

EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1206, Week 45 (ending on 14/11/2021)

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

2 Wild Polio cases:

- 1 in Afghanistan
- 1 in Pakistan

52 cVDPV2 cases:

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

4 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

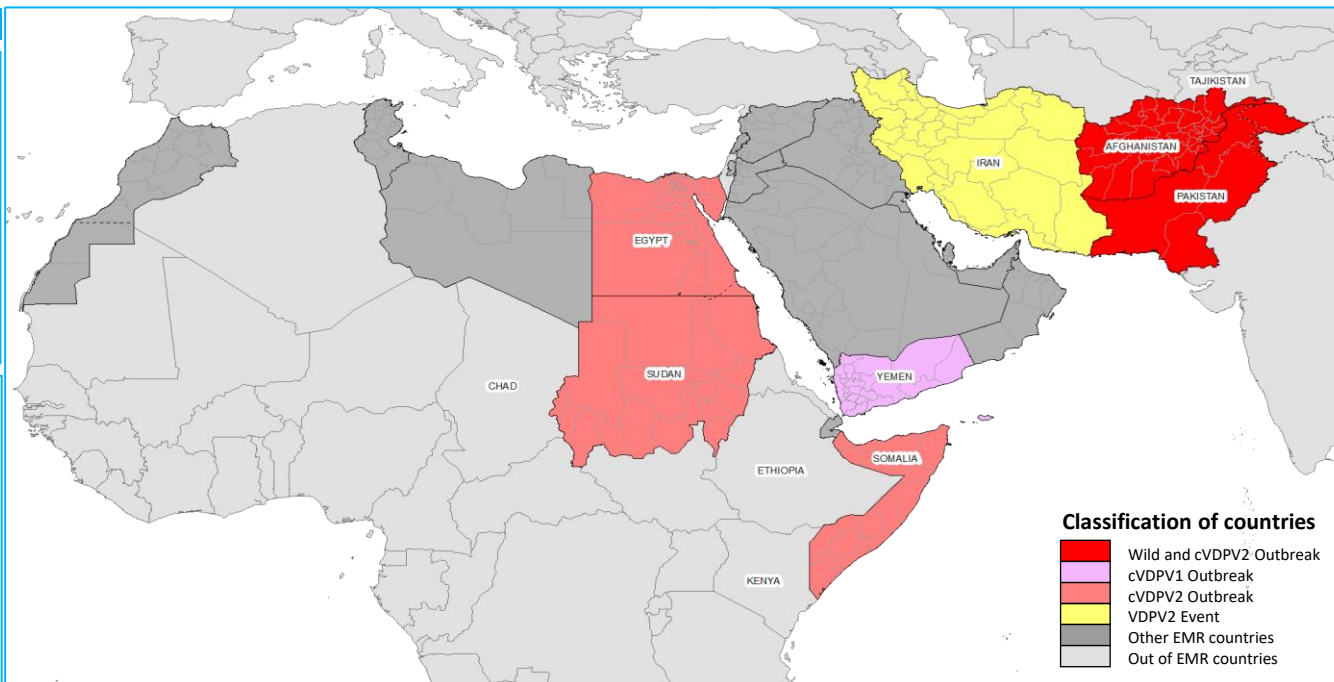
2021

63 Wild Polio isolates:

- 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

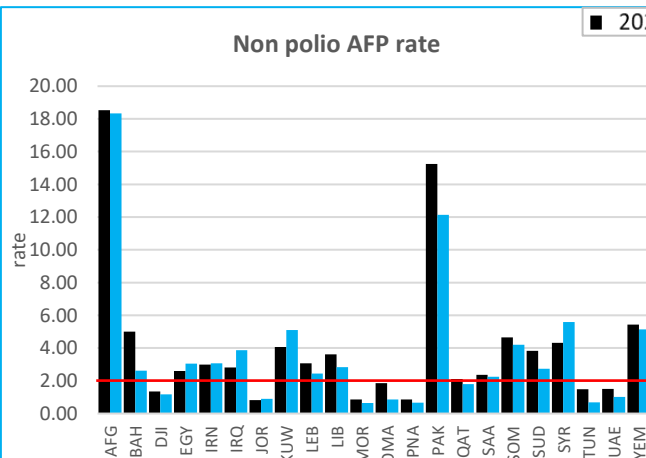


Highlights of the week

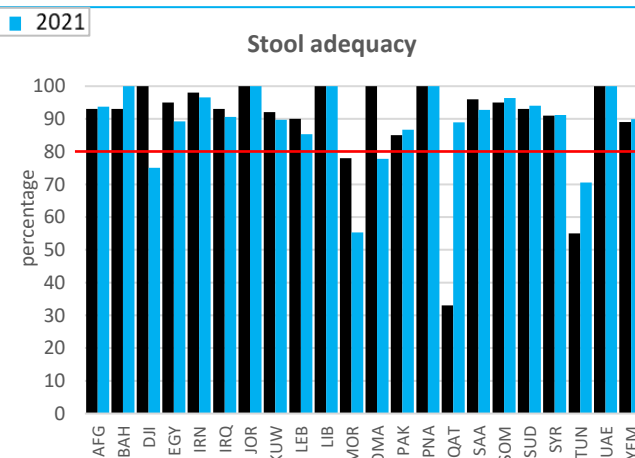
- After a 10 months gap, notification of two new WPV1 cases from Afghanistan. Both cases are from areas having no house to house campaigns between April 2019 and October 2020 in Emam-Saheb district, Kunduz province, with paralysis onset in October 2021. Details to be shared in next week EMR Polio Bulletin.
- One new cVDPV1 case from Yemen reported from Sahar district, Saadah province, with date of onset 20/07/2021. The index case of cVDPV1 outbreak is from Sahar district, which has reported highest number of cVDPV1 cases so far (14/35 cases).
- Two new positive VDPV2 environmental samples are reported from Egypt, from Asyout and Beni Suef provinces (specimen collection 12/10 and 13/10). Asyout reported VDPV2 for the first time.
- The 22nd Inter-Country meeting of directors of poliovirus laboratories network (PLN) in the Eastern Mediterranean Region was successfully conducted online from 10-11 November 2021.
- Regional office is supporting Egypt for the nOPV2 use (preparation and monitoring) which is expected early in December 2021.

