

# EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1203, Week 42 (ending on 24/10/2021)

## Highlights



**Children  
Paralyzed  
by polio**

**2020**

■ **140 Wild Polio cases:**

- 56 in Afghanistan
- 84 in Pakistan

■ **515 cVDPV2 cases:**

- 308 in Afghanistan
- 135 in Pakistan
- 58 in Sudan
- 14 in Somalia

■ **31 cVDPV1 cases:**

- All in Yemen

**2021**

■ **2 Wild Polio cases:**

- 1 in Afghanistan
- 1 in Pakistan

■ **52 cVDPV2 cases:**

- 43 in Afghanistan
- 8 in Pakistan
- 0 in Sudan
- 1 in Somalia

■ **3 cVDPV1 cases:**

- All in Yemen



**Sewage  
water  
sampling**

**2020**

■ **469 Wild Polio isolates:**

- 35 in Afghanistan
- 434 in Pakistan

■ **352 cVDPV2 Isolates:**

- 174 in Afghanistan
- 135 in Pakistan
- 0 in Egypt
- 3 in Iran
- 14 in Sudan
- 26 in Somalia

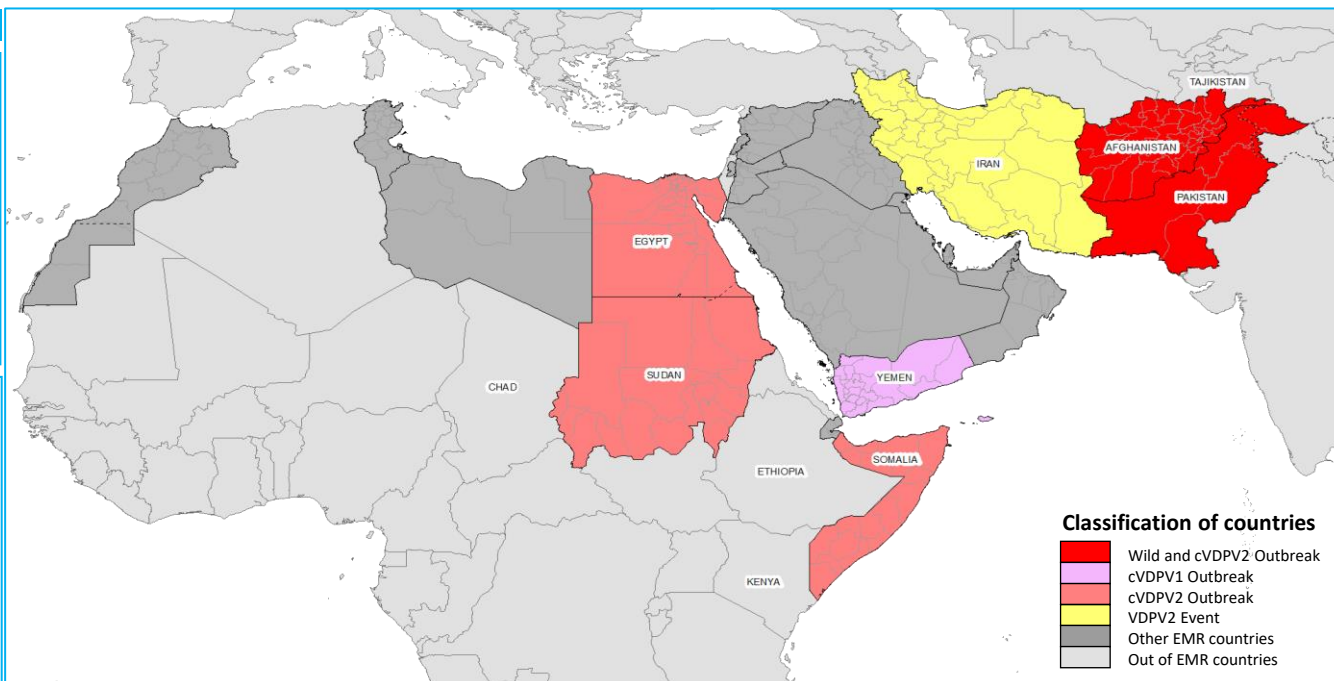
**2021**

■ **63 Wild Polio cases:**

- 1 in Afghanistan
- 62 in Pakistan

■ **87 cVDPV2 Isolates:**

- 40 in Afghanistan
- 35 in Pakistan
- 10 in Egypt
- 1 in Iran
- 0 in Sudan
- 1 in Somalia

