

EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1314, Week 49 (ending on 10/12/2023)

Highlights



Children
Paralyzed
by polio

2022

- 22 cases of Wild Polio 1
 - 02 in Afghanistan
 - 20 in Pakistan

- 168 cases of cVDPV2
 - 05 in Somalia
 - 162 in Yemen
 - 01 in Sudan

- Zero cVDPV1 cases

2023

- 12 cases of Wild Polio 1
 - 06 in Afghanistan
 - 06 in Pakistan

- 8 cases of cVDPV2
 - 05 in Somalia
 - 03 in Yemen

- Zero case of cVDPV1



Sewage
water
sampling

2022

- 59 samples Wild Polio 1
 - 22 in Afghanistan
 - 37 in Pakistan

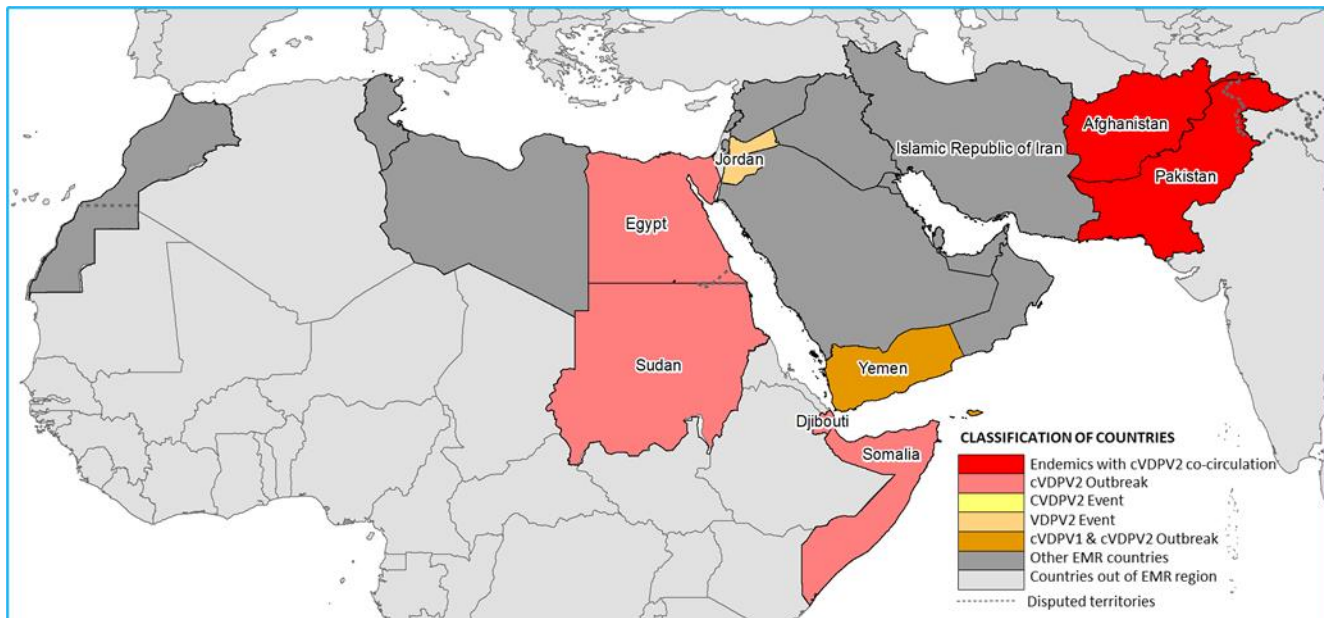
- 51 samples cVDPV2
 - 06 in Egypt
 - 12 in Djibouti
 - 06 in Somalia
 - 01 in Sudan
 - 26 in Yemen

