

EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1281, Week 16 (ending on 23/04/2023)

Highlights



Children
Paralyzed
by polio

2022

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

2023

- 1 case of Wild Polio 1
 - 01 in Pakistan

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

- 1 case of cVDPV2
 - 01 in Somalia

- Zero cVDPV1 cases

- Zero case of cVDPV1



Sewage
water
sampling

2022

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

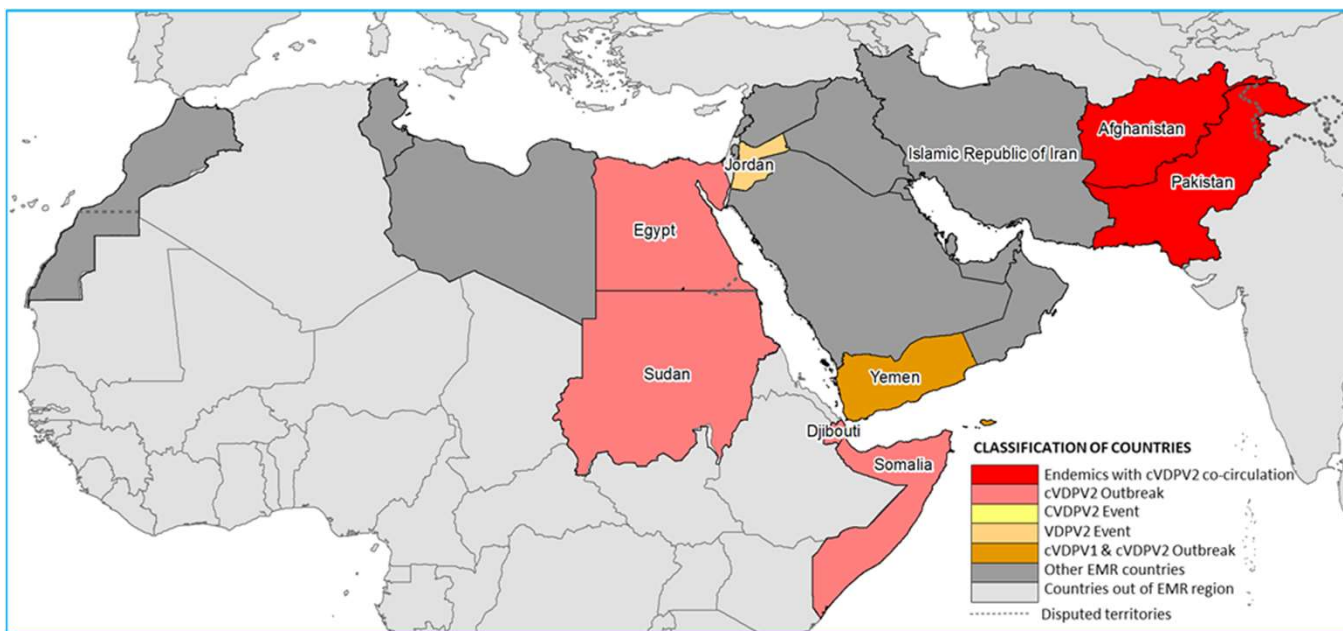
2023

- 21 samples Wild Polio 1
 - 18 in Afghanistan
 - 03 in Pakistan

- 50 samples cVDPV2
 - 06 in Egypt
 - 12 in Djibouti
 - 06 in Somalia
 - 01 in Sudan
 - 25 in Yemen

