

EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1226, Week 13 (ending on 03/04/2022)

Highlights



Children
Paralyzed
by polio

2021

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

- 85 cases of cVDPV2
 - 43 in Afghanistan
 - 08 in Pakistan
 - 01 in Somalia
 - 33 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

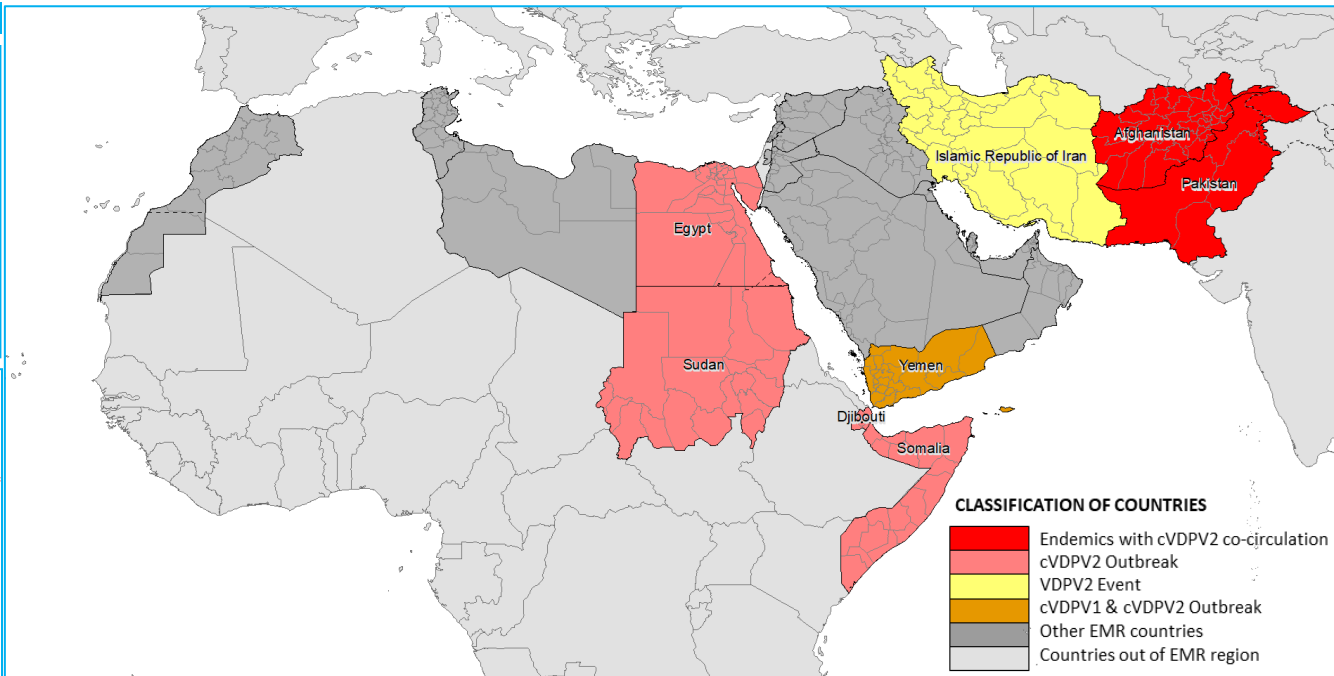
- 66 samples Wild Polio 1
 - 01 in Afghanistan
 - 65 in Pakistan

- 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)

