

# EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1217, Week 04 (ending on 30/01/2022)

## 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

- 63 cVDPV2 cases
  - 43 in Afghanistan
  - 8 in Pakistan
  - 0 in Sudan
  - 1 in Somalia
  - 11 in Yemen

- 3 cVDPV1 cases
  - All in Yemen



Sewage  
water  
sampling

2020

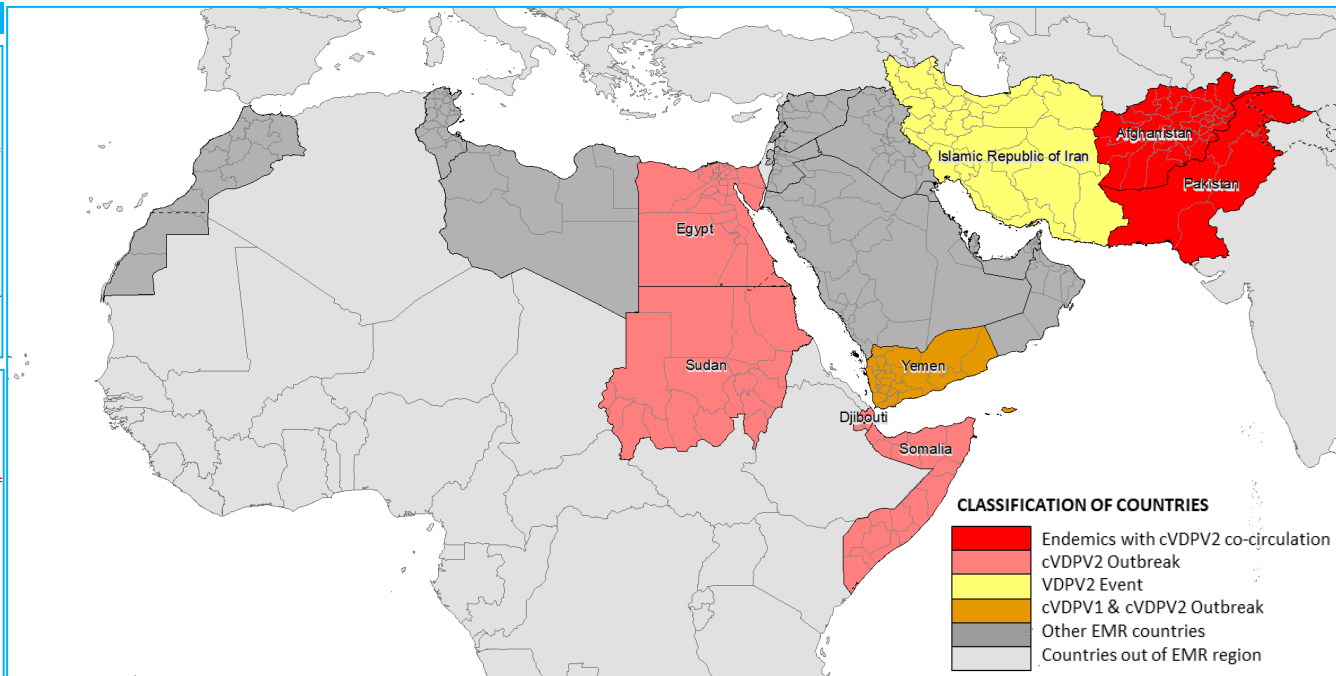
- 469 Wild Polio 1 samples
  - 35 in Afghanistan
  - 434 in Pakistan

- 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

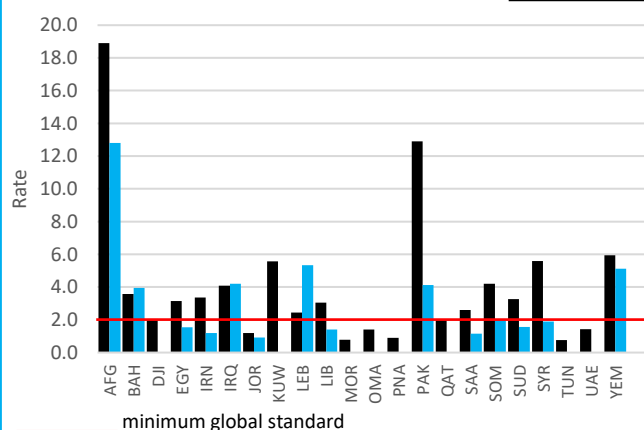
- 91 cVDPV2 samples
  - 40 in Afghanistan
  - 35 in Pakistan
  - 11 in Egypt
  - 1 in Iran
  - 0 in Sudan
  - 1 in Somalia
  - 3 in Djibouti



