

EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1204, Week 43 (ending on 31/10/2021)

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

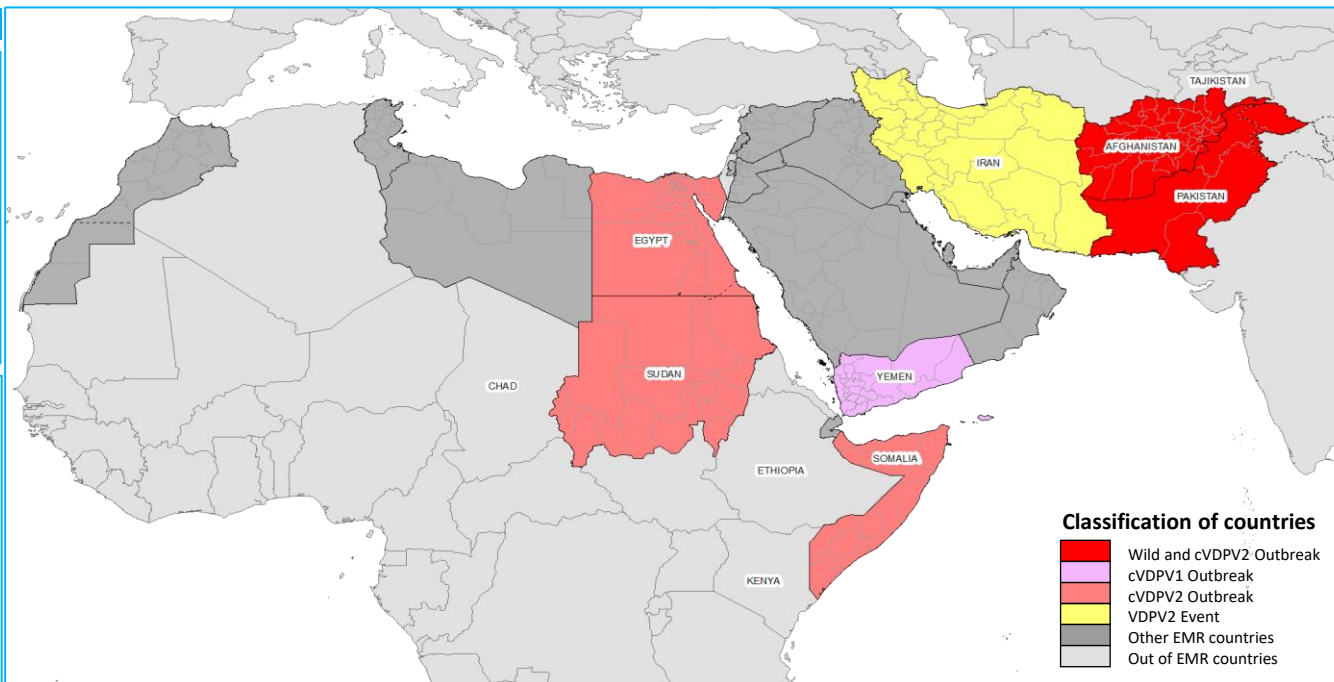
2021

■ **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

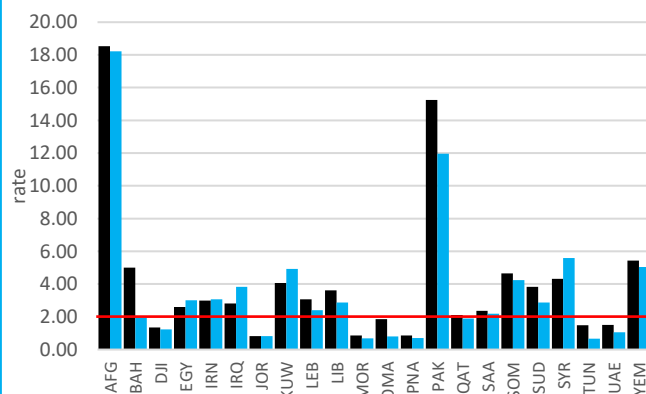


Highlights of the week

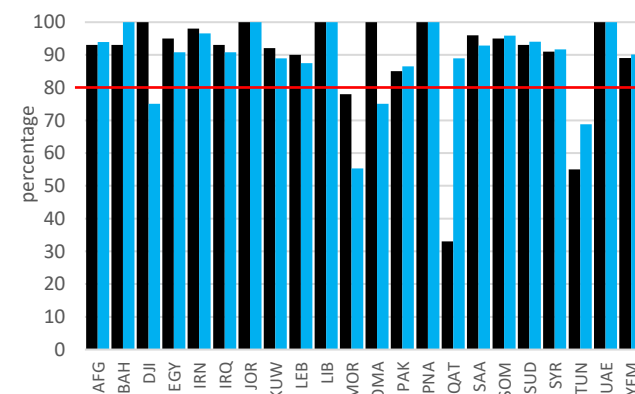
- No new WPV1 or circulating VDPV type-2 (cVDPV2) were reported from human or environmental samples.
- One new aVDPV2 case and two aVDPV2 positive environmental samples were reported from Pakistan. The case from Bahawalnagar district, Punjab province, with onset 24 September 2021 while the two samples are both from Balochistan province from Quetta and Killabduh with specimens' collection dates 4 & 11 October 2021.
- An initial training of the EM Regional Certification Commission (RCC) Members for Poliomyelitis Eradication on the newly developed Electronic Annual Certification Reports system (e-ACR), is scheduled to take place in Dubai, United Arab Emirates, 14-16 December 2021.
- 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