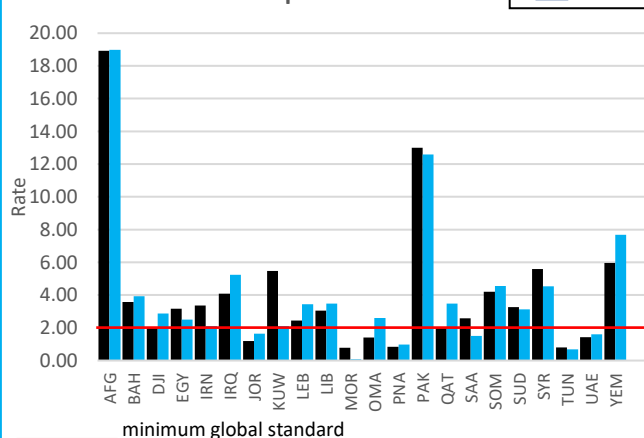
- 2 samples cVDPV2
 - 02 in Egypt



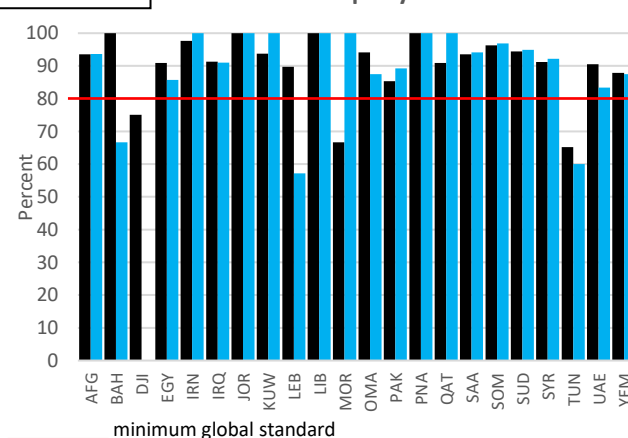
Highlights of the week

- No new wild poliovirus isolates from human or environmental samples reported this week.
- Yemen: Several VDPV2 isolates from human samples are pending classification on sequencing. The vaccination response with appropriate vaccine had been implemented in southern Yemen and LQS results are awaited while the response campaign is yet to start in northern Yemen.
- Egypt: One new cVDPV2 positive environmental sample is reported from Qena province and is genetically related to earlier two cVDPV2 isolates from same province (specimen collection date 9/3/2022; emergence EGY-QEN-1). Results of field investigation are awaited to strategize response to this new outbreak of cVDPV2 in Egypt.