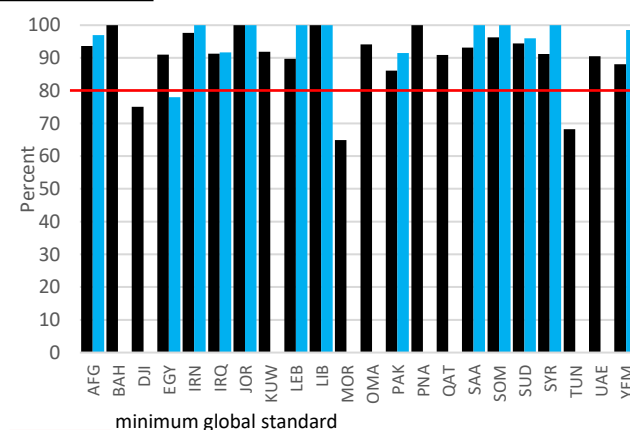
## Highlights of the week

- Djibouti: reports the first ever cVDPV2 isolates**, detected in three environmental samples (one from Arta and two from Djibouti region). Specimen were collected in October and November 2021. Viruses are closely related on sequencing with viruses seen earlier in Yemen (YEM-TAI-1 emergence). A 3-level call was convened for a robust response.
- No new isolates of WPV1 or cVDPV1 from human or environmental samples in the past week.

