

EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1214, Week 01 (ending on 09/01/2022)

Highlights



Children
Paralyzed
by polio

2020

- 140 Wild Polio 1 cases
 - 56 in Afghanistan
 - 84 in Pakistan

- 515 cVDPV2 cases
 - 308 in Afghanistan
 - 135 in Pakistan
 - 58 in Sudan
 - 14 in Somalia

- 31 cVDPV1 cases
 - All in Yemen

2021

- 5 Wild Polio 1 cases
 - 4 in Afghanistan
 - 1 in Pakistan

- 62 cVDPV2 cases
 - 43 in Afghanistan
 - 8 in Pakistan
 - 0 in Sudan
 - 1 in Somalia
 - 10 in Yemen

- 3 cVDPV1 cases
 - All in Yemen



Sewage
water
sampling

2020

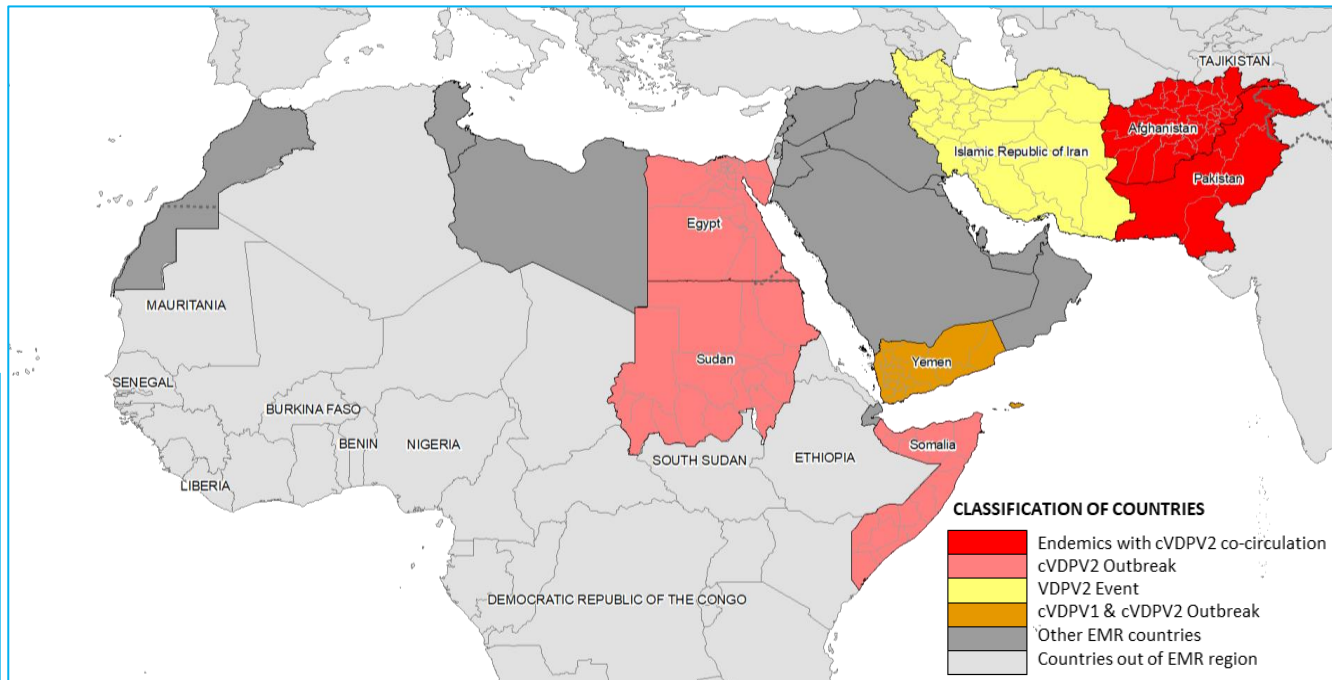
- 469 Wild Polio 1 samples
 - 35 in Afghanistan
 - 434 in Pakistan

- 352 cVDPV2 samples
 - 174 in Afghanistan
 - 135 in Pakistan
 - 0 in Egypt
 - 3 in Iran
 - 14 in Sudan
 - 26 in Somalia

