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Integrated Disease Surveillance & Response (IDSR) Report

Center of Disease Control
National Institute of Health, Islamabad

http:/www.phb.nih.org.pk/

Integrated Disease Surveillance & Response (IDSR) Weekly Public Health Bulletin is your go-to resource for disease trends, outbreak alerts, and crucial public health information. By reading and sharing this bulletin, you can help increase awareness and promote preventive measures within your community.

Public Health Bulletin - Pakistan, Week 42, 2023

This bulletin highlights the most notable public health events in Pakistan during Week 42 of 2023.

Acute Diarrhea (Non-Cholera) was the most frequently reported disease during Week 42, followed by Malaria, Influenza-like Illness (ILI), Acute Lower Respiratory Infection in children under 5 (ALRI <5 years), Viral Hepatitis (B&D), Bloody Diarrhea, Severe Acute Respiratory Infection (SARI), dog bite, and Acute Watery Diarrhea (AWD) (A&E).

Pertussis cases were reported from Balochistan, Gilgit-Baltistan, and Khyber Pakhtunkhwa (KPK). All cases are suspected and require field verification.

Foodborne and waterborne diseases continue to be reported from across the country. All causative agents, modes of spread, and risk factors are known. A multi-sectoral approach is needed to reduce the burden of these diseases.

It is important to note that all reported cases are suspected and require field investigation for verification.

This issue of the Public Health Bulletin also includes information on World Polio Day activities, the measles outbreak investigation in DI Khan, KPK, and an educational awareness essay on smog.

The team reminds the public to stay vigilant and to seek medical attention promptly if they experience any symptoms of the diseases listed above.

Working together, we can safeguard the health of our communities.

Sincerely,
The Chief Editor

- *During week 42, most frequent reported cases were of Acute Diarrhea (Non-Cholera), followed by Malaria, ILI, ALRI <5 years, VH (B&D), B. Diarrhea, SARI, dog bite and AWD (A&E).*
- *Pertussis cases reported from Balochistan, GB and KPK. All are suspected cases and need field verification.*
- *Food borne and water borne diseases continue to be reported from across the country. All causative agents, mode of spread and risk factors are known. Multi-sectoral target approach is required to reduce the burden of diseases.*

IDSR compliance attributes

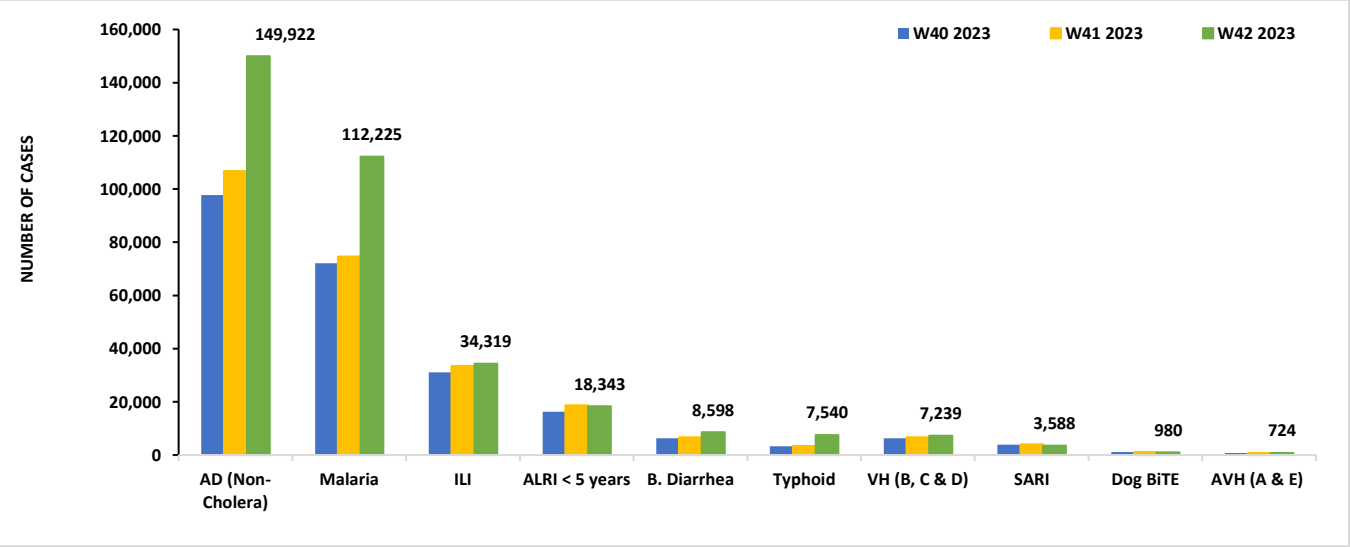
- *The national compliance rate for IDSR reporting in 121 implemented districts* is 76%
- *Sindh and AJK are the top reporting region with a compliance rate of 91% and 86% followed by Khyber Pakhtunkhwa with 76%*
- *The lowest compliance rate was observed in Gilgit Baltistan.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	1865	1424	76
Azad Jammu Kashmir	377	325	86
Islamabad Capital Territory	27	10	37
Balochistan	1304	893	68
Gilgit Baltistan	479	138	29
Sindh	1861	1693	91
National	5913	4483	76

Table 1: Province/Area wise distribution of most frequently reported cases during week 42, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	1,028	7,867	392	95	17,840	80,463	42,237	149,922
Malaria	72	9,212	2	5	6,022	4,546	92,366	112,225
ILI	2,059	8,329	246	359	4,517	299	18,510	34,319
ALRI < 5 years	964	2,576	283	2	2,036	43	12,439	18,343
B. Diarrhea	54	1,906	36	2	899	2,178	3,523	8,598
Typhoid	30	968	27	0	742	3,995	1,778	7,540
VH (B, C & D)	6	183	0	1	65	NR	6,984	7,239
SARI	299	941	220	0	1,279	NR	849	3,588
Dog Bite	10	151	0	0	134	NR	685	980
AWD (S. Cholera)	70	458	27	0	28	NR	75	658
AVH (A & E)	16	28	11	0	207	NR	462	724
Mumps	65	107	47	1	104	NR	297	621
CL	0	127	0	0	320	114	9	570
Dengue	7	0	2	5	79	NR	386	479
Chickenpox/ Varicella	13	9	9	0	115	233	18	397
Measles	8	34	4	0	165	NR	51	262
Pertussis	2	116	18	0	13	NR	5	154
Gonorrhea	0	105	4	0	11	NR	37	160
AFP	1	14	0	1	14	0	24	54
HIV/AIDS	21	1	0	0	2	NR	13	37
Syphilis	2	0	0	0	8	NR	25	35
Meningitis	1	16	0	0	5	NR	10	32
VL	0	14	0	0	14	NR	0	28
Brucellosis	0	10	0	0	7	NR	10	27
CCHF	0	0	0	0	0	NR	0	0
Anthrax	0	0	0	0	0	NR	0	0
NT	0	0	0	0	6	NR	8	14
Leprosy	0	0	0	0	4	NR	4	8
Diphtheria (Probable)	1	0	0	0	6	NR	1	8
Rubella (CRS)	0	2	0	0	2	NR	0	4
Chikungunya	0	0	0	0	0	NR	0	0