## Non polio AFP rate



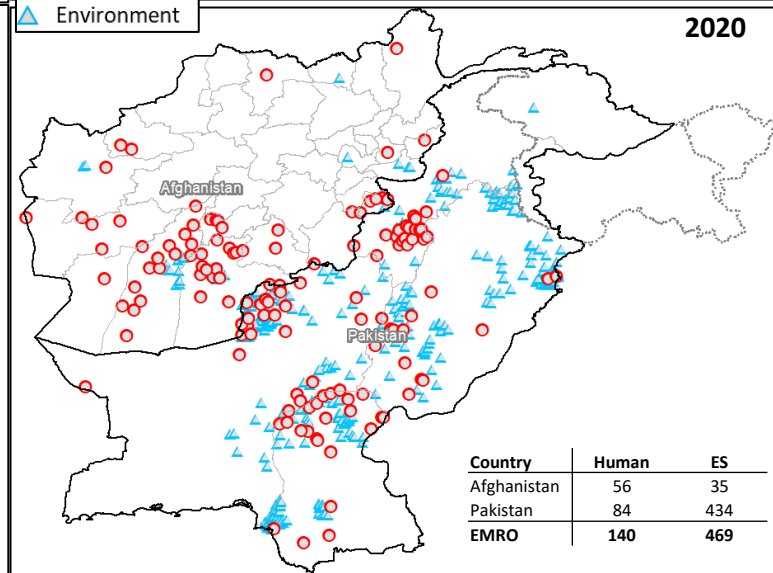
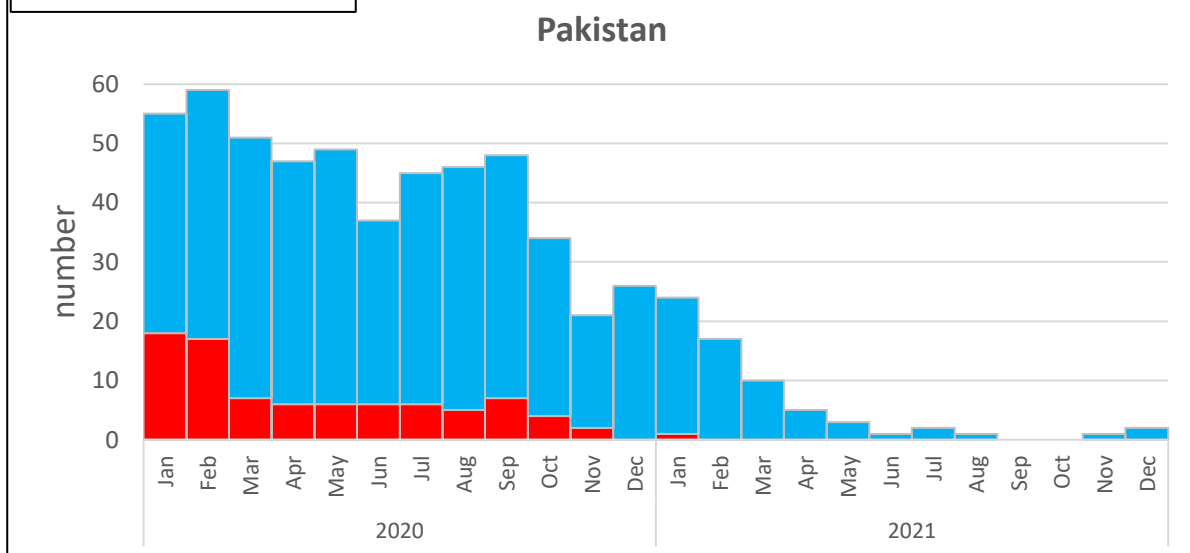
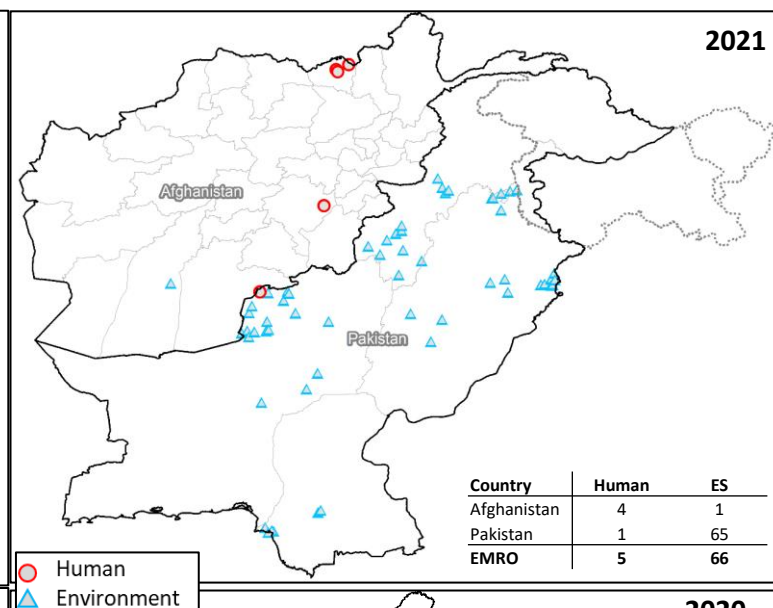
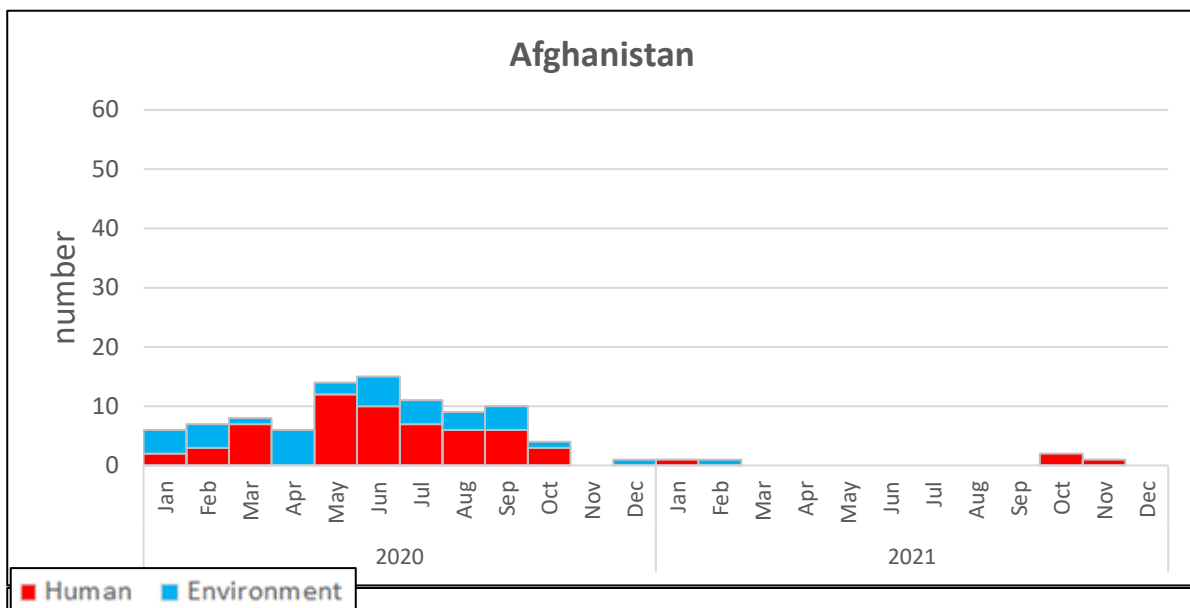
## Stool adequacy



