

EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1207, Week 46 (ending on 21/11/2021)

Highlights



Children
Paralyzed
by polio

2020

■ **140 Wild Polio 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

■ **4 Wild Polio cases:**

- 3 in Afghanistan
- 1 in Pakistan

■ **54 cVDPV2 cases:**

- 43 in Afghanistan
- 8 in Pakistan
- 0 in Sudan
- 1 in Somalia
- 2 in Yemen

■ **3 cVDPV1 cases:**

- All in Yemen



Sewage
water
sampling

2020

■ **469 Wild Polio isolates:**

- 35 in Afghanistan
- 434 in Pakistan

■ **352 cVDPV2 Isolates:**

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

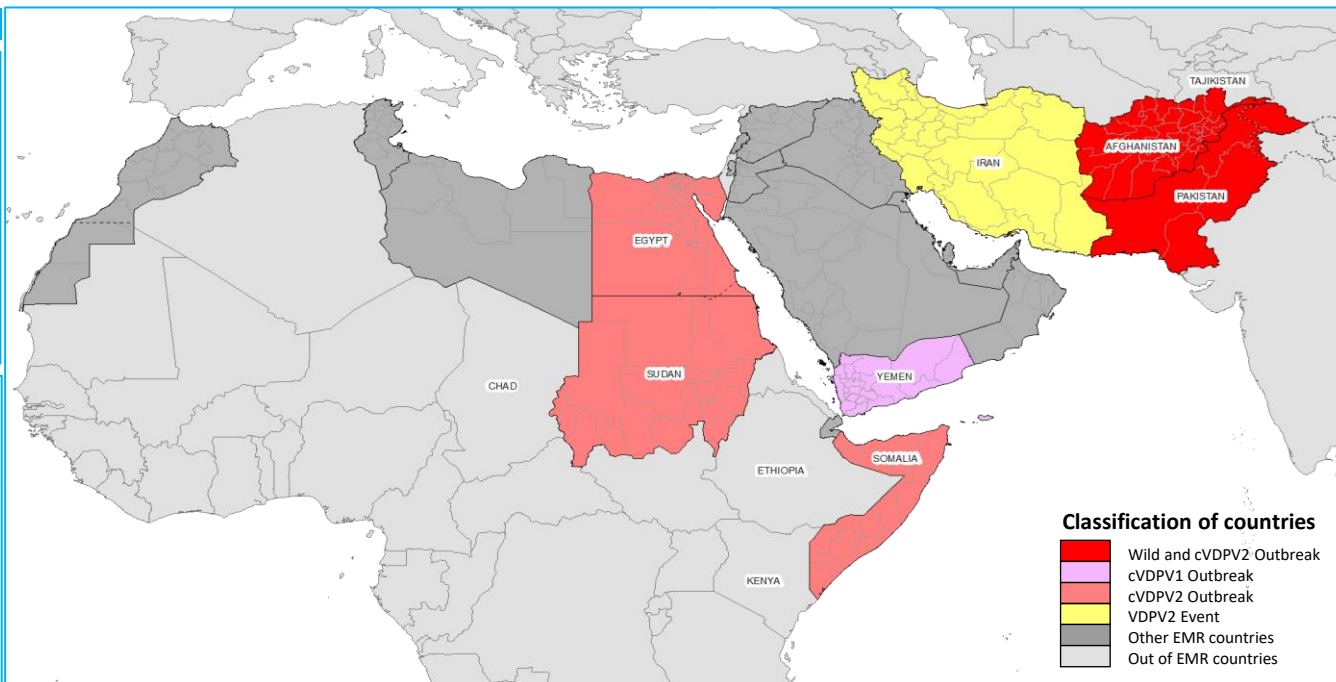
2021

■ **63 Wild Polio cases:**

- 1 in Afghanistan
- 62 in Pakistan

■ **87 cVDPV2 Isolates:**

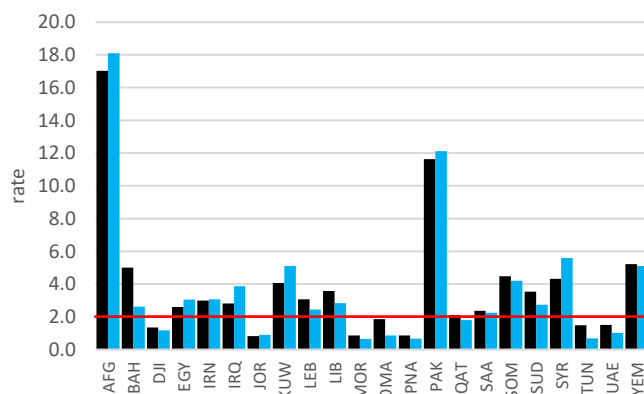
- 40 in Afghanistan
- 35 in Pakistan
- 10 in Egypt
- 1 in Iran
- 0 in Sudan
- 1 in Somalia



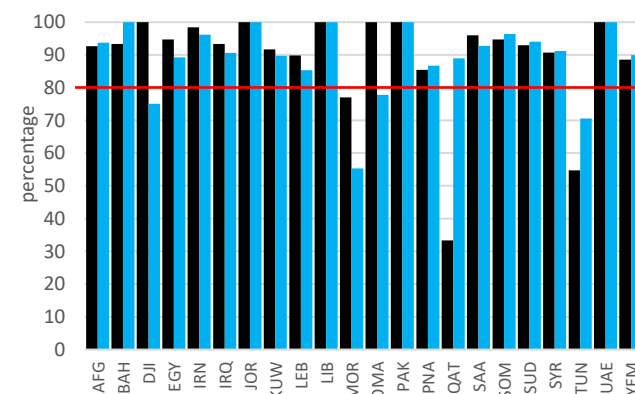
Highlights of the week

- Yemen reports first ever cVDPV2 detection from two AFP cases from Taiz and Marab provinces since Switch from TOPV to bOPV in 2016. Cases have onset of paralysis in August 2021 and are from a new emergence YEM-TAI-1. Response per GPEI SOPs is initiated.
- Regional office is supporting Egypt for the nOPV2 use (preparation and monitoring) which is expected early in December 2021.
- Polio eradication teams continued in contributing to the COVID19 Response, particularly in areas of surveillance, data analysis, communications, and coordination.

