNTRY	LAB RESULTS	2016	2017	2018	2019	2020	2021
AFG	Wild	2	42	83	56	28	
	Wild+cVDPV2					7	
	cVDPV2					160	
	aVDPV2					1	
	EV/SL	177	265	248	200	188	2
Negative	6	9	5	3	3		
Pending					26	16	
<b>AFG Total</b>		<b>185</b>	<b>316</b>	<b>336</b>	<b>259</b>	<b>413</b>	<b>18</b>
EGY	aVDPV2					1	
	VDPV2						1
	EV/SL	493	481	508	666	501	6
	Negative	35	41	32	34	40	
	Pending						25
	aVDPV3					1	
aVDPV1					1		
VDPV3					1		
<b>EGY Total</b>		<b>528</b>	<b>522</b>	<b>540</b>	<b>700</b>	<b>545</b>	<b>32</b>
IRN	Wild				3		
	VDPV2					3	
	EV/SL		5	51	65	41	
	Negative		1	3	3		
	Pending						2
<b>IRN Total</b>			<b>6</b>	<b>54</b>	<b>71</b>	<b>44</b>	<b>2</b>
JOR	EV/SL	2	29	36	36	21	
	Negative		2			1	
	Pending					3	
<b>JOR Total</b>		<b>2</b>	<b>31</b>	<b>36</b>	<b>36</b>	<b>25</b>	
KUW	EV/SL			3	13		
	Negative				1		
<b>KUW Total</b>			<b>3</b>	<b>14</b>			
LEB	EV/SL	2	26	44	44	25	
	Negative	2	1	1	3	2	
	Pending					4	
<b>LEB Total</b>		<b>4</b>	<b>27</b>	<b>45</b>	<b>47</b>	<b>31</b>	
PAK	Wild	59	105	139	367	344	12
	Wild+cVDPV2	2			10	86	
	Wild+aVDPV2	1	1		2	4	
	cVDPV2	2			29	38	
	aVDPV2	3	4			11	
	EV/SL	456	523	531	420	320	3
	Negative	6		3	4	5	
	Pending					19	34
<b>PAK Total</b>	<b>529</b>	<b>633</b>	<b>673</b>	<b>832</b>	<b>827</b>	<b>49</b>	
SOM	cVDPV2		2	18	5	26	
	cVDPV3			11			
	aVDPV2			2	1		
	cVDPV2+cVDPV3			1			
	EV/SL		20	43	28	18	
	Negative		14	138	29	32	
Pending					5		
<b>SOM Total</b>		<b>36</b>	<b>213</b>	<b>63</b>	<b>81</b>		
SUD	cVDPV2					11	
	EV/SL			15	42	12	
	Negative				1	2	
	Pending				17	25	4
<b>SUD Total</b>			<b>15</b>	<b>60</b>	<b>50</b>	<b>4</b>	
SYR	EV/SL		4	81	155	187	3
	Negative			21	30	17	
	Pending					1	6
<b>SYR Total</b>		<b>4</b>	<b>102</b>	<b>185</b>	<b>205</b>	<b>9</b>	
<b>TOTAL</b>		<b>1248</b>	<b>1575</b>	<b>2017</b>	<b>2267</b>	<b>2221</b>	<b>114</b>

