

EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1224, Week 11 (ending on 20/03/2022)

Highlights



Children
Paralyzed
by polio

2021

- 05 cases of Wild Polio 1
 - 04 in Afghanistan
 - 01 in Pakistan

- 69 cases of cVDPV2
 - 43 in Afghanistan
 - 08 in Pakistan
 - 01 in Somalia
 - 17 in Yemen

- 03 cVDPV1 cases
 - All in Yemen

2022

- 01 case of Wild Polio 1
 - 01 in Afghanistan

- 01 case of cVDPV2
 - 01 in Somalia

- Zero case of cVDPV1
(No cVDPV1 for the last ten months)



Sewage
water
sampling

2021

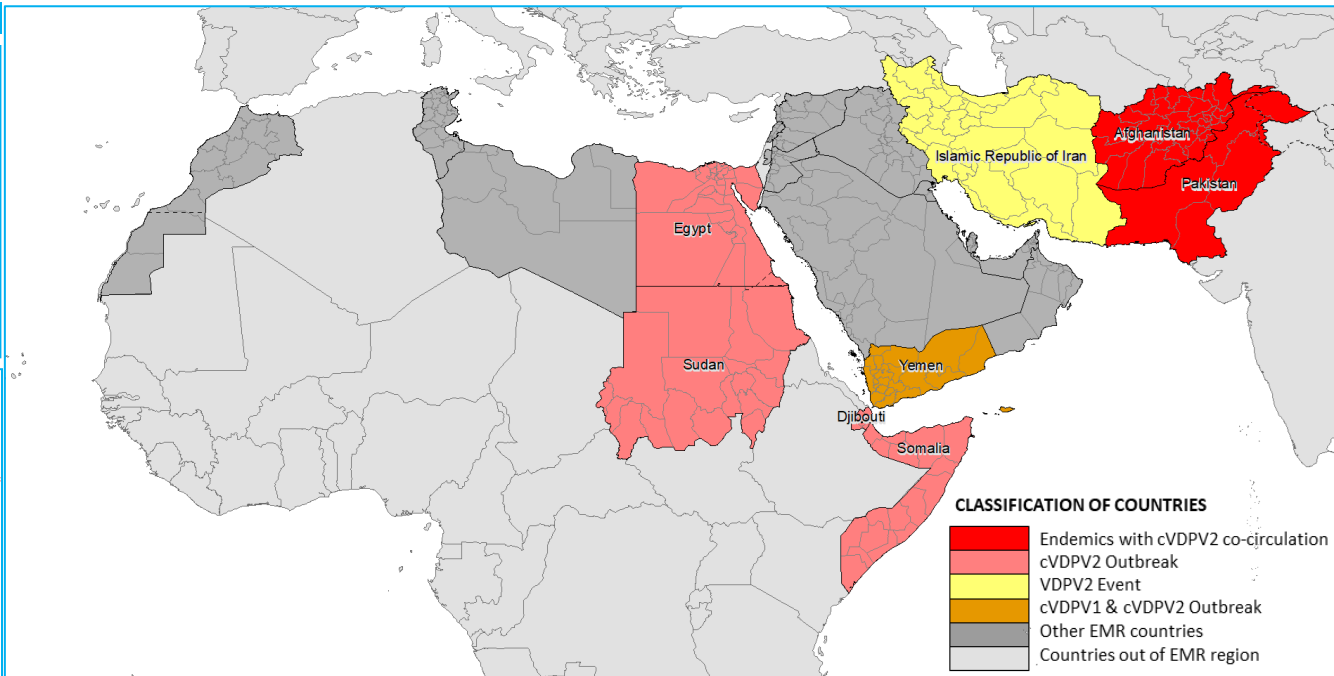
- 66 samples Wild Polio 1
 - 01 in Afghanistan
 - 65 in Pakistan

- 93 samples cVDPV2
 - 40 in Afghanistan
 - 35 in Pakistan
 - 11 in Egypt
 - 01 in Iran
 - 01 in Somalia
 - 05 in Djibouti

2022

- No sample positive for Wild Polio 1
(No WPV1 for the last 2 months)

- No sample positive for cVDPV2
(No cVDPV2 for the last 3 months)