Non polio AFP rate



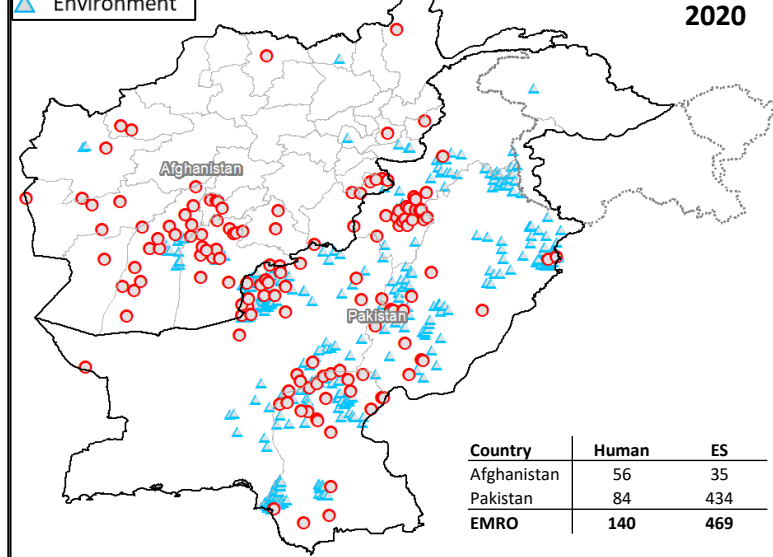
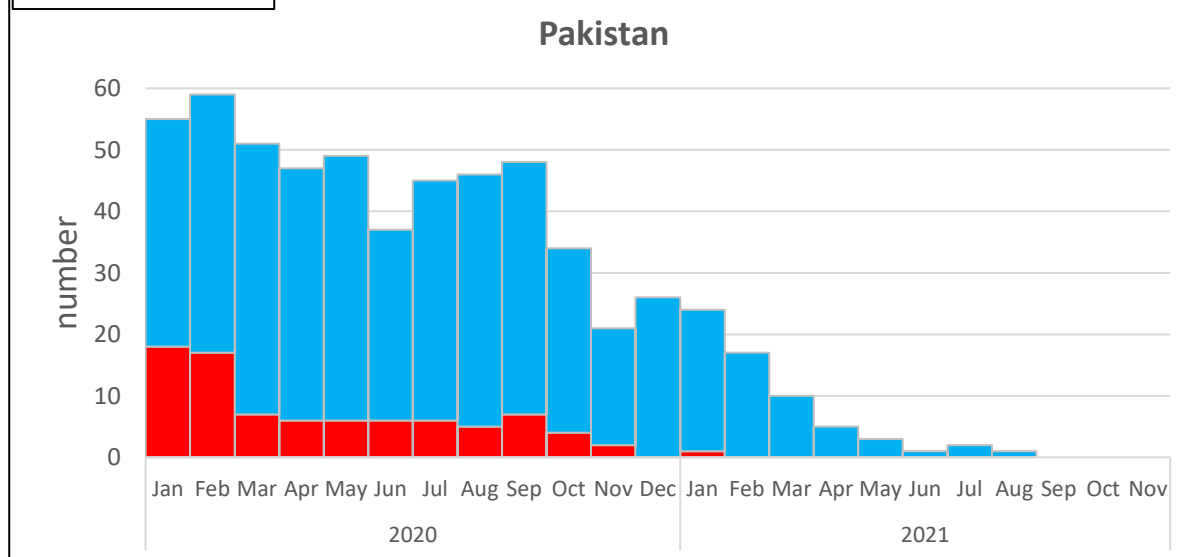
