

## Highlights



Children  
Paralyzed  
by polio



Sewage  
water  
sampling

2021

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

- 118 cases of cVDPV2
  - 43 in Afghanistan
  - 08 in Pakistan
  - 01 in Somalia
  - 66 in Yemen

- 03 cVDPV1 cases
  - All in Yemen

2022

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

- 107 samples cVDPV2
  - 40 in Afghanistan
  - 35 in Pakistan
  - 12 in Egypt
  - 01 in Iran
  - 01 in Somalia
  - 05 in Djibouti
  - 13 in Yemen

2022

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

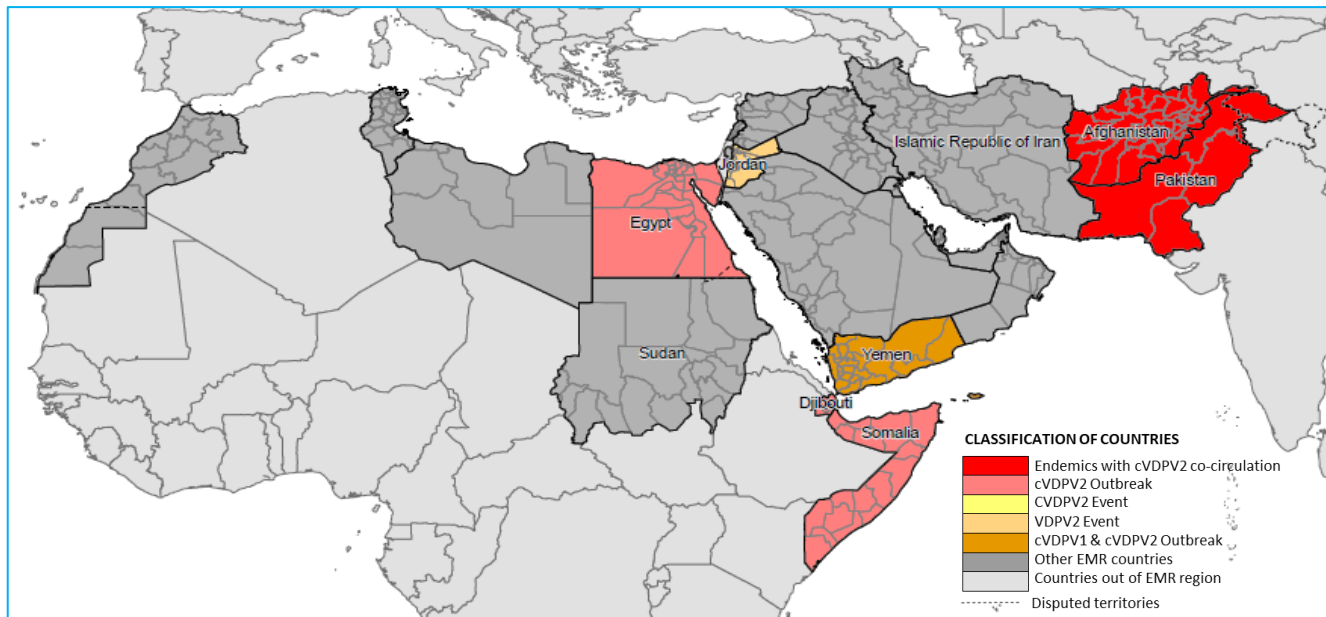
- 158 cases of cVDPV2
  - 04 in Somalia
  - 154 in Yemen

- Zero case of cVDPV1  
(No cVDPV1 for the last 19 months)

2022

- 40 samples Wild Polio 1
  - 08 in Afghanistan
  - 32 in Pakistan

- 24 samples of cVDPV2
  - 06 in Egypt
  - 12 in Djibouti
  - 03 in Somalia
  - 03 in Yemen