2021

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

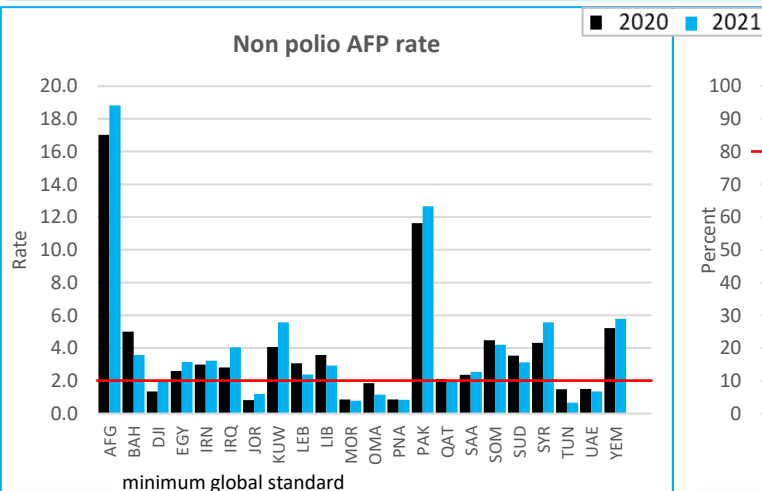
- 88 cVDPV2 samples
 - 40 in Afghanistan
 - 35 in Pakistan
 - 11 in Egypt
 - 1 in Iran
 - 0 in Sudan
 - 1 in Somalia



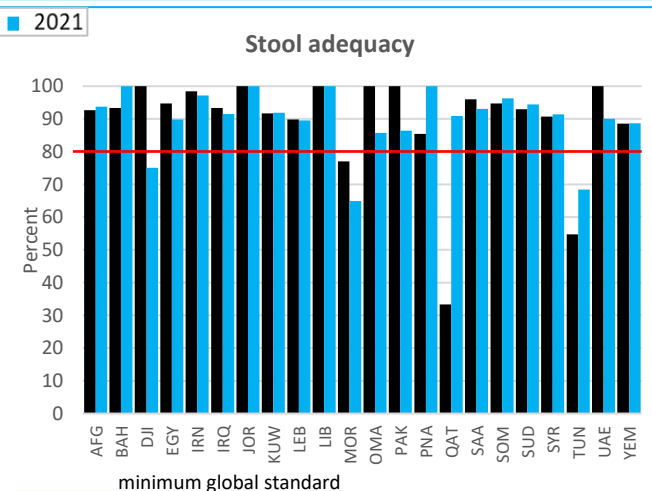
Highlights of the week

- No new WPV1 or cVDPV1 isolates from human or environmental samples in the past week.
- YEMEN:** Four new cVDPV2 cases reported from provinces of Al-Hudaidah, Taiz, Dhamar and Saadah. Onset of paralysis is between 10 and 15 October 2021.
- AFGHANISTAN:** Briefing of extensive desk review to WHO – UNICEF Polio Teams was held on 9 January 2022. Prioritized next steps are: i) expansion of environmental surveillance in coordination with the lab with special attention to populations moving across the border, ii) an external assessment of surveillance system with careful field evaluation of southern region; and iii) periodic analysis of data for three corridors of population movement.