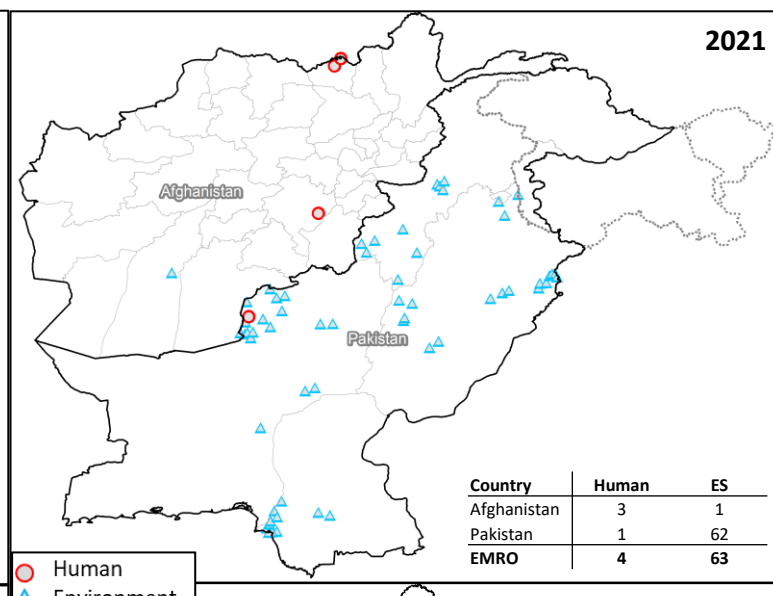
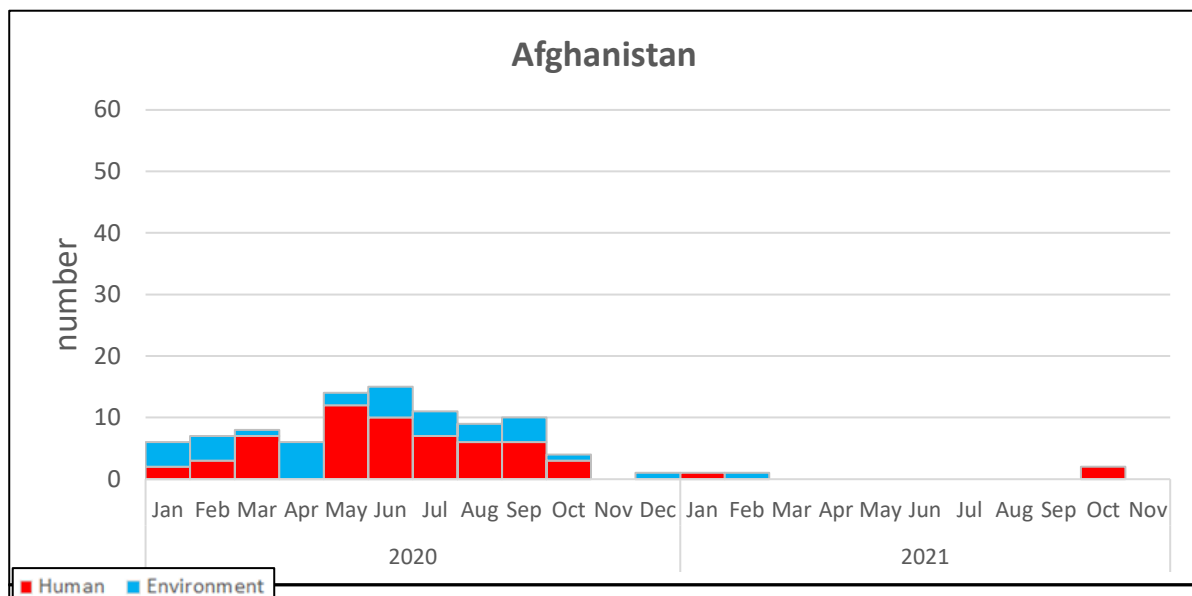
Stool adequacy