## Highlights of the week

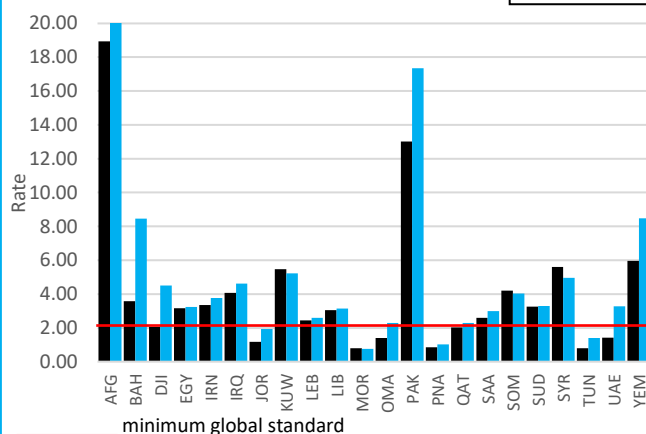
### Endemic

- No new Wild Poliovirus Type 1 (WPV1) cases were reported this week and the count remains to be 22 cases (2 from Afghanistan and 20 from Pakistan).
- Afghanistan:** Two WPV1 positive environmental samples were reported this week from Afghanistan. Both from Nangarhar province; one from Jalaabad district and the other from Behsud district, with specimens' collection dates 19<sup>th</sup> and 20<sup>th</sup> October 2022 respectively.

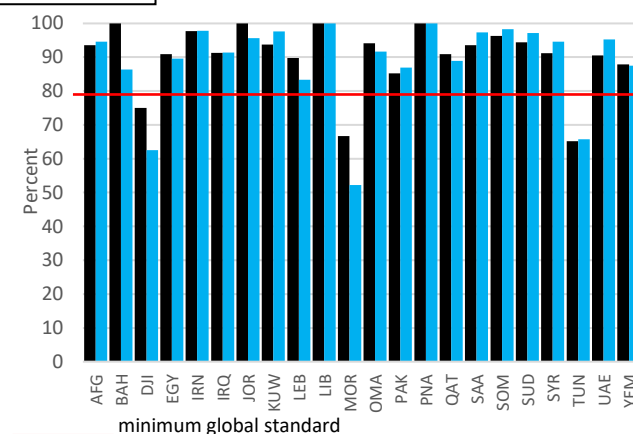
### Yemen:

- Four new circulating vaccine derived poliovirus (cVDPV2) cases reported this week from Yemen. The reported cases were from 3 provinces namely Hajjah (2), and one each from Taiz and Al Mahawet. The dates of onset vary between 18<sup>th</sup> August to 25<sup>th</sup> September 2022.