2023

- 130 samples Wild Polio 1
 - 46 in Afghanistan
 - 84 in Pakistan

- 16 samples of cVDPV2
 - 07 in Somalia
 - 03 in Yemen
 - 06 in Egypt

Classification of EMR countries by type of poliovirus circulation



Highlights of the week

Wild Poliovirus

- No new WPV1 isolates reported this week. The WPV1 cases count in 2023 to date is 12 (6 each from Afghanistan and Pakistan) and in 2022, the WPV1 cases count remains to be 22 cases (2 from Afghanistan and 20 from Pakistan) while the positive environmental samples WPV1 count in 2023 to date is 130 (46 in Afghanistan and 84 in Pakistan), and in 2022, the count remains to be 59 (22 in Afghanistan and 37 in Pakistan).

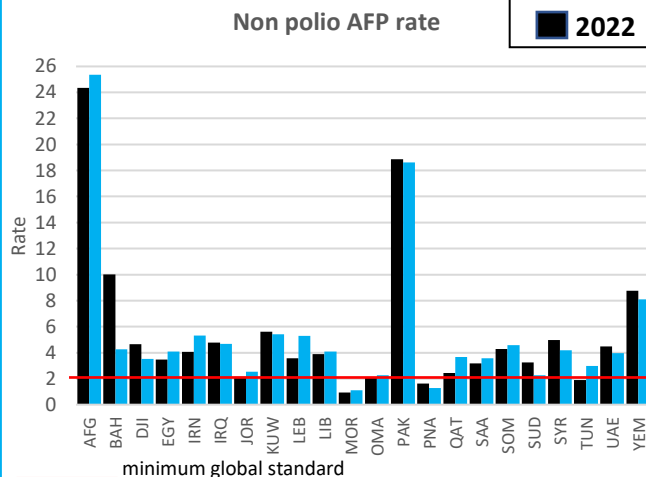
Circulating Vaccine derived poliovirus (cVDPV)

- No new cVDPV isolates reported this week. The count of cVDPV2 cases in 2023 to date is 8 (5 from Somalia and 3 from Yemen) and in 2022 the count remains to be 168 cases (1 from Sudan, 5 from Somalia and 162 from Yemen) while the cVDPV2 positive environmental samples count in 2023 to date is 16 (7 from Somalia, 6 from Egypt and 3 from Yemen) and in 2022, the count remains 51 (1 in Sudan, 6 in each of Egypt and Somalia, 12 in Djibouti and 26 in Yemen).

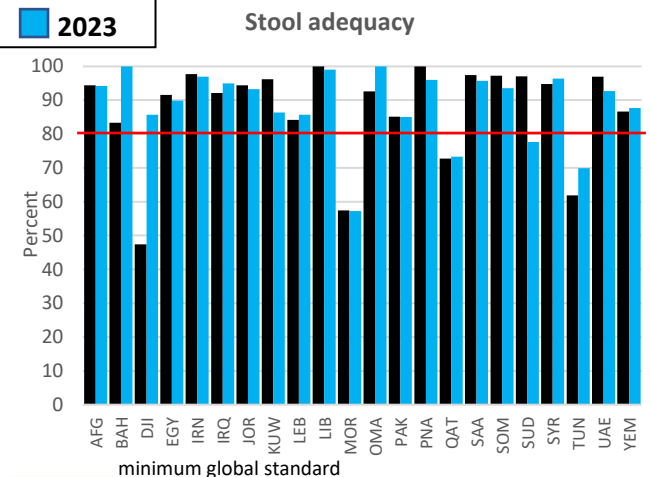
Events

- The 23rd Intercountry Meeting of Directors of Poliovirus Laboratories in the Eastern Mediterranean Region is currently taking place this week in Muscat, Oman, from 10-11 December 2023.