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

WPV1 Positive isolates from AFG/PAK by source

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Virus isolation by country, last 12 months (Nov. 21, 2020 to Nov. 21, 2021)

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Source / Virus type	AFG	PAK	EGY	IRN	SOM	SUD	YEM	Total
Human (AFP only)	85	24	1		1	7	8	126
Wild	3	1						4
cVDPV2	78	11			1	7	2	99
Wild+cVDPV2		1						1
Wild+aVDPV2								
Wild+aVDPV3								
cVDPV1							5	5
aVDPV1	1	1						2
aVDPV2	3	10	1					14
VDPV1							1	1
VDPV2								
Environment	67	157	78	5	1			308
Wild		59						59
cVDPV2	61	31	10	3	1			106
Wild+cVDPV2	2	24						26
Wild+aVDPV2		6						6
Wild+aVDPV3		1						1
cVDPV1								
aVDPV1		1						1
aVDPV2	4	35		2				41
VDPV1			1					1
VDPV2			67					67

Confirmed Wild Polio Cases by month of onset

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Country	Total year 2019	Total year 2020	21-11		Confirmed Wild Polio Cases by month of onset												Last Case
					2020						2021						
			2020	2021	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Afghanistan	29	56	56	3	0	1	0	0	0	0	0	0	0	0	2		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	147	84	83	1	0	1	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	176	140	139	4	0	2	0	0	0	0	0	0	0	0	2	0	29-Oct-21