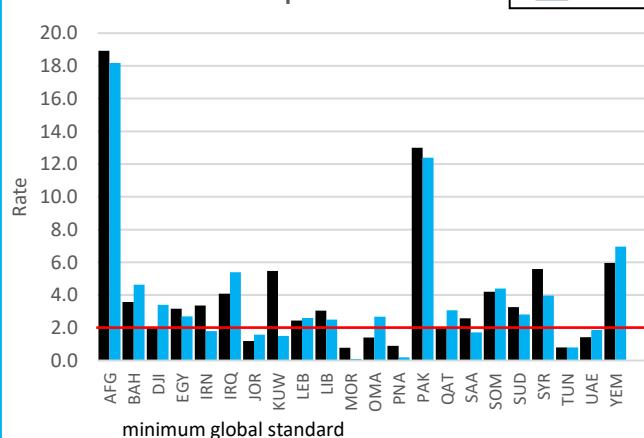


Highlights of the week

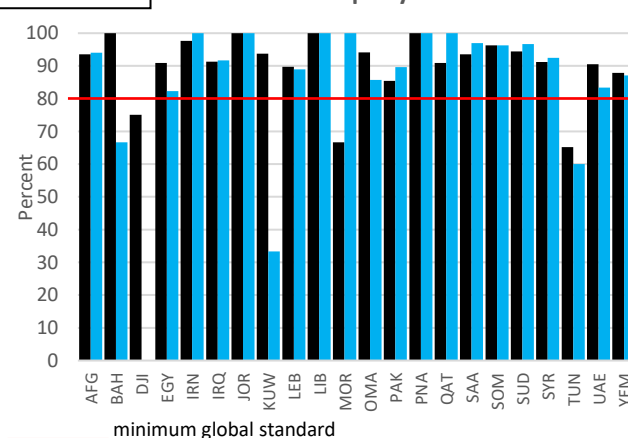
- No new wild poliovirus from human or environmental samples reported this week.
- Yemen: three new cVDPV2 cases are reported. The include one each from Lahaj Marib and Saadah. Their onset of paralysis is in first half of October 2021.
- An outbreak of cVDPV3 is reported in Jerusalem, Israel. There is risk of spread of outbreak to occupied Palestinian Territory due to proximity. In response to this outbreak a risk analysis is being carried out for strategizing vaccination activities in occupied Palestinian territory besides enhanced surveillance activities.
- Somalia: a summit to stop cVDPV2 transmission commences 21 March 2022 in Nairobi. Country has the most stubborn cVDPV2 circulation in the EMR.