### Non polio AFP rate

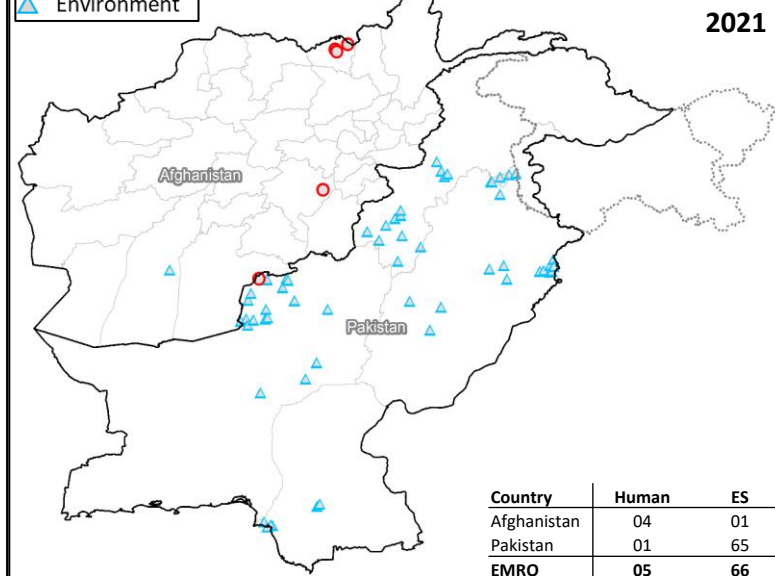
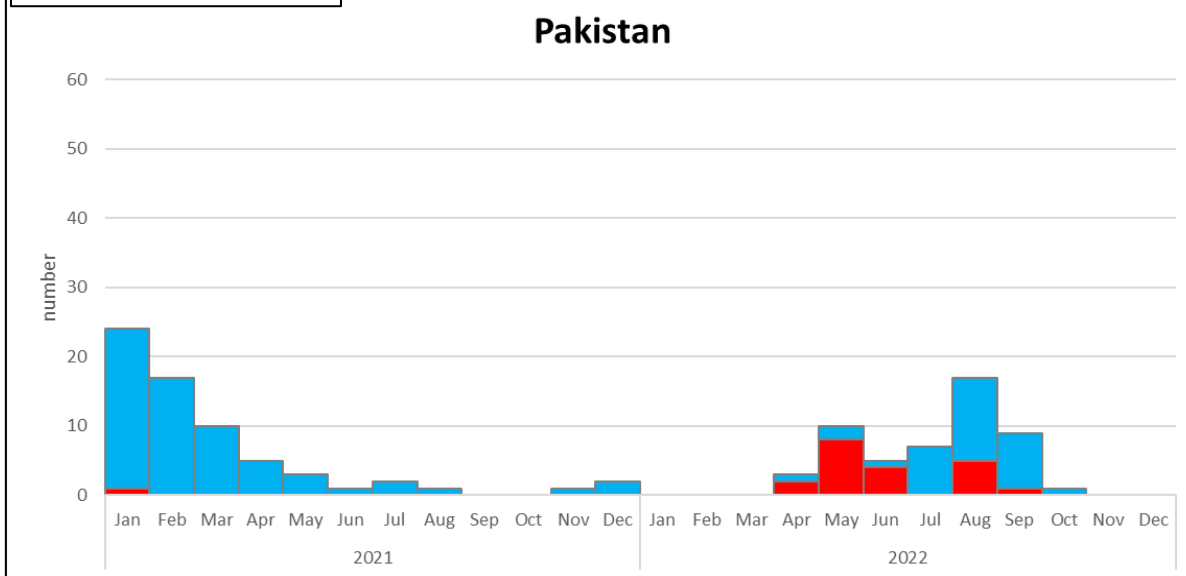
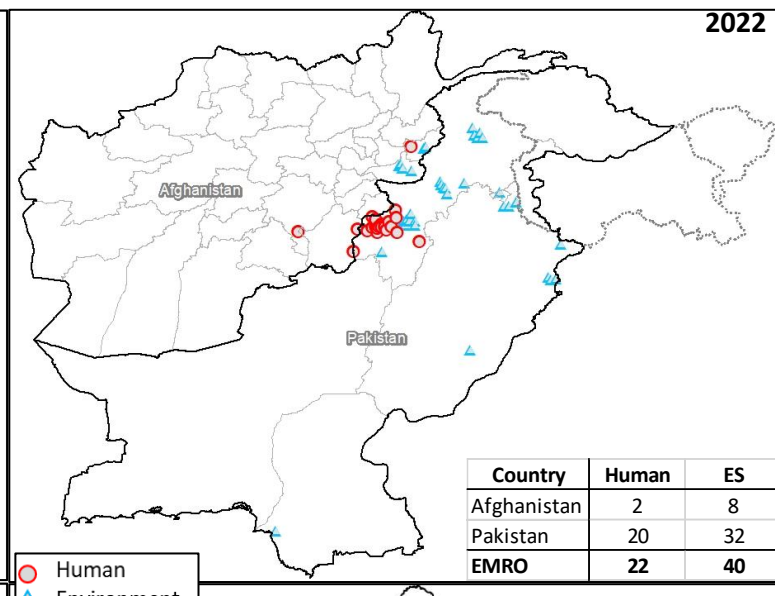
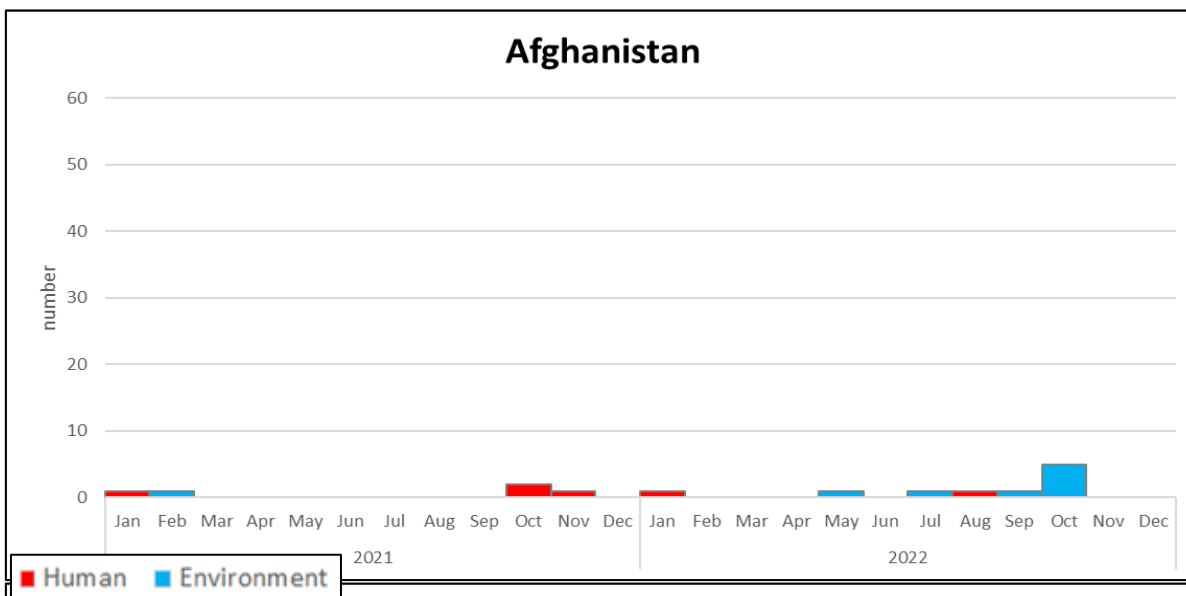