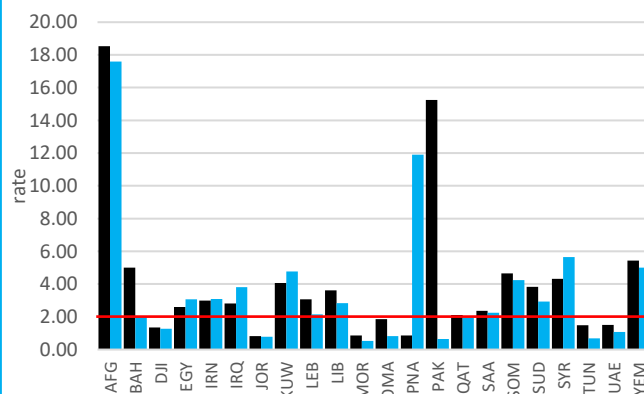


### Highlights of the week

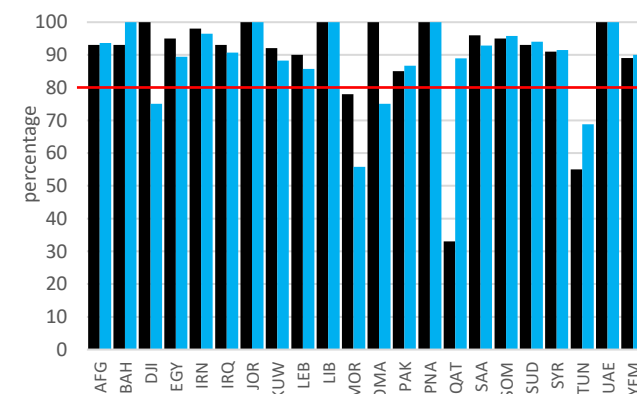
- No new WPV1 or circulating VDPV type-2 (cVDPV2) were reported from human or environmental samples.
- Two new positive VDPV2 environmental samples from Egypt (one from Red Sea province and the other from Qena province with specimens' collection dates 19 & 22 September 2021) were reported.
- Finalization of Pakistan External/Independent Surveillance Review and debriefing of outcome/recommendations of Pakistan national authorities concerned on 25 October 2021.
- The tentative date of nOPV2 vaccine arrival in Egypt is 22 November 2021 +/- 2 days and subsequent preparations had commenced. The date of conducting the NID is yet to be decided.
- Polio eradication teams continued in contributing to the COVID19 Response, particularly in areas of surveillance, data analysis, communications, and coordination.