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

Non polio AFP rate

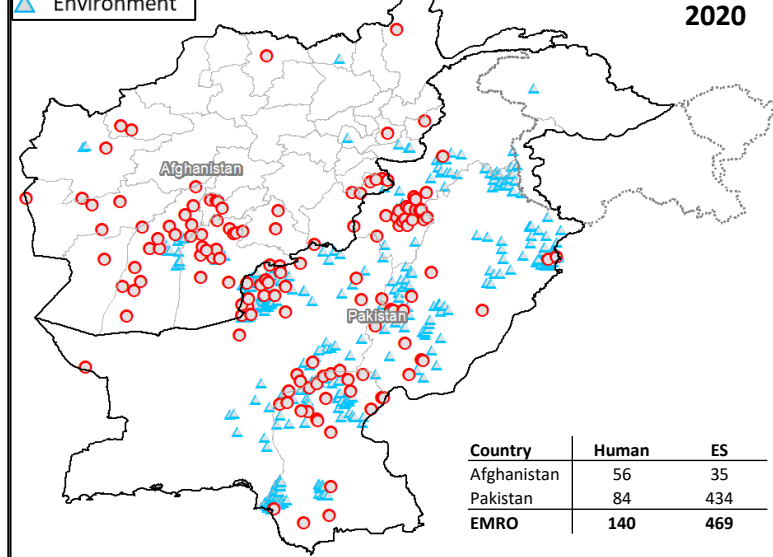