**Table 7: Environmental Wild/VDPV isolate by site 2020-2021**

YEAR	COUNTRY	LAB RESULTS	PROVINCE	Count	First date	Last date	
2020	AFG	Wild	HILMAND	10	1/Jan/20	24/Aug/20	
			HIRAT	4	26/Apr/20	23/Aug/20	
			KABUL	1	26/Sep/20	26/Sep/20	
			KANDAHAR	9	28/Jan/20	25/Jun/20	
			KHOST	1	25/Apr/20	25/Apr/20	
			KUNDUZ	1	27/Sep/20	27/Sep/20	
			NANGARHAR	2	26/Jan/20	6/Oct/20	
			HILMAND	1	6/Sep/20	6/Sep/20	
			KANDAHAR	4	25/Jun/20	6/Dec/20	
			NANGARHAR	2	8/Jan/20	25/Jul/20	
		Wild+cVDPV2	HILMAND	31	27/May/20	6/Dec/20	
			HIRAT	2	26/Sep/20	24/Oct/20	
			KABUL	19	26/Apr/20	5/Nov/20	
			KANDAHAR	33	9/Jul/20	6/Dec/20	
			KHOST	6	24/Jun/20	23/Nov/20	
			KUNAR	5	6/Jun/20	7/Nov/20	
			KUNDUZ	2	23/Aug/20	24/Oct/20	
			LAGHMAN	4	24/Jul/20	6/Oct/20	
			NANGARHAR	57	7/Jan/20	24/Nov/20	
			PAKTYA	1	26/Jul/20	26/Jul/20	
	aVDPV2	HILMAND	1	27/Sep/20	27/Sep/20		
		<b>AFG Total</b>	<b>196</b>	<b>1/Jan/20</b>	<b>6/Dec/20</b>		
		EGY	aVDPV2	GIZA	1	21/Sep/20	21/Sep/20
		<b>EGY Total</b>	<b>1</b>	<b>21/Sep/20</b>	<b>21/Sep/20</b>		
		PAK	Wild	AJK	1	25/Feb/20	25/Feb/20
				BALOCHISTAN	76	1/Jan/20	21/Dec/20
				GBALTISTAN	1	12/May/20	12/May/20
				ISLAMABAD	5	16/Jan/20	10/Nov/20
				KPAKHTUNKHWA	23	28/Jan/20	18/Dec/20
				PUNJAB	123	4/Jan/20	28/Dec/20
	SINDH			115	3/Jan/20	8/Dec/20	
	Wild+cVDPV2			BALOCHISTAN	23	1/Feb/20	2/Dec/20
				KPAKHTUNKHWA	1	11/Mar/20	11/Mar/20
PUNJAB				14	4/Jan/20	12/Oct/20	
SINDH			48	3/Jan/20	10/Dec/20		
cVDPV2			BALOCHISTAN	13	2/Jun/20	15/Dec/20	
			KPAKHTUNKHWA	6	10/Jan/20	2/Dec/20	
			PUNJAB	2	16/Jan/20	17/Apr/20	
			SINDH	17	8/Jun/20	10/Dec/20	
			aVDPV2	BALOCHISTAN	2	17/Sep/20	19/Oct/20
				KPAKHTUNKHWA	4	10/Apr/20	28/Oct/20
	PUNJAB			1	4/May/20	4/May/20	
	SINDH			4	13/Oct/20	10/Dec/20	
	<b>PAK Total</b>			<b>479</b>	<b>1/Jan/20</b>	<b>28/Dec/20</b>	
	SOM	cVDPV2		BANADIR	23	5/Jan/20	24/Oct/20
BAY				2	19/Jun/20	20/Jun/20	
LOWER JUBA				1	8/Sep/20	8/Sep/20	
<b>SOM Total</b>	<b>26</b>	<b>5/Jan/20</b>		<b>24/Oct/20</b>			
SUD	cVDPV2	KHARTOUM		11	29/Mar/20	6/Sep/20	
		<b>SUD Total</b>	<b>11</b>	<b>29/Mar/20</b>	<b>6/Sep/20</b>		
<b>2020 Total</b>			<b>713</b>	<b>1/Jan/20</b>	<b>28/Dec/20</b>		
2021	PAK	Wild	BALOCHISTAN	2	1/Jan/21	2/Jan/21	
			ISLAMABAD	1	11/Jan/21	11/Jan/21	
			KPAKHTUNKHWA	1	11/Jan/21	11/Jan/21	
			PUNJAB	6	4/Jan/21	12/Jan/21	
	SINDH	2	4/Jan/21	13/Jan/21			
<b>PAK Total</b>	<b>12</b>	<b>1/Jan/21</b>	<b>13/Jan/21</b>				
<b>2021 Total</b>			<b>12</b>	<b>1/Jan/21</b>	<b>13/Jan/21</b>		