*Wild Poliovirus type-1 (WPV1)* *Vaccine-derived Poliovirus (VDPV)*

### Non polio AFP rate

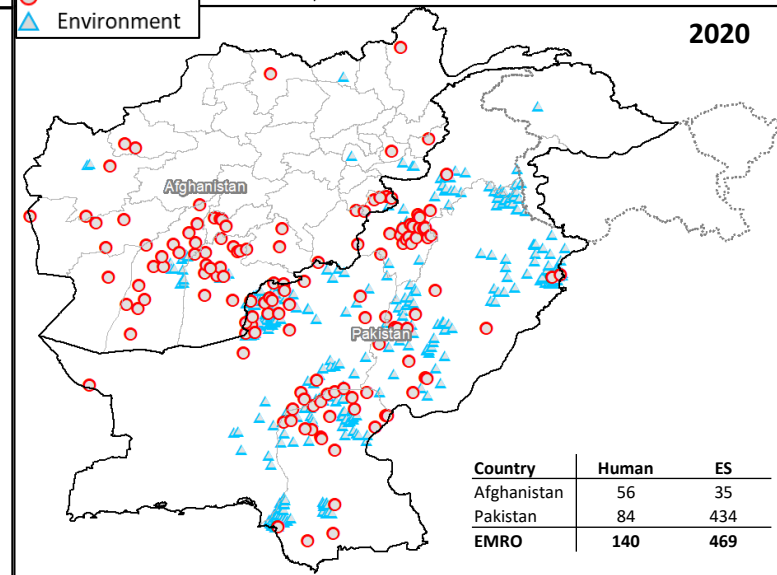
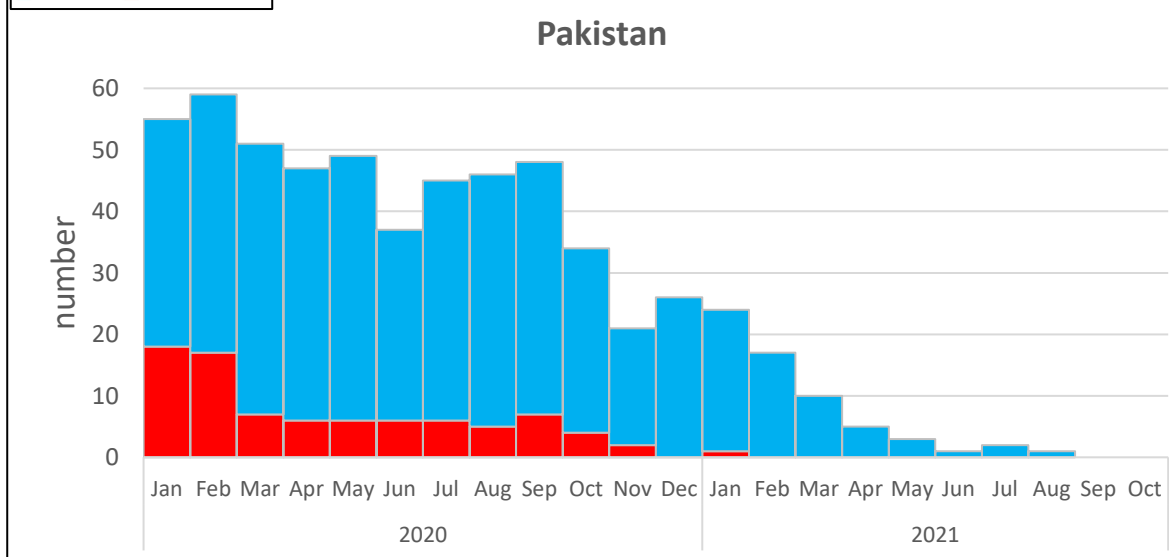
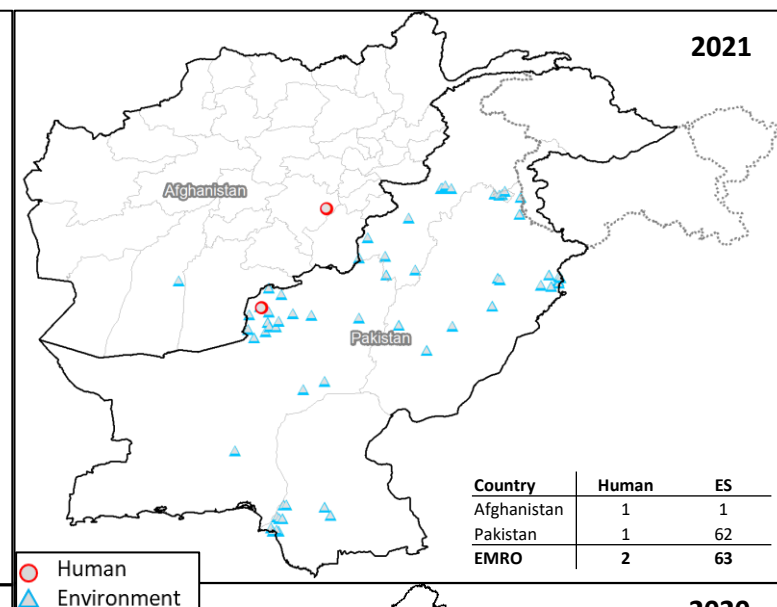
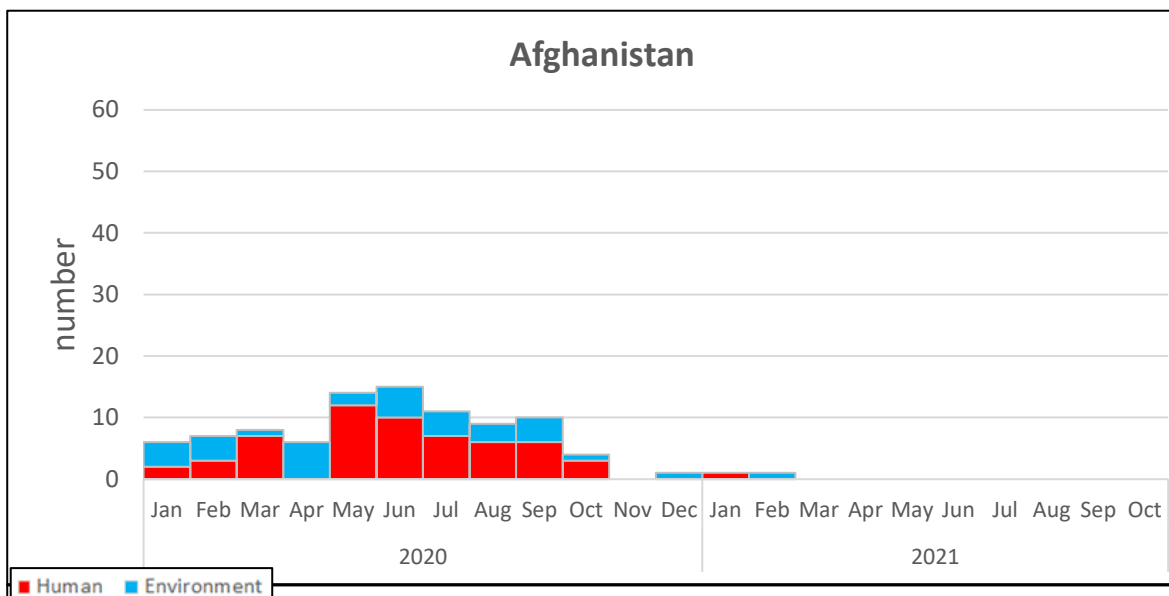