- Zero samples of cVDPV2

Classification of EMR countries by type of poliovirus circulation



Highlights of the week

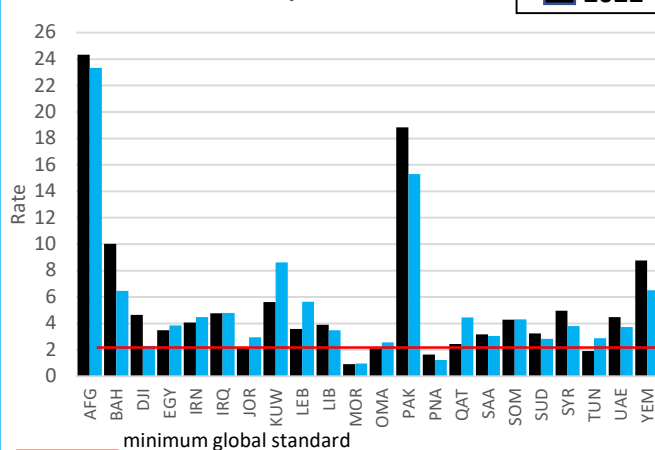
Wild Poliovirus

- No new Wild Poliovirus case reported this week. The WPV1 case count in 2023 remains one from Pakistan while in 2022 the WPV1 case count is 22 (02 from Afghanistan and 20 from Pakistan).
- Environmental surveillance; no new WPV1 isolate reported this week, total WPV1 ES count remains 21 (18 from Afghanistan and 3 in Pakistan) in 2023 while for 2022, the count is 59 (22 in Afghanistan and 37 in Pakistan).

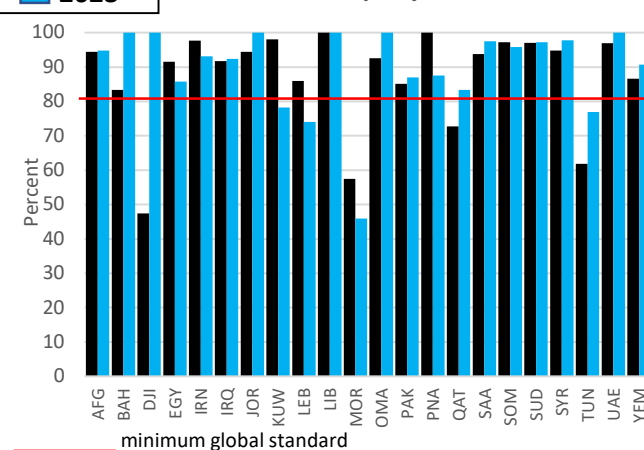
Circulating Vaccine derived poliovirus (VDPV)

- No new cVDPV isolates from human or environmental samples reported this week. The cVDPV2 cases count in 2023 remains to be 1 case from Somalia while the count in 2022 remains to be 168 cases (1 from Sudan, 5 from Somalia and 162 from Yemen). In 2022 to date, the positive cVDPV2 ES count remains to be 50 (1 in Sudan, 6 in each of Egypt and Somalia, 12 in Djibouti and 25 in Yemen) and no cVDPV ES reported in 2023 till date.
- Sudan crisis is affecting sample testing in National Polio Lab Sudan. EMRO Polio team is evaluating the condition and exploring testing sample in other labs inside or outside the region as well as the biorisk hazard of sample stored in the laboratory.

