

# EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1216, Week 03 (ending on 23/01/2022)

## 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

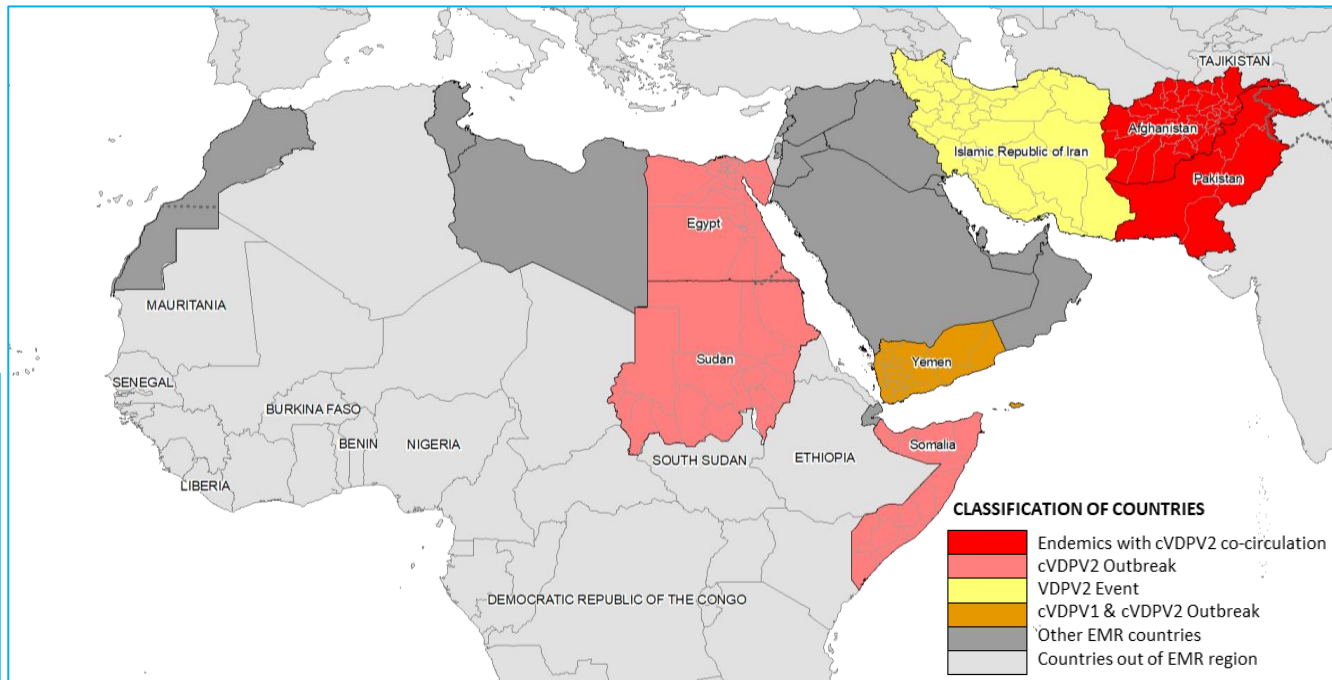
- 469 Wild Polio 1 samples
  - 35 in Afghanistan
  - 434 in Pakistan

- 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

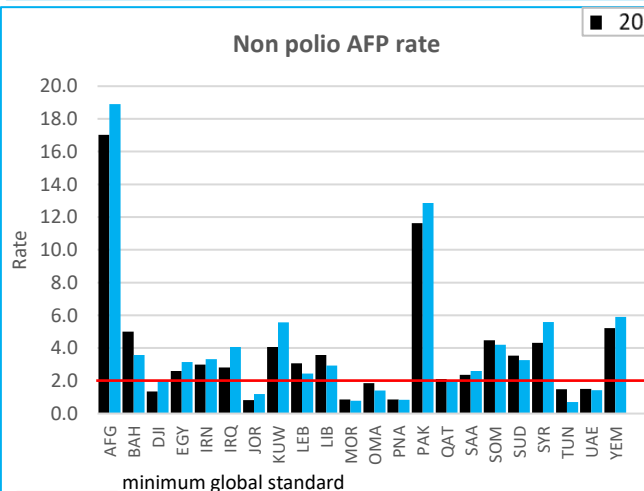
- 88 cVDPV2 samples
  - 40 in Afghanistan
  - 35 in Pakistan
  - 11 in Egypt
  - 1 in Iran
  - 0 in Sudan
  - 1 in Somalia



