

Highlights



Children
Paralyzed
by polio

2021

- 05 cases of Wild Polio 1
 - 04 in Afghanistan
 - 01 in Pakistan
- 113 cases of cVDPV2
 - 43 in Afghanistan
 - 08 in Pakistan
 - 01 in Somalia
 - 61 in Yemen
- 03 cVDPV1 cases
 - All in Yemen

2022

- 01 case of Wild Polio 1
 - 01 in Afghanistan
- 06 case of cVDPV2
 - 01 in Afghanistan
 - 05 in Yemen
- Zero case of cVDPV1
(No cVDPV1 for the last ten months)



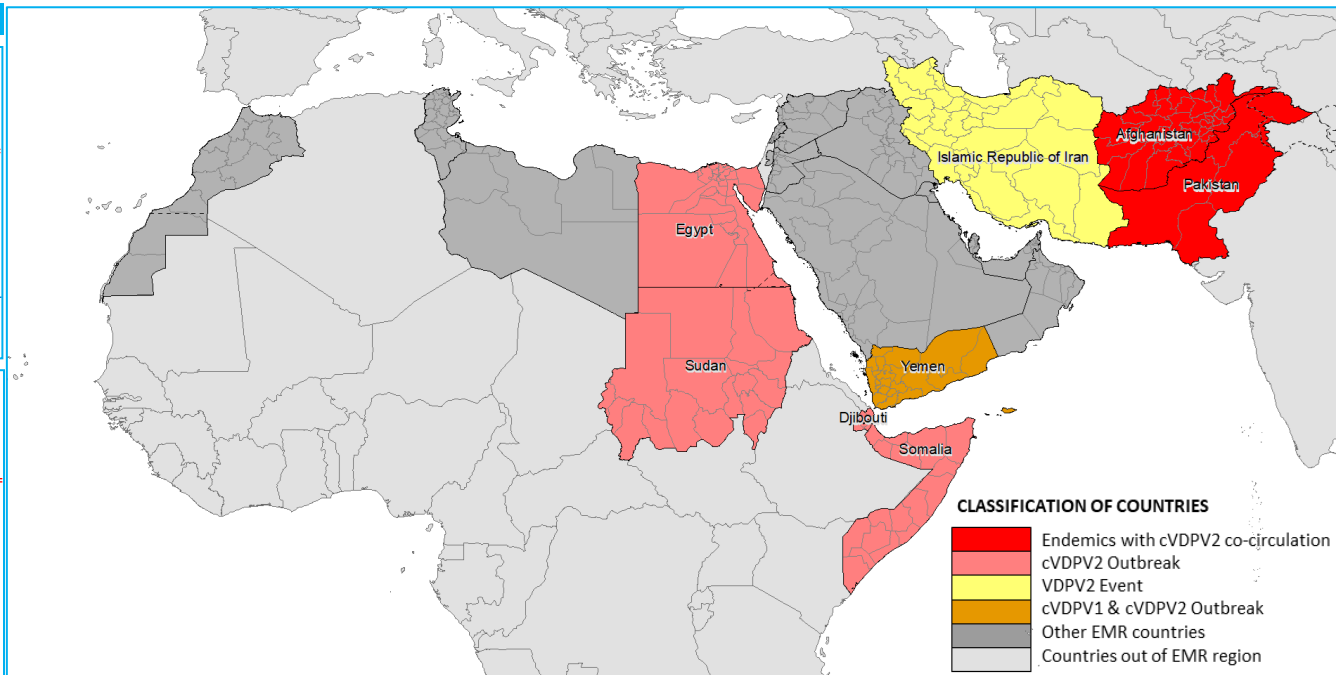
Sewage
water
sampling

2021

- 66 samples Wild Polio 1
 - 01 in Afghanistan
 - 65 in Pakistan
- 94 samples cVDPV2
 - 40 in Afghanistan
 - 35 in Pakistan
 - 12 in Egypt
 - 01 in Iran
 - 01 in Somalia
 - 05 in Djibouti