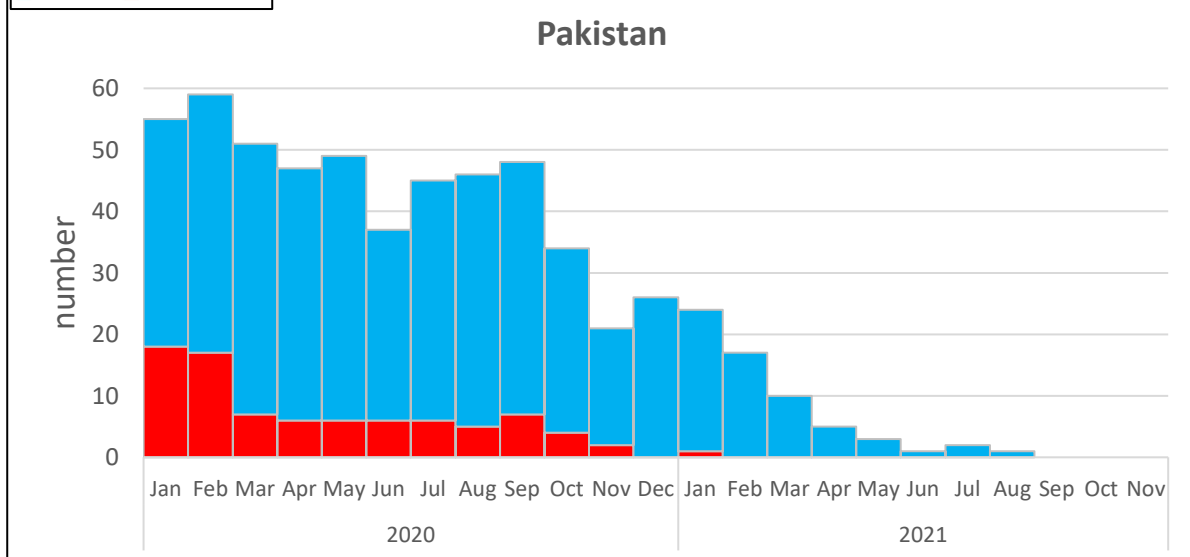
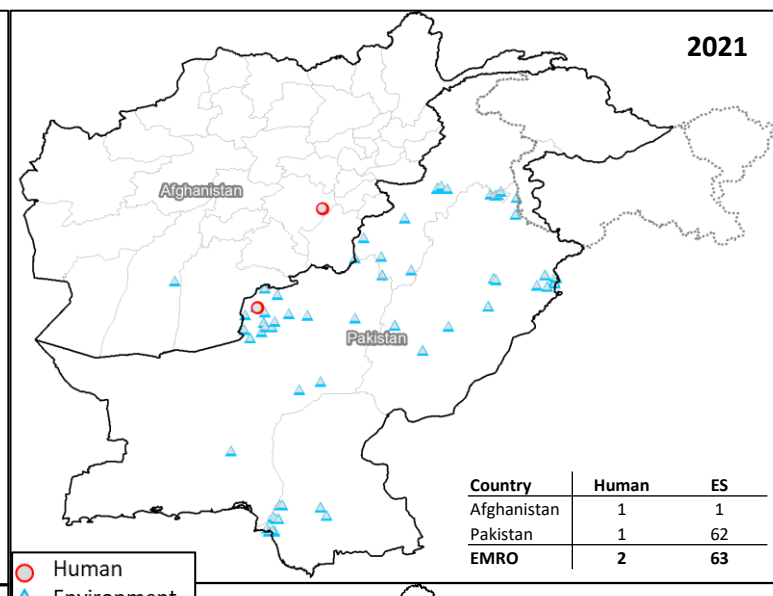
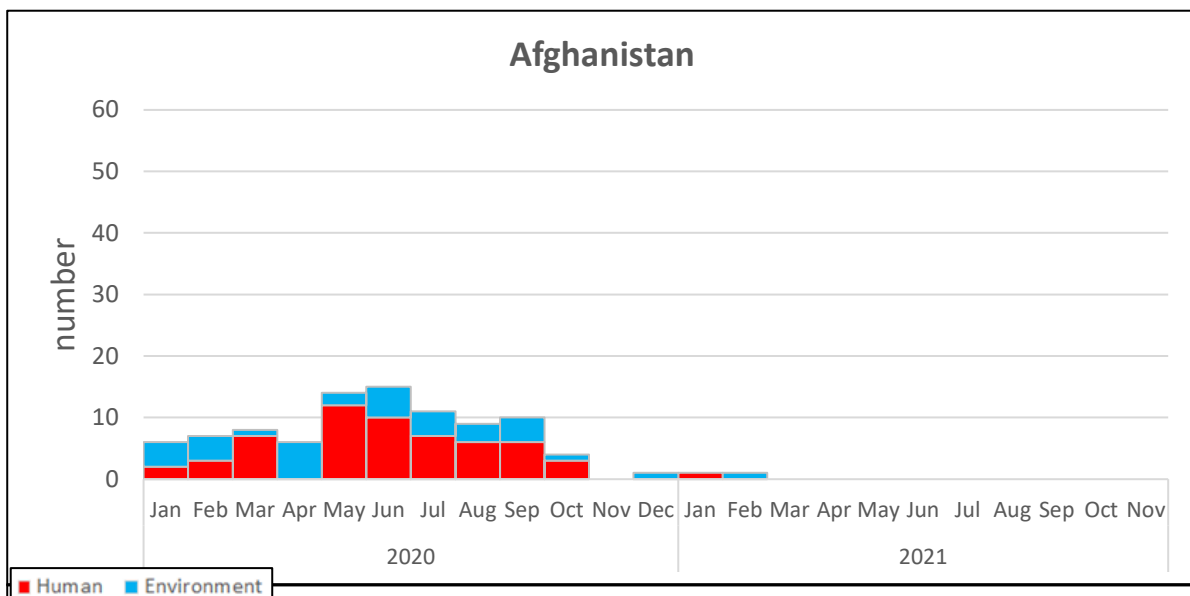