Non polio AFP rate



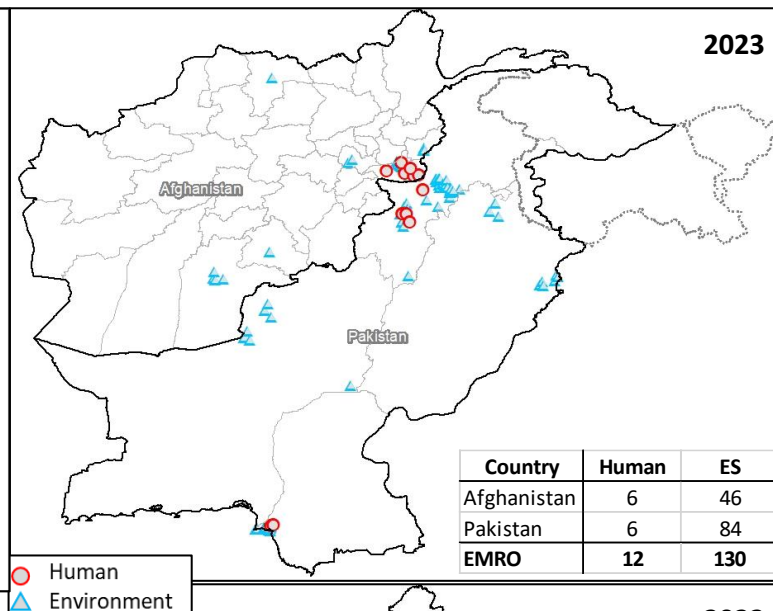
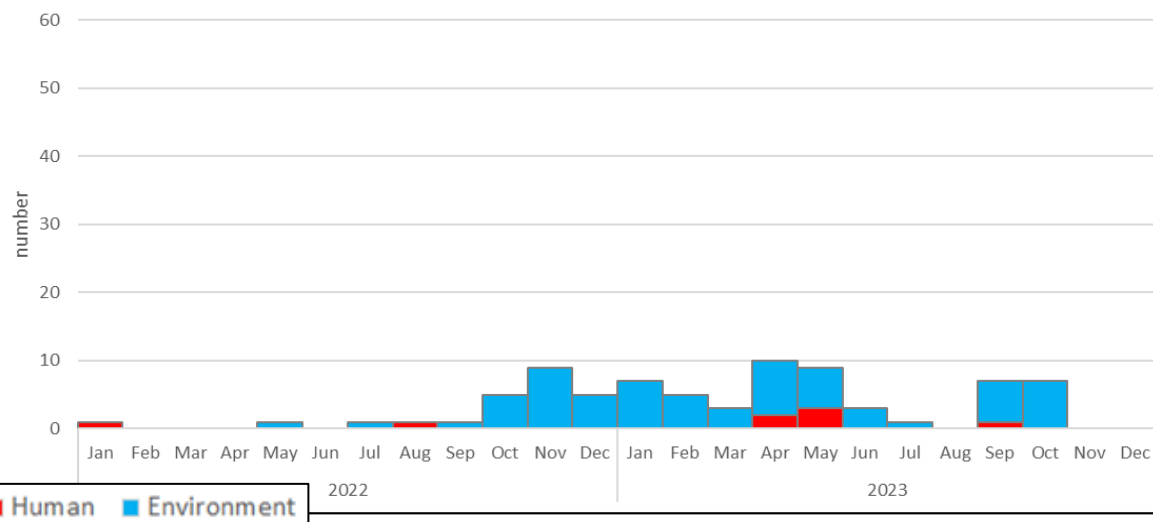
Stool adequacy