2022

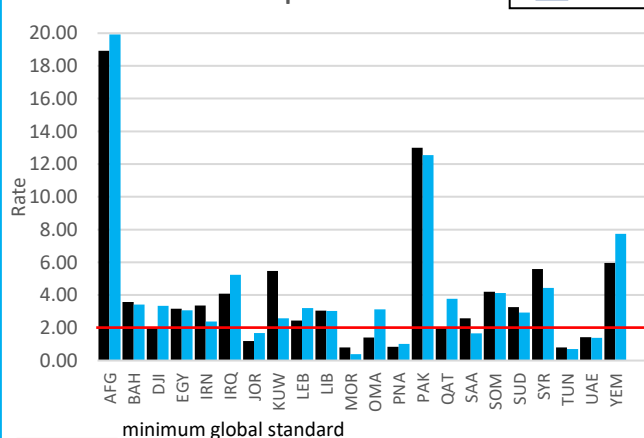
- No sample positive for Wild Polio 1
(No WPV1 for the last 4 months)
- 2 samples cVDPV2
 - 02 in Egypt



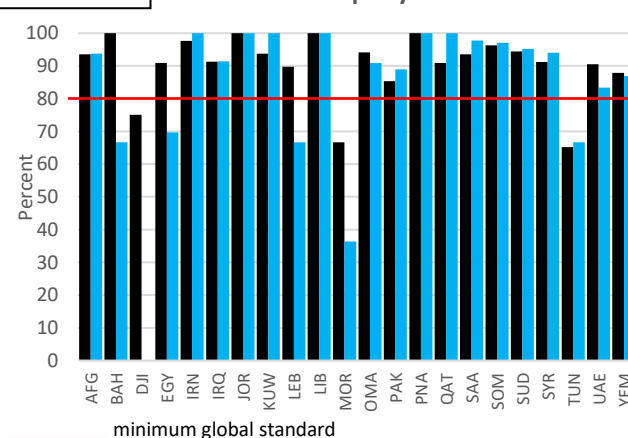
Highlights of the week

- No new wild poliovirus isolates.
- Yemen: 18 new cVDPV2 cases reported from ten provinces (13 in 2021 and 5 in 2022). Total cVDPV2 cases from Yemen so far are 61 in 2021 and 5 in 2022. The recent most cVDPV2 case has onset of paralysis on 7 January 2022.
- Somalia and Djibouti: PV2 isolates pending for sequencing from environmental and/or human samples
- Egypt and Palestinian programs are strategizing targeted vaccination campaigns due to breakthrough transmission of cVDPV2 in Qena and an cVDPV3 outbreak in Israel, respectively.
- An ad hoc meeting of Technical Advisory Group on Polio Eradication in Pakistan concluded that nOPV2 should be vaccine of choice for any cVDPV2s.