Stool adequacy



WPV1 Positive isolates from AFG/PAK by source

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Virus isolation by country, last 12 months (Nov. 14, 2020 to Nov. 14, 2021)

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Source / Virus type	AFG	PAK	EGY	IRN	SOM	SUD	YEM	Total
Human (AFP only)	92	26	1		1	9	6	135
Wild	1	1						2
cVDPV2	86	13			1	9		109
Wild+cVDPV2		1						1
Wild+aVDPV2								
Wild+aVDPV3								
cVDPV1							6	6
aVDPV1	1	1						2
aVDPV2	4	10	1					15
VDPV1								
VDPV2								
Environment	67	162	78	5	1			313
Wild		60						60
cVDPV2	61	33	10	3	1			108
Wild+cVDPV2	2	25						27
Wild+aVDPV2		6						6
Wild+aVDPV3		1						1
cVDPV1								
aVDPV1		1						1
aVDPV2	4	36		2				42
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	14-11		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	1	0	1	0	0	0	0	0	0	0	0			01-Jan-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			
Iran	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			
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				
Morocco	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				27-Jan-21
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	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	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	0		0		
Yemen	0	0	0	0	0	0	0	0	0	0							
EMR	176	140	139	2	0	2	0	0	0	0	0	0	0	0	0	0	27-Jan-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							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				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	
AFGHANISTAN	3972	56	3	3600	314	0	0	18.53	92.60	3446	1	1	3166	45	35	0	18.34	93.73	14-Nov-21
BAHRAIN	15	0	0	15	0	0	0	5.00	93.33	7	0	0	4	0	0	0	2.61	100.00	14-Nov-21