### Stool adequacy



# WPV1 Positive isolates from AFG/PAK by source

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# Virus isolation by country, last 12 months (Oct. 24, 2020 to Oct. 24, 2021)

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Source / Virus type	AFG	PAK	EGY	IRN	SOM	SUD	YEM	Total
<b>Human (AFP only)</b>	<b>127</b>	<b>36</b>	<b>1</b>		<b>2</b>	<b>11</b>	<b>5</b>	<b>182</b>
Wild	1	2						3
cVDPV2	120	23			2	11		156
Wild+cVDPV2		1						1
Wild+aVDPV2								
Wild+aVDPV3								
cVDPV1							5	5
aVDPV1	1	1						2
aVDPV2	3	7	1					11
aVDPV	2	2						4
VDPV1								
VDPV2								
<b>Environment</b>	<b>90</b>	<b>185</b>	<b>76</b>	<b>4</b>	<b>2</b>	<b>1</b>		<b>358</b>
Wild		71						71
cVDPV2	84	39	10	3	2	1		139
Wild+cVDPV2	2	31						33
Wild+aVDPV2		6						6
Wild+aVDPV3		1						1
cVDPV1								
aVDPV1		1						1
aVDPV2	4	36		1				41
aVDPV								
VDPV1			1					1
VDPV2			65					65