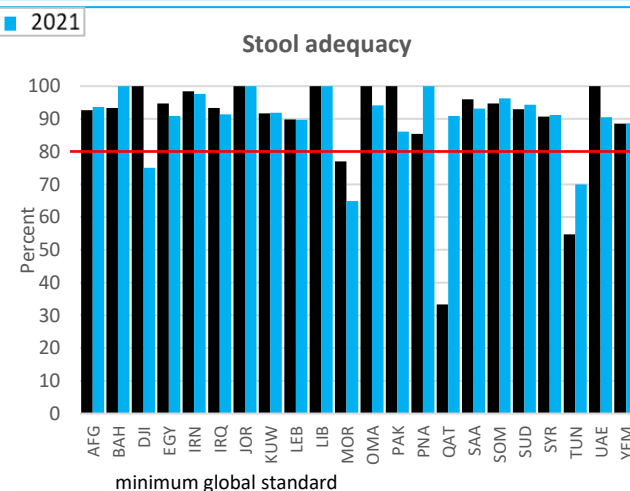
## Highlights of the week

- No new isolates of WPV1 or cVDPVs from human or environmental samples in the past week.
- Pakistan: sub-national vaccination campaign 65 districts commences 24 January 2022. Upwards of 21 million children will be vaccinated with bOPV.
- Afghanistan: nationwide campaign successfully implemented last week.