Figure 1: Most frequently reported suspected cases during week 42, Pakistan



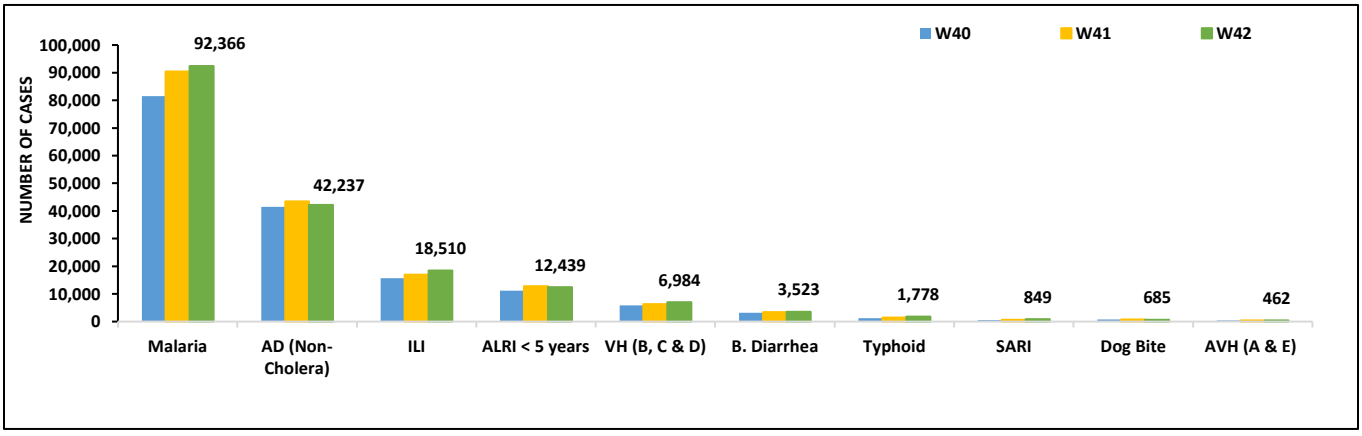
Sindh

- Malaria cases were maximum followed by AD (Non-Cholera), ILI, ALRI<5 Years, VH (B, C, D), B. Diarrhea, Typhoid, SARI, dog bite and AVH (A&E). Malaria cases show an upward trend in cases this week.
- ALRI(< 5 years) cases reported from Khairpur, Jaccobabad, Dadu and Badin. All are suspected cases however verification of cases is required to initiate response.
- Cases of acute diarrhea and bloody diarrhea continue to report in high numbers from across the province. Field investigation is required to identify the source to control the spread of disease.
- Dog bite cases are also on rise and mainly reported from Shikarpur and Sanghar district.

Table 2: District wise distribution of most frequently reported suspected cases during week 42, Sindh

DISTRICTS	Malaria	AD (Non-Cholera)	ILI	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Typhoid	Dog Bite	SARI	AVH (A & E)
Badin	6,869	3,027	358	654	401	242	49	170	12	2
Dadu	4,380	1,764	150	1,408	9	216	88	0	58	1
Ghotki	1,600	749	0	523	416	125	0	0	0	0
Hyderabad	486	1,814	374	63	56	23	19	0	0	0
Jacobabad	2,694	1,384	131	1,449	290	183	14	65	4	0
Jamshoro	1,330	1,629	48	186	106	136	51	6	8	0
Kamber	7,721	2,399	0	450	654	257	29	0	0	0
Karachi Central	190	1,688	2,250	72	156	80	133	0	0	29
Karachi East	124	497	105	19	1	13	11	3	4	2
Karachi Keamari	14	381	233	46	0	2	9	0	0	0
Karachi Korangi	61	291	0	0	0	3	8	0	0	0
Karachi Malir	117	634	1,666	286	27	48	18	6	18	4
Karachi South	46	125	0	0	0	1	1	0	0	4
Karachi West	118	858	619	100	27	32	37	26	34	5
Kashmore	2,723	600	597	237	22	77	12	0	0	0
Khairpur	6,552	3,255	1,408	1,083	648	354	340	63	230	5
Larkana	13,091	2,414	10	485	130	482	21	0	0	0
Matiari	1,898	1,498	9	340	395	69	7	24	0	6
Mirpurkhas	5,805	2,570	3,232	844	161	116	62	33	1	5
Naushero Feroze	1,580	1,078	504	149	86	61	85	61	0	0
Sanghar	3,238	1,900	121	693	1,011	73	104	148	261	3
Shaheed Benazirabad	1,871	1,960	0	515	112	91	181	0	3	1
Shikarpur	3,891	1,132	2	218	140	126	2	107	3	0
Sujawal	2,996	1,019	0	202	0	11	0	0	0	51
Sukkur	4,054	1,766	1,896	528	304	180	12	0	1	0
Tando Allahyar	1,695	1,179	700	413	312	131	11	30	0	11
Tando Muhammad Khan	2,073	1,389	1	304	32	81	5	0	0	0
Tharparkar	4,222	1,198	1,359	598	266	93	44	3	14	39
Thatta	3,444	1,208	853	285	286	77	30	33	17	255
Umerkot	4,468	1,652	274	466	270	72	38	0	4	3
Total	89,351	43,058	16,900	12,616	6,318	3,455	1,421	778	672	426