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2020 - 31/12/2020

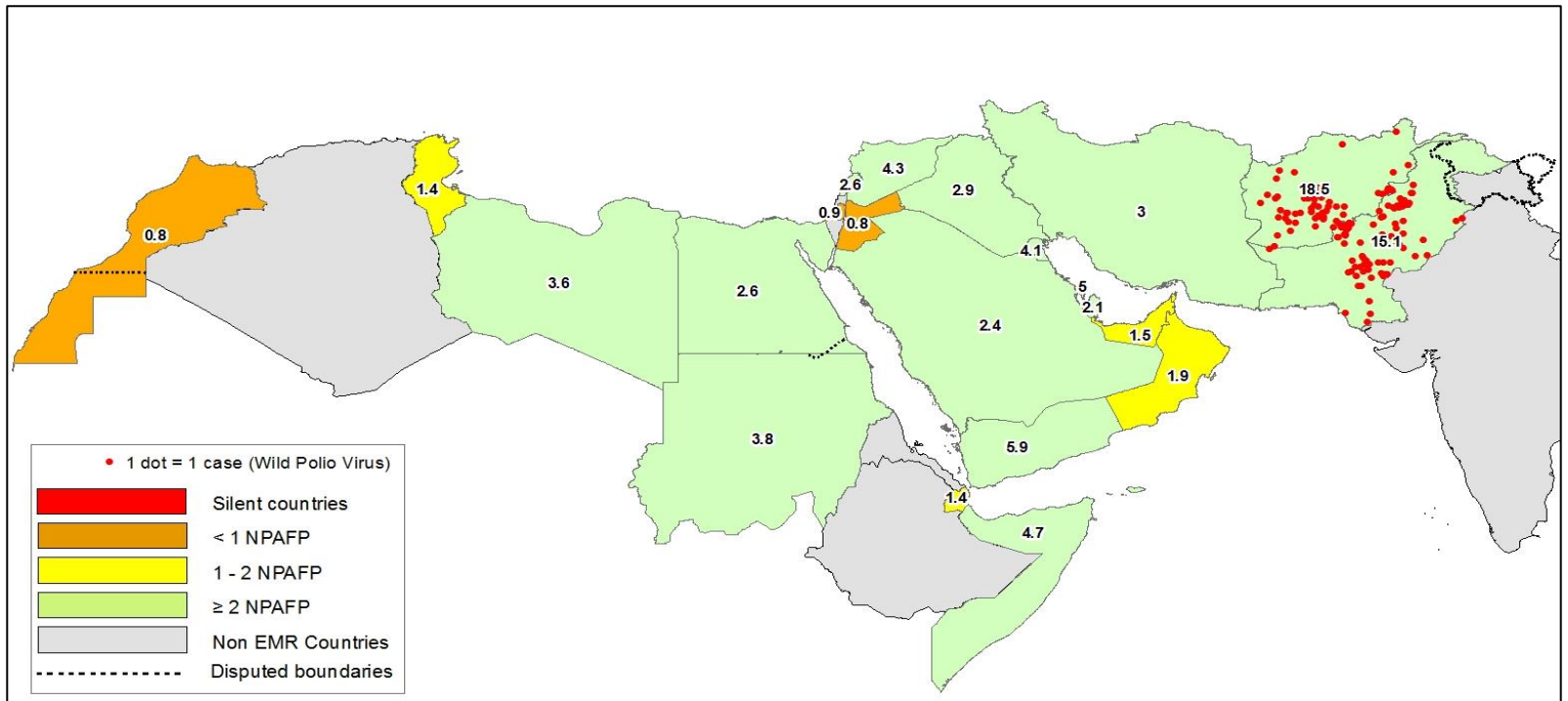