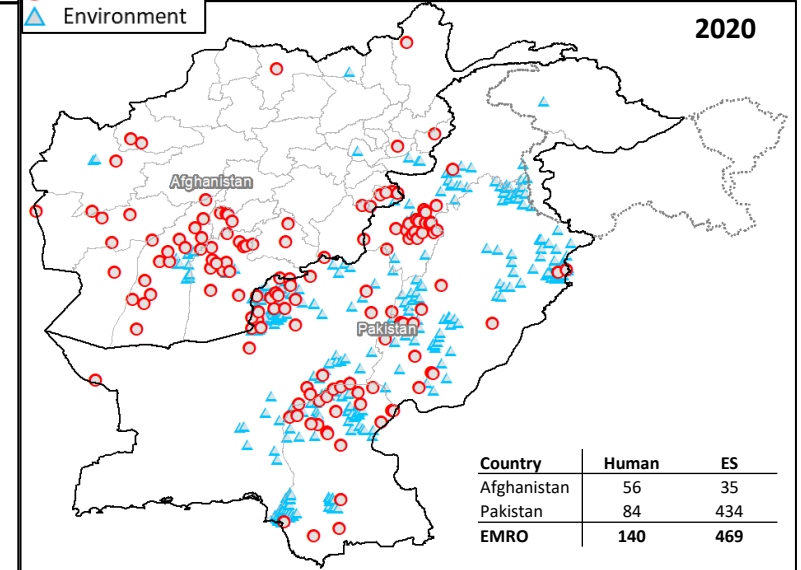
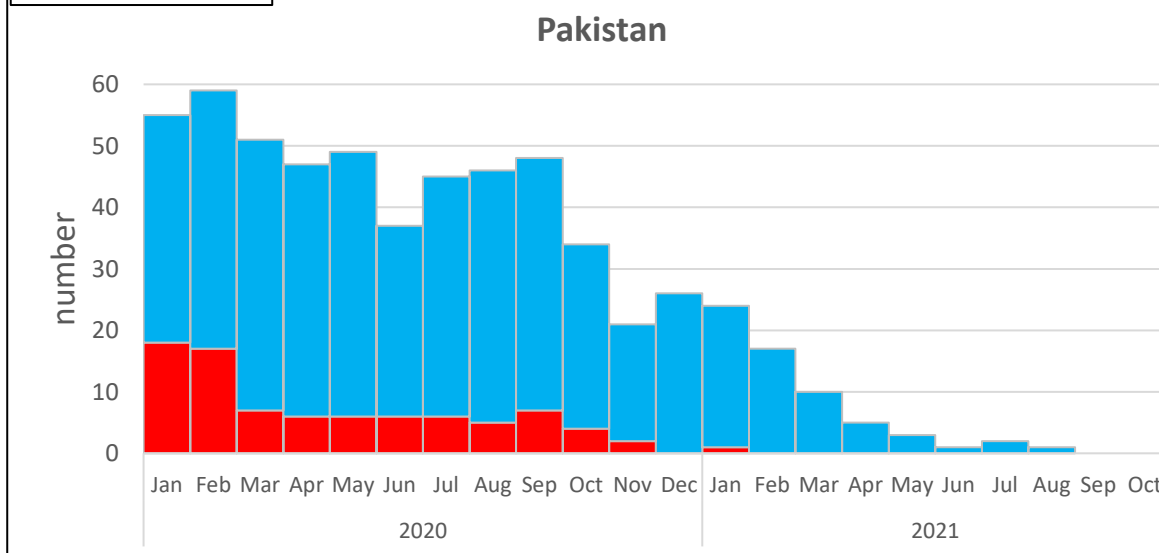