Figure 2: Most frequently reported suspected cases during week 42, Sindh



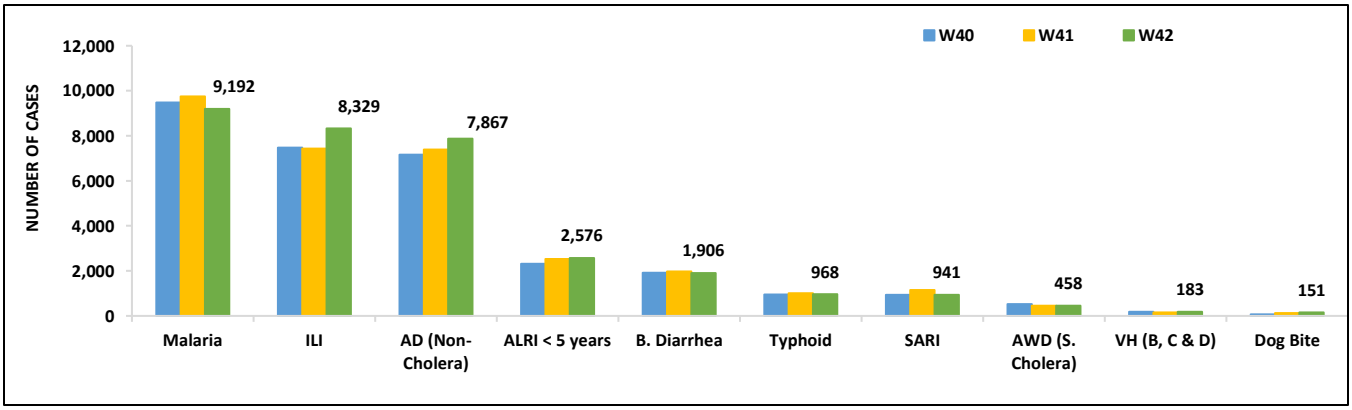
Balochistan

- Malaria, ILI, AD (Non-Cholera), ALRI <5 years, B. Diarrhea, Typhoid, SARI, AWD (S. Cholera), VH (B&C) and dog bite were the most frequently reported diseases from Balochistan province.
- Jaffarabad and Sohbatpur reported high cases of Malaria this week. All are suspected cases and need field investigation to verify the cases for vector control activities.
- Cases of AWD (S. Cholera) reported from Sibi and Panjgur. An urgent verification of cases required for verification of cases.se.

Table 3: District wise distribution of most frequently reported suspected cases during week 42, Balochistan

Districts	Malaria	ILI	AD Non-Cholera)	ALRI < 5 years	B. Diarrhea	Typhoid	SARI	AWD (S.Cholera)	VH (B, C&D)	Dog Bite
Barkhan	168	77	74	29	17	39	43	7	0	6
Chagai	2	314	207	0	60	50	0	27	0	1
Chaman	7	210	151	6	53	55	3	28	1	0
Dera Bugti	275	16	67	35	38	20	30	3	0	1
Duki	78	92	140	38	99	23	50	43	0	0
Gwadar	208	857	273	1	79	26	NR	NR	**NR**	NR
Harnai	99	24	86	194	88	7	0	7	0	2
Hub	394	192	262	52	48	5	27	0	11	0
Jaffarabad	1,088	179	651	35	60	7	41	0	1	14
Jhal Magsi	598	119	372	46	17	14	0	9	0	11
Kachhi (Bolan)	665	536	584	35	60	65	57	22	6	25
Kalat	16	14	26	3	21	21	1	0	0	0
Kech (Turbat)	361	667	299	62	35	0	0	2	0	0
Kharan	84	278	131	2	59	5	0	4	3	0
Khuzdar	106	107	87	4	67	10	6	0	3	0
Killa Saifullah	214	0	199	150	79	53	8	5	0	0
Kohlu	234	601	209	48	147	64	133	37	3	1
Lasbella	649	72	497	673	25	16	41	1	0	7
Loralai	57	313	142	29	51	18	88	3	0	0
Mastung	121	162	413	41	104	101	116	8	18	3
Naseerabad	663	1	322	31	15	77	0	0	76	56
Nushki	53	0	212	0	87	0	13	3	0	0
Panjgur	182	32	43	28	21	1	10	50	0	0
Pishin	8	151	58	23	40	14	2	0	0	3
Quetta	38	1,233	483	49	72	29	8	6	6	0
Sherani	24	59	25	14	18	6	16	10	0	0
Sibi	449	872	321	45	57	68	33	76	0	1
Sohbat pur	1,147	65	404	200	119	78	66	1	5	0
Surab	34	98	53	0	0	37	0	0	0	0
Usta Muhammad	780	176	575	266	62	12	37	0	50	10
Washuk	116	400	228	0	90	4	11	0	0	0
Zhob	218	131	128	342	46	11	76	14	0	0
Ziarat	56	281	145	95	72	32	25	92	0	10
Total	9,192	8,329	7,867	2,576	1,906	968	941	458	183	151

Figure 3: Most frequently reported suspected cases during week 42, Balochistan

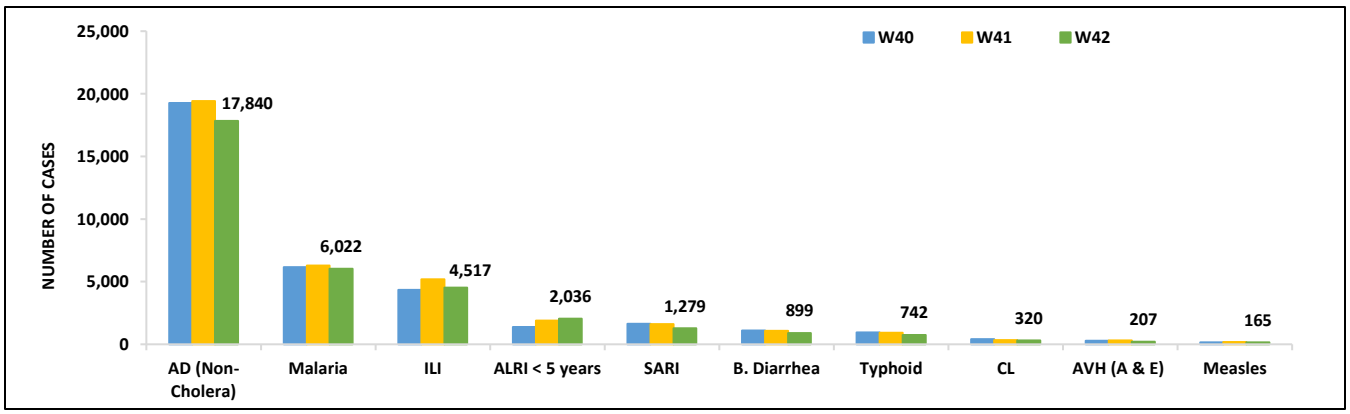


- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, ALRI<5 Years, SARI, B. Diarrhea, Typhoid, CL, AVH (A&E) and Measles cases.
- Malaria and AD cases show decline in trend.
- Measles cases reported from Peshawar and Dir Lower with case clustering within health facilities. These are suspected cases and a field investigation is required to verify cases to prevent further spread of disease.