Non polio AFP rate



Stool adequacy



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

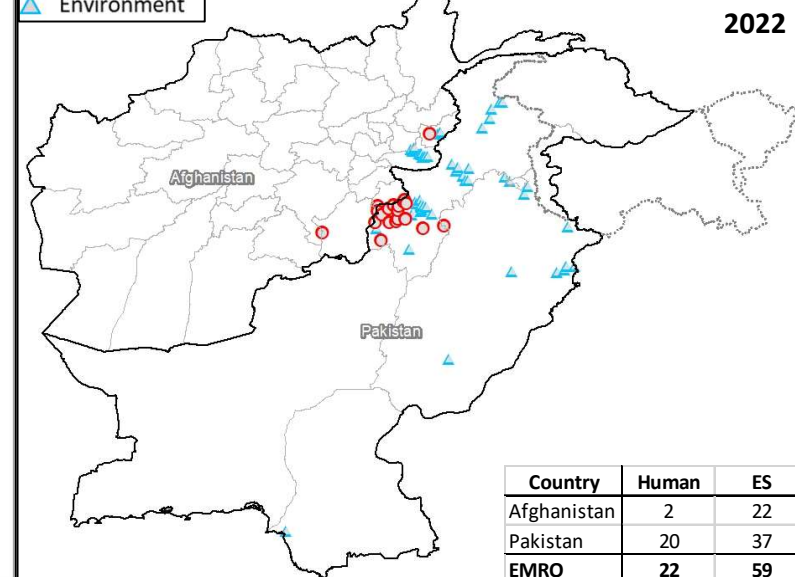