Non polio AFP rate



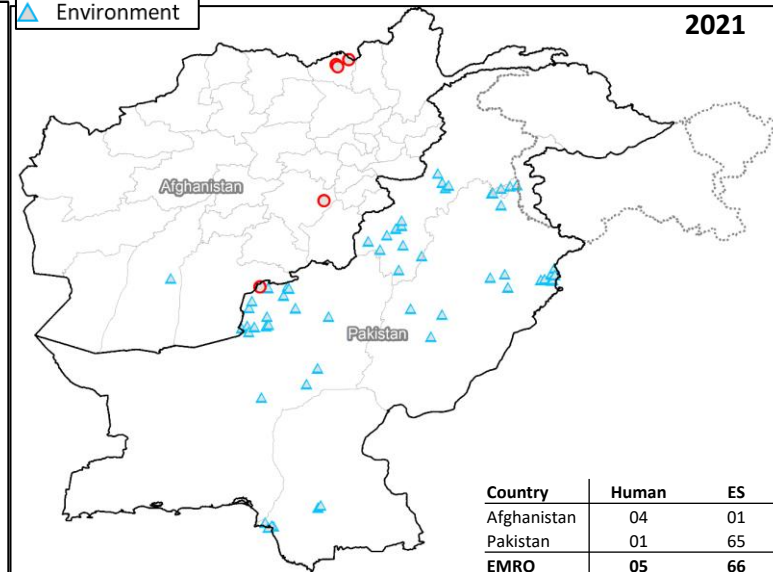
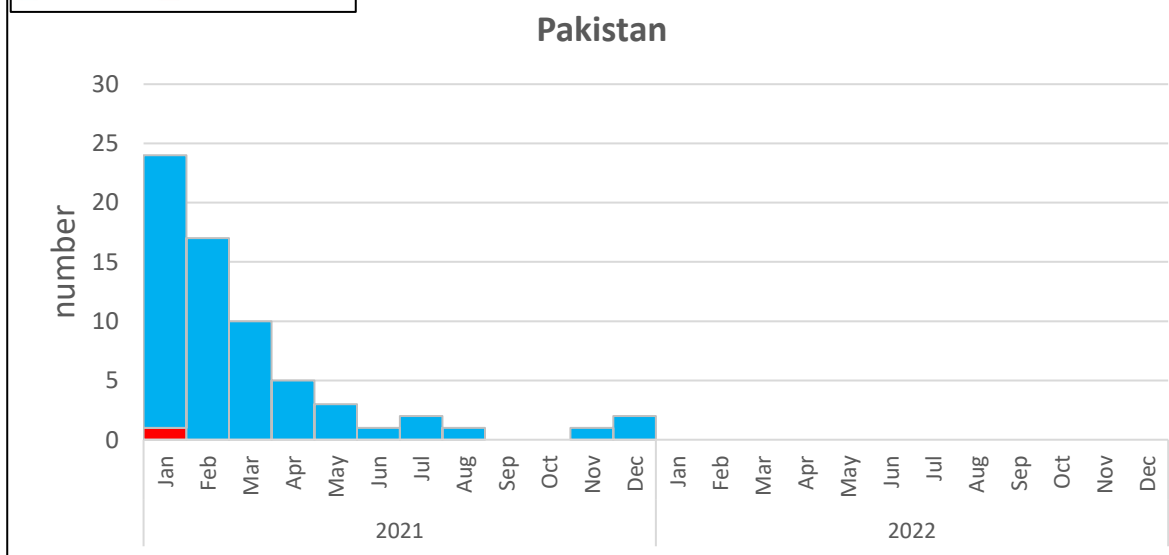
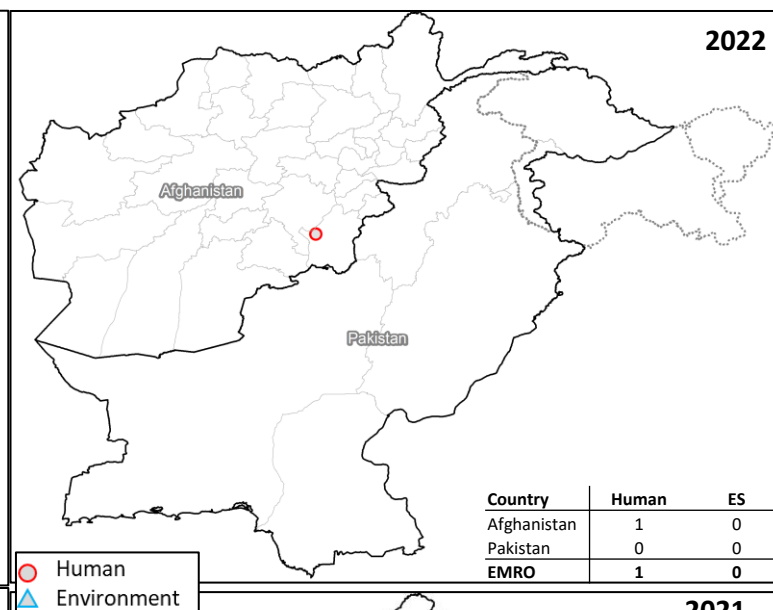
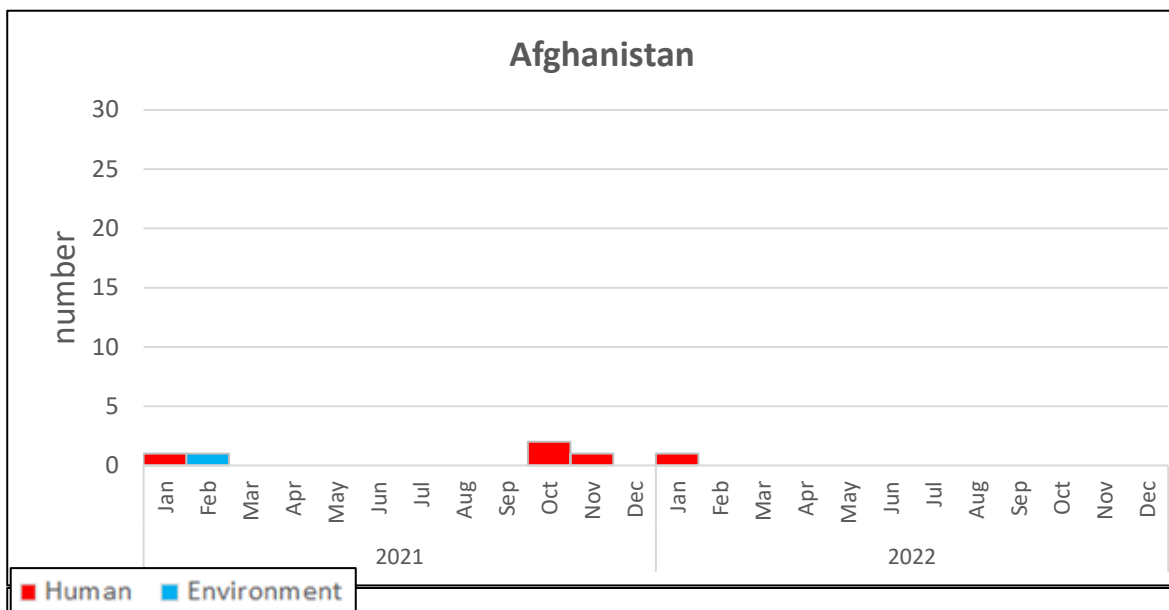
Stool adequacy