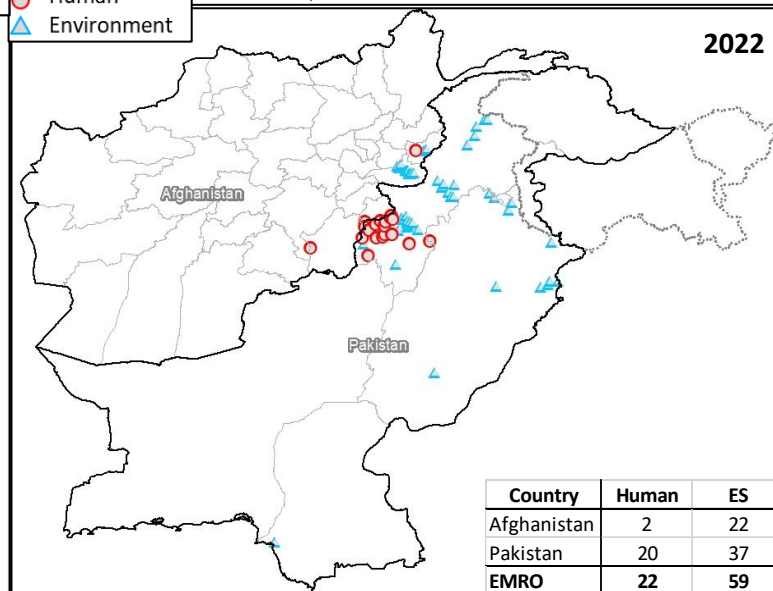
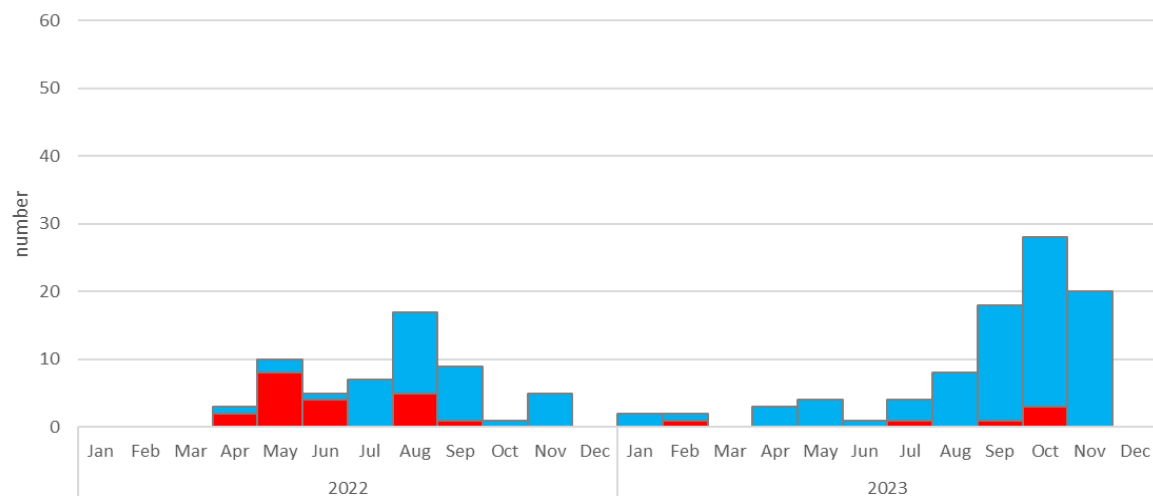
WPV1 Positive isolates from Afghanistan and Pakistan by source

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Afghanistan



Pakistan



Virus isolation by country, last 12 months (Dec. 10, 2022, to Dec. 10, 2023)

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Source / Virus type	AFG	PAK	EGY	SOM	SUD	YEM	Total
Human (AFP only)	6	6	1	5		5	23
Wild	6	6					12
cVDPV2				5		4	9
aVDPV2							
VDPV2			1			1	2
VDPV3							
Environment	48	85	10	8	1	4	156
Wild	48	84					132
cVDPV2			6	8		3	17
aVDPV2			4				4
VDPV2					1	1	2
VDPV3		1					1
Total	54	91	11	13	1	9	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 2021	Total year 2022	10 December		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2023												
			2022	2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Afghanistan	4	2	2	6	0	0	0	2	3	0	0	0	1	0			04-Sep-23
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	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				
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				
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			
Pakistan	1	20	20	6	0	1	0	0	0	0	1	0	1	3			24-Oct-23
Palestine ****	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			
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					
Sudan	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					
Yemen	0	0	0	0	0	0	0	0	0								
EMR	5	22	22	12	0	1	0	2	3	0	1	0	2	3	0	0	24-Oct-23