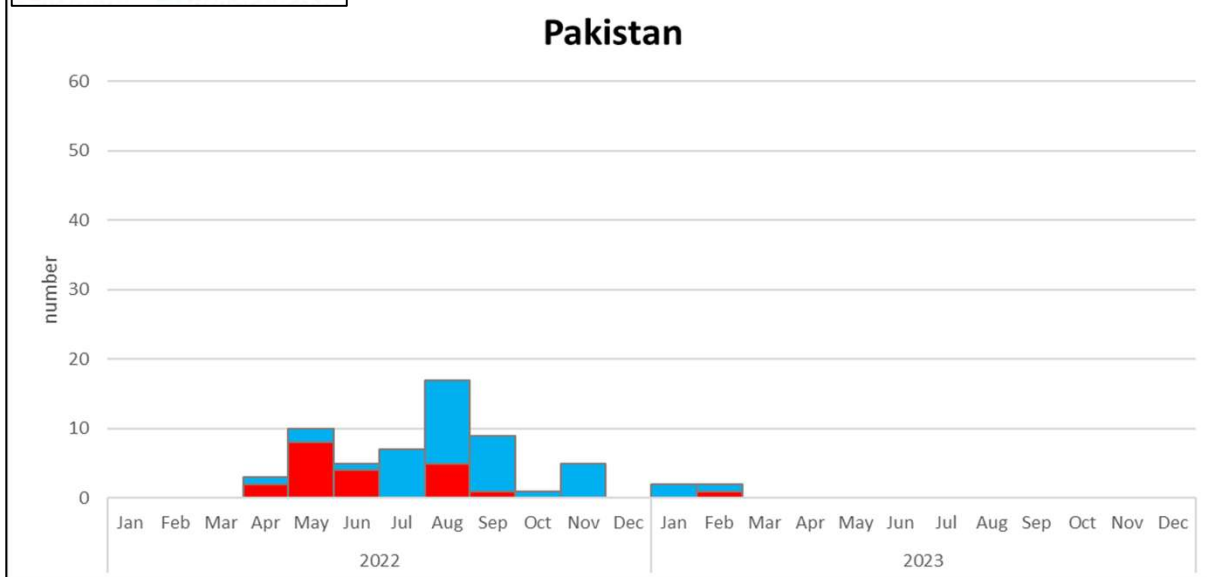
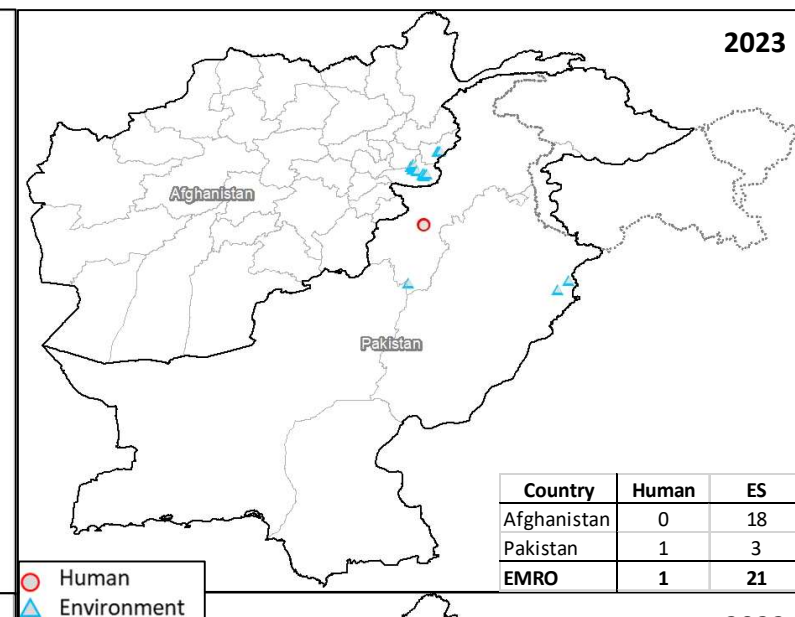
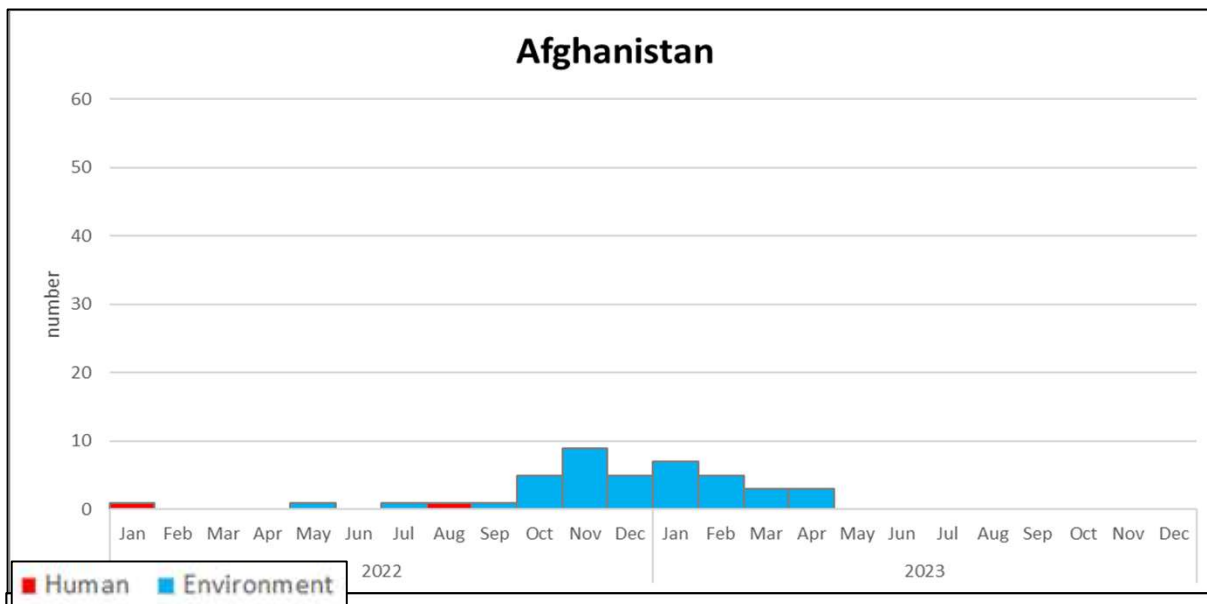
Contact us: WHO/EMRO – POL/SLD - Data