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2020 - 31/12/2020

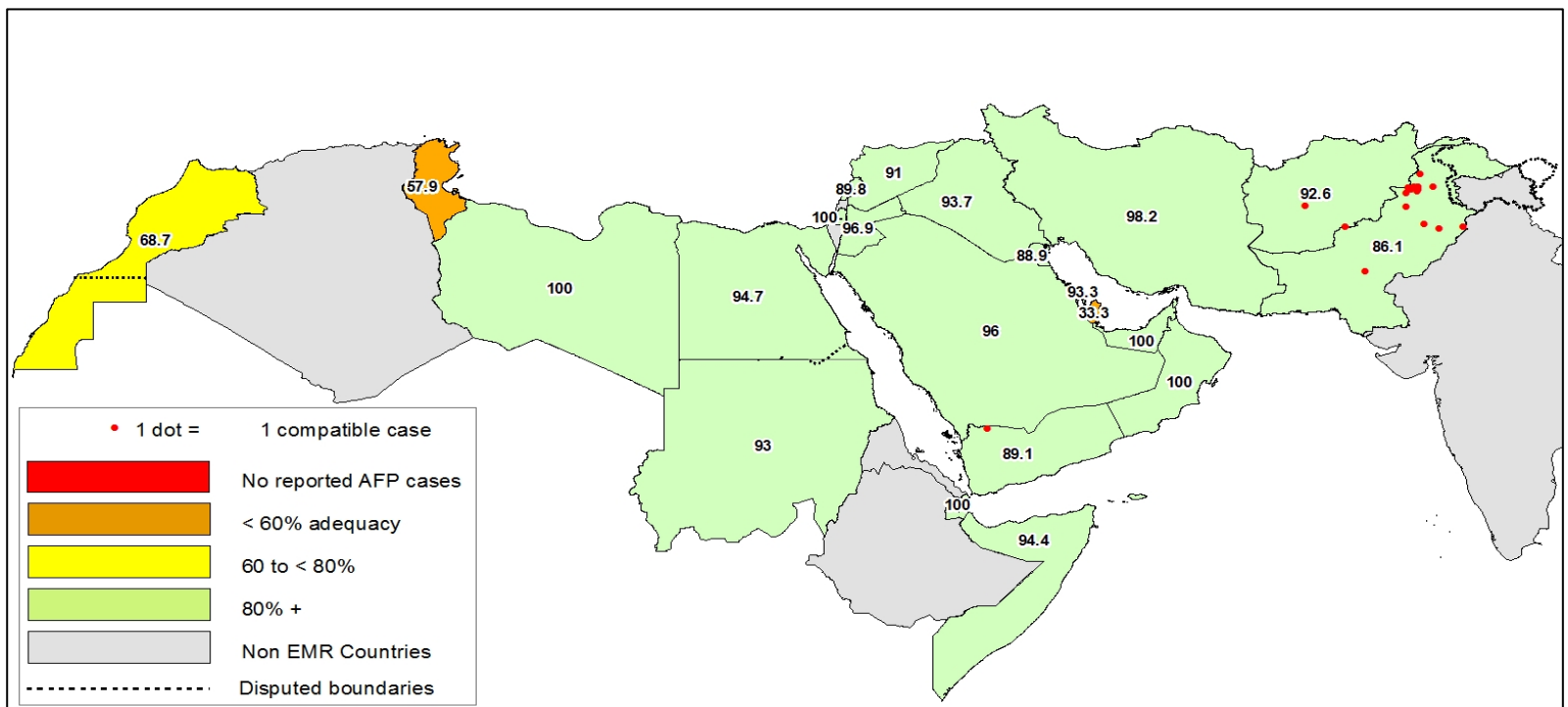
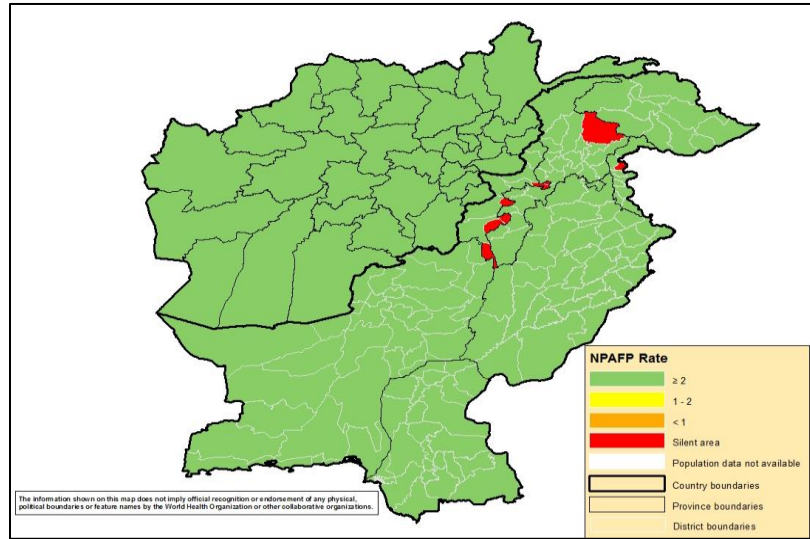