Table 4: District wise distribution of most frequently reported suspected cases during week 42, KP

Districts	AD (Non-Cholera)	Malaria	ILI	ALRI <5 Years	SARI	B. Diarrhea	Typhoid	CL	AVH (A & E)	Measels
Abbottabad	443	2	36	21	26	3	14	1	0	0
Bajaur	180	133	39	21	5	25	1	9	0	8
Bannu	569	1,305	43	4	3	5	46	2	1	0
Buner	282	465	0	69	0	0	13	0	0	0
Charsadda	823	394	162	21	67	18	30	11	0	2
Chitral Lower	229	24	60	13	66	21	5	15	8	1
Chitral Upper	105	3	12	10	2	3	30	1	4	1
D.I. Khan	972	494	6	18	38	15	4	4	0	7
Dir Lower	1,194	519	6	194	0	116	59	9	34	20
Dir Upper	589	15	22	12	1	13	26	6	7	8
Hangu	292	364	132	7	30	25	15	26	3	3
Haripur	896	54	483	379	3	6	71	0	58	2
Karak	261	274	53	6	16	1	6	29	0	8
Khyber	65	355	77	60	0	21	8	16	2	0
Kohat	71	48	0	1	0	0	0	2	0	3
Kohistan Lower	156	1	1	8	1	14	0	0	2	0
Kohistan Upper	278	13	74	1	11	10	10	0	0	8
Kolai Palas	76	10	0	2	18	6	0	0	7	0
L & C Kurram	23	19	154	0	0	4	0	0	0	0
Lakki Marwat	413	316	0	61	0	19	5	13	0	2
Malakand	471	39	0	36	4	30	23	18	29	15
Mansehra	520	17	574	41	82	4	4	0	0	6
Mardan	856	77	20	428	0	27	0	8	7	1
Mohmand	99	149	38	13	5	14	11	65	0	0
Nowshera	1,792	99	21	1	25	27	21	30	0	0
Peshawar	2,400	90	966	174	190	136	84	24	8	27
Shangla	209	98	0	7	0	0	15	0	0	4
SWA	141	116	310	198	144	52	28	21	12	6
Swabi	915	58	491	111	10	14	30	0	5	4
Swat	1,890	68	236	54	0	22	3	0	12	9
Tank	399	215	0	29	0	4	43	4	0	1
Tor Ghar	51	160	0	6	12	20	33	6	1	0
Upper Kurram	180	28	501	30	520	224	104	0	7	19
Total	17,840	6,022	4,517	2,036	1,279	899	742	320	207	165

Figure 4: Most frequently reported suspected cases during week 42, KP



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and Malaria. ILI cases showed a downward trend in cases this week.

AJK: ILI cases were maximum followed by AD (Non-Cholera), ALRI <5 years, SARI, Malaria, AWD (S. Cholera), Mumps. Diarrhea, Typhoid and HIV/AIDS. Trend for ILI cases remained same whereas AD showed a downward trend in cases this week.

GB: AD (Non. Cholera) cases were the most frequently reported disease followed by ILI, ALRI<5 years, ILI, SARI, Mumps, B. Diarrhea, AWD (S. Cholera), Typhoid and Pertussis. There is a sharp decline trend in AD (Non-Cholera) cases this week.