Non polio AFP rate



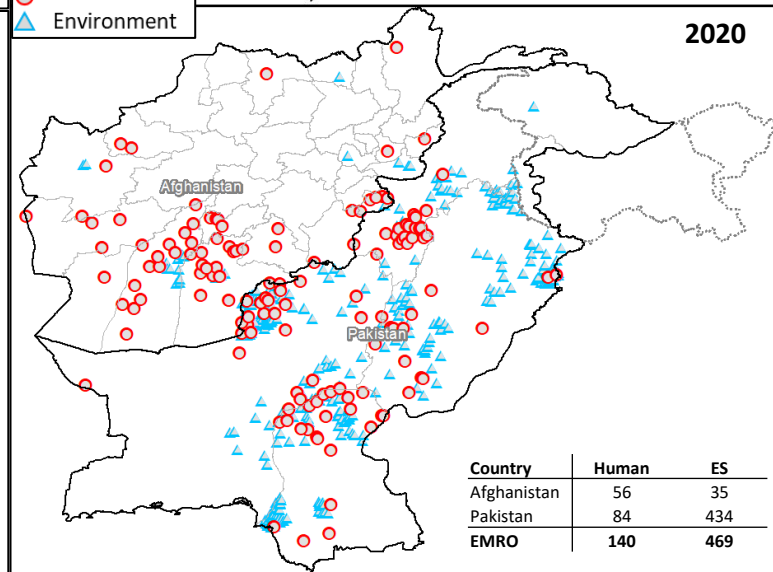
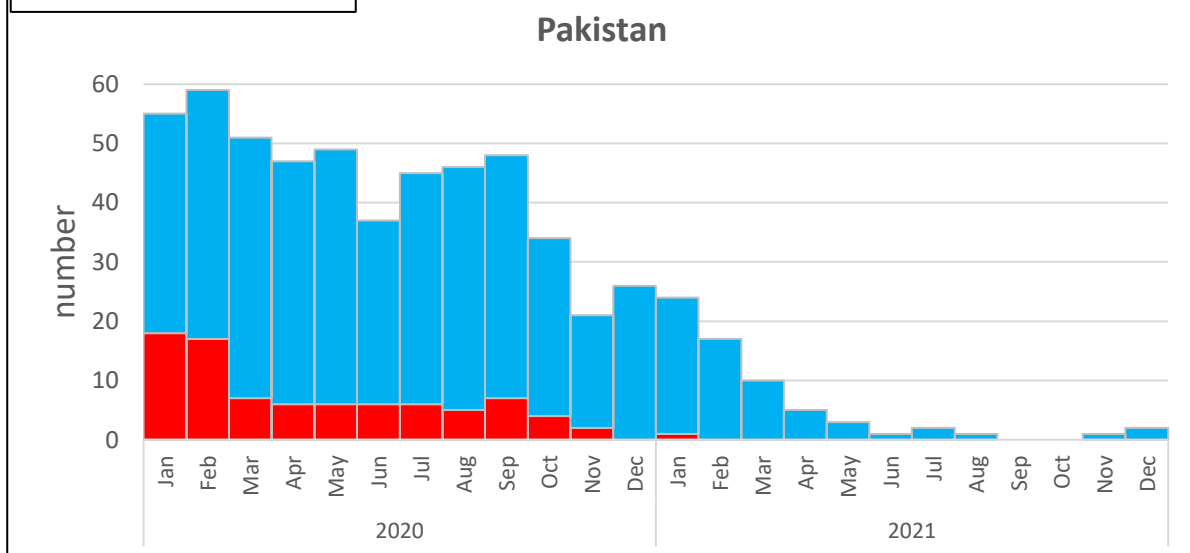
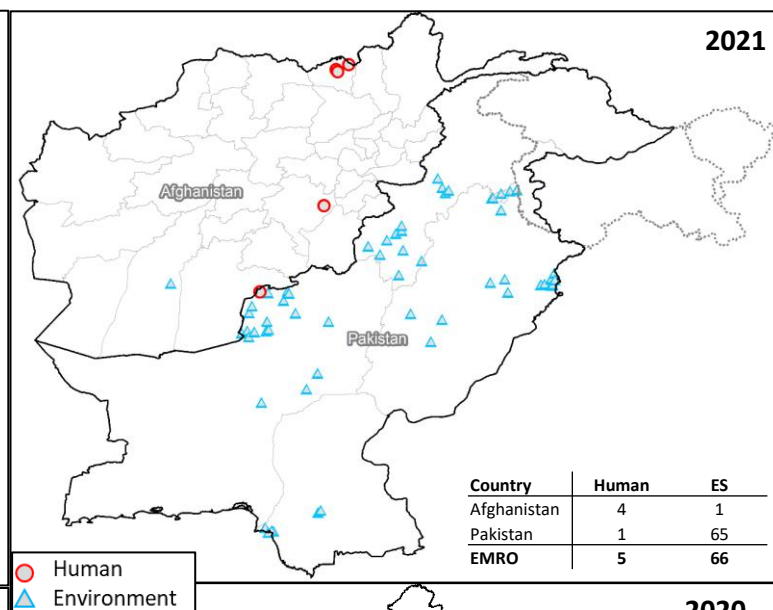
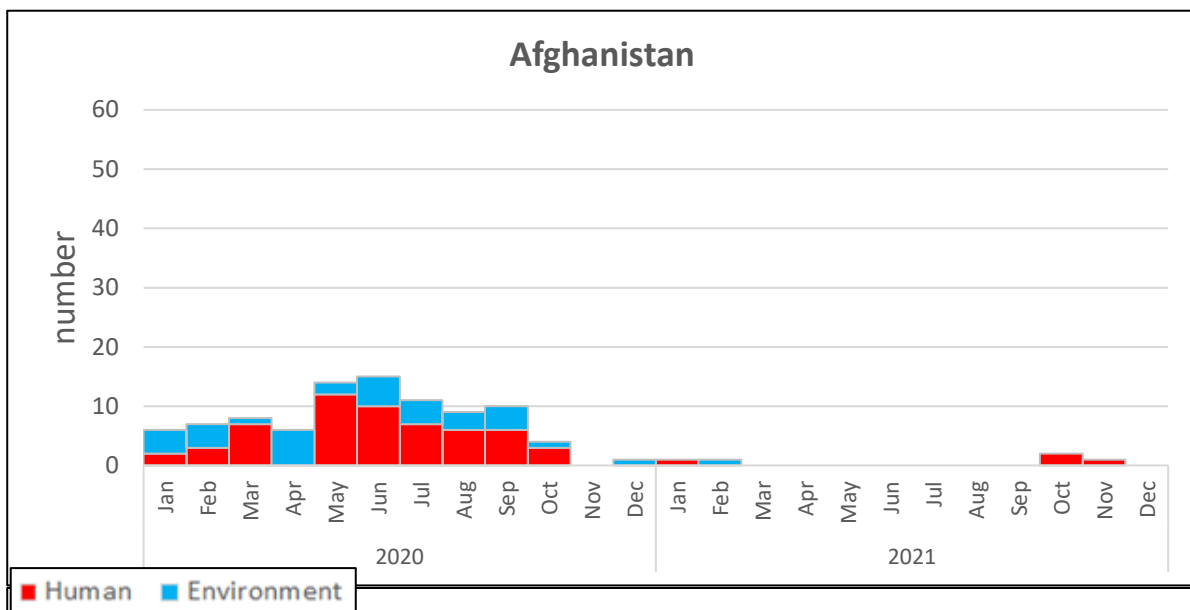
Stool adequacy