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2020 - 2021

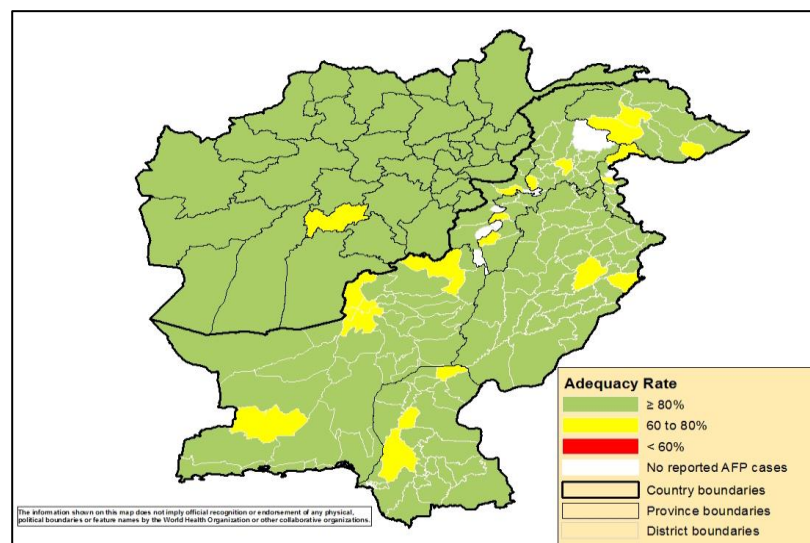
Year	COUNTRY	Count	First Case	Last Case
2020	AFG	56	4-Jan-20	19-Oct-20
	PAK	84	1-Jan-20	23-Nov-20
<b>2020 Total</b>		<b>140</b>	<b>1-Jan-20</b>	<b>23-Nov-20</b>



**Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2020 - 31/12/2020**

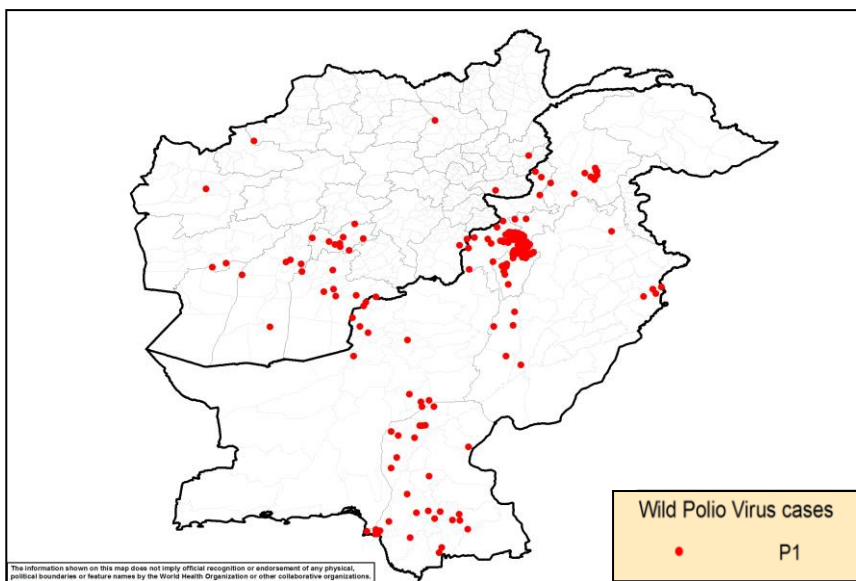


**Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2020 - 31/12/2020**

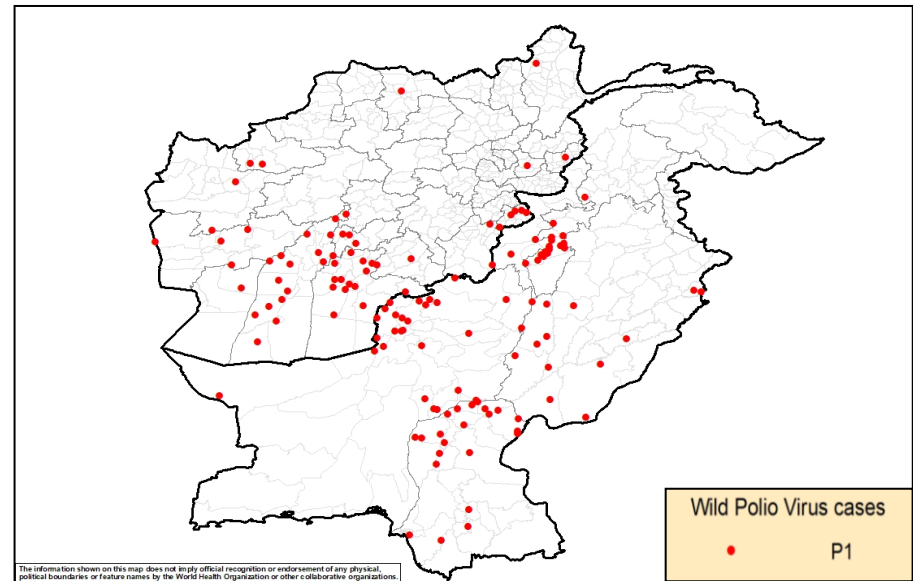


**Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan**

**5(a) 01/01/2019 - 31/12/2019**



**5(b) 01/01/2020 - 31/12/2020**



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**Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2020-2021**

ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case	
2020	BALKH	DEHDADI	1	15-Mar-20	15-Mar-20	
	HIRAT	PASHTUNZARGHUN	1	29-Jun-20	29-Jun-20	
		SHINDAND	1	21-Mar-20	21-Mar-20	
	FARAH	BALABULUK	2	11-May-20	17-May-20	
		ANARDARA	1	6-May-20	6-May-20	
		BAKWA	1	4-Feb-20	4-Feb-20	
	BADGHIS	QALA-E-NAW	1	5-Sep-20	5-Sep-20	
		QADIS	1	13-May-20	13-May-20	
	KUNAR	SHIGAL WA SHELTON	1	5-Mar-20	5-Mar-20	
	LAGHMAN	MEHTARLAM	1	10-Feb-20	10-Feb-20	
	PAKTIKA	NAKA	1	12-Aug-20	12-Aug-20	
	KHOST	NADIRSHAHKOT	1	7-Sep-20	7-Sep-20	
		BAK	2	3-Sep-20	7-Sep-20	
		SABARI	1	8-Aug-20	8-Aug-20	
		SPERA	1	1-Aug-20	1-Aug-20	
	KANDAHAR	MARUF	1	14-Oct-20	14-Oct-20	
		KANDAHAR	3	22-Jun-20	13-Sep-20	
		ZHERAY	3	20-Jul-20	24-Aug-20	
		SPINBOLDAK	1	25-Jul-20	25-Jul-20	
		PANJWAYI	1	10-Jun-20	10-Jun-20	
		SHAHWALIKOT	3	4-Mar-20	6-Jun-20	
		NESH	1	23-May-20	23-May-20	
		GHORAK	1	19-Mar-20	19-Mar-20	
	ZABUL	QALAT	1	6-Aug-20	6-Aug-20	
		ARGHANDAB (Z)	1	14-Jul-20	14-Jul-20	
		MIZAN	1	21-Jan-20	21-Jan-20	
	HILMAND	NAD-E-ALI	2	1-May-20	19-Oct-20	
		WASHER	3	4-Jan-20	19-Oct-20	
		BAGHRAN	2	16-Jul-20	4-Sep-20	
		KAJAKI	2	10-Jun-20	27-Jul-20	
		REG	4	25-May-20	3-Jun-20	
		DEH-E-SHU	1	27-May-20	27-May-20	
		NAWZAD	1	11-May-20	11-May-20	
	SANGIN	1	7-May-20	7-May-20		
	URUZGAN	SHAHID-E-HASSAS	3	14-Jun-20	12-Jul-20	
		TIRINKOT	1	28-May-20	28-May-20	
	NIMROZ	KHASHROD	1	28-Feb-20	28-Feb-20	
	BADAKHSHAN	YAWAN	1	10-Mar-20	10-Mar-20	
	<b>2020 Total</b>			<b>56</b>	<b>4-Jan-20</b>	<b>19-Oct-20</b>

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Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2020-2021

ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case	
2020	KHYBER PAKHTUNKHWA	PESHAWAR	1	13-Jul-20	13-Jul-20	
		WAZIR-S	2	21-Feb-20	8-Jun-20	
		BANNU	1	27-Apr-20	27-Apr-20	
		TANK	4	11-Jan-20	15-Mar-20	
		KARAK	2	20-Jan-20	13-Mar-20	
		LAKKIMRWT	12	2-Jan-20	9-Mar-20	
	BALOCHISTAN	KABDULAH	3	11-May-20	23-Nov-20	
		QUETTA	5	17-Jul-20	5-Nov-20	
		MASTUNG	1	15-Oct-20	15-Oct-20	
		PISHIN	6	31-Jan-20	3-Oct-20	
		KSAIFULAH	1	1-Sep-20	1-Sep-20	
		CHAGHAI	1	4-Jun-20	4-Jun-20	
		DUKKI	1	26-May-20	26-May-20	
		JHALMAGSI	1	19-Apr-20	19-Apr-20	
		ZHOB	2	22-Feb-20	13-Apr-20	
		NSIRABAD	2	3-Jan-20	13-Apr-20	
		SOHBATPUR	1	12-Feb-20	12-Feb-20	
		JAFARABAD	1	12-Feb-20	12-Feb-20	
		SIBI	1	7-Feb-20	7-Feb-20	
		PUNJAB	LAYYAH	1	21-Oct-20	21-Oct-20
	MUZFARGARH		1	4-Oct-20	4-Oct-20	
	VEHARI		1	16-Sep-20	16-Sep-20	
	DGKHAN		5	18-Jan-20	14-Sep-20	
	BAHAWALPUR		2	17-Aug-20	5-Sep-20	
	RYKHAN		1	1-Sep-20	1-Sep-20	
	LAHORE		2	12-Jun-20	24-Jul-20	
	RAJANPUR	1	2-Jun-20	2-Jun-20		
	SINDH	JACOBABAD	4	7-Feb-20	14-Jul-20	
		GHOTKI	4	2-Mar-20	9-Jul-20	
		KHILANDHI	1	9-Jun-20	9-Jun-20	
		LARKANA	1	21-May-20	21-May-20	
		KAMBAR	3	8-Jan-20	11-Apr-20	
		KHAIRPUR	1	27-Mar-20	27-Mar-20	
		NFEROZ	2	8-Feb-20	22-Feb-20	
		SHIKARPUR	1	11-Feb-20	11-Feb-20	
		KASHMORE	2	16-Jan-20	3-Feb-20	
		SUJAWAL	1	7-Jan-20	7-Jan-20	
		T.ALLAHYAR	1	7-Jan-20	7-Jan-20	
		BADIN	1	1-Jan-20	1-Jan-20	
		<b>2020 Total</b>			<b>84</b>	<b>1-Jan-20</b>

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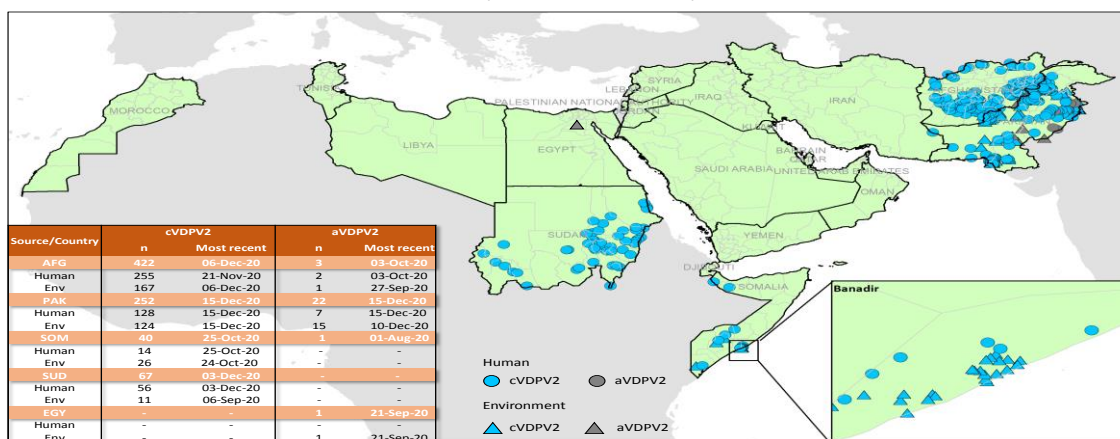
Week 01, ending 17 January 2021