## Non polio AFP rate



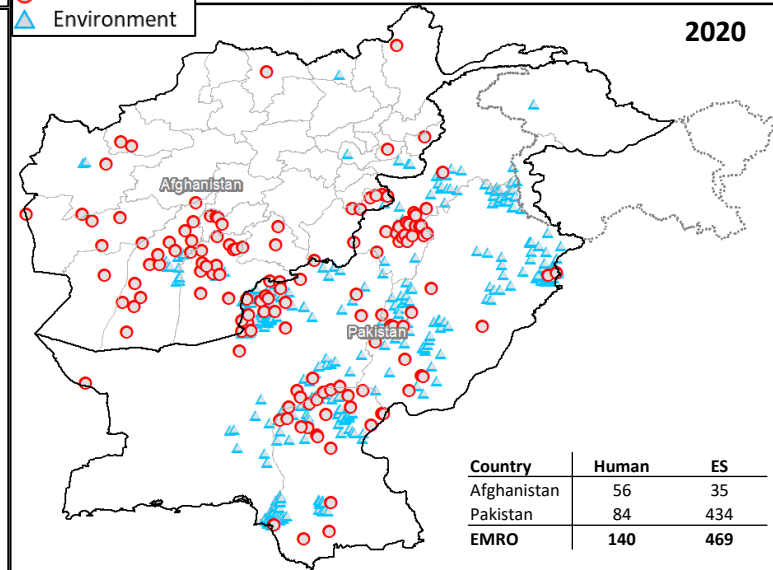
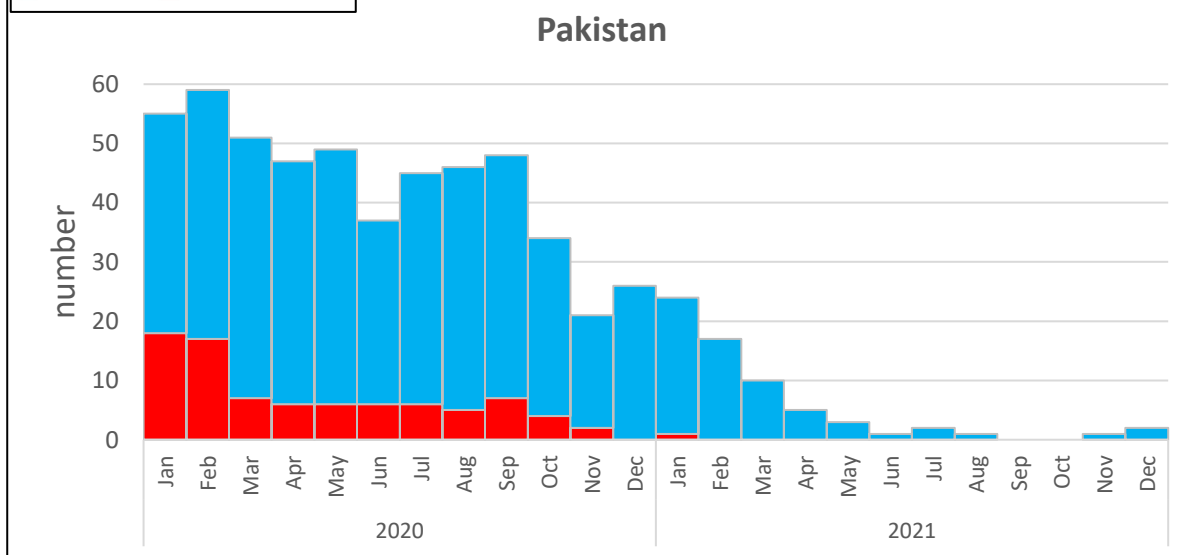
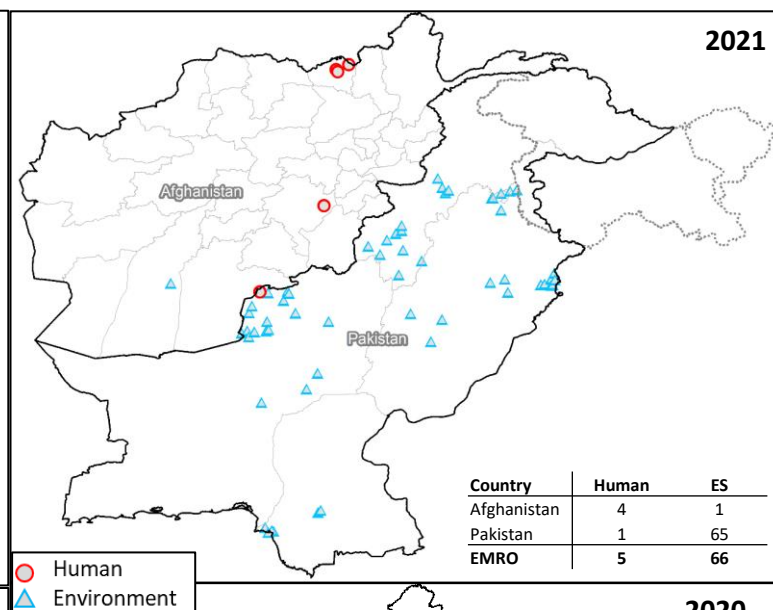
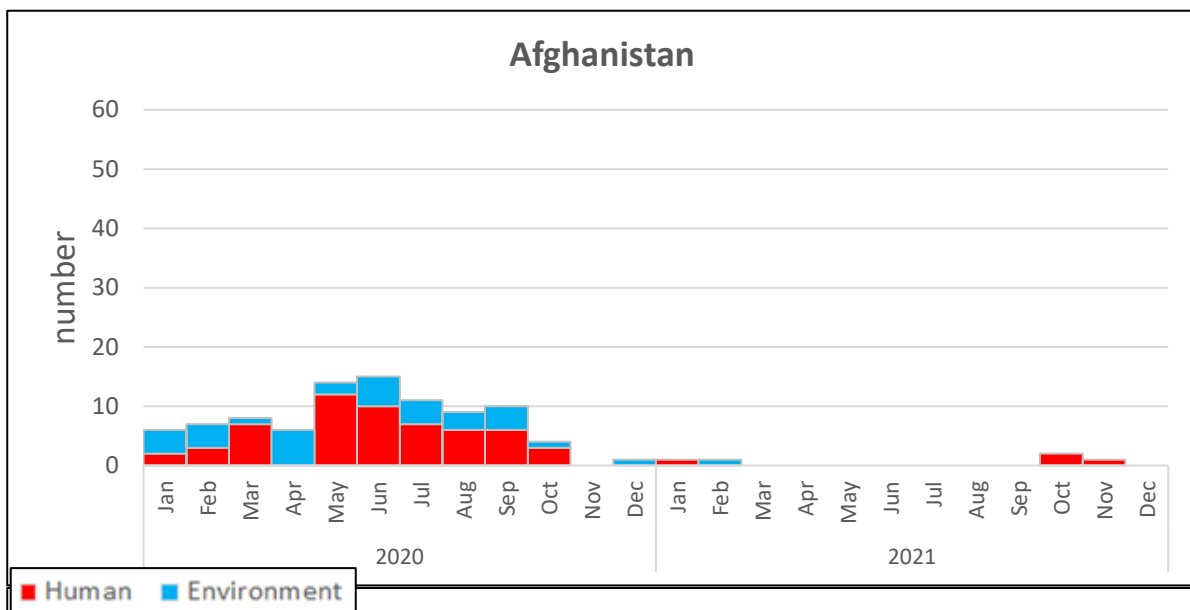
## Stool adequacy