Non polio AFP rate



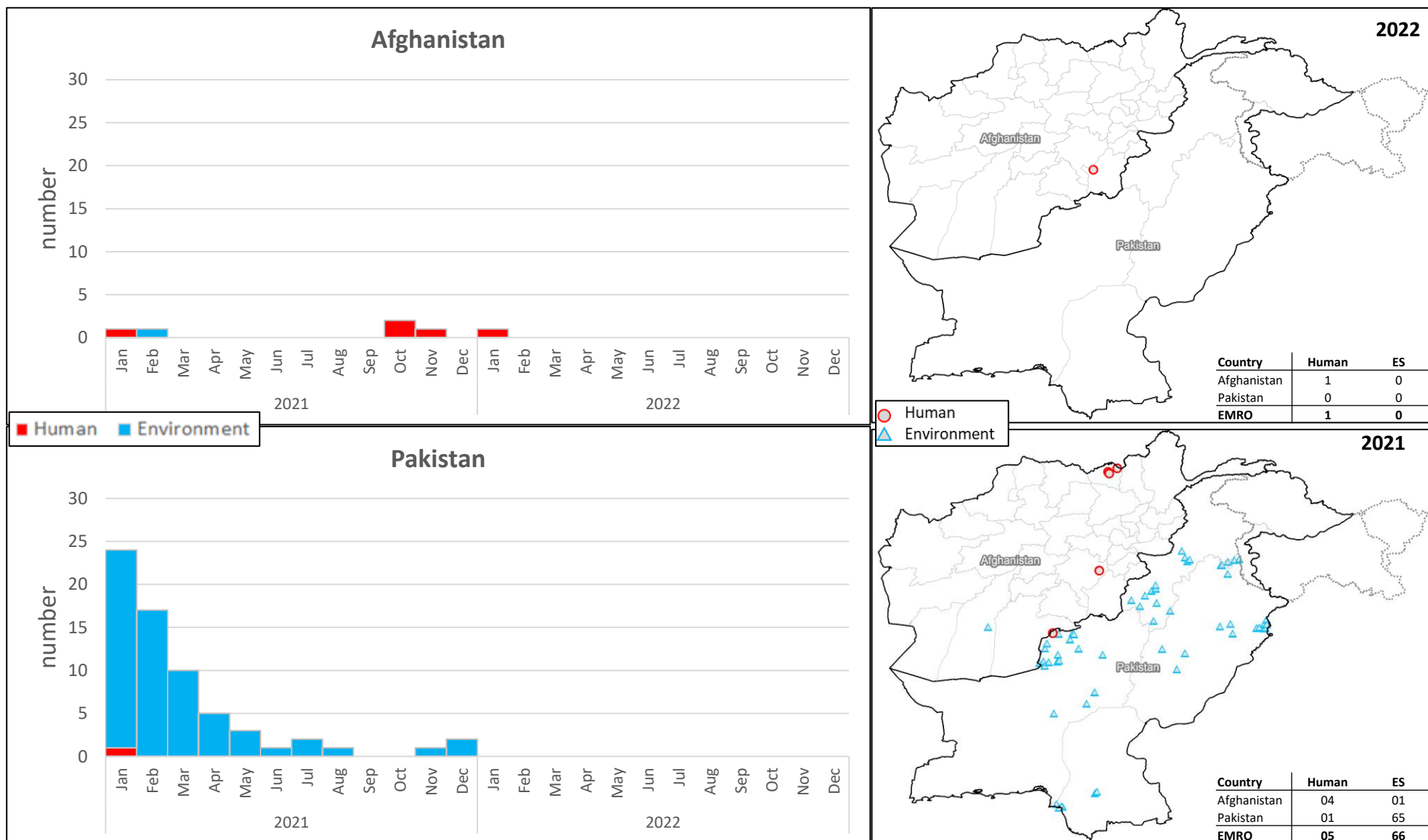
Stool adequacy



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

WPV1 Positive isolates from Afghanistan and Pakistan by source

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Virus isolation by country, last 12 months (Apr. 17, 2021 to Apr. 17, 2022)

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Source / Virus type	AFG	DJI	PAK	EGY	IRN	SOM	YEM	Total
Human (AFP only)	10		3	1		2	69	85
Wild	4							4
cVDPV2	5		1			2	65	73
aVDPV2	1		2	1				4
VDPV1								
VDPV2							3	3
cVDPV2+aVDPV1							1	1
Environment	4	5	33	78	3	1		124
Wild			10					10
cVDPV2	3	5	4	5		1		18
aVDPV2	1		18		2			21
VDPV1				1				1
VDPV2			1	72	1			74
cVDPV2+aVDPV1								
Total	14	5	36	79	3	3	69	209