# Confirmed Wild Polio Cases by month of onset

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Country	Total year 2019	Total year 2020	03-10		Confirmed Wild Polio Cases by month of onset												Last Case
					2020		2021										
			2020	2021	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Afghanistan	29	56	56	1	0	0	1	0	0	0	0	0	0	0			01-Jan-21
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				
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	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			
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	0		
Pakistan	147	84	82	1	2	0	1	0	0	0	0	0	0	0			27-Jan-21
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			
Saudi Arabia	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				
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				
U.A.E	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							
EMR	176	140	138	2	2	0	2	0	0	0	0	0	0	0	0	0	27-Jan-21

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

# Investigation of AFP cases with paralysis onset in 2020 & 2021

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COUNTRY	AFP (2020)									AFP (2021)									Line List 2021
	AFP cases	Case classification						Surveillance indicators		AFP cases	Case classification						Surveillance indicators		Date of latest
		Total Confirmed WPV1 Polio Cases	Polio Compatible	Discarded (non polio AFP)	VDPV	Pending classification > 90 days from onset	Pending LAB classification > 90 days from onset	Annualized Non polio AFP rate	% with adequate specimens		Total Confirmed WPV1 Polio Cases	Polio Compatible	Discarded (non polio AFP)	VDPV	Pending classification > 90 days from onset	Pending LAB classification > 90 days from onset	Annualized Non polio AFP rate	% with adequate specimens	
AFGHANISTAN	3972	56	3	3600	314	0	0	18.53	92.60	3087	1	1	2836	45	26	0	17.58	93.62	17-Oct-21
BAHRAIN	15	0	0	15	0	0	0	5.00	93.33	5	0	0	3	0	0	0	2.00	100.00	24-Oct-21
DJIBOUTI	5	0	0	5	0	0	0	1.35	100.00	4	0	0	4	0	0	0	1.27	75.00	17-Oct-21
EGYPT	1009	0	0	1009	0	0	0	2.60	94.65	987	0	0	909	1	3	0	3.07	91.13	20-Oct-21
IRAN	618	0	0	618	0	0	0	2.99	98.54	512	0	0	499	0	0	0	3.10	96.43	23-Oct-21
IRAQ	476	0	0	476	0	0	0	2.81	93.28	538	0	0	488	0	7	0	3.81	90.32	15-Oct-21
JORDAN	32	0	0	32	0	0	0	0.83	100.00	25	0	0	23	0	0	0	0.78	100.00	21-Oct-21
KUWAIT	36	0	0	36	0	0	0	4.06	91.67	34	0	0	32	0	0	0	4.76	88.24	17-Oct-21
LEBANON	49	0	0	49	0	0	0	3.07	89.80	28	0	0	23	0	2	0	2.16	85.19	23-Oct-21
LIBYA	95	0	0	94	1	0	0	3.62	100.00	60	0	0	56	0	0	0	2.84	100.00	15-Oct-21
MOROCCO	87	0	0	87	0	0	0	0.86	78.16	43	0	0	12	0	27	10	0.54	55.81	18-Sep-21
OMAN	22	0	0	22	0	0	0	1.85	100.00	8	0	0	8	0	0	0	0.82	75.00	24-Oct-21
PAKISTAN	11972	84	29	11719	142	0	0	15.25	85.43	9761	1	3	9017	17	155	0	11.90	87.12	24-Oct-21
PALESTINE	16	0	0	16	0	0	0	0.87	100.00	10	0	0	4	0	0	0	0.66	100.00	17-Oct-21
QATAR	9	0	0	9	0	0	0	2.11	33.33	9	0	0	2	0	0	0	1.94	88.89	24-Oct-21
SAUDI ARABIA	200	0	0	200	0	0	0	2.37	96.00	153	0	0	110	0	0	0	2.24	92.72	24-Oct-21
SOMALIA	376	0	0	361	15	0	0	4.66	94.68	286	0	0	218	1	1	0	4.24	95.71	24-Oct-21
SUDAN	733	0	0	675	58	0	0	3.84	92.91	465	0	0	432	0	4	0	2.94	93.89	20-Oct-21
SYRIA	343	0	0	343	0	0	0	4.32	90.96	353	0	0	328	0	0	0	5.64	91.04	23-Oct-21
TUNISIA	42	0	0	42	0	0	0	1.49	54.76	16	0	0	14	0	0	0	0.69	68.75	15-Oct-21
U.A.E.	19	0	0	19	0	0	0	1.52	100.00	13	0	0	2	0	8	0	1.08	100.00	17-Oct-21
YEMEN	825	0	1	794	31	0	0	5.44	88.73	629	0	0	335	3	110	94	5.01	90.16	23-Oct-21
EMR POL	20951	140	33	20221	561	0	0	7.96	88.59	17026	2	4	15355	67	343	104	7.31	89.47	