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

Investigation of AFP cases with paralysis onset in 2020 & 2021

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COUNTRY	AFP (2020)									AFP (2021)									Line List 2021
	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	3972	56	3	3600	314	0	0	18.53	92.60	3515	3	1	3245	45	35	0	18.09	93.74	30-Sep-21
BAHRAIN	15	0	0	15	0	0	0	5.00	93.33	7	0	0	4	0	0	0	2.61	100.00	02-Oct-21
DJIBOUTI	5	0	0	5	0	0	0	1.35	100.00	4	0	0	4	0	0	0	1.19	75.00	26-Sep-21
EGYPT	1009	0	0	1009	0	0	0	2.60	94.65	1085	0	0	979	1	3	0	3.05	88.66	30-Sep-21
IRAN	618	0	0	618	0	0	0	2.99	98.54	553	0	0	545	0	0	0	3.07	96.56	02-Oct-21
IRAQ	476	0	0	476	0	0	0	2.81	93.28	602	0	0	551	0	7	0	3.86	90.86	02-Oct-21
JORDAN	32	0	0	32	0	0	0	0.83	100.00	32	0	0	29	0	0	0	0.90	100.00	23-Sep-21
KUWAIT	36	0	0	36	0	0	0	4.06	91.67	40	0	0	36	0	0	0	5.10	87.50	26-Sep-21
LEBANON	49	0	0	49	0	0	0	3.07	89.80	36	0	0	24	0	2	0	2.45	88.89	01-Oct-21
LIBYA	95	0	0	94	1	0	0	3.62	100.00	65	0	0	56	0	0	0	2.83	100.00	01-Oct-21
MOROCCO	87	0	0	87	0	0	0	0.86	78.16	61	0	0	32	0	18	6	0.65	60.66	18-Sep-21
OMAN	22	0	0	22	0	0	0	1.85	100.00	9	0	0	9	0	0	0	0.86	77.78	29-Sep-21
PAKISTAN	11972	84	29	11719	142	0	0	15.25	85.43	10918	1	3	10083	18	185	4	12.11	86.45	02-Oct-21
PALESTINE	16	0	0	16	0	0	0	0.87	100.00	11	0	0	7	0	1	0	0.67	100.00	26-Sep-21
QATAR	9	0	0	9	0	0	0	2.11	33.33	9	0	0	2	0	0	0	1.81	88.89	26-Sep-21
SAUDI ARABIA	200	0	0	200	0	0	0	2.37	96.00	164	0	0	123	0	1	0	2.25	92.68	30-Sep-21
SOMALIA	376	0	0	361	15	0	0	4.66	94.68	309	0	0	279	1	3	2	4.20	96.12	02-Oct-21
SUDAN	733	0	0	675	58	0	0	3.84	92.91	465	0	0	432	0	5	0	2.74	93.98	30-Sep-21
SYRIA	343	0	0	343	0	0	0	4.32	90.96	381	0	0	361	0	0	0	5.60	91.08	02-Oct-21
TUNISIA	42	0	0	42	0	0	0	1.49	54.76	17	0	0	15	0	0	1	0.69	70.59	01-Oct-21
U.A.E.	19	0	0	19	0	0	0	1.52	100.00	15	0	0	4	0	10	0	1.01	93.33	26-Sep-21
YEMEN	825	0	1	793	31	0	0	5.44	88.73	713	0	0	458	6	52	41	5.11	89.62	02-Oct-21
EMR	20951	140	33	20220	561	0	0	7.96	88.59	19011	4	4	17278	71	322	54	7.42	88.96	

* 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, within 14 days of paralysis onset and specimens received in the lab in Good Condition