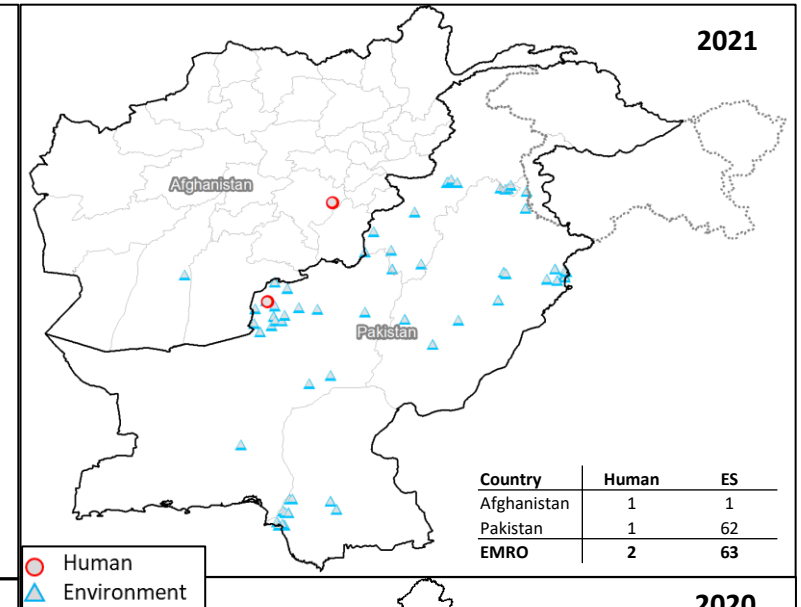
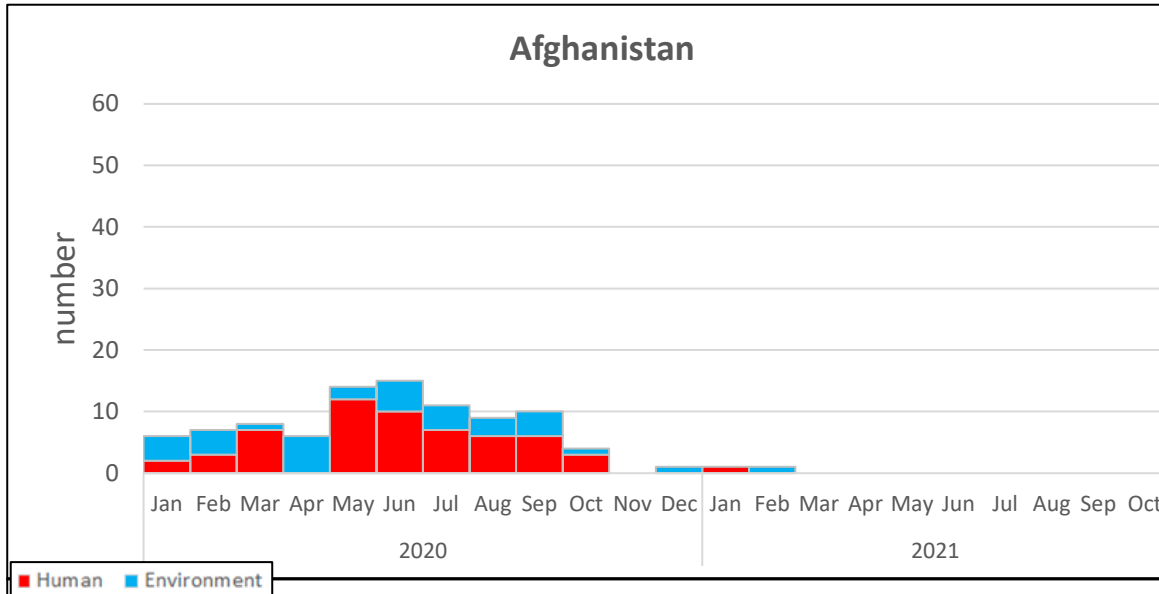