\* 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

\*\*\*\*Includes all VDPV cases. Further details available page number

For further details on Contacts click: [detail of contact samples](#)

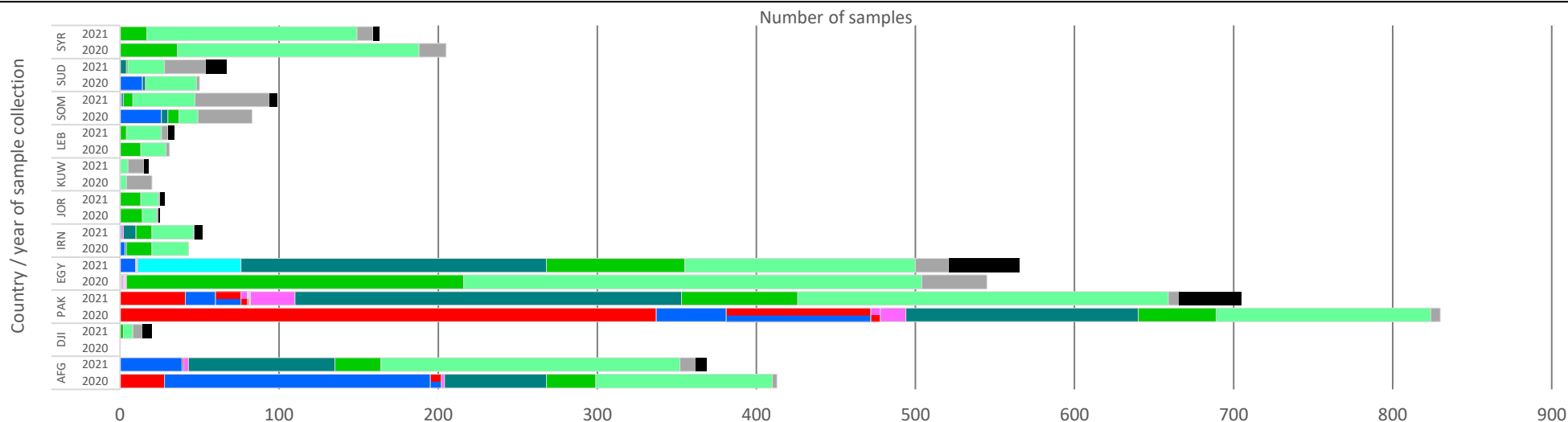
# Laboratory investigation of AFP cases with paralysis onset in 2021