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. 30, 2021 to Jan. 30, 2022)

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Source / Virus type	AFG	DJI	PAK	EGY	IRN	SOM	YEM	Total
<b>Human (AFP only)</b>	<b>32</b>		<b>7</b>	<b>1</b>		<b>1</b>	<b>14</b>	<b>55</b>
Wild	3							3
cVDPV2	27		2			1	11	41
Wild+cVDPV2								
Wild+aVDPV2								
Wild+aVDPV3								
cVDPV1							2	2
aVDPV1	1							2
aVDPV2	1		5	1				7
VDPV1							1	
VDPV2								
<b>Environment</b>	<b>30</b>	<b>3</b>	<b>88</b>	<b>75</b>	<b>4</b>	<b>1</b>		<b>201</b>
Wild			31					31
cVDPV2	26	3	13	6	1	1		50
Wild+cVDPV2	1		9					10
Wild+aVDPV2			1					1
Wild+aVDPV3			1					1
cVDPV1								
aVDPV1			1					1
aVDPV2	3		30		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	30-01		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case	
					2021													2022
			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	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				
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	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				
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					
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						
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Pakistan	84	1	1	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			
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	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	0	0				
U.A.E	0	0	0	0	0	0	0	0	0	0	0							
Yemen	0	0	0	0	0	0	0	0	0	0	0							
EMR	140	5	2	0	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	4084	4	1	3960	45	39	0	18.91	93.61	227	0	0	60	0	0	0	12.81	96.92	30-Jan-22
BAHRAIN	11	0	0	8	0	0	0	3.58	100.00	1	0	0	0	0	0	0	3.96	0.00	30-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	1248	0	0	1211	1	0	0	3.16	90.95	50	0	0	0	0	0	0	1.54	78.00	26-Jan-22
IRAN	681	0	0	673	0	0	0	3.36	97.65	21	0	0	2	0	0	0	1.20	100.00	29-Jan-22
IRAQ	709	0	0	690	0	8	0	4.08	91.26	60	0	0	15	0	0	0	4.20	91.67	29-Jan-22
JORDAN	47	0	0	40	0	0	0	1.19	100.00	3	0	0	3	0	0	0	0.92	100.00	26-Jan-22
KUWAIT	49	0	0	46	0	0	0	5.58	91.84	0	0	0	0	0	0	0	0.00		16-Jan-22
LEBANON	39	0	0	33	0	3	0	2.45	89.74	7	0	0	0	0	0	0	5.35	100.00	30-Jan-22
LIBYA	79	0	0	68	0	0	0	3.05	100.00	3	0	0	0	0	0	0	1.41	100.00	29-Jan-22
MOROCCO	77	0	0	36	0	24	5	0.78	64.94	0	0	0	0	0	0	0	0.00		14-Jan-22
OMAN	17	0	0	17	0	0	0	1.41	94.12	0	0	0	0	0	0	0	0.00		23-Jan-22
PAKISTAN	12975	1	4	12617	18	55	0	12.87	86.10	341	0	0	21	0	0	0	4.12	91.50	23-Jan-22
PALESTINE	16	0	0	9	0	2	1	0.85	100.00	0	0	0	0	0	0	0	0.00		23-Jan-22
QATAR	11	0	0	9	0	0	0	2.03	90.91	0	0	0	0	0	0	0	0.00		30-Jan-22
SAUDI ARABIA	218	0	0	169	0	0	0	2.60	93.12	8	0	0	0	0	0	0	1.16	100.00	30-Jan-22
SOMALIA	349	0	0	339	1	1	0	4.21	96.28	14	0	0	1	0	0	0	2.06	100.00	30-Jan-22
SUDAN	637	0	0	626	0	6	0	3.26	94.35	25	0	0	4	0	0	0	1.56	96.00	27-Jan-22
SYRIA	431	0	0	423	0	0	0	5.60	91.18	12	0	0	0	0	0	0	1.90	100.00	30-Jan-22
TUNISIA	22	0	0	19	0	0	0	0.77	68.18	0	0	0	0	0	0	0	0.00		28-Jan-22
U.A.E.	21	0	0	12	0	4	2	1.42	90.48	0	0	0	0	0	0	0	0.00		24-Jan-22
YEMEN	919	0	0	634	15	50	37	5.95	88.03	65	0	0	0	0	0	0	5.13	98.46	29-Jan-22
EMR POL	22648	5	5	21643	80	192	45	7.91	88.89	837	0	0	106	0	0	0	3.56	93.43	