Figure 6: Week wise reported suspected cases of ILI, ICT

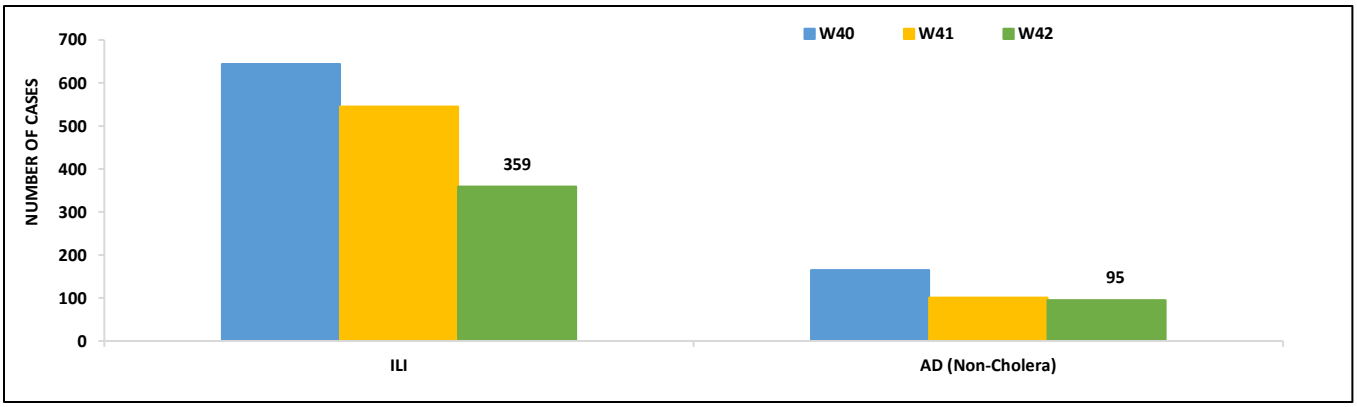


Figure 6: Week wise reported suspected cases of ILI, ICT

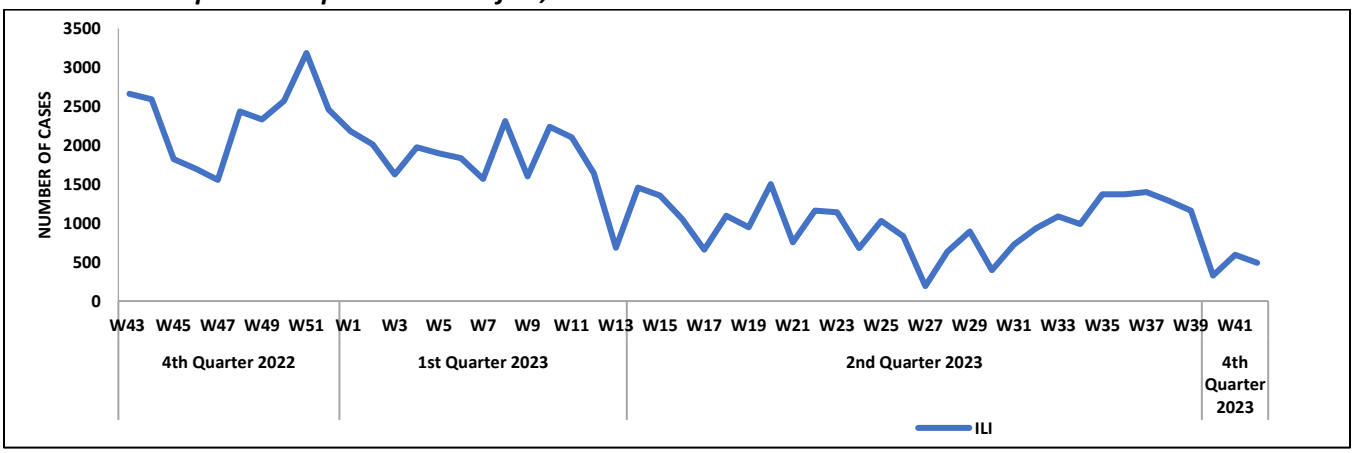


Figure 7: Most frequently reported suspected cases during week 42, AJK

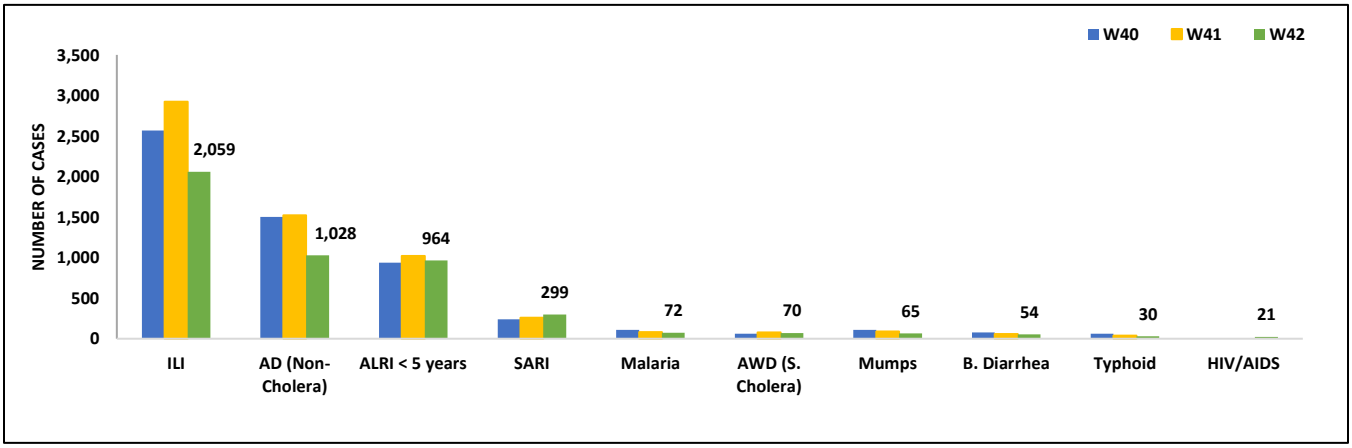


Figure 8: Week wise reported suspected cases of AD (Non-Cholera) and ILI, AJK

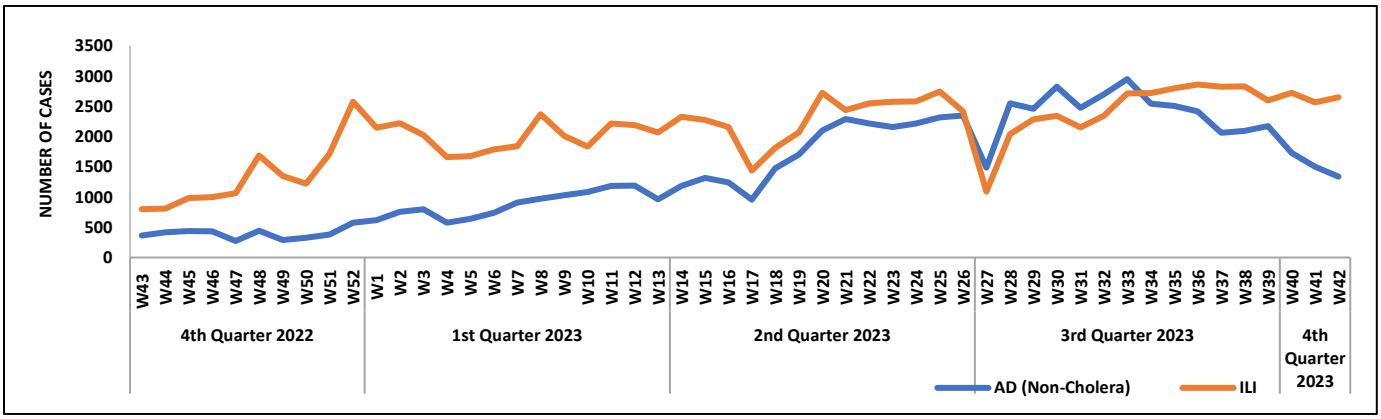


Figure 9: Most frequent cases reported during WK 42, GB

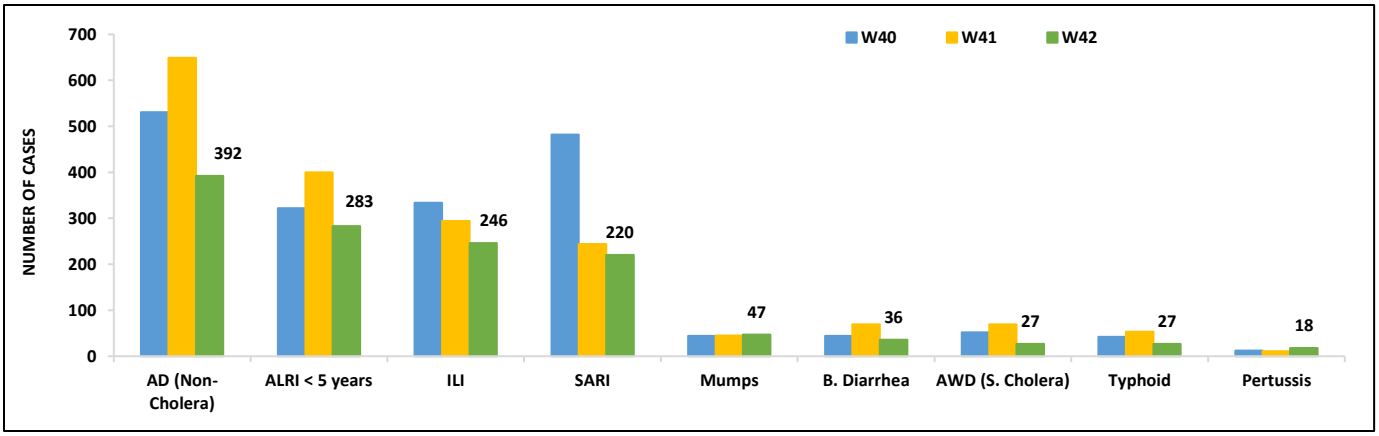
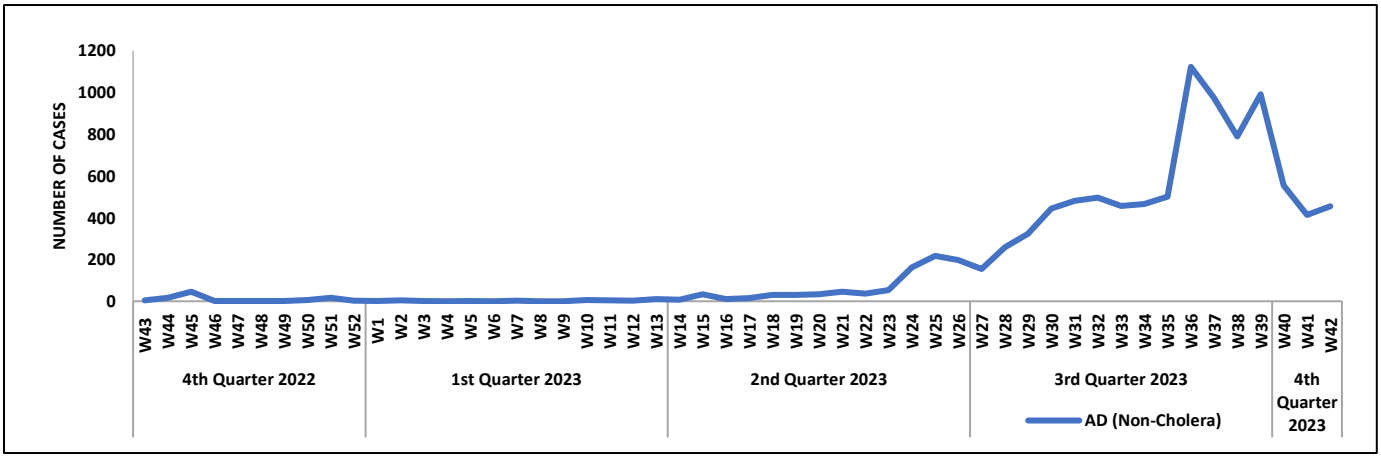