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

Investigation of AFP cases with paralysis onset in 2022 & 2023

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COUNTRY	2023									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)	Vbpv	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)	Vbpv	Pending classification > 90 days from onset	Pending LAB classification > 90 days from onset	Annualized Non polio AFP rate	% with adequate specimens	
AFGHANISTAN	5382	6	0	5118	0	5	0	25.34	94.24	5368	2	0	5365	1	0	0	24.34	94.41	10-Dec-23
BAHRAIN	12	0	0	10	0	1	0	4.26	100.00	30	0	0	30	0	0	0	10.02	83.33	10-Dec-23
DJIBOUTI	14	0	0	9	0	0	0	3.53	85.71	19	0	0	19	0	0	0	4.65	47.37	9-Dec-23
EGYPT	1586	0	0	1416	1	22	0	4.08	89.85	1394	0	0	1394	0	0	0	3.48	91.54	7-Dec-23
IRAN	1057	0	0	1022	0	0	0	5.31	96.97	824	0	0	824	0	0	0	4.06	97.69	10-Dec-23
IRAQ	775	0	0	732	0	13	0	4.68	94.97	835	0	0	835	0	0	0	4.78	92.10	9-Dec-23
JORDAN	104	0	0	99	0	0	0	2.54	93.27	89	0	0	89	0	0	0	2.14	94.38	10-Dec-23
KUWAIT	44	0	0	36	0	0	0	5.42	86.36	52	0	0	52	0	0	0	5.62	96.15	3-Dec-23
LEBANON	77	0	0	61	0	6	0	5.29	85.71	57	0	0	57	0	0	0	3.58	84.21	10-Dec-23
LIBYA	100	0	0	94	0	0	0	4.09	99.00	101	0	0	101	0	0	0	3.89	100.00	9-Dec-23
MOROCCO	124	0	0	42	0	50	7	1.12	57.26	94	0	0	92	0	2	0	0.93	57.45	4-Dec-23
OMAN	27	0	0	24	0	0	0	2.28	100.00	27	0	0	27	0	0	0	2.10	92.59	10-Dec-23
PAKISTAN	17149	6	0	16167	0	155	0	18.62	84.99	19033	20	1	19012	0	0	0	18.86	85.13	10-Dec-23
PALESTINE	25	0	0	20	0	0	0	1.28	96.00	33	0	0	32	1	0	0	1.64	100.00	10-Dec-23
QATAR	15	0	0	11	0	2	0	3.66	73.33	11	0	0	11	0	0	0	2.44	72.73	10-Dec-23
SAUDI ARABIA	281	0	0	216	0	0	0	3.57	95.73	274	0	0	274	0	0	0	3.18	97.45	3-Dec-23
SOMALIA	388	0	0	372	5	0	0	4.59	93.56	356	0	0	349	6	0	0	4.28	97.19	10-Dec-23
SUDAN	447	0	0	343	0	19	2	2.28	77.63	650	0	0	649	1	0	0	3.25	97.08	10-Dec-23
SYRIA	306	0	0	289	0	0	0	4.18	96.41	382	0	0	382	0	0	0	4.96	94.76	9-Dec-23
TUNISIA	83	0	0	80	0	1	1	2.99	69.88	55	0	0	55	0	0	0	1.91	61.82	8-Dec-23
U.A.E.	55	0	0	46	0	0	0	3.96	92.73	66	0	0	66	0	0	0	4.47	96.97	6-Dec-23
YEMEN	1218	0	0	914	4	39	28	8.09	87.68	1377	0	1	1214	162	0	0	8.77	86.64	9-Dec-23
EMR POL	29269	12	0	27121	10	313	38	10.65	87.95	31127	22	2	30929	171	2	0	10.77	88.20	