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

Non polio AFP rate

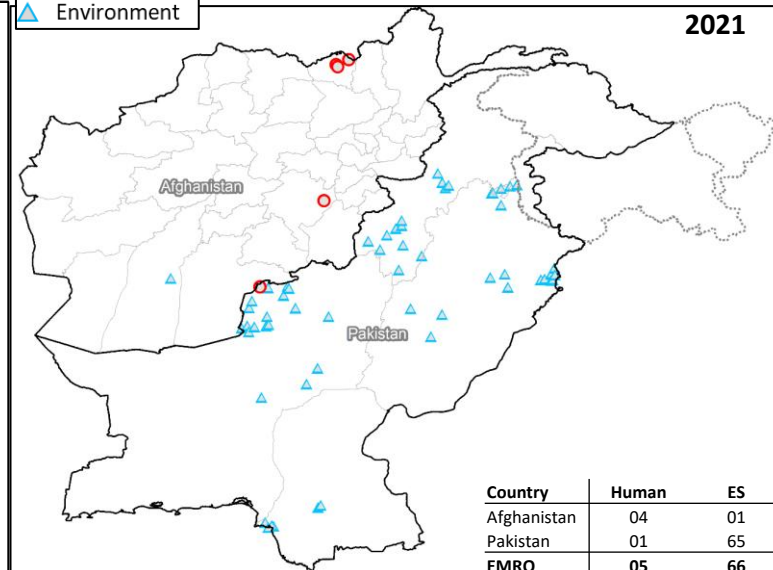
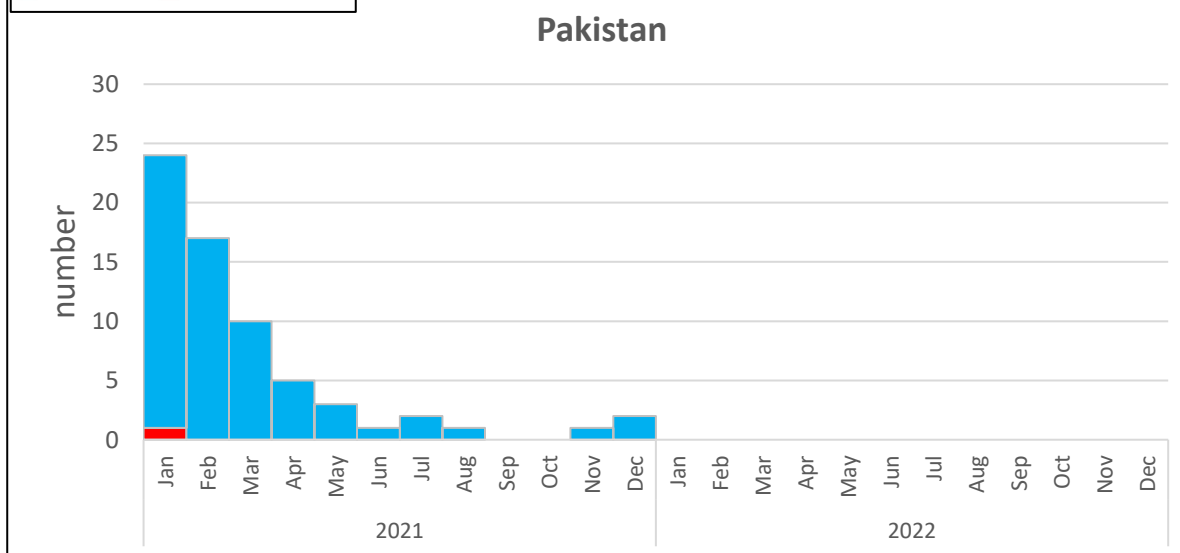
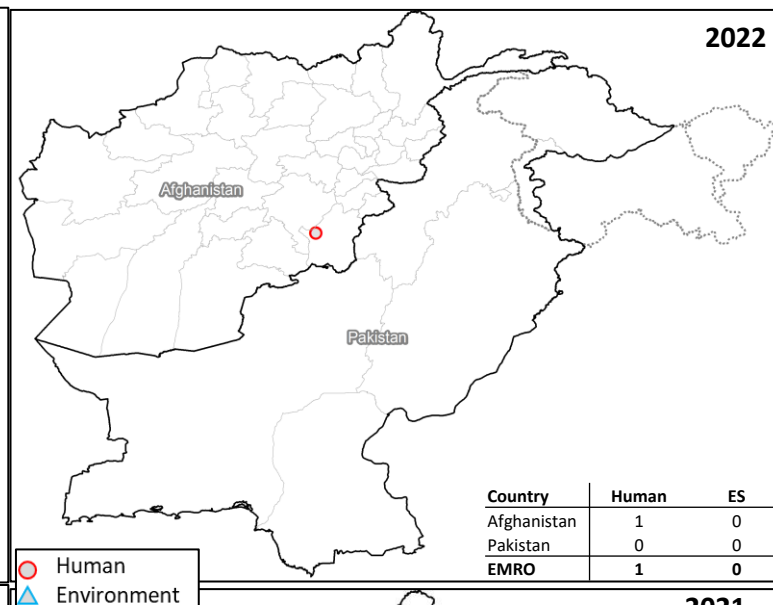
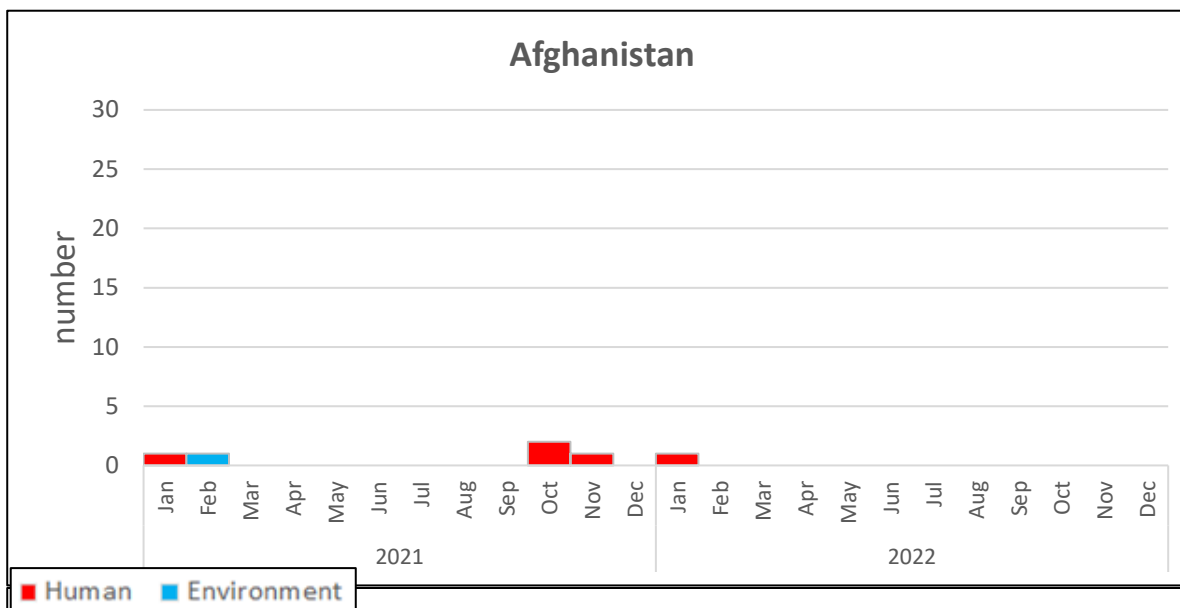