**** Includes all VDPV cases. Further details available page number

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

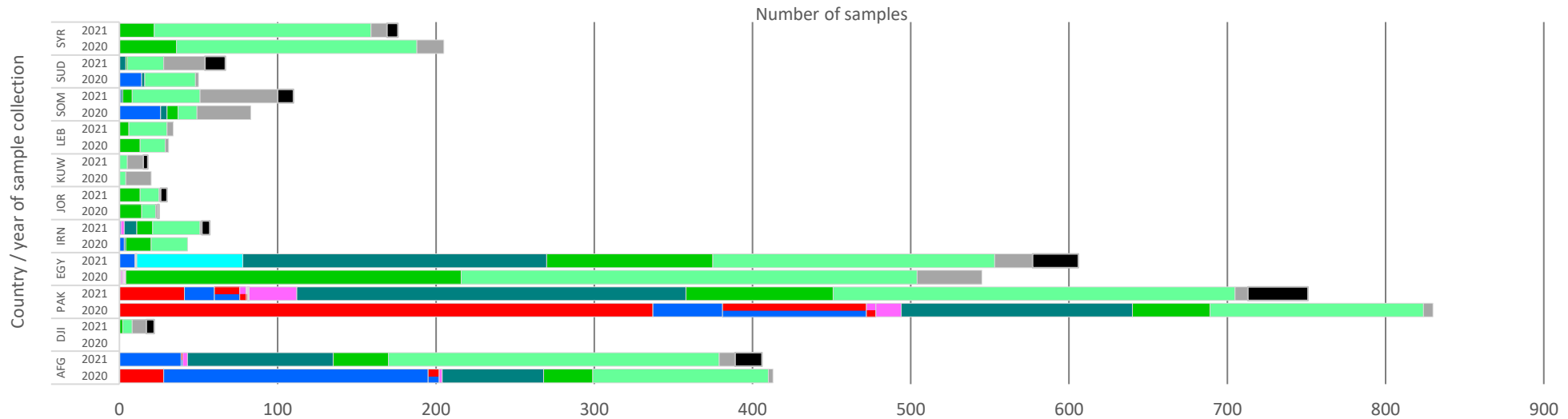
Laboratory investigation of AFP cases with paralysis onset in 2021

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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	3411	256	43	610	2340	122	1	1	129	1		71	40		122			2		2	16%	99%	99%	99%	14-Nov-21
Bahrain	NPL Oman / CDC	5				5																0%	100%		20%	9-Nov-21
Djibouti	NPL Kenya / CDC	4			1																	100%			100%	14-Nov-21
Egypt***	RRL Egypt	1013	61	3	135	764	39	12		3			58			2				2		12%	97%	100%	99%	11-Nov-21
Iran	NPL Iran / CDC	551	14		7	520	9	1		3	1		6			4						1%	100%	100%	98%	13-Nov-21
Iraq	NPL Iraq, RRL Egypt	580	10		40	506	24	1		3						15					2	7%	100%	50%	98%	13-Nov-21
Jordan	NPL Jordan, RRL Egypt	31	1		3	26	1														1	10%	100%		100%	14-Nov-21
Kuwait	RRL Kuwait / RIVM	39				36	3															0%	100%		97%	14-Nov-21
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	28			1	27																4%	100%			13-Nov-21
Libya	RRL Tunisia / RIVM	60				60																0%	100%		83%	1-Nov-21
Morocco	NPL Morocco, RRL Tunisia	51			1	47	1	2														2%	100%		94%	5-Nov-21
Oman	NPL Oman / CDC	9				9																1%	89%		100%	9-Nov-21
Pakistan	RRL Pakistan	10421	529	61	2162	7105	410	157	1	222	1		173	14		278	1		6		5	18%	100%	100%	97%	14-Nov-21
Palestine & UNRWA		11				10		1														0%	10%		100%	7-Nov-21
Qatar	NPL Oman / CDC	9				9																0%	100%		100%	9-Nov-21
Saudi Arabia	NPL Saudi Arabia / CDC	167	2			164		1								2						0%	95%	50%	97%	12-Nov-21
Somalia	NPL Kenya / CDC	304	4		42	222	2	33		2				1		2						16%	3%		66%	14-Nov-21
Sudan	NPL Sudan / RRL Egypt	456	1		73	363		20					1			1						17%	88%	100%	67%	14-Oct-21
Syria	NPL Syria / RRL Egypt	370	12		21	321	16															6%	100%		0%	13-Nov-21
Tunisia	RRL Tunisia	16				16																0%	100%		94%	1-Nov-21
U.A.E	NPL Oman / CDC	12				12																0%	100%		42%	9-Nov-21
Yemen	NPL Oman, NPL Kenya, RRL Egypt	382	11		73	234		64		2	3					6		1				18%	100%	100%	1%	13-Nov-21
Total EMR 2021		17930	901	107	3169	12796	627	293	2	364	6		309	55		432	1	1	8	2	10	15%	98%	99%	95%	
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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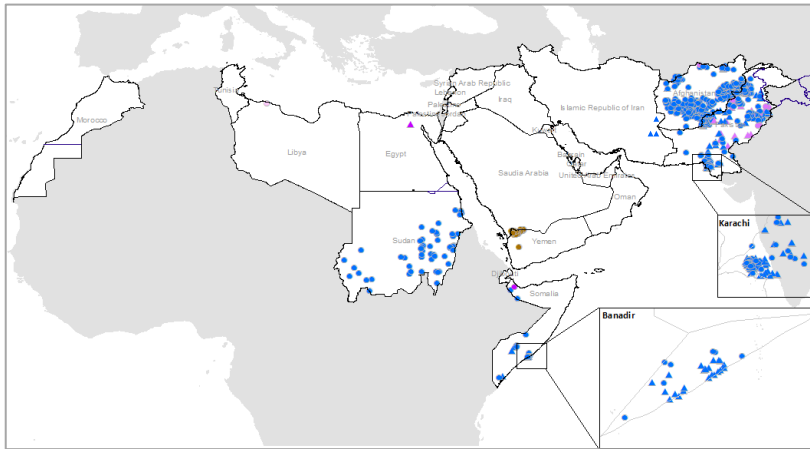