\* 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)

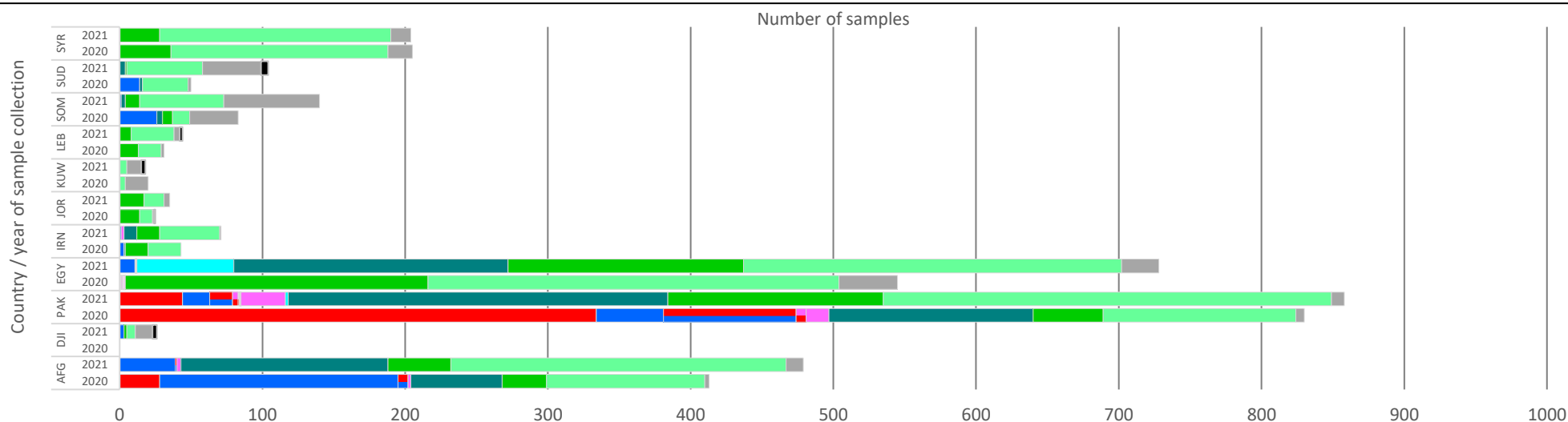
# Laboratory investigation of AFP cases with paralysis onset in 2021