Stool adequacy



WPV1 Positive isolates from Afghanistan and Pakistan by source

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Virus isolation by country, last 12 months (Mar. 20, 2021 to Mar. 20, 2022)

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Source / Virus type	AFG	DJI	PAK	EGY	IRN	SOM	YEM	Total
Human (AFP only)	14		4	1		2	22	43
Wild	4							4
cVDPV2	10		2			2	17	31
Wild+cVDPV2								
Wild+aVDPV3								
cVDPV1							1	1
aVDPV1							1	1
aVDPV2			2	1				3
VDPV1								
VDPV2							3	3
Environment	7	5	45	75	3	1		136
Wild			13					13
cVDPV2	6	5	7	2		1		21
Wild+cVDPV2			2					2
Wild+aVDPV3			1					1
cVDPV1								
aVDPV1								
aVDPV2	1		21		2			24
VDPV1				1				1
VDPV2			1	72	1			74
Total	21	5	49	76	3	3	22	179

Note: Viruses isolated from 'other' sources (example healthy children) are not included in this analysis; they are shown in page No. (8)

Confirmed Wild Polio 1 Cases by month of onset

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Country	Total year 2020	Total year 2021	20-02		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case	
					2021						2022							
			2021	2022	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		
Afghanistan	56	4	1	1	0	0	0	0	0	0	0	2	1	0	1			14-Jan-22
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			
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					
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					
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0					
Morocco	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	84	1	1	0	0	0	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					
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				
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					
Yemen	0	0	0	0	0	0	0	0	0	0								
EMR	140	5	2	1	0	0	0	0	0	0	0	2	1	0	1	0	0	14-Jan-22