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

# WPV1 Positive isolates from Afghanistan and Pakistan by source

EMR Polio Bulletin - Issue No. 1216, Week 03 (ending on 23/01/2022)



# Virus isolation by country, last 12 months (Jan. 23, 2021 to Jan. 23, 2022)

EMR Polio Bulletin - Issue No. 1216, Week 03 (ending on 23/01/2022)

Source / Virus type	AFG	PAK	EGY	IRN	SOM	YEM	Total
<b>Human (AFP only)</b>	<b>38</b>	<b>8</b>	<b>1</b>		<b>1</b>	<b>14</b>	<b>62</b>
Wild	3	1					4
cVDPV2	33	2			1	11	47
Wild+cVDPV2							
Wild+aVDPV2							
Wild+aVDPV3							
cVDPV1						2	2
aVDPV1	1						2
aVDPV2	1	5	1				7
VDPV1						1	
VDPV2							
<b>Environment</b>	<b>34</b>	<b>90</b>	<b>78</b>	<b>4</b>	<b>1</b>		<b>207</b>
Wild		32					32
cVDPV2	30	14	9	1	1		55
Wild+cVDPV2	1	9					10
Wild+aVDPV2		1					1
Wild+aVDPV3		1					1
cVDPV1							
aVDPV1		1					1
aVDPV2	3	30		2			35
VDPV1			1				1
VDPV2		2	68	1			71

*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

EMR Polio Bulletin - Issue No. 1216, Week 03 (ending on 23/01/2022)

Country	Total year 2020	Total year 2021	09-01		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	0		
Djibouti	0	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	0		
Iran	0	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	0		
Jordan ****	0	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	0		
Lebanon ****	0	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	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	0		
Pakistan	84	1	0	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	0		
Qatar	0	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	0		
Somalia	0	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	0		
Syria ****	0	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	0		
U.A.E	0	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	0		
EMR	140	5	1	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

EMR Polio Bulletin - Issue No. 1216, Week 03 (ending on 23/01/2022)

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	4083	4	1	3939	45	39	0	18.90	93.63	138	0	0	13	0	0	0	10.08	98.55	23-Jan-22
BAHRAIN	11	0	0	6	0	0	0	3.58	100.00	0	0	0	0	0	0	0	0.00		16-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	1247	0	0	1207	1	1	0	3.15	90.86	37	0	0	0	0	0	0	1.49	24.32	20-Jan-22
IRAN	680	0	0	664	0	0	0	3.33	97.65	11	0	0	0	0	0	0	0.86	100.00	22-Jan-22
IRAQ	708	0	0	689	0	7	0	4.07	91.38	41	0	0	1	0	0	0	3.75	90.24	22-Jan-22
JORDAN	47	0	0	40	0	0	0	1.19	100.00	3	0	0	0	0	0	0	1.20	100.00	23-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	5	0	0	0	0	0	0	4.98	100.00	23-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	23	4	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	46	0	12.87	86.10	341	0	0	21	0	0	0	5.38	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		16-Jan-22
SAUDI ARABIA	218	0	0	168	0	0	0	2.60	93.12	4	0	0	0	0	0	0	0.76	100.00	23-Jan-22
SOMALIA	348	0	0	339	1	1	0	4.20	96.26	9	0	0	0	0	0	0	1.72	100.00	23-Jan-22
SUDAN	636	0	0	582	0	6	0	3.26	94.34	0	0	0	0	0	0	0	0.00		20-Jan-22
SYRIA	431	0	0	422	0	1	0	5.60	91.18	9	0	0	0	0	0	0	1.86	100.00	22-Jan-22
TUNISIA	20	0	0	19	0	0	0	0.70	70.00	0	0	0	0	0	0	0	0.00		14-Jan-22
U.A.E.	21	0	0	12	0	1	0	1.42	90.48	0	0	0	0	0	0	0	0.00		17-Jan-22
YEMEN	912	0	0	634	15	28	15	5.90	88.60	22	0	0	0	0	0	0	2.26	100.00	18-Jan-22
EMR POL	22630	5	5	21560	80	158	20	7.90	88.92	620	0	0	35	0	0	0	3.44	89.84	