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 (Jan. 09, 2021 to Jan. 09, 2022)

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Source / Virus type	AFG	PAK	EGY	IRN	SOM	YEM	Total
Human (AFP only)	41	11	1		1	15	69
Wild	3	1					4
cVDPV2	36	3			1	11	51
Wild+cVDPV2							
Wild+aVDPV2							
Wild+aVDPV3							
cVDPV1						3	3
aVDPV1	1						2
aVDPV2	1	7	1				9
VDPV1						1	
VDPV2							
Environment	34	111	80	3	1		229
Wild		41					41
cVDPV2	30	18	11	1	1		61
Wild+cVDPV2	1	15					16
Wild+aVDPV2		2					2
Wild+aVDPV3		1					1
cVDPV1							
aVDPV1		1					1
aVDPV2	3	31		2			36
VDPV1			1				1
VDPV2		2	68				70

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	09-01		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2021												
			2021	2022	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
Afghanistan	56	4	1	0	0	0	0	0	0	0	0	0	2	1	0		29-Oct-21
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	0		
Egypt	0	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	0	0		
Iraq	0	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	0		
Kuwait	0	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	0		
Libya	0	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	0	0	0		
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	84	1	0	0	0	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	0		
Saudi Arabia	0	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	0	0		
Sudan	0	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	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	0	0	0		
Yemen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
EMR	140	5	1	0	0	0	0	0	0	0	0	0	2	1	0		29-Oct-21