Email: emacojorpolisd@who.int

Web: <http://www.emro.who.int/polio/strategy-surveillance/em-polio-fax-issues.html>

WPV1 Positive isolates from Afghanistan and Pakistan by source

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For further details on Wild Poliovirus click: [line-list of WPV isolates](#)

Virus isolation by country, last 12 months (Apr. 16, 2022 to Apr. 16, 2023)

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Source / Virus type	AFG	DJI	PAK	EGY	JOR	SOM	SUD	YEM	Total
Human (AFP only)	1		19			6	1	67	94
Wild	1		19						20
cVDPV2						4	1	67	72
aVDPV2						2			2
VDPV2									
Environment	40	2	39	3	1	4	1	19	109
Wild	40		39						79
cVDPV2		2		2		4	1	18	27
aVDPV2									
VDPV2				1	1			1	3
Total	41	2	58	3	1	10	2	86	203

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	16 April		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2022								2023				
			2022	2023	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
Afghanistan	4	2	1	0	0	0	0	1	0	0	0	0		0			29-Aug-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	0	0		
Egypt	0	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				
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						
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	0		0			
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	1	20	2	1	8	4	0	5	1	0	0		0	1			20-Feb-23
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	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					
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	0					
EMR	5	22	3	1	8	4	0	6	1	0	0	0	0	1	0	0	20-Feb-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)	VDPV ***	Pending classification > 90 days from	Pending LAB classification > 90 days from	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	Pending LAB classification > 90 days from	Annualized Non polio AFP rate **	% with adequate specimens ***	
Afghanistan	1625	0	0	1394	0	15	2	22.91	95	5368	2	0	5365	1	0	0	24.33	94	23-Apr-23
Bahrain	6	0	0	2	0	0	0	6.36	100	30	0	0	30	0	0	0	10.02	83	16-Apr-23
Djibouti	3	0	0	2	0	0	0	2.26	100	19	0	0	19	0	0	0	4.65	47	22-Apr-23
Egypt	493	0	0	324	0	1	0	3.78	86	1394	0	0	1382	0	10	0	3.48	92	13-Apr-23
Iraq	261	0	0	195	0	4	0	4.70	92	835	0	0	835	0	0	0	4.78	92	20-Apr-23
Irak	292	0	0	263	0	1	0	4.39	93	824	0	0	824	0	0	0	4.06	98	15-Apr-23
Jordan	40	0	0	25	0	0	0	2.91	100	89	0	0	89	0	0	0	2.14	94	19-Apr-23
Kuwait	23	0	0	17	0	0	0	7.00	78	52	0	0	52	0	0	0	5.62	98	16-Apr-23
Lebanon	27	0	0	1	0	8	7	5.55	74	57	0	0	49	0	8	1	3.58	86	07-Apr-23
Libya	28	0	0	25	0	0	0	3.30	100	99	0	0	99	0	0	0	3.82	100	15-Apr-23
Morocco	37	0	0	12	0	5	1	0.96	46	94	0	0	82	0	11	2	0.91	57	07-Apr-23
Oman	10	0	0	10	0	0	0	2.52	100	27	0	0	27	0	0	0	2.10	93	16-Apr-23
Pakistan	4638	1	0	3859	0	102	0	15.04	87	19025	20	1	18978	0	26	3	18.85	85	23-Apr-23
Palestine	8	0	0	2	0	0	0	1.22	88	33	0	0	32	0	0	1	1.59	100	09-Apr-23
Qatar	6	0	0	0	0	0	0	0.73	83	11	0	0	11	0	0	0	1.77	73	16-Apr-23
Saudi Arabia	79	0	0	10	0	16	0	3.00	97	274	0	0	274	0	0	0	3.18	94	09-Apr-23
Somalia	120	0	0	99	1	1	1	4.21	96	356	0	0	349	7	0	0	4.20	97	23-Apr-23
Sudan	179	0	0	154	0	1	0	2.77	97	650	0	0	649	1	0	0	3.24	97	13-Apr-23
Syria	91	0	0	73	0	0	0	3.73	98	382	0	0	382	0	0	0	4.96	95	22-Apr-23
Tunisia	26	0	0	20	0	2	1	2.84	77	55	0	0	55	0	0	0	1.91	62	13-Apr-23
U.A.E	17	0	0	0	0	5	0	3.66	100	66	0	0	66	0	0	0	4.47	97	19-Apr-23
Yemen	322	0	0	143	0	9	7	6.41	91	1377	0	1	1212	162	2	1	7.73	87	22-Apr-23
EMR POL	8331	1	0	6630	1	170	19	9.05	89	31117	22	2	30861	171	57	8	10.71	88	

* 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)