\* 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)

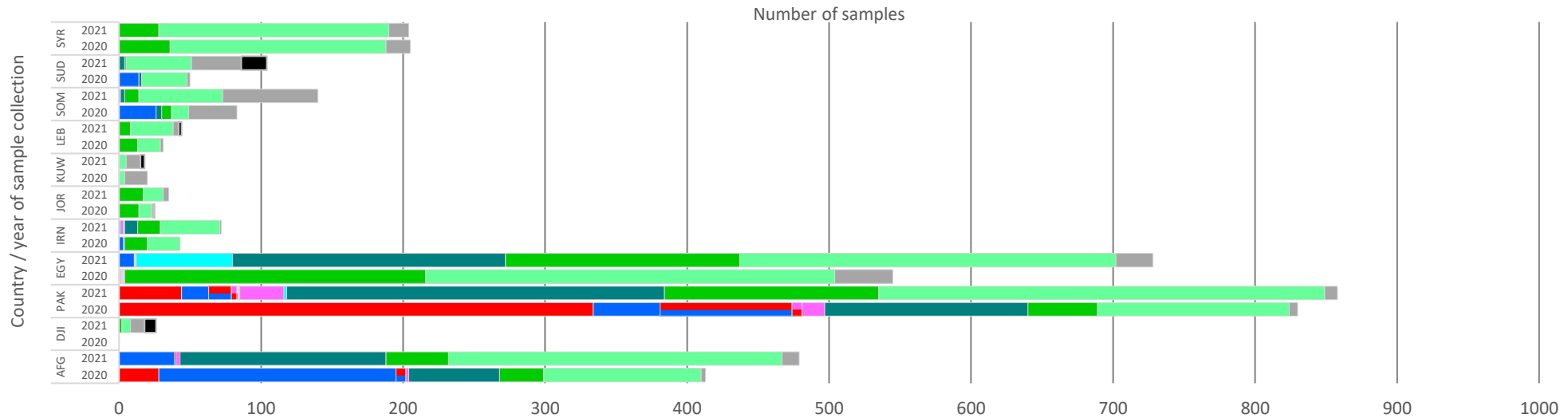
# Laboratory investigation of AFP cases with paralysis onset in 2021

EMR Polio Bulletin - Issue No. 1216, Week 03 (ending on 23/01/2022)

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	4040	341	50	723	2906	20		4	169	1		117	40		170			2			15%	99%	99%	99%	23-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	1207	65	5	170	959	7	2		4			58			3			2	2		12%	97%	100%	99%	20-Jan-22
Iran	NPL Iran / CDC	675	14		11	645	5			3	1		6			4						2%	100%	100%	98%	22-Jan-22
Iraq	NPL Iraq, RRL Egypt	702	12		51	637	2			7						17				2		7%	100%	50%	98%	22-Jan-22
Jordan	NPL Jordan, RRL Egypt	47	1		3	43				2						2						6%	100%	0.5	100%	16-Jan-22
Kuwait	RRL Kuwait / RIVM	50				49	1															0%	100%		98%	23-Jan-22
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	40	1		1	35	3															4%	100%			23-Jan-22
Libya	RRL Tunisia / RIVM	72				69		3														0%	100%		86%	15-Dec-21
Morocco	NPL Morocco, RRL Tunisia	63			1	58		4														2%	100%		95%	31-Dec-21
Oman	NPL Oman / CDC	16				16																1%	100%		100%	23-Jan-22
Pakistan	RRL Pakistan	12654	627	69	2529	9307	110	10	1	275	1		181	14		368	1		5		1	16%	100%	100%	97%	23-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	348	6		54	280		7		4				1		4						16%	2%		64%	23-Jan-22
Sudan	NPL Sudan / RRL Egypt	612	2		120	489		2		1			1			2		1				20%	70%	100%	67%	13-Jan-22
Syria	NPL Syria / RRL Egypt	427	17		24	381	5															6%	100%		0%	23-Jan-22
Tunisia	RRL Tunisia	17				17																0%	100%		94%	15-Dec-21
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%	18-Jan-22
Total EMR 2021		21734	1112	125	3797	16489	154	53	5	469	7		363	66		580	1	1	7	2	5	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