* 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)

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

Laboratory investigation of AFP cases with paralysis onset in 2023

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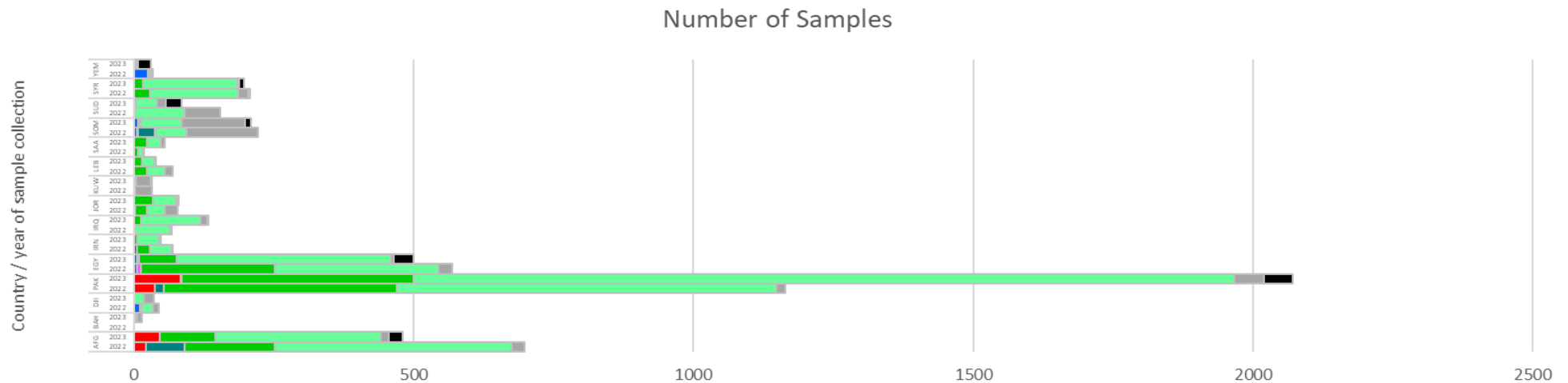
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results														Indicators				Latest report Date
	ITD / Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			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	5332	277	27	729	4097	158		5 *	187						227			2	2	3	12%	94%	100%	98%	10-Dec-23	
Bahrain	NPL Oman / CDC	11			1	10																5%	100%		45%	10-Dec-23	
Djibouti	NPL Kenya / CDC	14			2	11		1														15%	46%		77%	9-Dec-23	
Egypt	RRL Egypt	1484	14		159	1232	27	53		8				1		9				1		10%	92%	100%	99%	30-Nov-23	
Iran	NPL Iran / CDC	1049	7		8	1009	6	19		5						3						1%	100%	100%	99%	2-Dec-23	
Iraq	NPL Iraq, RRL Egypt	775	6		56	679	22	12		5						2						8%	100%	100%	99%	8-Dec-23	
Jordan	NPL Jordan, RRL Egypt	102			18	80	4															17%	95%		100%	10-Dec-23	
Kuwait	RRL Kuwait / RIVM	47	1		6	34	3	3													1	12%	98%		100%	7-Dec-23	
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	74			1	73																4%	100%			7-Dec-23	
Libya	RRL Tunisia / RIVM	96	1		3	89	3			1												3%	98%	1	100%	1-Dec-23	
Morocco	NPL Morocco, RRL Tunisia	114			3	105	5	1														3%	99%		94%	9-Dec-23	
Oman	NPL Oman / CDC	27			1	26																9%	100%		100%	10-Dec-23	
Pakistan	RRL Pakistan	16756	472	40	2566	13222	417	23	5 *	320						370						13%	93%	100%	96%	10-Dec-23	
Palestine & UNRWA		25	1			20	2	2		1			1									0%	40%		100%	10-Dec-23	
Qatar	NPL Oman / CDC	15	1			14										1						0%	100%	1	100%	10-Dec-23	
Saudi Arabia	NPL Saudi Arabia / CDC	284	2		5	271	3	3		2						1						2%	98%	100%	100%	7-Dec-23	
Somalia	NPL Kenya / CDC	387	10		60	307	3	8		4			2	5		2						16%	4%		95%	10-Dec-23	
Sudan	NPL Sudan / RRL Egypt	368	10	1	73	266		17					3			2			2			19%	99%	100%	31%	14-Apr-23	
Syria	NPL Syria / RRL Egypt	303	5	1	24	259	11	3														8%	100%			7-Dec-23	
Tunisia	RRL Tunisia	87	1		3	83										1						3%	97%	1	98%	1-Dec-23	
U.A.E	NPL Oman / CDC	51			3	48																6%	96%		27%	10-Dec-23	
Yemen	NPLs Oman, Jordan & Kenya, RRL Egypt	1020	25	2	213	774		6		11			1	4		18					1	18%	22%	100%	22%	9-Dec-23	
Total EMR 2023		28421	833	71	3934	22709	664	151	12 *	544			7	10		636			4	3	5	12%	90%	100%	94%		
Total EMR 2022		30461	1068	119	4831	24435		2	22 *	556	2		38	169 **		723		6	8	2	1	13%	93%	89%	92%		