**** 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	4065	4	1	3812	45	30	0	18.82	93.73	12	0	0	0	0	0	0	2.26	100.00	9-Jan-22
BAHRAIN	11	0	0	3	0	1	0	3.58	100.00	0	0	0	0	0	0	0	0.00		9-Jan-22
DJIBOUTI	8	0	0	4	0	0	0	2.06	75.00	0	0	0	0	0	0	0	0.00		12-Dec-21
EGYPT	1242	0	0	1144	1	12	0	3.14	89.77	0	0	0	0	0	0	0	0.00		5-Jan-22
IRAN	661	0	0	642	0	0	0	3.24	97.13	0	0	0	0	0	0	0	0.00		9-Jan-22
IRAQ	705	0	0	668	0	5	0	4.06	91.49	1	0	0	0	0	0	0	0.23		8-Jan-22
JORDAN	47	0	0	35	0	0	0	1.19	100.00	0	0	0	0	0	0	0	0.00		6-Jan-22
KUWAIT	49	0	0	46	0	0	0	5.58	91.84	0	0	0	0	0	0	0	0.00		3-Jan-22
LEBANON	38	0	0	33	0	3	0	2.38	89.47	0	0	0	0	0	0	0	0.00		2-Jan-22
LIBYA	76	0	0	68	0	0	0	2.93	100.00	0	0	0	0	0	0	0	0.00		31-Dec-21
MOROCCO	77	0	0	36	0	21	2	0.78	64.94	0	0	0	0	0	0	0	0.00		7-Jan-22
OMAN	14	0	0	14	0	0	0	1.16	85.71	0	0	0	0	0	0	0	0.00		9-Jan-22
PAKISTAN	12774	1	4	11982	18	123	0	12.67	86.39	2	0	0	0	0	0	0	0.08	50.00	9-Jan-22
PALESTINE	16	0	0	9	0	1	0	0.85	100.00	0	0	0	0	0	0	0	0.00		9-Jan-22
QATAR	11	0	0	9	0	0	0	2.03	90.91	0	0	0	0	0	0	0	0.00		2-Jan-22
SAUDI ARABIA	214	0	0	157	0	2	0	2.55	92.99	0	0	0	0	0	0	0	0.00		9-Jan-22
SOMALIA	348	0	0	329	1	1	0	4.20	96.26	1	0	0	0	0	0	0	0.49	100.00	9-Jan-22
SUDAN	609	0	0	436	0	36	29	3.12	94.42	0	0	0	0	0	0	0	0.00		3-Jan-22
SYRIA	429	0	0	415	0	0	0	5.57	91.38	1	0	0	0	0	0	0	0.53	100.00	8-Jan-22
TUNISIA	19	0	0	19	0	0	0	0.67	68.42	0	0	0	0	0	0	0	0.00		7-Jan-22
U.A.E.	20	0	0	12	0	1	0	1.36	90.00	0	0	0	0	0	0	0	0.00		3-Jan-22
YEMEN	895	0	0	634	15	13	5	5.79	88.60	3	0	0	0	0	0	0	0.79	100.00	8-Jan-22
EMR POL	22328	5	5	20507	80	249	36	7.80	89.04	20	0	0	0	0	0	0	0.28	95.00	

* 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)

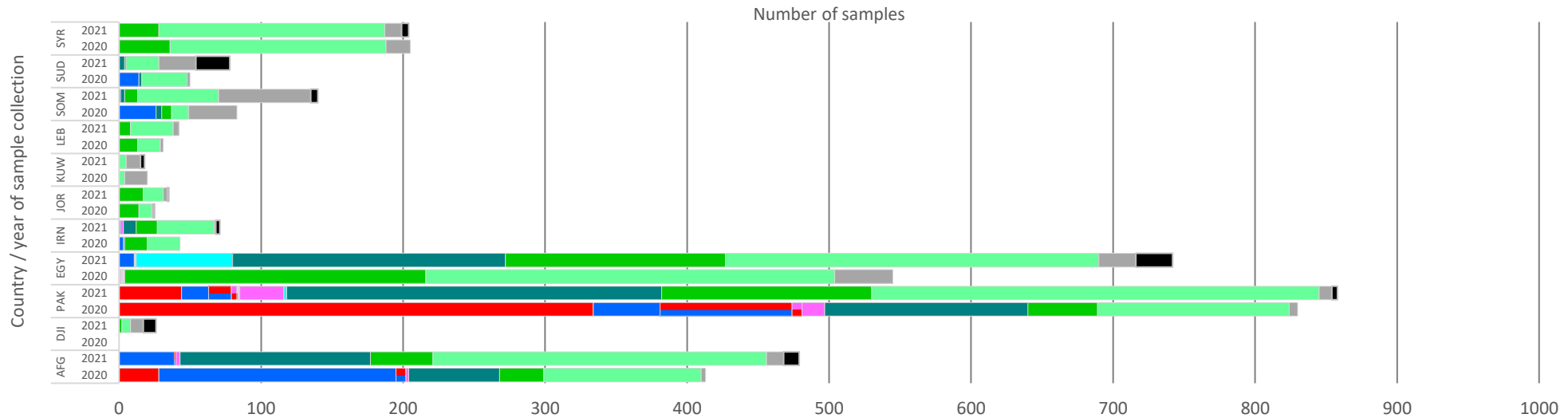
Laboratory investigation of AFP cases with paralysis onset in 2021