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Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results												Indicators					Latest report Date
	ITD / Nucleotide Sequencing		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**	
	Sequencing performed by CDC and RIVM laboratories		L20B+	L20B+/NPEV			received within last 14 days	received more than 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Afghanistan	RRL Pakistan	3038	237	38	550	2079	43	65	1	115	1		71	40		105			2			16%	99%	99%	98%	20-Oct-21
Bahrain	NPL Oman / CDC	3				3															0%	100%		0%	20-Oct-21	
Djibouti	NPL Kenya / CDC	4			1																100%			100%	17-Oct-21	
Egypt***	RRL Egypt	951	61	3	125	725	34	3		3			58			2			2		12%	97%	100%	99%	20-Oct-21	
Iran	NPL Iran / CDC	532	14		7	492	19			3			6			4		1			1%	100%	100%	98%	23-Oct-21	
Iraq	NPL Iraq, RRL Egypt	532	8		38	465	21			3						15					8%	100%	50%	98%	22-Oct-21	
Jordan	NPL Jordan, RRL Egypt	25			3	20	2														13%	100%		100%	17-Oct-21	
Kuwait	RRL Kuwait / RIVM	36				33	3														0%	100%		97%	24-Oct-21	
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	28			1	25	2														4%	100%			23-Oct-21	
Libya	RRL Tunisia / RIVM	60				57	3														0%	100%		82%	22-Oct-21	
Morocco	NPL Morocco, RRL Tunisia	41			1	39		1													3%	100%		98%	10-Sep-21	
Oman	NPL Oman / CDC	8				8															1%	88%		100%	20-Oct-21	
Pakistan	RRL Pakistan	9525	508	59	2029	6652	252	11	1	216	1		172	13		263	1		6		1	18%	100%	100%	97%	24-Oct-21
Palestine & UNRWA		10				10															0%	10%		100%	17-Oct-21	
Qatar	NPL Oman / CDC	3				3															0%	100%		100%	20-Oct-21	
Saudi Arabia	NPL Saudi Arabia / CDC	154	2			145	7									2					0%	95%	50%	97%	24-Oct-21	
Somalia	NPL Kenya / CDC	286	5		35	179	4	62		3				1		3					16%	4%		79%	24-Oct-21	
Sudan	NPL Sudan / RRL Egypt	456	1		73	363	9	11					1			1					17%	88%	100%	67%	14-Oct-21	
Syria	NPL Syria / RRL Egypt	348	6		21	303	18														6%	100%		0%	23-Oct-21	
Tunisia	RRL Tunisia	16				15	1														0%	100%		93%	22-Oct-21	
U.A.E	NPL Oman / CDC	12				12															0%	100%		42%	20-Oct-21	
Yemen	NPL Oman, NPL Kenya, RRL Egypt	282	9		58	215				1	3					5					16%	100%	100%	0%	23-Oct-21	
Total EMR 2021		16350	851	100	2942	11843	418	153	2	344	5		308	54		400	1	1	8	2	1	15%	98%	99%	95%	
Total EMR 2020		20387	1680	93	3046	15557		4	129	352	32		509	468		462	2	3	18	11		14%	94%	97%	93%	

# Environmental Surveillance Isolation by Classification

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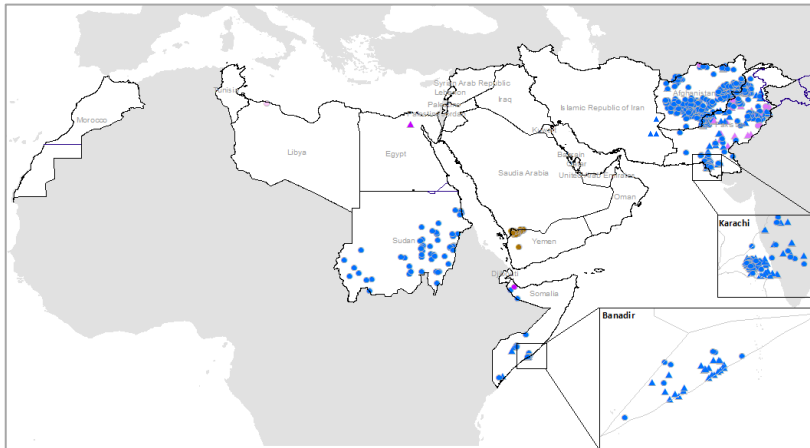


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Wild	28				337	41																
cVDPV2	167	39			44	19		10	3	1							26	1	14			
Wild+cVDPV2	7	1			91	16																
Wild+aVDPV2					6	4																
Wild+aVDPV3						1																
aVDPV1						1	1															
aVDPV2	2	3			16	28	1			1												
aVDPV3							2															
VDPV1								1														
VDPV2								65														
SL2	64	92			146	243		192	1	8							4	1	2	4		
SL1/3	31	29		2	49	73	212	87	16	10	14	13			13	4	7	6		1	36	17
Entero	111	188		6	135	233	288	145	23	26	9	11	4	5	16	22	12	39	32	23	152	132
Negative	3	10		6	6	7	41	21		1	1	1	16	10	2	4	34	47	2	26	17	10
Pending		7		6		39		44		5	1	3		3		4		5		13		4