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. 03, 2021 to Apr. 03, 2022)

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Source / Virus type 	AFG	DJI	PAK	EGY	IRN	SOM	YEM	Total
Human (AFP only)	13		4	1		2	38	58
Wild	4							4
cVDPV2	9		2			2	33	46
Wild+cVDPV2								
Wild+aVDPV3								
aVDPV1							1	1
aVDPV2			2	1				3
VDPV1								
VDPV2							4	4
Environment	4	5	40	78	3	1		131
Wild			12					12
cVDPV2	3	5	4	5		1		18
Wild+cVDPV2			1					1
Wild+aVDPV3			1					1
aVDPV1								
aVDPV2	1		21		2			24
VDPV1				1				1
VDPV2			1	72	1			74
Total	17	5	44	79	3	3	38	189

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				
Djibouti	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							
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					
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						
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					
Syria *****	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						
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

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	4019	45	19	0	18.92	93.52	1048	1	0	803	0	2	0	18.98	93.61	3-Apr-22
BAHRAIN	11	0	0	11	0	0	0	3.58	100.00	3	0	0	0	0	0	0	3.94	66.67	24-Mar-22
DJIBOUTI	8	0	0	4	0	4	3	2.06	75.00	3	0	0	0	0	0	0	2.88	0.00	19-Mar-22
EGYPT	1251	0	0	1237	1	13	1	3.17	90.89	252	0	0	215	0	0	0	2.51	85.71	31-Mar-22
IRAN	681	0	0	680	1	0	0	3.36	97.65	109	0	0	103	0	0	0	2.12	100.00	3-Apr-22
IRAQ	709	0	0	709	0	0	0	4.08	91.26	232	0	0	182	0	1	0	5.24	90.95	2-Apr-22
JORDAN	47	0	0	47	0	0	0	1.19	100.00	17	0	0	15	0	0	0	1.65	100.00	31-Mar-22
KUWAIT	48	0	0	48	0	0	0	5.47	93.75	5	0	0	3	0	0	0	2.12	100.00	27-Mar-22
LEBANON	39	0	0	39	0	0	0	2.45	89.74	14	0	0	6	0	0	0	3.45	57.14	26-Mar-22
LIBYA	79	0	0	79	0	0	0	3.05	100.00	23	0	0	14	0	0	0	3.48	100.00	2-Apr-22
MOROCCO	78	0	0	57	0	21	2	0.79	66.67	2	0	0	0	0	0	0	0.08	100.00	7-Mar-22
OMAN	17	0	0	17	0	0	0	1.41	94.12	8	0	0	8	0	0	0	2.61	87.50	3-Apr-22
PAKISTAN	13098	1	4	13060	18	15	0	12.99	85.32	3228	0	0	2457	0	18	0	12.58	89.19	3-Apr-22
PALESTINE	16	0	0	16	0	0	0	0.85	100.00	5	0	0	0	0	0	0	0.98	100.00	3-Apr-22
QATAR	11	0	0	11	0	0	0	2.03	90.91	4	0	0	0	0	0	0	3.48	100.00	3-Apr-22
SAUDI ARABIA	217	0	0	217	0	0	0	2.59	93.55	34	0	0	0	0	0	0	1.51	94.12	3-Apr-22
SOMALIA	349	0	0	348	1	0	0	4.21	96.28	96	0	0	69	1	0	0	4.55	96.88	3-Apr-22
SUDAN	637	0	0	637	0	0	0	3.26	94.35	155	0	0	112	0	0	0	3.12	94.84	31-Mar-22
SYRIA	431	0	0	431	0	0	0	5.60	91.18	89	0	0	54	0	0	0	4.54	92.13	2-Apr-22
TUNISIA	23	0	0	23	0	0	0	0.81	65.22	5	0	0	5	0	0	0	0.68	60.00	1-Apr-22
U.A.E.	21	0	0	21	0	0	0	1.42	90.48	6	0	0	0	0	0	0	1.60	83.33	30-Mar-22
YEMEN	921	0	0	836	40	44	23	5.96	87.84	302	0	0	38	0	0	0	7.69	87.42	3-Apr-22
EMR POL	22780	5	5	22547	106	116	29	7.96	88.41	5640	1	0	4084	1	21	0	7.72	90.34	