Figure 10: Week wise reported suspected cases of AD (Non-Cholera), GB



Punjab

- Cases of AD (Non-Cholera) were maximum followed by Malaria, Typhoid and B. Diarrhea.
- AD cases showed a slight upward trend this week.

Figure 11: District wise distribution of most frequently reported suspected cases during week 42, Punjab

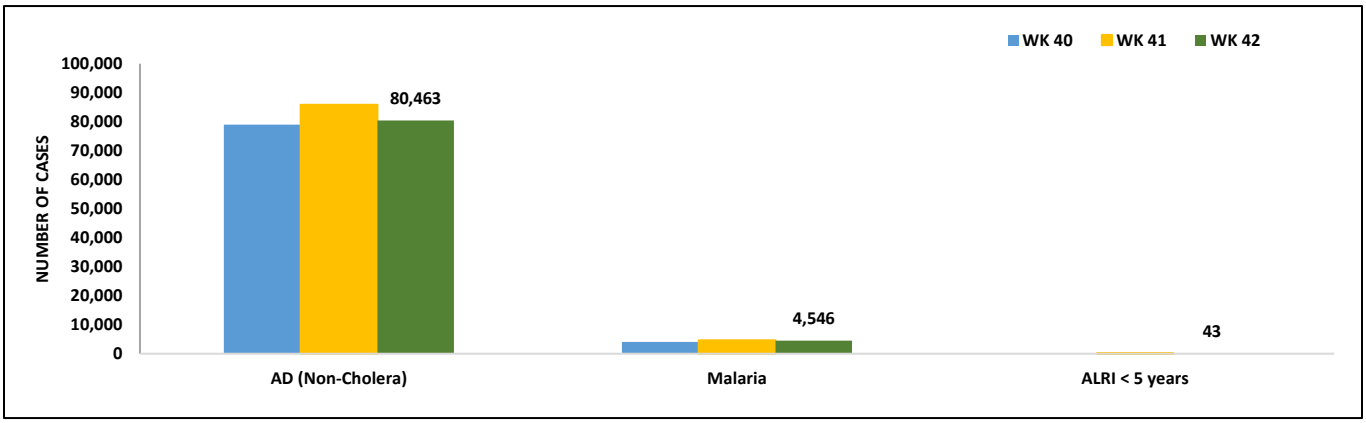


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 42

Diseases	Sindh	Balochistan	Punjab	KPK	ISL	Gilgit
Acute Watery Diarrhoea (S. Cholera)	0	-	-	0	-	--
Acute diarrhea(non-cholera)	0	-	0	-	--	-
Malaria	222	-	--	0	0	-
CCHF	-	3	-	2	-	-
Dengue	23	0	-	0		26
MPOX	0	-	-	0	--	-
Acute Viral Hepatitis(B)	65	0		-	2	-
Acute Viral Hepatitis(C)	298	23	0	3	6	3
Acute Viral Hepatitis(E)	0	-	--	-	-	
Typhoid	65	-	-	0	-	0
Covid 19	0	0	-	0	-	1
Tb	-	-	4	-		-

IDSR Reports Compliance

- Out OF 120 IDSR implemented districts, compliance is low from Gilgit Baltistan districts. Green color showing >50% compliance while red color is <50% compliance

Table 6: IDSR reporting districts Week 42

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Agreed Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	110	110	100	91%
	Bannu	92	92	76	83%
	Battagram	43	43	25	58%
	Buner	34	34	24	71%
	Bajaur	44	44	33	75%
	Charsadda	61	61	49	80%
	Chitral Upper	33	33	28	85%
	Chitral Lower	35	35	34	97%
	D.I. Khan	89	89	73	82%
	Dir Lower	75	75	73	97%
	Dir Upper	55	55	39	71%
	Hangu	22	22	22	100%
	Haripur	69	69	60	87%
	Karak	39	39	38	97%
	Khyber	40	40	12	30%
	Kohat	59	59	59	100%
	Kohistan Lower	11	11	11	100%
	Kohistan Upper	20	20	20	100%
	Kolai Palas	10	10	10	100%
	Lakki Marwat	49	49	49	100%
	Lower & Central Kurram	40	40	12	30%
	Upper Kurram	42	42	14	33%
	Malakand	42	42	34	81%
	Mansehra	133	133	80	60%
	Mardan	84	84	60	71%
	Nowshera	54	54	53	98%
	North Waziristan	22	22	1	5%
	Peshawar	101	101	101	100%
	Shangla	64	64	11	17%
	Swabi	67	67	64	96%
	Swat	76	76	63	83%
	South Waziristan	78	78	48	62%
	Tank	54	54	30	56%
	Torghar	18	18	18	100%
Azad Jammu Kashmir	Mirpur	37	37	36	97%
	Bhimber	20	20	16	80%
	Kotli	60	60	60	100%
	Muzaffarabad	43	45	43	96%
	Poonch	46	46	46	100%
	Haveli	34	34	19	56%
	Bagh	40	40	31	78%
	Neelum	39	39	18	46%
	Jhelum Vellay	29	29	29	100%
	Sudhnooti	27	27	27	100%