https://www.emro.who.int/index.php?option=com_user&view=login&Itemid=61

Laboratory investigation of AFP cases with paralysis onset in 2023

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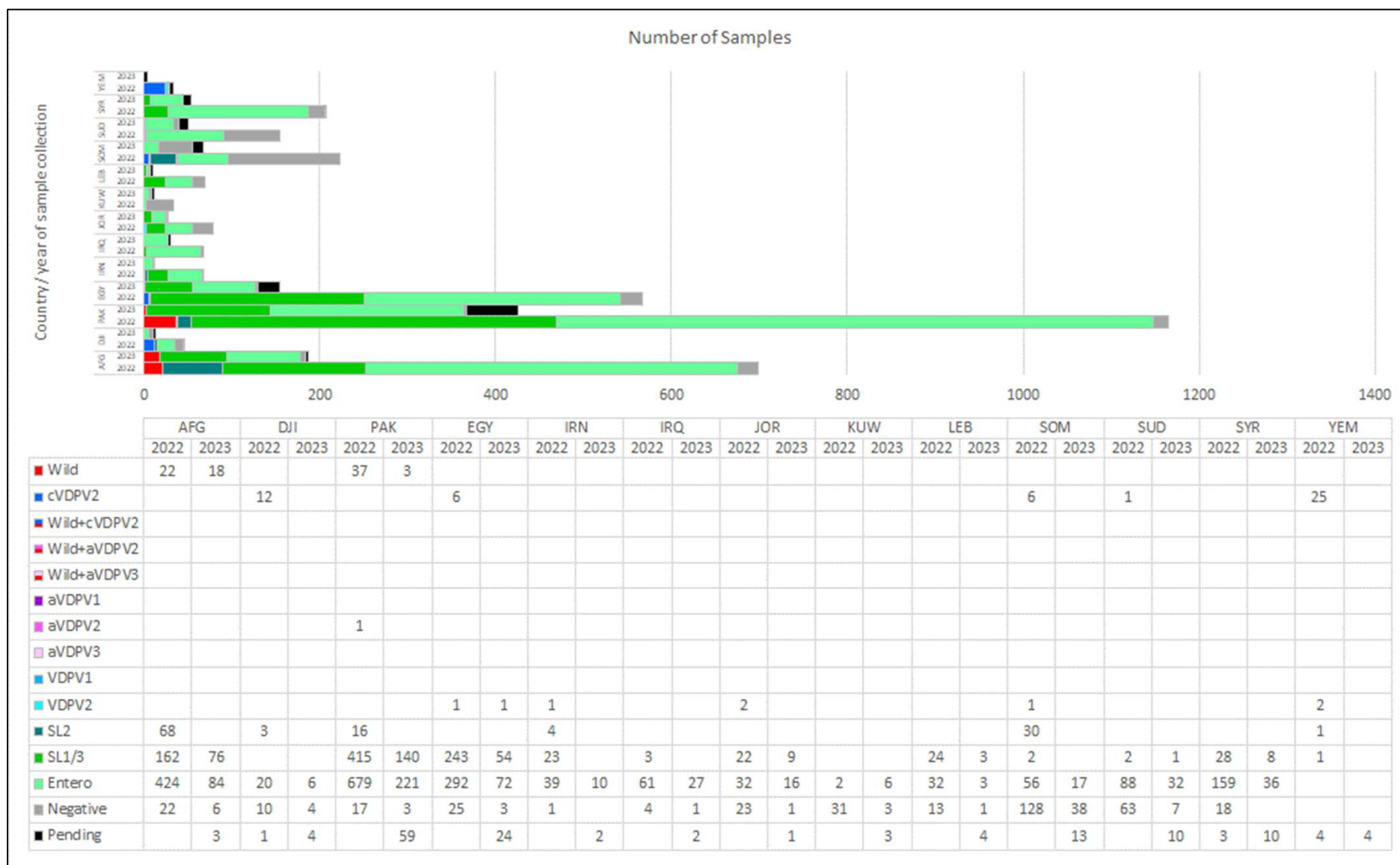
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results													Indicators				Latest report Date
	ITD / Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant 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	1548	92	6	131	1133	139			61						77					2	8%	100%	100%	99%	16-Apr-23
Bahrain	NPL Oman / CDC	3				3																0%	100%		0%	16-Apr-23
Djibouti	NPL Kenya / CDC	3				2	1															0%	100%		100%	15-Apr-23
Egypt	RRL Egypt	453	3		33	356	43	19		2						2						8%	97%	100%	100%	13-Apr-23
Iran	NPL Iran / CDC	314	1			288	25			1												0%	100%	100%	100%	15-Apr-23
Iraq	NPL Iraq, RRL Egypt	241	3		17	190	22	9		2						2						8%	100%	100%	100%	13-Apr-23
Jordan	NPL Jordan, RRL Egypt	40			9	24	7															26%	93%		100%	16-Apr-23
Kuwait	RRL Kuwait / RIVM	21			1	18	2															4%	100%		100%	16-Apr-23
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	15				15																0%	100%			10-Apr-23
Libya	RRL Tunisia / RIVM	28			1	26	1															4%	100%		100%	18-Apr-23
Morocco	NPL Morocco, RRL Tunisia	37			2	32	3															3%	100%		91%	16-Apr-23
Oman	NPL Oman / CDC	10			1	9																4%	100%		100%	16-Apr-23
Pakistan	RRL Pakistan	4314	143	5	328	3436	372	5	1	89						111						7%	100%	100%	97%	16-Apr-23
Palestine & UNRWA		8				6		2														0%	60%		100%	9-Apr-23
Qatar	NPL Oman / CDC	5				5																0%	100%		100%	16-Apr-23
Saudi Arabia	NPL Saudi Arabia / CDC	59	1		3	55				1												5%	100%	100%	100%	26-Mar-23
Somalia	NPL Kenya / CDC	112	4		12	72	5	19		1			2	1		1						14%	6%		97%	16-Apr-23
Sudan	NPL Sudan / RRL Egypt	187	5		28	137	16	1								1						16%	99%	100%	100%	14-Apr-23
Syria	NPL Syria / RRL Egypt	86			2	70	3	11														3%	100%			10-Apr-23
Tunisia	RRL Tunisia	64	2		2	57	1	2					1			1						3%	100%	1	98%	18-Apr-23
U.A.E	NPL Oman / CDC	13			1	6		6														14%	100%		0%	16-Apr-23
Yemen	NPLs Oman, Jordan & Kenya, RRL Egypt	143	1		15	97		31								1						14%	26%	100%	8%	15-Apr-23
Total EMR 2023		7704	255	11	586	6037	640	105	1	157			3	1		196					2	7%	97%	100%	96%	
Total EMR 2022		30459	1065	119	4831	24427		13	22 *	555	1		38	169 **		721		6	8	2	3	13%	93%	89%	92%	