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Wild	28				337	41																
cVDPV2	167	39			44	19		10	3	1							26	1	14			
Wild+cVDPV2	7	1			91	16																
Wild+aVDPV2					6	4																
Wild+aVDPV3						1																
aVDPV1						1	1															
aVDPV2	2	3			16	30	1			2												
aVDPV3							2															
VDPV1								1														
VDPV2								67														
SL2	64	92			146	246		192	1	8							4	1	2	4		
SL1/3	31	35		2	49	93	212	105	16	10	14	13			13	6	7	6		1	36	22
Entero	111	209		6	135	254	288	178	23	30	9	12	4	5	16	24	12	43	32	23	152	137
Negative	3	10		9	6	8	41	24		1	1	1	16	10	2	4	34	49	2	26	17	10
Pending		17		5		38		29		5	1	4		3				10		13		7

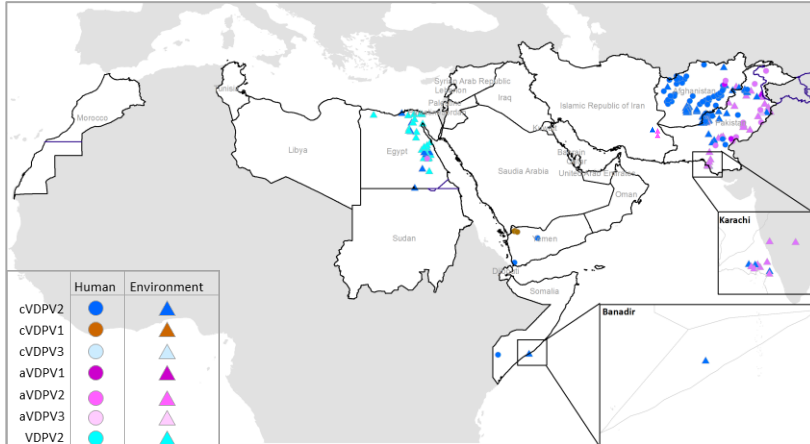
VDPVs isolations by Source and Country

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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																			10	08-06-21								
	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						2	01-Sep-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		17-06-20								
	Pakistan						1	21-08-21												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	34	11-10-21							
	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																					
VDPV2	Egypt														1					67	13-10-21								
	Pakistan														1						11-07-16								

Important links

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