### Stool adequacy



# WPV1 Positive isolates from Afghanistan and Pakistan by source

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# Virus isolation by country, last 12 months (Nov. 13, 2021 to Nov. 13, 2022)

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Source / Virus type	AFG	DJI	PAK	EGY	IRN	JOR	SOM	YEM	Total
<b>Human (AFP only)</b>	<b>3</b>		<b>20</b>				<b>4</b>	<b>190</b>	<b>217</b>
Wild	2		20						22
cVDPV2							4	190	194
aVDPV2	1								1
VDPV2									
<b>Environment</b>	<b>8</b>	<b>15</b>	<b>37</b>	<b>8</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>9</b>	<b>85</b>
Wild	8		34						42
cVDPV2		15		7			3	9	34
aVDPV2			3						3
VDPV2				1	1	3	1		6
<b>Total</b>	<b>11</b>	<b>15</b>	<b>57</b>	<b>8</b>	<b>1</b>	<b>3</b>	<b>8</b>	<b>199</b>	<b>302</b>

*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	13 Nov.		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2021	2022											
			2021	2022	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Afghanistan	56	4	3	2	0	1	0	0	0	0	0	0	1	0			29-Aug-22
Bahrain	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	0			
Lebanon ****	0	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	0		0				
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	84	1	1	20	0	0	0	0	2	8	4	0	5	1			15-Sep-22
Palestine ****	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	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					
Sudan	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	0					
EMR	140	5	4	22	0	1	0	0	2	8	4	0	6	1	0	0	15-Sep-22

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

# Investigation of AFP cases with paralysis onset in 2021 & 2022

EMR Polio Bulletin - Issue No. 1258, Week 45 (ending on 13/11/2022)