* In 2022 - Three WPV1 cases are 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

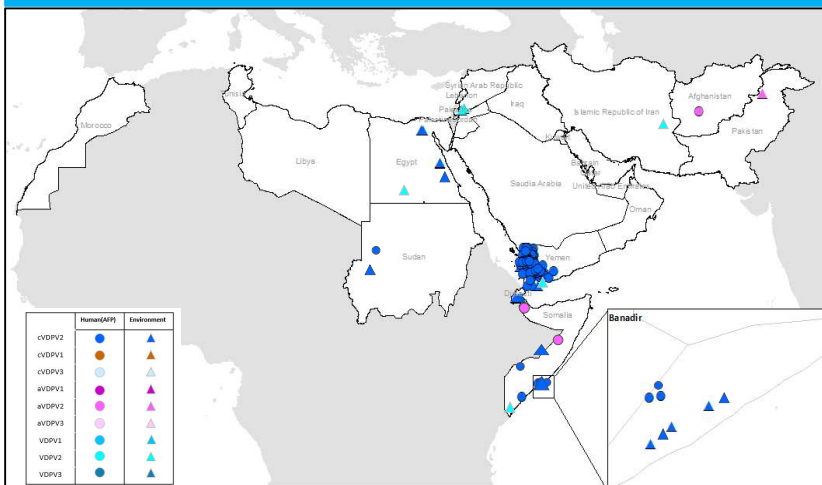
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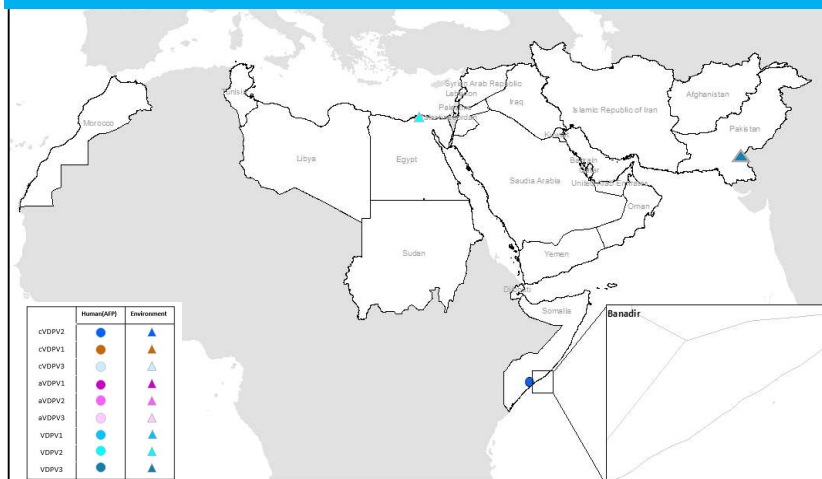
VDPVs isolations by Source and Country

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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		29-08-22							
	Iran																	3	1		20-02-21								
	Pakistan		22	135	8			23-04-21									38	135	35		11-08-21								
	Somalia	6	3	14	1	5	1	12-01-23	3	1	11		5		31-08-22	19	5	26	1	6		22-12-22		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		14-12-22				23	40		19-12-22				13	25		28-11-22								
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			21-09-20								
	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	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	27-02-23										67	1		12-01-22								
	Iran																		1		04-02-22								
	Jordan																		2		25-05-22								
	Somalia					1		01-09-22																					
Yemen																		1		24-04-22									
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)