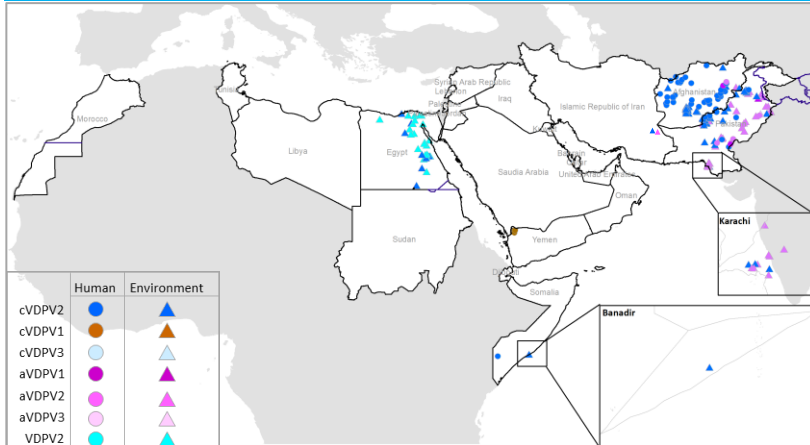
# VDPVs isolations by Source and Country

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## VDPV Isolates, EMR countries, 2020



## VDPV Isolates, EMR countries, 2021



## VDPVs isolated from 2016-2021

cVDPV Isolate type	EMR Country	Sources																											
		AFP cases(Human)						Contacts(Human)						Environment						Other Sources (Healthy Children)									
		2016	2017	2018	2019	2020	2021	Most recent	2016	2017	2018	2019	2020	2021	Most recent	2016	2017	2018	2019	2020	2021	Most recent	2016	2017	2018	2019	2020	2021	Most recent
cVDPV2	Afghanistan				307	43	09-07-21												174	40	23-06-21								
	Egypt																			10	08-06-21								
	Iran																		3	1	20-02-21								
	Pakistan	1			22	135	8	23-04-21								4			38	135	35	11-08-21							
	Somalia			6	3	14	1	12-05-21			3	1	11		10-11-20		2	19	5	26	1	23-05-21				1	5		22-09-20
	Sudan					58		18-12-20					18		08-10-20					14		09-11-20					4		24-08-21
	Syria		74					21-09-17	63						12-09-17									4					20-08-17
cVDPV1	Yemen				1	31	3	27-03-21				2		10-07-19															
cVDPV3	Somalia			7				07-09-18			7				30-06-18			12				23-08-18							
aVDPV1	Afghanistan						1	22-02-21																					
	Egypt																		1		17-06-20								
	Pakistan						1	21-08-21												1	10-02-21								
	Somalia					1		26-01-20																					
aVDPV2	Afghanistan	1			3	1	01-03-21					75	15	03-05-21					2	3	25-07-21								
	Egypt					1	30-05-21						1	14-06-21					1		21-09-21								
	Iran																			1	10-07-21								
	Pakistan				7	5	23-05-21				8	19	1	28-04-21	3	5		3	22	32	21-09-21								
	Somalia	1					24-10-16	1						30-10-16			2	1			03-02-19								
	Yemen	1					11-06-16	2						20-06-16															
aVDPV3	Afghanistan				1		23-06-20																						
	Egypt																		2		30-09-20								
	Pakistan																			1	05-04-21								
	Libya				1		15-01-20																						
VDPV2	Egypt														1				65	22-09-21									
	Pakistan														1						11-07-16								

# Important links

EMR Polio Bulletin - Issue No. 1203, Week 42 (ending on 24/10/2021)

- [Global Polio Eradication Initiative](#)
- [IMST – Outbreak Response Dashboard](#)
- [nOPV2 Tracker](#)
- [Pol-MIS](#) (restricted to registered users)
- [Containment](#) (restricted to registered users)