DJIBOUTI	5	0	0	5	0	0	0	1.35	100.00	4	0	0	4	0	0	0	1.19	75.00	14-Nov-21
EGYPT	1009	0	0	1009	0	0	0	2.60	94.65	1050	0	0	965	1	3	0	3.05	89.24	11-Nov-21
IRAN	618	0	0	618	0	0	0	2.99	98.54	544	0	0	535	0	0	0	3.07	96.51	13-Nov-21
IRAQ	476	0	0	476	0	0	0	2.81	93.28	586	0	0	541	0	7	0	3.87	90.61	13-Nov-21
JORDAN	32	0	0	32	0	0	0	0.83	100.00	31	0	0	29	0	0	0	0.90	100.00	14-Nov-21
KUWAIT	36	0	0	36	0	0	0	4.06	91.67	39	0	0	36	0	0	0	5.10	89.74	14-Nov-21
LEBANON	49	0	0	49	0	0	0	3.07	89.80	34	0	0	23	0	2	0	2.45	85.29	6-Nov-21
LIBYA	95	0	0	94	1	0	0	3.62	100.00	64	0	0	56	0	0	0	2.83	100.00	5-Nov-21
MOROCCO	87	0	0	87	0	0	0	0.86	78.16	56	0	0	30	0	18	1	0.65	55.36	11-Nov-21
OMAN	22	0	0	22	0	0	0	1.85	100.00	9	0	0	9	0	0	0	0.86	77.78	14-Nov-21
PAKISTAN	11972	84	29	11719	142	0	0	15.25	85.43	10661	1	3	9638	18	185	0	12.14	86.64	14-Nov-21
PALESTINE	16	0	0	16	0	0	0	0.87	100.00	11	0	0	6	0	1	0	0.67	100.00	7-Nov-21
QATAR	9	0	0	9	0	0	0	2.11	33.33	9	0	0	2	0	0	0	1.81	88.89	7-Nov-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	14-Nov-21
SOMALIA	376	0	0	361	15	0	0	4.66	94.68	304	0	0	267	1	3	2	4.21	96.38	14-Nov-21
SUDAN	733	0	0	675	58	0	0	3.84	92.91	465	0	0	432	0	5	0	2.74	93.98	20-Oct-21
SYRIA	343	0	0	343	0	0	0	4.32	90.96	375	0	0	351	0	0	0	5.60	91.20	13-Nov-21
TUNISIA	42	0	0	42	0	0	0	1.49	54.76	17	0	0	15	0	0	0	0.69	70.59	5-Nov-21
U.A.E.	19	0	0	19	0	0	0	1.52	100.00	13	0	0	2	0	10	0	1.01	100.00	31-Oct-21
YEMEN	825	0	1	793	31	0	0	5.44	88.73	691	0	0	436	4	52	34	5.14	89.87	13-Nov-21
EMR POL	20951	140	33	20220	561	0	0	7.96	88.59	18580	2	4	16670	69	322	37	7.45	89.11	

* 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](#)

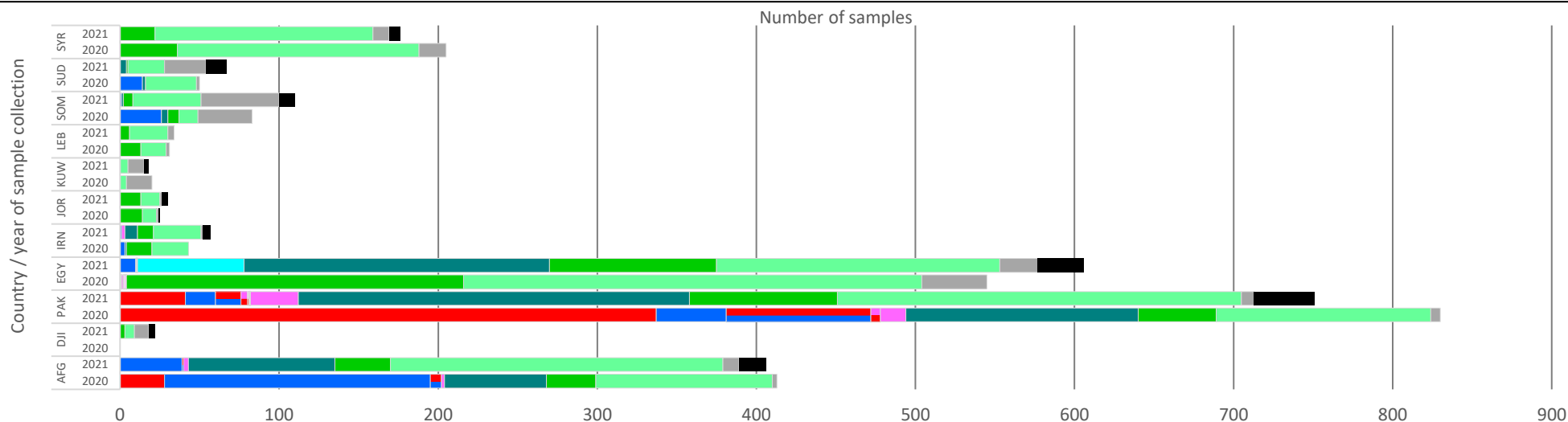
Laboratory investigation of AFP cases with paralysis onset in 2021