EMR Polio Bulletin - Issue No. 1216, Week 03 (ending on 23/01/2022)

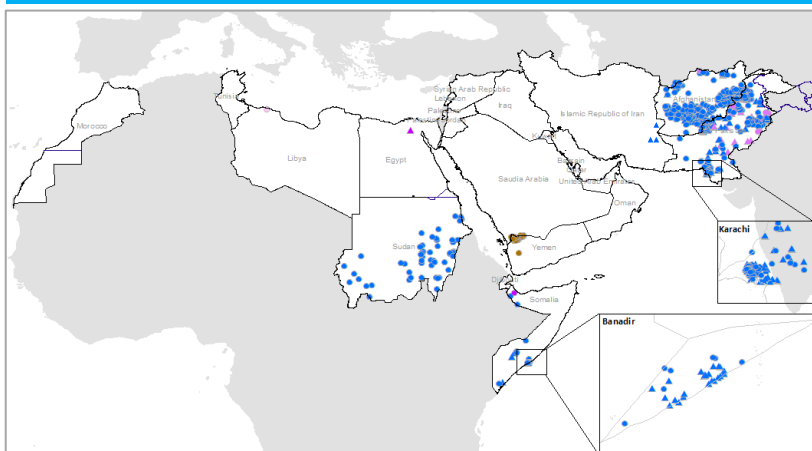


	AFG		DJI		PAK		EGY		IRN		JOR		KUW		LEB		SOM		SUD		SYR	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Wild	28				334	44																
cVDPV2	167	39			47	19		11	3	1							26	1	14			
Wild+cVDPV2	7	1			93	16																
Wild+aVDPV2					7	4																
Wild+aVDPV3						1																
aVDPV1						1	1															
aVDPV2	2	3			16	31	1			2												
aVDPV3							2															
VDPV1								1														
VDPV2						2	68			1												
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	46	152	162
Negative	3	12		10	6	9	41	26		1	1	4	16	10	2	4	34	67	2	35	17	14
Pending				8							1			3		2				18		

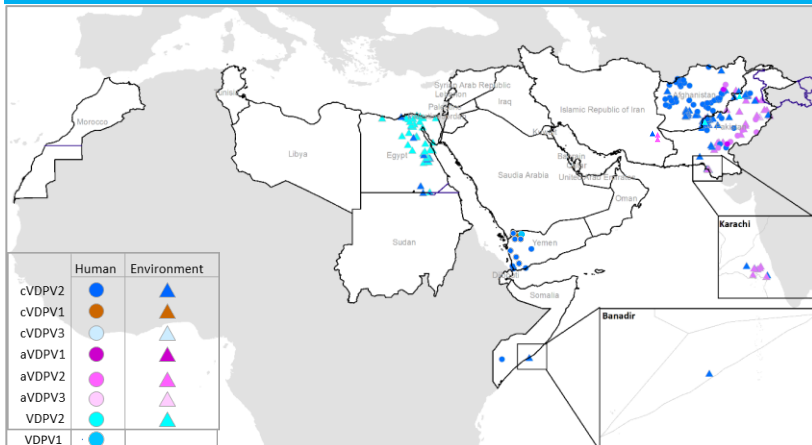
# VDPVs isolations by Source and Country

EMR Polio Bulletin - Issue No. 1216 Week 03 (ending on 23/01/2022)

## VDPV Isolates, EMR countries, 2020



## VDPV Isolates, EMR countries, 2021



## VDPVs isolated from 2016-2021

cVDPV Isolate type	EMR Country	Sources																					Other Sources (Healthy Children)					
		AFP cases(Human)						Contacts(Human)						Environment														
		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
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		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. 1216, Week 03 (ending on 23/01/2022)

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