Stool adequacy



WPV1 Positive isolates from AFG/PAK by source

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Virus isolation by country, last 12 months (Oct. 31, 2020 to Oct. 31, 2021)

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Source / Virus type	AFG	PAK	EGY	IRN	SOM	SUD	YEM	Total
Human (AFP only)	120	34	1		1	10	5	171
Wild	1	2						3
cVDPV2	113	20			1	10		144
Wild+cVDPV2		1						1
Wild+aVDPV2								
Wild+aVDPV3								
cVDPV1							5	5
aVDPV1	1	1						2
aVDPV2	5	10	1					16
VDPV1								
VDPV2								
Environment	76	184	76	4	1	1		342
Wild		70						70
cVDPV2	70	39	10	3	1	1		124
Wild+cVDPV2	2	30						32
Wild+aVDPV2		6						6
Wild+aVDPV3		1						1
cVDPV1								
aVDPV1		1						1
aVDPV2	4	37		1				42
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	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					
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	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	3273	1	1	2989	45	30	0	18.21	93.86	31-Oct-21
BAHRAIN	15	0	0	15	0	0	0	5.00	93.33	5	0	0	3	0	0	0	1.95	100.00	31-Oct-21
DJIBOUTI	5	0	0	5	0	0	0	1.35	100.00	4	0	0	4	0	0	0	1.24	75.00	31-Oct-21
EGYPT	1009	0	0	1009	0	0	0	2.60	94.65	990	0	0	929	1	3	0	3.01	90.81	30-Oct-21
IRAN	618	0	0	618	0	0	0	2.99	98.54	520	0	0	511	0	0	0	3.07	96.54	30-Oct-21
IRAQ	476	0	0	476	0	0	0	2.81	93.28	555	0	0	510	0	7	0	3.84	90.81	31-Oct-21
JORDAN	32	0	0	32	0	0	0	0.83	100.00	27	0	0	25	0	0	0	0.82	100.00	28-Oct-21
KUWAIT	36	0	0	36	0	0	0	4.06	91.67	36	0	0	32	0	0	0	4.93	88.89	24-Oct-21
LEBANON	49	0	0	49	0	0	0	3.07	89.80	32	0	0	23	0	2	0	2.41	87.50	29-Oct-21
LIBYA	95	0	0	94	1	0	0	3.62	100.00	62	0	0	56	0	0	0	2.87	100.00	29-Oct-21
MOROCCO	87	0	0	87	0	0	0	0.86	78.16	56	0	0	15	0	27	10	0.68	55.36	29-Oct-21
OMAN	22	0	0	22	0	0	0	1.85	100.00	8	0	0	8	0	0	0	0.80	75.00	31-Oct-21
PAKISTAN	11972	84	29	11719	142	0	0	15.25	85.43	10039	1	3	9197	18	199	20	11.96	86.52	31-Oct-21
PALESTINE	16	0	0	16	0	0	0	0.87	100.00	11	0	0	6	0	0	0	0.71	100.00	31-Oct-21
QATAR	9	0	0	9	0	0	0	2.11	33.33	9	0	0	2	0	0	0	1.89	88.89	24-Oct-21
SAUDI ARABIA	200	0	0	200	0	0	0	2.37	96.00	153	0	0	115	0	0	0	2.19	92.81	31-Oct-21
SOMALIA	376	0	0	361	15	0	0	4.66	94.68	293	0	0	223	1	2	1	4.25	95.90	31-Oct-21
SUDAN	733	0	0	675	58	0	0	3.84	92.91	465	0	0	432	0	4	0	2.87	93.98	20-Oct-21
SYRIA	343	0	0	343	0	0	0	4.32	90.96	358	0	0	328	0	0	0	5.59	91.62	30-Oct-21
TUNISIA	42	0	0	42	0	0	0	1.49	54.76	16	0	0	14	0	0	0	0.67	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	1.06	100.00	17-Oct-21
YEMEN	825	0	1	794	31	0	0	5.44	88.73	648	0	0	355	3	100	83	5.04	90.12	30-Oct-21
EMR POL	20951	140	33	20221	561	0	0	7.96	88.59	17573	2	4	15779	68	382	114	7.38	89.18	