* In 2023 – Two WPV1 cases are confirmed due to positive contacts while in 2022 - three WPV1 cases were confirmed due to positive contacts (Index cases were negative for WPV1)

** In 2022 – Five cVDPV2 cases are identified by positive contacts (Index cases were negative for cVDPV2)

Environmental Surveillance Isolation by Classification

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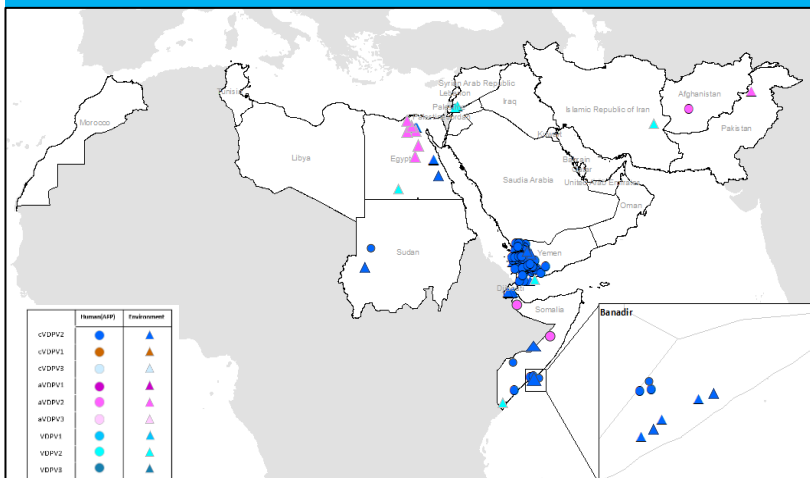


	AFG		BAH		DJI		PAK		EGY		IRN		IRQ		JOR		KUW		LEB		SAA		SOM		SUD		SYR		YEM		
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	
🇸🇰 Wild	22	46					37	84																							
🇸🇰 cVDPV2					12				6	6													6	7	1					26	3
🇸🇰 Wild+cVDPV2																															
🇸🇰 Wild+aVDPV2																															
🇸🇰 Wild+aVDPV3																															
🇸🇰 aVDPV1																															
🇸🇰 aVDPV2							1		7	4																					
🇸🇰 aVDPV3																															
🇸🇰 VDPV1																															
🇸🇰 VDPV2											1				2								1			1				3	1
🇸🇰 VDPV3								1																							
🇸🇰 SL2	68				2		16				4												30	2		1				1	1
🇸🇰 SL1/3	162	100		2		1	415	415	239	67	23	6	3	13	22	35		2	24	14	7	24	2	4	2	2	28	17	2	2	
🇸🇰 Entero	424	295		3	20	18	679	1467	292	383	39	38	61	107	32	40	2	2	32	24	9	25	55	73	88	38	159	167	1	1	
🇸🇰 Negative	22	14		10	11	17	17	53	25	5	1	1	4	11	23	2	31	27	13	1	2	7	128	113	63	15	18	5			
🇸🇰 Pending		26						51		35		3		2		4		1						11		29	3	8		22	