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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	4021	332	49	706	2808	112	1	4	160	1		107	40		162			2		7	15%	99%	99%	99%	9-Jan-22
Bahrain	NPL Oman / CDC	10				10																0%	100%		50%	5-Jan-22
Djibouti	NPL Kenya / CDC	8			1			4														100%			100%	12-Dec-21
Egypt***	RRL Egypt	1199	61	4	165	932	32	6		4			58			3			2			12%	97%	100%	99%	6-Jan-22
Iran	NPL Iran / CDC	666	14		11	628	13			3	1		6			4						2%	100%	100%	98%	8-Jan-22
Iraq	NPL Iraq, RRL Egypt	692	11		46	609	9	17		7						17				1		7%	100%	50%	98%	31-Dec-21
Jordan	NPL Jordan, RRL Egypt	47	1		3	43				2						2						6%	100%	0.5	100%	9-Jan-22
Kuwait	RRL Kuwait / RIVM	48				46		2														0%	100%		98%	3-Jan-22
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	37	1		1	35																4%	100%			8-Jan-22
Libya	RRL Tunisia / RIVM	72				69		3														0%	100%		86%	15-Dec-21
Morocco	NPL Morocco, RRL Tunisia	63			1	58	1	3														2%	100%		95%	31-Dec-21
Oman	NPL Oman / CDC	14				14																1%	93%		100%	5-Jan-22
Pakistan	RRL Pakistan	12471	616	67	2450	8911	416	7	1	269	1		181	14		348	1		5		9	16%	100%	100%	97%	9-Jan-22
Palestine & UNRWA		16				15		1														0%	14%		87%	9-Jan-22
Qatar	NPL Oman / CDC	11				9	2															0%	100%		100%	5-Jan-22
Saudi Arabia	NPL Saudi Arabia / CDC	214	3		3	188	14	6		1						3						1%	94%	67%	97%	9-Jan-22
Somalia	NPL Kenya / CDC	348	6		53	271	2	15		4				1		4						16%	2%		62%	9-Jan-22
Sudan	NPL Sudan / RRL Egypt	514	1		73	364		77		1			1			2		1				17%	88%	100%	67%	18-Nov-21
Syria	NPL Syria / RRL Egypt	422	17		23	375	7															6%	100%		0%	8-Jan-22
Tunisia	RRL Tunisia	17				17																0%	100%		94%	15-Dec-21
U.A.E	NPL Oman / CDC	12				12																0%	100%		42%	5-Jan-22
Yemen	NPL Oman, NPL Kenya, RRL Egypt	483	23	1	105	354				3	4			11		7						18%	87%	100%	0%	8-Jan-22
Total EMR 2021		21385	1086	121	3641	15768	608	142	5	454	7		353	66		552	1	1	7	2	17	15%	97%	99%	94%	
Total EMR 2020		20387	1680	93	3046	15557		4	129	352	32		509	468		462	2	3	18	11		14%	94%	97%	93%	

Environmental Surveillance Isolation by Classification

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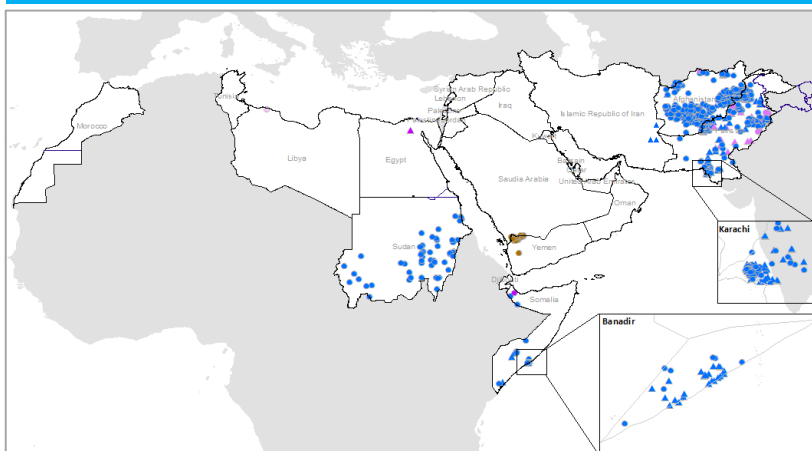