Islamabad Capital Territory	ICT	18	18	5	28%
	CDA	9	9	5	56%
Balochistan	Gwadar	24	24	22	92%
	Kech	78	44	20	45%
	Khuzdar	136	20	20	100%
	Killa Abdullah	50	32	0	0%
	Lasbella	85	85	55	65%
	Pishin	118	23	8	35%
	Quetta	77	77	17	22%
	Sibi	36	36	36	100%
	Zhob	37	37	29	78%
	Jaffarabad	47	47	16	34%
	Naserabad	37	37	33	89%
	Kharan	32	32	30	94%
	Sherani	32	32	15	47%
	Kohlu	75	75	66	88%
	Chagi	35	35	26	74%
	Kalat	65	65	18	28%
	Harnai	18	18	17	94%
	Kachhi (Bolan)	35	35	35	100%
	Jhal Magsi	39	39	23	59%
	Sohbat pur	25	25	25	100%
	Surab	33	33	29	88%
	Mastung	45	45	45	100%
	Loralai	33	33	25	76%
	Killa Saifullah	31	31	27	87%
	Ziarat	42	42	27	64%
	Duki	31	31	30	97%
	Nushki	32	32	30	94%
	Dera Bugti	45	45	30	67%
	Washuk	25	25	25	100%
	Panjgur	38	38	7	18%
	Awaran	23	23	0	0%
	Chaman	22	22	21	95%
	Barkhan	19	19	19	100%
	Hub	33	33	33	100%
	Usta Muhammad	34	34	34	100%
Gilgit Baltistan	Hunza	31	31	9	29%
	Nagar	6	6	0	0%
	Ghizer	62	62	3	5%
	Gilgit	48	48	40	83%
	Diamer	79	79	10	13%
	Astore	53	53	2	4%
	Shigar	24	24	12	50%
	Skardu	51	51	40	78%
	Ganche	79	79	14	18%
	Kharmang	46	46	8	17%

Sindh	Hyderabad	71	71	33	46%
	Ghotki	65	65	63	97%
	Umerkot	98	43	32	74%
	Naushahro Feroze	68	68	61	90%
	Tharparkar	278	100	94	94%
	Shikarpur	60	60	60	100%
	Thatta	53	53	53	100%
	Larkana	67	67	66	99%
	Kamber Shadadkot	71	71	79	97%
	Karachi-East	14	14	13	93%
	Karachi-West	23	23	22	96%
	Karachi-Malir	37	37	20	54%
	Karachi-Kemari	18	18	11	61%
	Karachi-Central	11	11	11	100%
	Karachi-Korangi	18	18	12	67%
	Karachi-South	4	4	4	100%
	Sujawal	54	54	49	91%
	Mirpur Khas	104	104	62	60%
	Badin	124	124	105	85%
	Sukkur	64	64	64	100%
	Dadu	90	90	90	100%
	Sanghar	101	101	101	100%
	Jacobabad	43	43	43	100%
	Khairpur	168	168	167	99%
	Kashmore	59	59	58	98%
	Matiari	42	42	41	98%
	Jamshoro	70	70	66	94%
	Tando Allahyar	54	54	51	94%
	Tando Muhammad Khan	41	41	40	98%
	Shaheed Benazirabad	124	124	122	98%

A note from Field Activities.

From the desk of Chief Editor

Pakistan Marks World Polio Day with Resolve to Eliminate the Disease

On World Polio Day, Pakistan reaffirmed its commitment to ending polio, despite the detection of positive environmental samples of the virus in recent months. Caretaker Prime Minister Anwaar-ul-Haq Kakar vowed to resist anti-vaxxers and "forces of darkness" who oppose vaccination.

Caretaker Health Minister Nadeem Jan paid homage to polio workers and emphasized the importance of community health workers in the fight to eradicate polio.

Punjab, which has been polio-free for the past three years, also marked World Polio Day with a reminder that the threat of the virus persists. Detection of the virus in environmental samples from Lahore and Rawalpindi districts this year highlights the risk.

Caretaker Provincial Primary and Secondary Healthcare Minister Dr Jamal Nasir said the province was celebrating the day with a promise that poliovirus would be eradicated from Punjab.

Besides the outbreak response (OBR) vaccination drives in districts with positive WPV-1 environmental samples, Special anti-polio vaccination campaigns have been launched in Khyber Pakhtunkhwa, Sindh, and Balochistan, targeting over 4.5 million children under the age of five.

World Polio Day is an opportunity to raise awareness about polio and the importance of vaccination. It is also a day to celebrate the progress that has been made and to recommit to ending polio once and for all. Both the federal and provincial governments are committed to ending polio in Pakistan. They are working with polio workers and the community to reach every child with the polio vaccine.

World Polio Day: Pakistan's Fight Against a Crippling Disease

Dr. Waqar Ahmed
Project Consultant
SafetyNet-NIH

Every year on October 24th, the world celebrates World Polio Day to raise awareness of the crippling and potentially fatal disease, and to highlight the progress made in the global fight to eradicate it. This year's theme "A Healthier Future for Mothers and Children." highlights the importance of polio eradication for the health and well-being of families and communities around the world.

Polio has been on the brink of eradication for several years, thanks to the tireless efforts of healthcare workers, volunteers, and donors around the globe. However, challenges remain in some parts of the world, including Pakistan. Pakistan continues to grapple with the stubborn presence of polio, with the confirmation of the fourth case this year. Environmental samples from all four provinces have also revealed the persistence of the poliovirus, despite the nation's longstanding efforts to combat the disease.

The battle against polio in Pakistan has been a decades-long struggle. Prior to the initiation of the anti-polio program in 1994, over 20,000 children were afflicted with lifelong disabilities each year due to the disease. The introduction of continuous polio vaccination campaigns brought about a gradual reduction in the incidence of the disease, offering hope for a polio-free future. There are a number of factors that contribute to the persistence of polio in Pakistan. One challenge is the country's rugged

terrain and remote areas, which can make it difficult to reach all children with the polio vaccine. Another challenge is vaccine hesitancy, which is driven by misinformation and mistrust of the dominion.

Despite these challenges, there is reason to be hopeful. Thanks to the tireless efforts of healthcare workers and volunteers, Pakistan has made significant progress in reducing the number of polio cases. In 2014, the country reported a staggering 306 cases, but this number has since dropped to just four cases in 2023. Pakistani government and its partners remain committed to polio eradication. The country has implemented a number of measures to strengthen its polio vaccination program, including increasing the number of vaccinators, improving surveillance, and engaging with communities to address vaccine hesitancy.

On World Polio Day, we must all recommit to doing our part to end polio for good. We can do this by supporting polio eradication efforts in Pakistan and other affected countries, and by raising awareness of the importance of polio vaccination.

Key takeaways:

- Pakistan is one of the only two countries in the world where polio remains endemic.
- The country has made significant progress in reducing the number of polio cases, but challenges remain, such as rugged terrain and vaccine hesitancy.
- The Pakistani government is committed to eradicating polio once and for all.
- We can all help by supporting the government's eradication efforts, educating ourselves and our communities about the importance of polio vaccination, and advocating for a polio-free world.