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	4038	45	0	0	18.92	93.52	4393	2	0	4129	1	46	0	23.41	94.56	13-Nov-22
BAHRAIN	11	0	0	11	0	0	0	3.58	100.00	22	0	0	9	0	1	0	8.47	86.36	13-Nov-22
DJIBOUTI	8	0	0	8	0	0	0	2.06	75.00	16	0	0	14	0	0	0	4.51	62.50	13-Nov-22
EGYPT	1251	0	0	1250	1	0	0	3.17	90.89	1109	0	0	989	0	17	0	3.24	89.54	12-Nov-22
IRAN	681	0	0	680	1	0	0	3.36	97.65	668	0	0	648	0	0	0	3.77	97.75	12-Nov-22
IRAQ	709	0	0	709	0	0	0	4.08	91.26	698	0	0	630	0	25	0	4.62	91.40	12-Nov-22
JORDAN	47	0	0	47	0	0	0	1.19	100.00	69	0	0	66	0	0	0	1.93	95.65	13-Nov-22
KUWAIT	48	0	0	48	0	0	0	5.47	93.75	42	0	0	35	0	0	0	5.23	97.62	6-Nov-22
LEBANON	39	0	0	39	0	0	0	2.45	89.74	36	0	0	28	0	6	0	2.60	83.33	11-Nov-22
LIBYA	79	0	0	79	0	0	0	3.05	100.00	71	0	0	67	0	0	0	3.15	100.00	12-Nov-22
MOROCCO	78	0	0	78	0	0	0	0.80	66.67	67	0	0	29	0	21	1	0.76	52.24	6-Nov-22
OMAN	17	0	0	17	0	0	0	1.41	94.12	24	0	0	24	0	0	0	2.30	91.67	13-Nov-22
PAKISTAN	13118	1	4	13095	18	0	0	13.01	85.19	15200	20	1	14159	0	187	0	17.34	86.95	13-Nov-22
PALESTINE	16	0	0	16	0	0	0	0.85	100.00	18	0	0	10	0	1	0	1.03	100.00	13-Nov-22
QATAR	11	0	0	11	0	0	0	2.03	90.91	9	0	0	8	0	0	0	2.30	88.89	6-Nov-22
SAUDI ARABIA	217	0	0	217	0	0	0	2.59	93.55	224	0	0	143	0	0	0	2.99	97.32	13-Nov-22
SOMALIA	349	0	0	348	1	0	0	4.21	96.28	291	0	0	252	4	0	0	4.03	98.28	13-Nov-22
SUDAN	636	0	0	636	0	0	0	3.26	94.34	559	0	0	498	0	5	1	3.31	97.14	10-Nov-22
SYRIA	431	0	0	431	0	0	0	5.60	91.18	331	0	0	318	0	0	0	4.96	94.56	11-Nov-22
TUNISIA	23	0	0	23	0	0	0	0.81	65.22	35	0	0	34	0	0	0	1.40	65.71	11-Nov-22
U.A.E.	21	0	0	21	0	0	0	1.42	90.48	42	0	0	0	0	30	0	3.28	95.24	8-Nov-22
YEMEN	921	0	0	849	72	0	0	5.96	87.84	1135	0	0	783	154	15	4	8.47	87.49	11-Nov-22
EMR POL	22799	5	5	22651	138	0	0	7.97	88.33	25059	22	1	22873	159	354	6	10.06	89.35	