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	3 April		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case	
					2021						2022							
			2021	2022	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
Afghanistan	56	4	1	1	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	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				
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	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	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	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	0							
EMR	140	5	2	1	0	0	0	0	0	0	2	1	0	1	0	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	4021	45	17	0	18.92	93.52	1264	1	0	998	1	7	0	19.91	93.67	17-Apr-22
BAHRAIN	11	0	0	11	0	0	0	3.58	100.00	3	0	0	1	0	0	0	3.42	66.67	17-Apr-22
DJIBOUTI	8	0	0	4	0	4	3	2.06	75.00	4	0	0	0	0	0	0	3.34	0.00	17-Apr-22
EGYPT	1251	0	0	1238	1	12	1	3.17	90.89	356	0	0	272	0	1	0	3.08	69.66	14-Apr-22
IRAN	681	0	0	680	1	0	0	3.36	97.65	142	0	0	112	0	0	0	2.40	100.00	16-Apr-22
IRAQ	709	0	0	709	0	0	0	4.08	91.26	267	0	0	192	0	6	0	5.24	91.39	16-Apr-22
JORDAN	47	0	0	47	0	0	0	1.19	100.00	20	0	0	16	0	0	0	1.68	100.00	07-Apr-22
KUWAIT	48	0	0	48	0	0	0	5.47	93.75	7	0	0	5	0	0	0	2.58	100.00	10-Apr-22
LEBANON	39	0	0	39	0	0	0	2.45	89.74	15	0	0	6	0	0	0	3.21	66.67	10-Apr-22
LIBYA	79	0	0	79	0	0	0	3.05	100.00	23	0	0	17	0	0	0	3.03	100.00	17-Apr-22
MOROCCO	78	0	0	78	0	0	0	0.80	66.67	11	0	0	0	0	2	1	0.39	36.36	15-Apr-22
OMAN	17	0	0	17	0	0	0	1.41	94.12	11	0	0	10	0	0	0	3.12	90.91	17-Apr-22
PAKISTAN	13105	1	4	13063	18	19	0	13.00	85.27	3712	0	0	2990	0	81	0	12.55	88.87	17-Apr-22
PALESTINE	16	0	0	16	0	0	0	0.85	100.00	6	0	0	0	0	2	0	1.02	100.00	17-Apr-22
QATAR	11	0	0	11	0	0	0	2.03	90.91	5	0	0	0	0	0	0	3.78	100.00	10-Apr-22
SAUDI ARABIA	217	0	0	217	0	0	0	2.59	93.55	43	0	0	15	0	0	0	1.67	97.67	17-Apr-22
SOMALIA	349	0	0	348	1	0	0	4.21	96.28	100	0	0	84	1	0	0	4.12	97.00	17-Apr-22
SUDAN	637	0	0	637	0	0	0	3.26	94.35	167	0	0	134	0	1	0	2.93	95.21	14-Apr-22
SYRIA	431	0	0	431	0	0	0	5.60	91.18	100	0	0	62	0	0	0	4.44	94.00	16-Apr-22
TUNISIA	23	0	0	23	0	0	0	0.81	65.22	6	0	0	5	0	0	0	0.71	66.67	15-Apr-22
U.A.E.	21	0	0	21	0	0	0	1.42	90.48	6	0	0	0	0	1	0	1.39	83.33	11-Apr-22
YEMEN	921	0	0	837	67	19	6	5.96	87.84	350	0	0	100	5	20	15	7.74	86.86	17-Apr-22
EMR POL	22787	5	5	22575	133	71	10	7.96	88.38	6618	1	0	5019	7	121	16	7.87	89.29	

* 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)

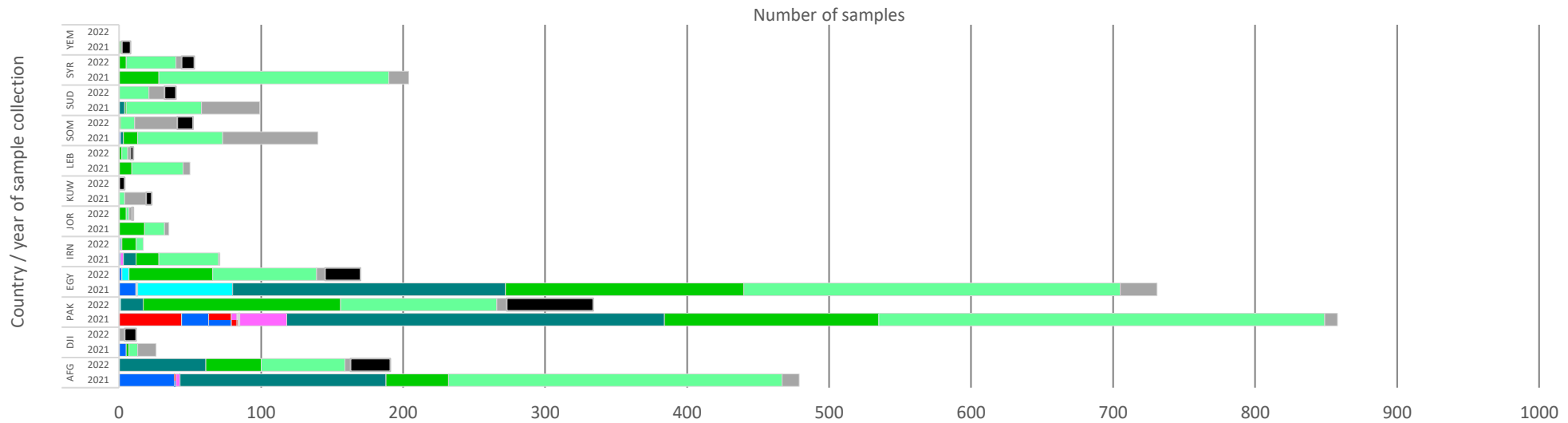
Laboratory investigation of AFP cases with paralysis onset in 2022