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Wild	28				334	44																
cVDPV2	167	39			47	19		11	3	1							26	1	14			
Wild+cVDPV2	7	1			93	16																
Wild+aVDPV2					7	4																
Wild+aVDPV3						1																
aVDPV1						1	1															
aVDPV2	2	3			16	31	1			2												
aVDPV3							2															
VDPV1								1														
VDPV2						2	68															
SL2	64	134			143	264	192	1	9								4	3	2	4		
SL1/3	31	44		2	49	148	212	155	16	15	14	17			13	8	7	9		1	36	28
Entero	111	235		6	135	315	288	263	23	40	9	14	4	5	16	30	12	57	32	23	152	159
Negative	3	12		9	6	9	41	26		1	1	3	16	10	2	4	34	65	2	26	17	12
Pending		11		9		4		26		3	1	1		3				5		24		5

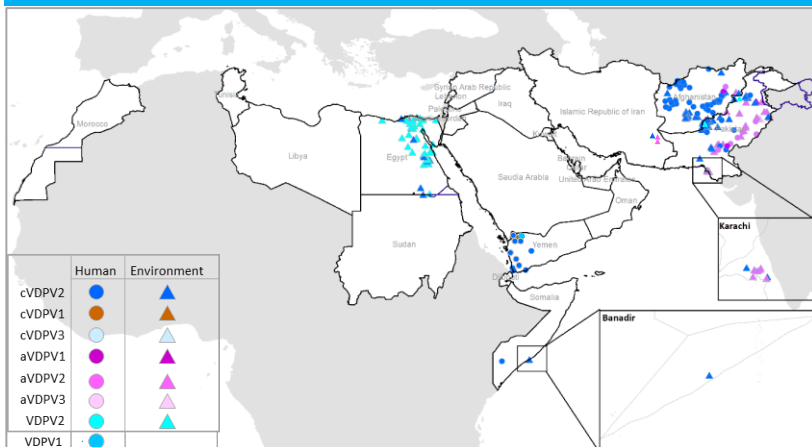
VDPVs isolations by Source and Country

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VDPV Isolates, EMR countries, 2020



VDPV Isolates, EMR countries, 2021



VDPVs isolated from 2016-2021

cVDPV Isolate type	EMR Country	Sources																												
		AFP cases(Human)						Contacts(Human)						Environment						Other Sources (Healthy Children)										
		2016	2017	2018	2019	2020	2021	Most recent	2016	2017	2018	2019	2020	2021	Most recent	2016	2017	2018	2019	2020	2021	Most recent	2016	2017	2018	2019	2020	2021	Most recent	
cVDPV2	Afghanistan					307	43	09-07-21												174	40	23-06-21								
	Egypt																				11	18-11-21								
	Iran																			3	1	20-02-21								
	Pakistan	1			22	135	8	23-04-21								4			38	135	35	11-08-21								
	Somalia			6	3	14	1	12-05-21			3	1	11		10-11-20	2	19	5	26	1	23-05-21					1	5		22-09-20	
	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						11	15-Oct-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	1	11-07-21									
	Pakistan																			1	10-02-21									
	Somalia					1		26-01-20																						
aVDPV2	Afghanistan	1				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	3	5		3	22	35	09-11-21								
	Somalia	1						24-10-16	1						30-10-16			2	1			03-02-19								
	Yemen	1						11-06-16	2						20-06-16															
aVDPV3	Afghanistan					1		23-06-20																						
	Egypt																		2			30-09-20								
	Pakistan																			1		05-04-21								
	Libya					1		15-01-20																						
VDPV1	Yemen						1	20-07-21																						
VDPV2	Egypt														1					68	04-11-21									
	Pakistan														1					2	06-12-21									

Important links

EMR Polio Bulletin - Issue No. 1214, Week 01 (ending on 09/01/2022)

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