\* 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 2022

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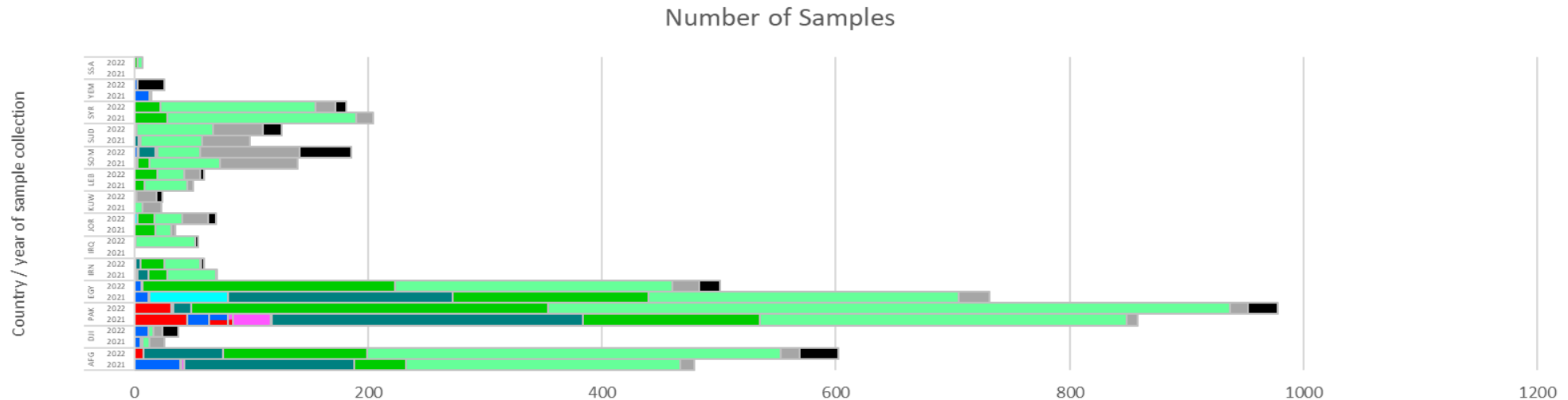
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results												Indicators				Latest report Date	
	ITD / Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant 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	4426	259	39	788	3148	184	3	2	191			8			219				6	16%	97%	100%	99%	12-Nov-22	
Bahrain	NPL Oman / CDC	15			1	14															6%	93%		93%	10-Nov-22	
Djibouti	NPL Kenya / CDC	16	2		4	8		2		2			2			2					29%	71%		71%	13-Nov-22	
Egypt	RRL Egypt	1109	21	5	154	864	63	2		8						14		4	1		12%	94%	100%	99%	13-Nov-22	
Iran	NPL Iran / CDC	694	11		8	652	19	4		4	1					8					1%	100%	100%	99%	12-Nov-22	
Iraq	NPL Iraq, RRL Egypt	700	3		58	612	23	4								4				2	9%	100%	50%	99%	12-Nov-22	
Jordan	NPL Jordan, RRL Egypt	69	3		14	45	2	5								3					25%	98%	1	100%	10-Nov-22	
Kuwait	RRL Kuwait / RIVM	43	2			34		7		1						1	1	1		1	2%	100%	1	100%	03-Nov-22	
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	34	1			32	1														0%	100%			10-Nov-22	
Libya	RRL Tunisia / RIVM	72			2	66		4													3%	100%		100%	29-Oct-22	
Morocco	NPL Morocco, RRL Tunisia	57			4	51	2														7%	100%		93%	11-Nov-22	
Oman	NPL Oman / CDC	27			4	22		1													14%	81%		100%	10-Nov-22	
Pakistan	RRL Pakistan	14915	399	50	2698	11189	556	11	17*	235			1			327					16%	97%	100%	97%	12-Nov-22	
Palestine & UNRWA		18				13	2	3													0%	38%		92%	13-Nov-22	
Qatar	NPL Oman / CDC	9	1			7	1			1											0%	88%	0	100%	10-Nov-22	
Saudi Arabia	NPL Saudi Arabia / CDC	173	3		3	164		3		1						2					2%	91%	33%	98%	23-Oct-22	
Somalia	NPL Kenya / CDC	291	10	1	50	200	8	27		2			9	4							20%	6%		87%	13-Nov-22	
Sudan	NPL Sudan / RRL Egypt	559	8		135	372	18	26										1			26%	74%	100%	22%	10-Nov-22	
Syria	NPL Syria / RRL Egypt	324	2		22	288	12														6%	100%			10-Nov-22	
Tunisia	RRL Tunisia	35				33		2													1%	100%		94%	29-Oct-22	
U.A.E	NPL Oman / CDC	42			1	40	1														1%	78%		66%	10-Nov-22	
Yemen	NPLs Oman, Jordan & Kenya, RRL Egypt	980	175	5	167	595	12	26		10			8	150**		22		12	1	1		17%	26%	36%	6%	11-Nov-22
Total EMR 2022		24608	900	100	4113	18449	904	130	22	455	1		28	158		602		13	7	2	9	15%	93%	87%	93%	
Total EMR 2021		22113	1183	128	3874	16919		4	5	478	7		363	117		599	1	1	7	2	2	14%	97%	97%	93%	

\* Three WPV1 cases are confirmed due to positive contacts (Index cases were negative for WPV1)

\*\* Four cVDPV2 cases are identified by positive contacts (Index cases were negative for cVDPV2)