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Table 11: Circulating VDPV2 cases and date of onset of paralysis in EMR countries by provinces 2020-2021

YEAR	COUNTRY	PROVINCE	Count	First Case	Last Case
2020	SOM	LOWER JUBA	1	29-Aug-20	29-Aug-20
		AWDAL	1	1-Aug-20	1-Aug-20
		GALBEED	1	29-Sep-20	29-Sep-20
		HIRAN	1	18-Oct-20	18-Oct-20
		MIDDLE SHABELLE	1	17-Jul-20	17-Jul-20
		BAY	2	3-Sep-20	25-Oct-20
	SUD	BANADIR	7	18-Jun-20	30-Sep-20
		SOUTH DARFUR	2	7-Mar-20	29-Apr-20
		NORTH DARFUR	1	26-Nov-20	26-Nov-20
		EAST DARFUR	3	12-May-20	24-Jul-20
		KHARTOUM	4	15-Jul-20	16-Nov-20
		KASSALA	11	28-Jul-20	6-Nov-20
		GEZIRA	5	9-Jul-20	19-Sep-20
		RIVER NILE	5	29-Jun-20	27-Sep-20
		RED SEA	8	29-Apr-20	29-Nov-20
		WEST DARFUR	1	19-May-20	19-May-20
		BLUE NILE	4	7-Aug-20	26-Nov-20
		SOUTH KORDOFAN	2	20-Nov-20	25-Nov-20
		NORTH KORDOFAN	3	29-Aug-20	2-Dec-20
		SENNAR	1	16-Aug-20	16-Aug-20
		WHITE NILE	3	15-Jun-20	22-Aug-20
		GEDARIF	3	1-Apr-20	1-Aug-20
	AFG	FARAH	10	1-Jun-20	11-Nov-20
		BALKH	2	29-Oct-20	3-Nov-20
		BADGHIS	3	1-Nov-20	7-Nov-20
		SAMANGAN	1	1-Nov-20	1-Nov-20
		HIRAT	2	10-Aug-20	15-Aug-20
		LOGAR	4	20-Aug-20	18-Nov-20
		KANDAHAR	64	4-Aug-20	12-Nov-20
		HILMAND	29	1-Aug-20	12-Nov-20
		JAWZIAN	3	4-Aug-20	21-Nov-20
		KABUL	7	6-Jul-20	12-Oct-20
		NURISTAN	2	21-Jun-20	13-Jul-20
		NIMROZ	3	6-Jul-20	8-Aug-20
		KHOST	16	5-Jul-20	19-Oct-20
		PAKTYA	4	18-Jun-20	5-Sep-20
		KUNDUZ	3	28-Aug-20	3-Oct-20
		PAKTIKA	6	25-Aug-20	25-Oct-20
		GHAZNI	2	29-Aug-20	21-Oct-20
		BADAKHSAN	1	23-Apr-20	23-Apr-20
		LAGHMAN	14	20-May-20	23-Sep-20
		TAKHAR	1	20-Sep-20	20-Sep-20
		ZABUL	9	17-Sep-20	31-Oct-20
		URUZGAN	10	28-Aug-20	5-Nov-20
		PARWAN	1	4-Sep-20	4-Sep-20
		WARDAK	4	6-Sep-20	22-10-20
		KUNAR	9	6-Apr-20	29-Sep-20
		NANGARHAR	45	5-Feb-20	21-Sep-20
	PAK	SINDH	43	2-May-20	16-Nov-20
		BALUCHISTAN	18	29-Feb-20	15-Dec-20
		PUNJAB	25	5-Feb-20	5-Nov-20
		KHYBER PAKHTUNKHWA	42	2-Jan-20	24-May-20
<b>Total 2020</b>			<b>453</b>	<b>2-Jan-20</b>	<b>15-Dec-20</b>

VDPV2 isolates, EMR countries, 2020-2021



One positive VDPV2 environmental sample reported from Egypt, Alexandria province (collection date 10 January 2021) and three positive VDPV2 environmental samples were reported from Iran, from S & B province, (collection dates 3 October, 27 November & 25 December 2020) - classification type still awaited