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

Investigation of AFP cases with paralysis onset in 2021 & 2022

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COUNTRY	2021									2022									Line List
	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	4088	4	1	4009	45	26	0	18.92	93.52	852	1	0	608	0	0	0	18.17	94.01	17-Mar-22
BAHRAIN	11	0	0	11	0	0	0	3.58	100.00	3	0	0	0	0	0	0	4.63	66.67	17-Mar-22
DJIBOUTI	8	0	0	4	0	4	3	2.06	75.00	3	0	0	0	0	0	0	3.40	0.00	19-Mar-22
EGYPT	1251	0	0	1236	1	8	1	3.17	90.89	231	0	0	153	0	0	0	2.71	82.25	17-Mar-22
IRAN	681	0	0	680	1	0	0	3.36	97.65	79	0	0	70	0	0	0	1.81	100.00	19-Mar-22
IRAQ	709	0	0	709	0	0	0	4.08	91.26	203	0	0	149	0	0	0	5.40	91.63	19-Mar-22
JORDAN	47	0	0	46	0	1	0	1.19	100.00	14	0	0	6	0	0	0	1.60	100.00	17-Mar-22
KUWAIT	48	0	0	48	0	0	0	5.47	93.75	3	0	0	1	0	0	0	1.50	33.33	13-Mar-22
LEBANON	39	0	0	36	0	3	0	2.45	89.74	9	0	0	0	0	0	0	2.61	88.89	6-Mar-22
LIBYA	79	0	0	79	0	0	0	3.05	100.00	14	0	0	7	0	0	0	2.50	100.00	5-Mar-22
MOROCCO	78	0	0	57	0	18	1	0.79	66.67	2	0	0	0	0	0	0	0.10	100.00	7-Mar-22
OMAN	17	0	0	17	0	0	0	1.41	94.12	7	0	0	6	0	0	0	2.69	85.71	13-Mar-22
PAKISTAN	13084	1	4	12991	18	53	0	12.98	85.41	2693	0	0	1935	0	0	0	12.36	89.64	19-Mar-22
PALESTINE	16	0	0	16	0	0	0	0.85	100.00	1	0	0	0	0	0	0	0.23	100.00	6-Mar-22
QATAR	11	0	0	11	0	0	0	2.03	90.91	3	0	0	0	0	0	0	3.07	100.00	13-Mar-22
SAUDI ARABIA	217	0	0	217	0	0	0	2.59	93.55	33	0	0	0	0	0	0	1.72	96.97	17-Mar-22
SOMALIA	349	0	0	348	1	0	0	4.21	96.28	79	0	0	61	1	0	0	4.41	96.20	19-Mar-22
SUDAN	637	0	0	635	0	1	0	3.26	94.35	119	0	0	92	0	0	0	2.82	96.64	17-Mar-22
SYRIA	431	0	0	431	0	0	0	5.60	91.18	66	0	0	39	0	0	0	3.97	92.42	19-Mar-22
TUNISIA	23	0	0	23	0	0	0	0.81	65.22	5	0	0	5	0	0	0	0.80	60.00	18-Mar-22
U.A.E.	21	0	0	21	0	0	0	1.42	90.48	6	0	0	0	0	0	0	1.88	83.33	17-Mar-22
YEMEN	921	0	0	763	24	83	61	5.96	87.84	232	0	0	1	0	0	0	6.95	87.07	19-Mar-22
EMR POL	22766	5	5	22388	90	197	66	7.95	88.47	4657	1	0	3133	1	0	0	7.51	90.51	

* 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, with 14 days of paralysis onset and specimens received in the lab in 'Good Condition'

**** Includes all VDPV cases. Further details available in page (8)

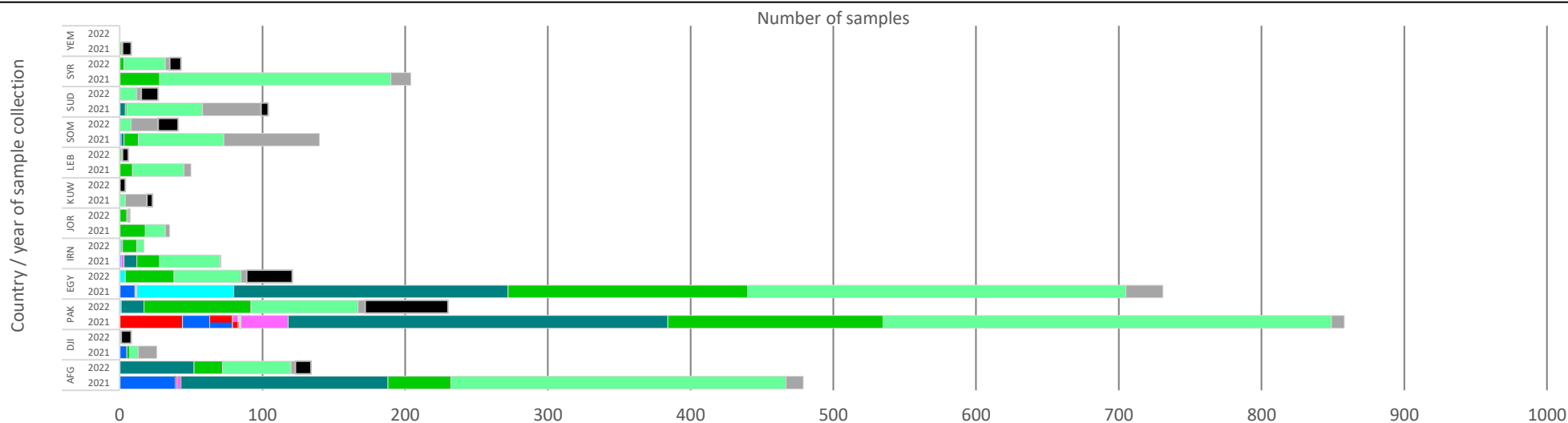
Laboratory investigation of AFP cases with paralysis onset in 2022