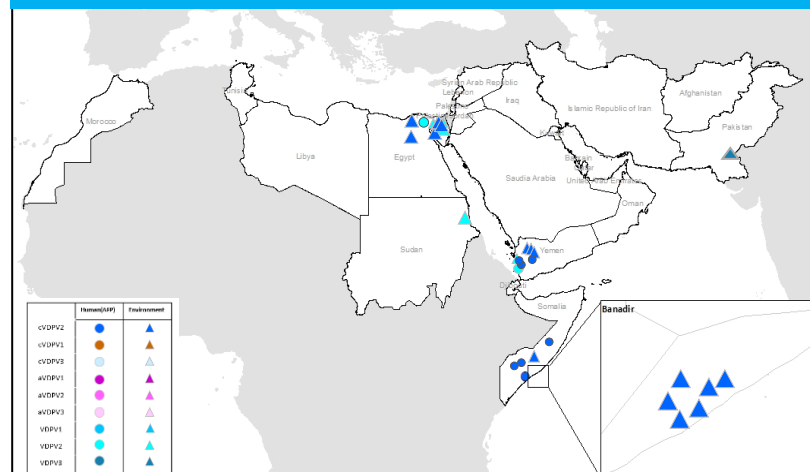
VDPVs isolations by Source and Country

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VDPV Isolates, EMR countries, 2022



VDPV Isolates, EMR countries, 2023



VDPVs isolated from 2018-2023

VDPV Isolate type	EMR Country	Sources																												
		AFP cases(Human)						Contacts(Human)						Environment						Other Sources (Healthy Children)										
		2018	2019	2020	2021	2022	2023	Most recent	2018	2019	2020	2021	2022	2023	Most recent	2018	2019	2020	2021	2022	2023	Most recent	2017	2018	2019	2020	2021	2022	Most recent	
cVDPV2	Afghanistan			307	43			09-07-21										174	40			23-06-21								
	Djibouti																		5	12			22-05-22							
	Egypt																		12	6	6		13-09-23							
	Iran																	3	1			20-02-21								
	Pakistan	22	135	8				23-04-21									38	135	35			11-08-21								
	Somalia	6	3	14	1	5	5	16-09-23	3	1	11		6	3	03-08-23	19	5	26	1	6	7	21-09-23		1	5		1			10-03-22
	Sudan			58		1		31-10-22			18				08-10-20			14		1		28-11-22			4					24-08-20
Yemen				66	162	3	28-08-23				23	40	1	11-06-23				13	26	3	29-05-23									
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			14-06-21			1	67	7	4	13-04-23								
	Iran																		2			23-09-21								
	Pakistan			7	8			24-09-21		8	19	1			28-04-21		3	22	37	1		15-02-22								
	Somalia					2		01-09-22				1			22-08-22	2	1					03-02-19								
	Yemen				3			01-11-21				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						1	17-07-23																						
	Iran																			1		04-02-22								
	Jordan																			2		25-05-22								
	Somalia					1		01-09-22												1		22-04-23								
	Sudan																				1	18-09-23								
	Yemen						1	09-05-23												3	1	26-04-23								
VDPV3	Pakistan																			1	14-02-23									

Important links

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Important Links

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