* 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](#)

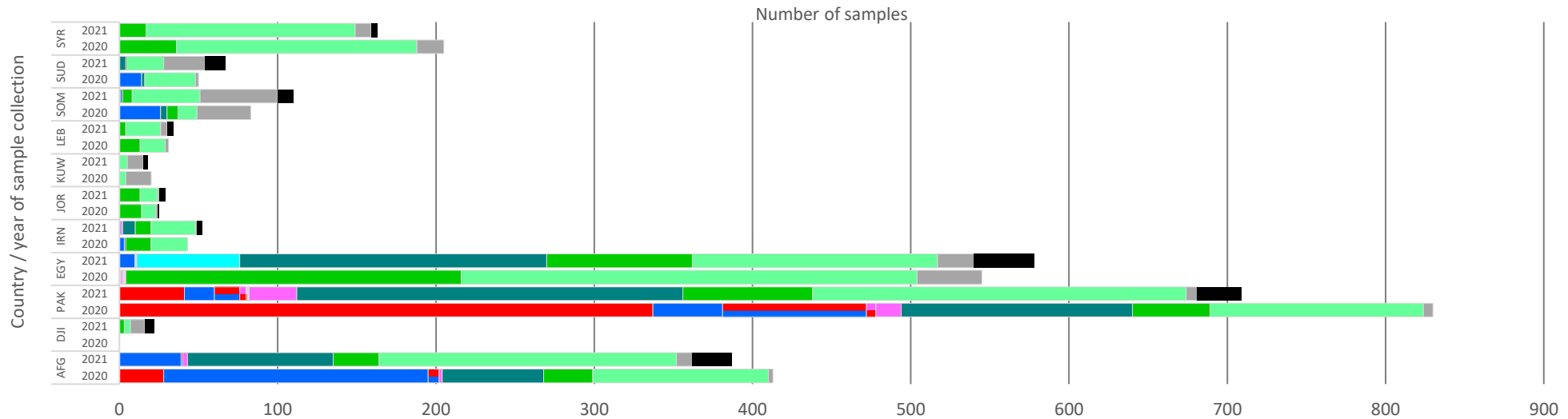
Laboratory investigation of AFP cases with paralysis onset in 2021