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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+/N PEV			received within last 14 days	received more than 14 days ago	Wild	Sabin	VPV	Wild	Sabin	VPV	Wild	Sabin	VPV									
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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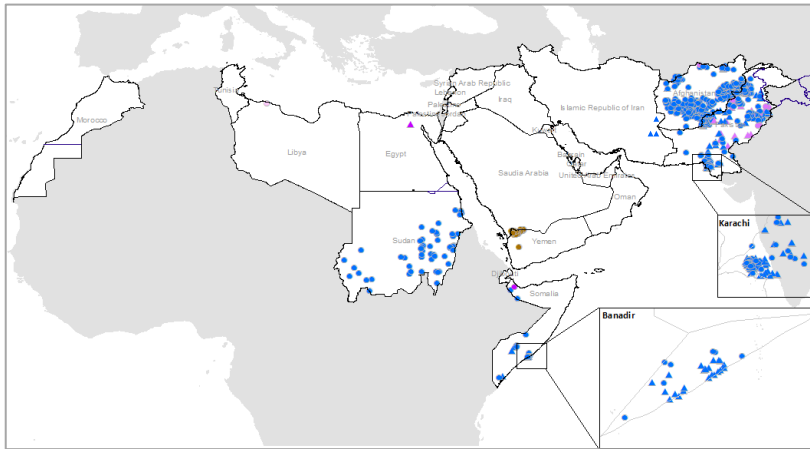


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Wild	28				337	41																
cVDPV2	167	39			44	19		10	3	1							26	1	14			
Wild+cVDPV2	7	1			91	16																
Wild+aVDPV2					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		3	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		4		38		29		5	1	4		3				10		13		7

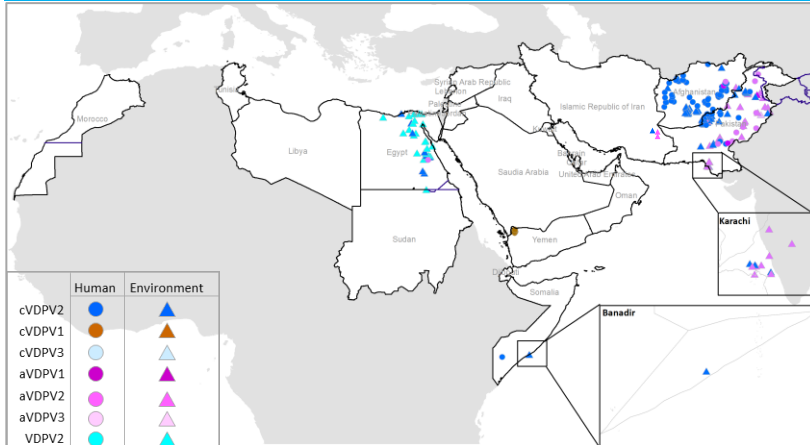
VDPVs isolations by Source and Country

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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
cVDPV1	Yemen				1	31	4	20-07-21				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

EMR Polio Bulletin - Issue No. 1206, Week 45 (ending on 14/11/2021)

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