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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	4041	341	50	725	2921	3		4	169	1		117	40		170			2			15%	99%	99%	99%	30-Jan-22
Bahrain	NPL Oman / CDC	11				11															0%	100%		55%	23-Jan-22	
Djibouti	NPL Kenya / CDC	8			1			4													100%			100%	12-Dec-21	
Egypt***	RRL Egypt	1210	65	5	170	959	3	9		4			58			3				2	2	12%	97%	100%	99%	26-Jan-22
Iran	NPL Iran / CDC	681	14		11	656				3	1		6			4						2%	100%	100%	98%	29-Jan-22
Iraq	NPL Iraq, RRL Egypt	704	13		51	639	1			8						17					2	7%	100%	48%	98%	29-Jan-22
Jordan	NPL Jordan, RRL Egypt	47	1		3	43				2						2						6%	100%	0.5	100%	24-Jan-22
Kuwait	RRL Kuwait / RIVM	50				49		1														0%	100%		98%	30-Jan-22
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	40	1		1	35		3														4%	100%			23-Jan-22
Libya	RRL Tunisia / RIVM	80				80																0%	100%		88%	28-Jan-22
Morocco	NPL Morocco, RRL Tunisia	67			1	63		2														2%	100%		95%	28-Jan-22
Oman	NPL Oman / CDC	16				16																1%	100%		100%	23-Jan-22
Pakistan	RRL Pakistan	12672	627	69	2545	9392	31	5	1	275	1		181	14		368	1		5			16%	100%	100%	96%	30-Jan-22
Palestine & UNRWA		16				15		1														0%	14%		87%	23-Jan-22
Qatar	NPL Oman / CDC	11				11																0%	100%		100%	23-Jan-22
Saudi Arabia	NPL Saudi Arabia / CDC	214	3		3	188		20		1						3						1%	94%	67%	97%	9-Jan-22
Somalia	NPL Kenya / CDC	349	6		54	280		8		4				1		4						16%	2%		64%	30-Jan-22
Sudan	NPL Sudan / RRL Egypt	635	2		126	506		2		1			1			2		1				20%	71%	100%	67%	27-Jan-22
Syria	NPL Syria / RRL Egypt	427	17		24	381	2	3														6%	100%		0%	23-Jan-22
Tunisia	RRL Tunisia	23				23																0%	100%		96%	28-Jan-22
U.A.E	NPL Oman / CDC	21			1	19	1															5%	100%		25%	23-Jan-22
Yemen	NPL Oman, NPL Kenya, RRL Egypt	483	23	1	105	354				3	4			11		7						18%	87%	100%	0%	29-Jan-22
Total EMR 2021		21806	1113	125	3821	16641	41	58	5	470	7		363	66		580	1	1	7	2	4	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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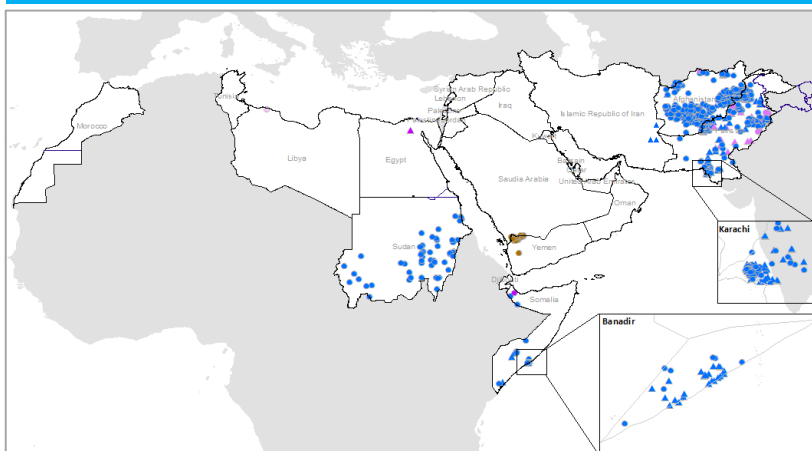


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Wild	28				334	44																
cVDPV2	167	39		3	47	19		11	3	1							26	1	14			
Wild+cVDPV2	7	1			93	16																
Wild+aVDPV2					7	4																
Wild+aVDPV3						1																
aVDPV1						1	1															
aVDPV2	2	3			16	31	1			2												
aVDPV3							2															
VDPV1								1														
VDPV2						2		68														
SL2	64	145			143	266		192	1	9							4	3	2	4		
SL1/3	31	44		2	49	151	212	165	16	16	14	17			13	8	7	10		1	36	28
Entero	111	235		6	135	314	288	265	23	42	9	14	4	5	16	30	12	59	32	53	152	162
Negative	3	12		12	6	9	41	26		1	1	4	16	10	2	4	34	67	2	41	17	14
Pending				3							1			3		2				5		

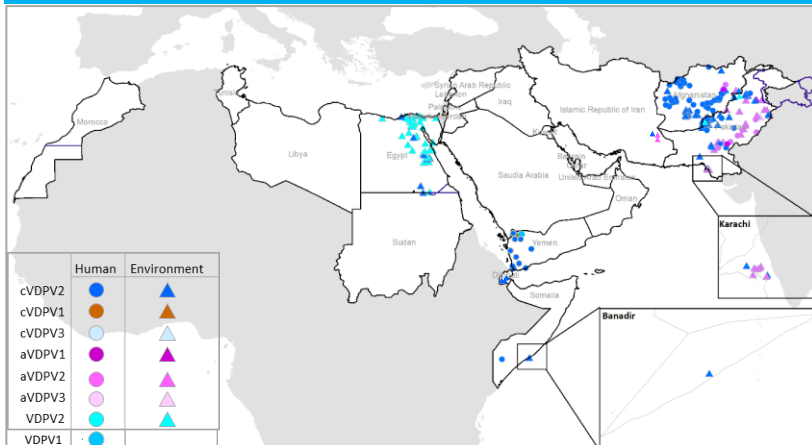
# VDPVs isolations by Source and Country

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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								
	Djibouti																			3	28-11-21								
	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		16-07-20								
	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	Egypt																			1	11-07-21								
	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. 1217, Week 04 (ending on 30/01/2022)

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