* 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)

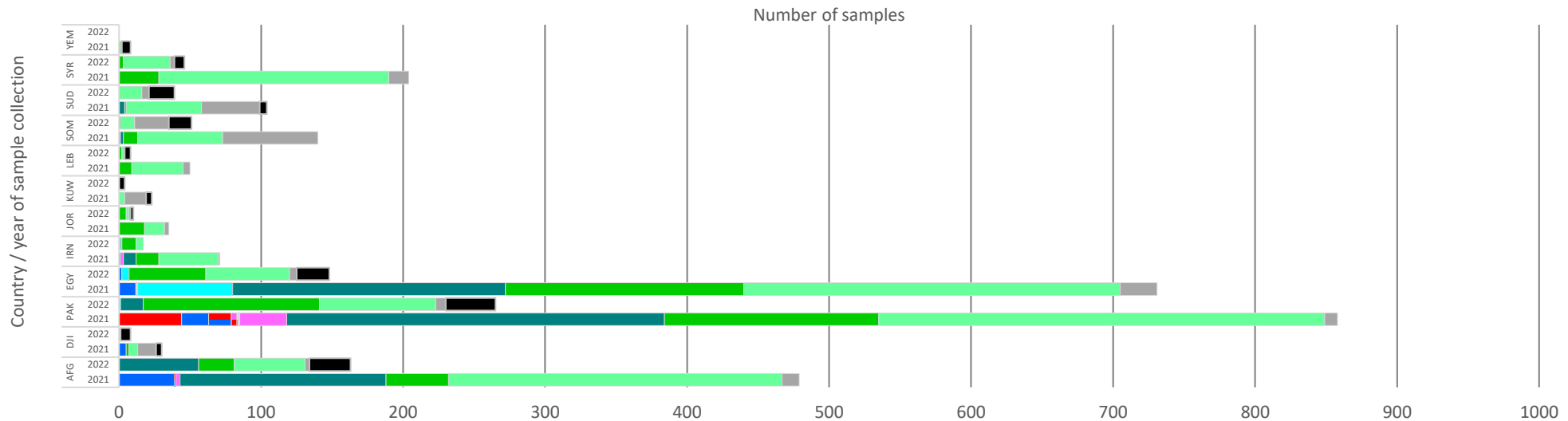
Laboratory investigation of AFP cases with paralysis onset in 2022

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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	1027	69	6	140	622	167		1	38			7			52					3	13%	100%	100%	99%	3-Apr-22
Bahrain	NPL Oman / CDC	2				2																0%	100%		100%	31-Mar-22
Djibouti	NPL Kenya / CDC	3						3																		19-Mar-22
Egypt***	RRL Egypt	321	6	1	34	230	47	3		1						4			1	1		11%	97%	100%	100%	31-Mar-22
Iran	NPL Iran / CDC	126	2		1	110	8	1		1	1					2						0%	100%	100%	100%	3-Apr-22
Iraq	NPL Iraq, RRL Egypt	237	1		12	193	29	2								2						6%	100%	50%	100%	31-Mar-22
Jordan	NPL Jordan, RRL Egypt	18			3	11	4	6														38%	100%		100%	3-Apr-22
Kuwait	RRL Kuwait / RIVM	5				4	1															0%	100%		100%	3-Apr-22
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	7				7																0%	100%			26-Mar-22
Libya	RRL Tunisia / RIVM	23				19	4															0%	100%		100%	1-Apr-22
Morocco	NPL Morocco, RRL Tunisia	8				5	3															0%	100%		100%	1-Apr-22
Oman	NPL Oman / CDC	10			1	9		1														6%	89%		100%	31-Mar-22
Pakistan	RRL Pakistan	3205	122	7	410	2159	463	44		72			1			96						11%	100%	99%	98%	3-Apr-22
Palestine & UNRWA		5				1	1	3														0%	0%		100%	3-Apr-22
Qatar	NPL Oman / CDC	4				3	1															0%	100%		100%	31-Mar-22
Saudi Arabia	NPL Saudi Arabia / CDC	43				31	5	7														0%	97%		100%	27-Mar-22
Somalia	NPL Kenya / CDC	96	1		11	62	5	20		1												15%	11%		100%	3-Apr-22
Sudan	NPL Sudan / RRL Egypt	157			29	98	28	2														22%	87%			2-Apr-22
Syria	NPL Syria / RRL Egypt	70	1		2	51	8	8														2%	100%			26-Mar-22
Tunisia	RRL Tunisia	6				5	1															0%	100%		100%	1-Apr-22
U.A.E	NPL Oman / CDC	7				3	4															0%	100%		100%	31-Mar-22
Yemen	NPL Oman, NPL Kenya, RRL Egypt	142	26		4	32	83	1				9								18		14%	100%	33%	0%	3-Apr-22
Total EMR 2022		5522	228	14	647	3657	862	101	1	113	1	9	8			156			1	1	21	11%	98%	96%	97%	
Total EMR 2021		22105	1181	128	3869	16909	4	11	5	477	7	25	363	91		599	1	1	7	2	9	14%	97%	98%	93%	