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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+/N PEV			received within last 14 days	received more than 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Afghanistan	RRL Pakistan	3231	249	40	579	2199	138	1	1	124	1		71	40		116			2			16%	99%	99%	98%	30-Oct-21
Bahrain	NPL Oman / CDC	3				3															0%	100%		0%	26-Oct-21	
Djibouti	NPL Kenya / CDC	4			1																100%			100%	31-Oct-21	
Egypt***	RRL Egypt	962	61	3	127	736	28	7		3			58			2			2		12%	97%	100%	99%	28-Oct-21	
Iran	NPL Iran / CDC	539	14		7	505	8	5		3	1		6			4					1%	100%	100%	98%	30-Oct-21	
Iraq	NPL Iraq, RRL Egypt	549	9		38	478	24			3						15				1	7%	100%	50%	98%	28-Oct-21	
Jordan	NPL Jordan, RRL Egypt	29			3	22	4														12%	100%		100%	31-Oct-21	
Kuwait	RRL Kuwait / RIVM	36				34	1	1													0%	100%		97%	31-Oct-21	
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	28			1	25	2														4%	100%			23-Oct-21	
Libya	RRL Tunisia / RIVM	60				57	1	2													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	9				9															1%	89%		100%	26-Oct-21	
Pakistan	RRL Pakistan	9794	514	60	2089	6828	270	9	1	217	1		172	14		266	1		6		5	18%	100%	100%	97%	30-Oct-21
Palestine & UNRWA		11				10	1														0%	10%		100%	31-Oct-21	
Qatar	NPL Oman / CDC	9				3	6														0%	100%		100%	26-Oct-21	
Saudi Arabia	NPL Saudi Arabia / CDC	159	2			151	6									2					0%	95%	50%	97%	28-Oct-21	
Somalia	NPL Kenya / CDC	293	4		37	183	2	66		2				1		2					17%	4%		78%	31-Oct-21	
Sudan	NPL Sudan / RRL Egypt	456	1		73	363		20					1			1					17%	88%	100%	67%	14-Oct-21	
Syria	NPL Syria / RRL Egypt	348	6		21	303	13	5													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%	26-Oct-21	
Yemen	NPL Oman, NPL Kenya, RRL Egypt	307	9		58	215	25			1	3					5					16%	100%	100%	0%	30-Oct-21	
Total EMR 2021		16896	869	103	3035	12190	529	118	2	353	6		308	55		413	1		8	2	6	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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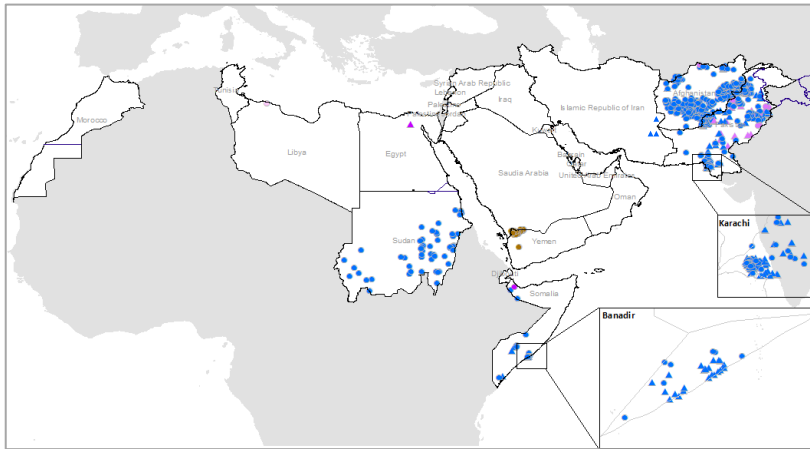


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Wild	28				337	41																
cVDPV2	167	39			44	19		10	3	1							26	1	14			
Wild+cVDPV2	7	1			91	16																
Wild+aVDPV2					6	4																
Wild+aVDPV3						1																
aVDPV1						1	1															
aVDPV2	2	3			16	30	1			1												
aVDPV3							2															
VDPV1								1														
VDPV2								65														
SL2	64	92			146	244		194	1	8							4	1	2	4		
SL1/3	31	29		3	49	82	212	92	16	10	14	13			13	4	7	6		1	36	17
Entero	111	188		4	135	236	288	155	23	28	9	11	4	5	16	22	12	43	32	23	152	132
Negative	3	10		9	6	7	41	23		1	1	1	16	10	2	4	34	49	2	26	17	10
Pending		25		6		28		38		3	1	4		3		4		10		13		4

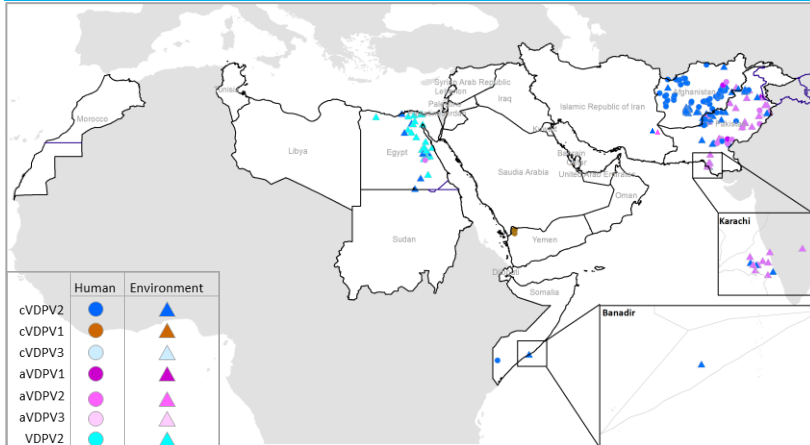
VDPVs isolations by Source and Country

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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	6	24-09-21					8	19	1	28-04-21	3	5		3	22	34	11-10-21							
	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. 1204, Week 43 (ending on 31/10/2021)

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