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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	1227	93	10	170	772	156	1	1	60			8			72					1	13%	94%	100%	99%	17-Apr-22
Bahrain	NPL Oman / CDC	3				3																0%	100%		100%	17-Apr-22
Djibouti	NPL Kenya / CDC	4						4																		17-Apr-22
Egypt***	RRL Egypt	358	6	1	42	271	36	2		1						4			1	1		11%	98%	100%	100%	17-Apr-22
Iran	NPL Iran / CDC	152	2		1	129	20			1	1					2						0%	99%	100%	99%	16-Apr-22
Iraq	NPL Iraq, RRL Egypt	269	1		16	224	26	2								2						7%	100%	50%	100%	15-Apr-22
Jordan	NPL Jordan, RRL Egypt	20			3	14	3															18%	100%		100%	10-Apr-22
Kuwait	RRL Kuwait / RIVM	6				4		2														0%	100%		100%	17-Apr-22
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	7				7																0%	100%			3-Apr-22
Libya	RRL Tunisia / RIVM	25				21	2	2														0%	100%		100%	8-Apr-22
Morocco	NPL Morocco, RRL Tunisia	11				5	2	4														0%	100%		100%	8-Apr-22
Oman	NPL Oman / CDC	13			2	11																13%	85%		100%	17-Apr-22
Pakistan	RRL Pakistan	3684	154	21	513	2577	395	14		84			1			133					1	11%	93%	99%	97%	17-Apr-22
Palestine & UNRWA		6				5	1															0%	0%		80%	17-Apr-22
Qatar	NPL Oman / CDC	5	1			4				1												0%	80%	0	100%	17-Apr-22
Saudi Arabia	NPL Saudi Arabia / CDC	47			2	45																4%	89%		100%	17-Apr-22
Somalia	NPL Kenya / CDC	100	1		17	71	3	11		1												19%	9%		100%	17-Apr-22
Sudan	NPL Sudan / RRL Egypt	168			32	108	11	17														22%	87%			17-Apr-22
Syria	NPL Syria / RRL Egypt	80	2		3	63		12														3%	100%			3-Apr-22
Tunisia	RRL Tunisia	6				5		1														0%	100%		100%	8-Apr-22
U.A.E	NPL Oman / CDC	6				6																0%	100%		83%	17-Apr-22
Yemen	NPL Oman, NPL Kenya, RRL Egypt	173	38		16	88	31			2		34				2					2	11%	81%	8%	1%	17-Apr-22
Total EMR 2022		6370	298	32	817	4433	686	72	1	150	1	34	9			215			1	1	4	11%	92%	89%	95%	
Total EMR 2021		22106	1182	128	3869	16913	1	9	5	477	7	29	363	91		599	1	1	7	2	3	14%	97%	97%	93%	