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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	845	54	5	92	491	183		1	30			7			42						11%	100%	100%	99%	19-Mar-22
Bahrain	NPL Oman / CDC	2				2																0%	100%		100%	17-Mar-22
Djibouti	NPL Kenya / CDC	3					2	1																		19-Mar-22
Egypt***	RRL Egypt	231	5	1	22	144	17	42		1						3			1	1		12%	96%	100%	100%	10-Mar-22
Iran	NPL Iran / CDC	112	1		1	90	20			1	1					1						0%	100%	100%	100%	19-Mar-22
Iraq	NPL Iraq, RRL Egypt	207	1		8	160	37	1								2						5%	100%	50%	99%	18-Mar-22
Jordan	NPL Jordan, RRL Egypt	9			2	6	1	1														29%	100%		100%	13-Mar-22
Kuwait	RRL Kuwait / RIVM	2				2																0%	100%		100%	17-Mar-22
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	7				7																0%	100%			19-Mar-22
Libya	RRL Tunisia / RIVM	19				14	5															0%	100%		100%	18-Mar-22
Morocco	NPL Morocco, RRL Tunisia	5				5																0%	100%		100%	18-Mar-22
Oman	NPL Oman / CDC	10				9	1															3%	89%		100%	17-Mar-22
Pakistan	RRL Pakistan	2683	98	2	321	1713	563	4		52			1			68				7		10%	100%	100%	98%	19-Mar-22
Palestine & UNRWA		1				1																0%	0%		100%	6-Mar-22
Qatar	NPL Oman / CDC	3				1	2															0%	100%		100%	17-Mar-22
Saudi Arabia	NPL Saudi Arabia / CDC	29				29																0%	97%		100%	17-Mar-22
Somalia	NPL Kenya / CDC	79			10	52	7	10														16%	9%		100%	19-Mar-22
Sudan	NPL Sudan / RRL Egypt	117			20	77	19	1														21%	92%			19-Mar-22
Syria	NPL Syria / RRL Egypt	62			2	44	16															3%	100%			19-Mar-22
Tunisia	RRL Tunisia	5				5																0%	100%		100%	18-Mar-22
U.A.E	NPL Oman / CDC	3				3																0%	100%		100%	17-Mar-22
Yemen	NPL Oman, NPL Kenya, RRL Egypt	89	2				87													2		0%	100%			19-Mar-22
Total EMR 2022		4523	161	8	478	2855	960	60	1	84	1		8			116			1	1	9	10%	98%	99%	99%	
Total EMR 2021		22102	1174	127	3861	16843	89	9	5	475	7	28	363	75		595	1	1	7	2	16	14%	97%	98%	93%	

Environmental Surveillance Isolation by Classification

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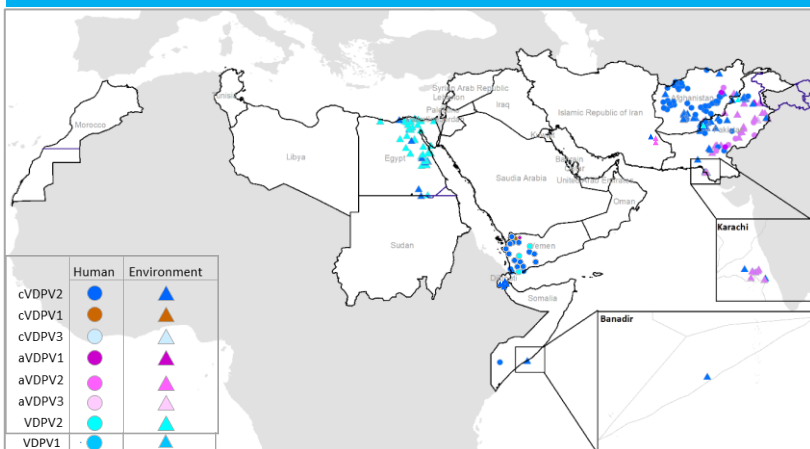