Environmental Surveillance Isolation by Classification

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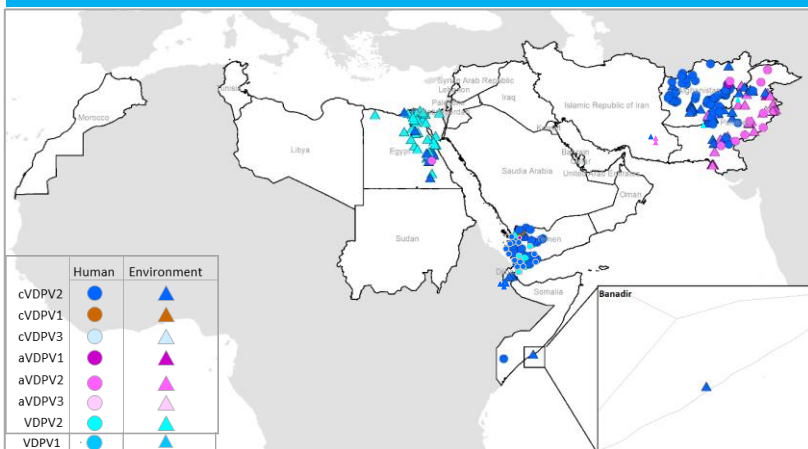


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR		YEM	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Wild					44																			
cVDPV2	39		5		19		12	2	1								1							
Wild+cVDPV2	1				16																			
Wild+aVDPV2					4																			
Wild+aVDPV3					1																			
aVDPV1					1																			
aVDPV2	3				33				2															
aVDPV3																								
VDPV1							1																	
VDPV2						1	67	5		1														
SL2	145	56			266	16	192		9	1							2		4					
SL1/3	44	25	2		151	124	168	54	16	10	18	5			9	2	10	1	1		28	3	1	
Entero	235	50	6		314	82	265	59	42	5	14	2	4		36	2	60	10	53	16	162	33	1	
Negative	12	3	13	1	9	7	26	5	1		3	1	15		5		67	24	41	5	14	3		
Pending		29	4	7		35		23				2	4	4		4		16	5	18		7	6	

VDPVs isolations by Source and Country

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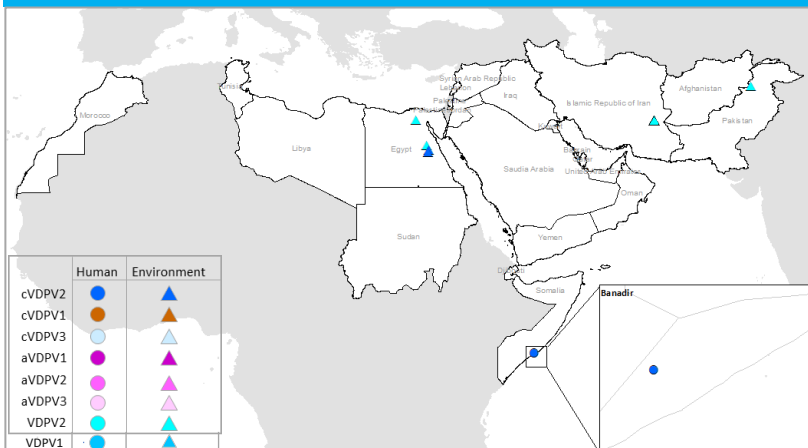
VDPV Isolates, EMR countries, 2021



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	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																		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	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					33		06-Dec-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																		67	2		07-03-22							
	IRAN																			1		04-02-22							
	Pakistan																			1		15-02-22							
	Yemen					4		01-11-21																					

VDPV Isolates, EMR countries, 2022



Important links

EMR Polio Bulletin - Issue No. 1226, Week 13 (ending on 03/04/2022)

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