Environmental Surveillance Isolation by Classification

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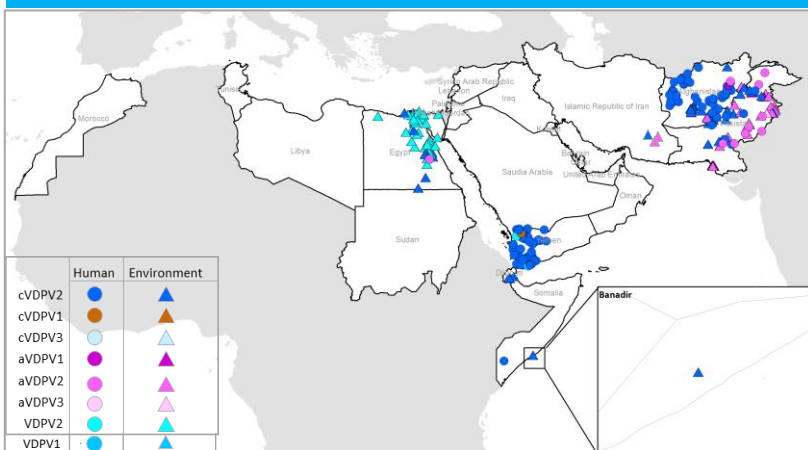


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR		YEM	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Wild					44																			
cVDPV2	39		5		19		12	2	1								1							
Wild+cVDPV2	1				16																			
Wild+aVDPV2					4																			
Wild+aVDPV3					1																			
aVDPV1					1																			
aVDPV2	3				33				2															
aVDPV3																								
VDPV1							1																	
VDPV2						1	67	5		1														
SL2	145	61			266	16	192		9	1							2		4					
SL1/3	44	39	2		151	139	168	59	16	10	18	5			9	2	10	1	1		28	5	1	
Entero	235	59	6		314	110	265	73	42	5	14	2	4		36	4	60	10	53	21	162	35	1	
Negative	12	4	13	4	9	7	26	6	1		3	2	15		5	2	67	30	41	11	14	4		
Pending		28		8		61		25				1	4	4		2		11		8		9	6	

VDPVs isolations by Source and Country

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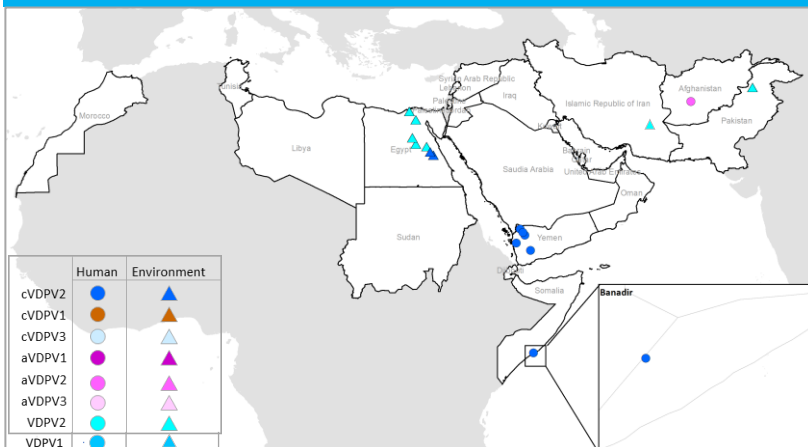
VDPV Isolates, EMR countries, 2021



VDPVs isolated from 2017-2022

VDPV Isolate type	EMR Country	Sources																										
		AFP cases(Human)						Contacts(Human)						Environment						Other Sources (Healthy Children)								
		2017	2018	2019	2020	2021	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																		12	2	09-03-22							
	Iran																		3	1	20-02-21							
	Pakistan			22	135	8	23-04-21											38	135	35	11-08-21							
	Somalia		6	3	14	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					61	5	07-01-22					23	5	17-01-22														
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	1	01-01-22				75	15	1	14-02-22				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							
	Yemen											1		09-12-21														
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																		67	5	07-03-22							
	IRAN																			1	04-02-22							
	Pakistan																			1	15-02-22							
	Yemen				3		01-11-21																					

VDPV Isolates, EMR countries, 2022



Important links

EMR Polio Bulletin - Issue No. 1227, Week 14 (ending on 10/04/2022)

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