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR		YEM	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Wild					44																			
cVDPV2	39		5		19		11		1							1								
Wild+cVDPV2	1				16																			
Wild+aVDPV2					4																			
Wild+aVDPV3					1																			
aVDPV1					1																			
aVDPV2	3				33				2															
aVDPV3																								
VDPV1							1																	
VDPV2						1	68	4		1														
SL2	145	52			266	16	192		9	1						2		4						
SL1/3	44	20	2		151	75	168	34	16	10	18	5			9	1	10		1		28	3	1	
Entero	235	48	6		314	75	265	47	42	5	14		4		36	1	60	8	53	12	162	29	1	
Negative	12	3	13	1	9	5	26	4	1		3	1	15		5		67	19	41	3	14	3		
Pending		11		7		58		32				1	4	4		4		14	5	12		8	6	

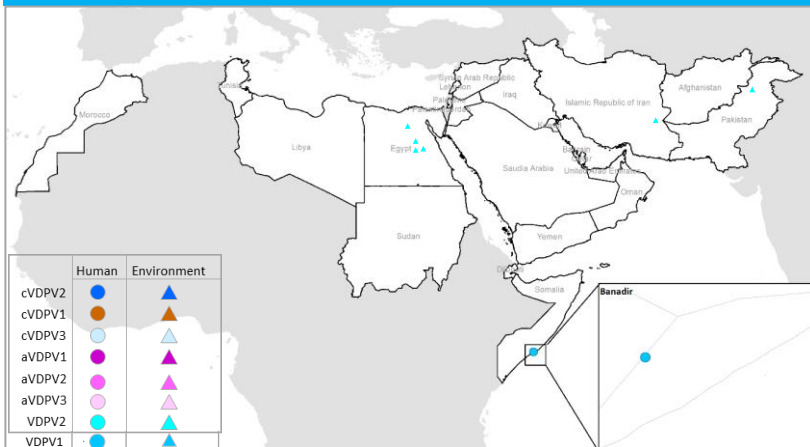
VDPVs isolations by Source and Country

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VDPV Isolates, EMR countries, 2021



VDPV Isolates, EMR countries, 2022



VDPVs isolated from 2017-2022

cVDPV Isolate type	EMR Country	Sources																											
		AFP cases(Human)						Contacts(Human)						Environment						Other Sources (Healthy Children)									
		2017	2018	2019	2020	2021	2022	Most recent	2017	2018	2019	2020	2021	2022	Most recent	2017	2018	2019	2020	2021	2022	Most recent	2017	2018	2019	2020	2021	2022	Most recent
cVDPV2	Afghanistan				307	43		09-07-21											174	40		23-06-21							
	Djibouti																		5			28-12-21							
	Egypt																			11		18-11-21							
	Iran																		3	1		20-02-21							
	Pakistan			22	135	8		23-04-21										38	135	35		11-08-21							
	Somalia		6	3	14	1	1	01-01-22	3	1	11		1	05-01-22	2	19	5	26	1		23-05-21				1	5			
	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
Yemen					17		08-Nov-21																						
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			16-07-20								
	Pakistan																		1		10-02-21								
	Somalia				1			26-01-20																					
	Yemen					1		20-07-21																					
aVDPV2	Afghanistan				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																		2		28-09-21								
	Pakistan				7	8		24-09-21			8	19	1	28-04-21	5		3	22	37		06-12-21								
	Somalia															2	1				03-02-19								
aVDPV3	Afghanistan				1			23-06-20																					
	Egypt																	2			30-09-20								
	Pakistan																		1		05-04-21								
	Libya				1			15-01-20																					
VDPV1	Egypt																	1			11-07-21								
VDPV2	Egypt																	68	4		14-02-22								
	IRAN																			1	04-02-22								
	Pakistan																			1	15-02-22								
	Yemen					3		29-10-21																					

Important links

EMR Polio Bulletin - Issue No. 1224, Week 11 (ending on 20/03/2022)

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