# Environmental Surveillance Isolation by Classification

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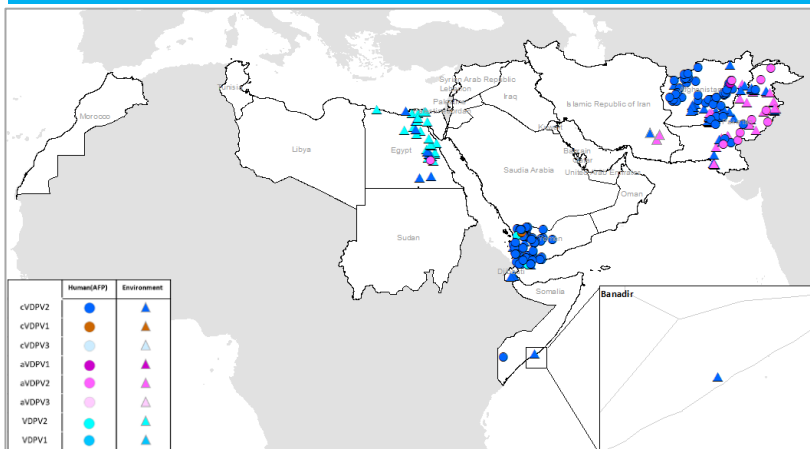


	AFG		DJI		PAK		EGY		IRN		IRQ		JOR		KUW		LEB		SOM		SUD		SYR		YEM		SSA	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
🇺🇦 Wild		8			45	32																						
🇺🇦 cVDPV2	39		5	12	19		12	6	1										1	3					13	3		
🇺🇦 Wild+cVDPV2	1				16																							
🇺🇦 Wild+aVDPV2					4																							
🇺🇦 Wild+aVDPV3																												
🇺🇦 aVDPV1																												
🇺🇦 aVDPV2	3				33	1			2																			
🇺🇦 aVDPV3																												
🇺🇦 VDPV1					1		1																					
🇺🇦 VDPV2							67	1		1			3							1								
🇺🇦 SL2	145	68			266	16	192		9	4								2	14	4								
🇺🇦 SL1/3	44	123	2		151	305	168	216	16	21		1	18	14			9	20	10	2	1	2	28	22	1		3	
🇺🇦 Entero	235	354	6	4	314	583	265	237	42	30		51	14	24	7	2	36	23	60	36	53	65	162	133	1		4	
🇺🇦 Negative	12	16	13	8	9	15	26	23	1	1			3	22	16	17	5	13	67	85	41	43	14	17				
🇺🇦 Pending		33		14		26		18		3		3		7		5		4		45		16		9		23		

# VDPVs isolations by Source and Country

EMR Polio Bulletin - Issue No. 1258 Week 45 (ending on 13/11/2022)

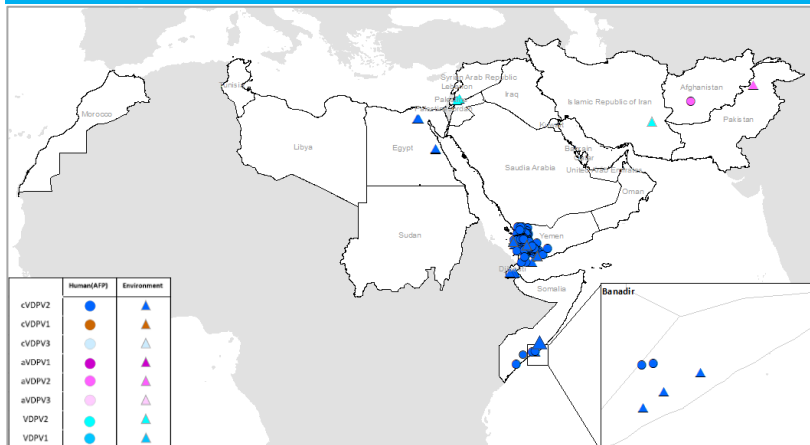
## VDPV Isolates, EMR countries, 2021



## 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	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	4	17-07-22		3	1	11		3	22-02-22	2	19	5	26	1	3	19-05-22			1	5		1	10-03-22
	Sudan				58			18-12-20				18			08-10-20				14			09-11-20				4			24-08-20
	Syria	74						21-09-17	63						12-09-17								4						20-08-17
Yemen					66	154	25-09-22				23	36	05-08-22					13	3		31-01-22								
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			21-09-20								
	Iran																		2		23-09-21								
	Pakistan			7	8			24-09-21			8	19	1	28-04-21	5		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																		67	1	12-01-22								
	Iran																			1	04-02-22								
	Jordan																			3	25-05-22								
	Pakistan																			1	15-02-22								

## VDPV Isolates, EMR countries, 2022





# 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)