A note from Field Activities.

Measles Outbreak Investigation at District DI Khan, Pakistan, 2023

Source: DHIS-2 Reports
https://dhis2.nih.org.pk/dhis-web-event-reports/

Introduction:

Measles is a highly contagious viral illness that can cause serious complications, including pneumonia, encephalitis, and death. It is most common among children under the age of five years, but it can also affect adults.

The District Health Office of DI Khan, Pakistan, reported an outbreak of measles. The objective of this investigation was to assess the magnitude of the problem, suggest and implement control measures, and prevent a future outbreak.

Methods:

A descriptive outbreak investigation study was conducted using structured questionnaires, active case search, and screening of health facility records. Data was collected from January 01, 2023, to August 25, 2023, and analyzed using MS Excel.

Results:

A total of 470 measles cases were reported, with a male to female ratio of 1:1.2. The most affected age group was 10-19 months (n=128). Tehsil DI Khan was the most affected tehsil (n=324). The highest number of cases were reported in epidemiological week 18 (n=38). Only 10% of cases were fully vaccinated. Fever and maculopapular rash were recorded in all patients.

Conclusion:

The majority of cases (n=428) were unvaccinated, and 42 cases had received only a single dose of measles vaccine. Case response was given to every notified case. Tehsil DI Khan accommodates the highest number of immigrant populations from district Tank and the newly Merged districts.

Recommendations:

The district administration should play a role in refusal coverage, as there are still unvaccinated children due to vaccine refusal. Routine immunization should be focused on, and extensive outreach sessions should be done. Awareness sessions should be conducted in the community regarding vaccination and Immigrant populations should be focused on during vaccination.

Letter to the Editor:

Polio vaccination imminent in Rawalpindi after positive environmental samples

Muhammad Nadeem
District superintendent vaccination, Rawalpindi
Dr. Ehsan Ghani
DHO (Preventive Services)

Background

Environmental surveillance is a valuable tool for detecting poliovirus, especially in areas with high-risk populations. In Pakistan, environmental surveillance has been used since 2009 to support the AFP surveillance system. The district of Rawalpindi has three environmental sampling sites: Safdarabad, Dhok Dallal, and Serae Kala. Serae Kala Tehsil Taxila was added to the list of environmental sites in 2022 to strengthen polio virus surveillance.

Pakistan's National Polio Laboratory at the National Institute of Health Islamabad has confirmed the detection of Type-1 Wild polio virus (WPV1) in an environmental (sewage) sample collected from Safdarabad District Rawalpindi in October 2023. The environmental (sewage) sample was collected on Oct 02, 2023 from the Safdarabad environmental sample collection site. Previous positive sample was collected on August 10, 2023 from same site.

"The isolated virus is classified as YB3A cluster and 98.56 percent genetically linked to the virus detected in an environmental sample in Jalalabad (Nangarhar), Afghanistan on January 01, 2023," polio eradication initiative official added.

This new detection takes the total number of positive environmental (sewage) samples in Pakistan in 2023 to 52 while the number of Polio cases in Pakistan in 2023 remains four.

Response

In response to the positive environmental sample, the District Health Authority (DHA) Rawalpindi is planning a mass vaccination campaign in five tehsils of the district focusing High Risk union councils. The polio case response campaign will target a total of 867,885 children under the age of five who need to be vaccinated against polio, reaching 669,412 households. To reach all of these children, the DHA has deployed a total of 3,251 teams. These teams are responsible for vaccinating children in all parts of the district, including hard-to-reach areas.

The mobile teams are the most numerous, followed by the fix teams and the transit teams. This suggests that the focus of the polio vaccination campaign is on reaching children in hard-to-reach areas.

The DHA is committed to ensuring that all children in the five high-risk tehsils of District Rawalpindi are vaccinated against polio. The polio case response campaign is a major undertaking, but it is essential to the health of children in the district

Knowledge Hub

SMOG: A Threat to Our Health and Future

Smog is a type of air pollution that is caused by the combination of smoke and fog. It is a mixture of harmful gases and particles that can be very dangerous to human health. Smog is most common in large cities with a lot of traffic and industry.

Diseases caused by smog:

Smog can cause a variety of health problems, and is especially harmful to children, the elderly, and people with chronic health conditions.

- **Respiratory diseases**: Smog can irritate the airways and lungs, making it difficult to breathe. This can lead to respiratory problems such as asthma, bronchitis, and pneumonia.
- **Heart diseases**: Smog can damage the heart and blood vessels, increasing the risk of heart attacks and strokes.
- **Cancer**: Smog contains cancer-causing chemicals that can damage cells in the body. This can lead to cancer of the lung, bladder, and other organs.
- **Neurological problems**: Smog can damage the nervous system, leading to problems such as headaches, dizziness, and confusion.
- **Eye and skin irritation**: Smog can irritate the eyes and skin, causing redness, itching, and burning.

Prevention of smog:

There are a number of things that can be done to prevent smog, including:

- Reducing traffic emissions by driving less, using public transportation, and walking or biking whenever possible.
- Reducing industrial emissions by using cleaner fuels and technologies.
- Planting trees and other vegetation, which can help to filter pollutants from the air.
- Using energy-efficient appliances and light bulbs.
- Conserving energy by turning off lights and appliances when they are not in use.
- Stay indoors as much as possible on days when smog levels are high.
- Avoid strenuous activity outdoors when smog levels are high.
- Wear a mask when outdoors, especially if you have a respiratory condition.
- Use an air purifier in your home.

If you are concerned about the health effects of smog, talk to your doctor. They can help you to develop a plan to protect yourself and your family.

Image by NDMA

CALLING ALL CREATIVE KIDS

World Antimicrobial Resistance Awareness Week 2023

"Preventing antimicrobial resistance together"

As part of World Antimicrobial Resistance Awareness Week (Nov 18-24, 2023), the National Institute of Health Islamabad invites children between the ages of 6 and 15 to showcase their creativity for a worthy cause. We would like you to create a poster that embodies this year's WAAW theme: "Preventing Antimicrobial Resistance Together."

To participate, get your creative juices flowing and illustrate your ideas about antibiotics and preventing antimicrobial resistance. You may consider the following prompts for inspiration:

- "What are your thoughts on antibiotics?"
- "Learn how to use antibiotics responsibly."
- "Let's Prevent Antimicrobial Resistance Together."
- "Understand how germs develop resistance against antibiotics."

After you've drawn your picture, please scan it and send it in pdf, JPEG, or JPG format via email to pakamr-ipc@nih.org.pk. Don't forget that the submission deadline is November 10th, 2023.

We can't wait to see your creative ideas!

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	phb@nih.org.pk		https://www.facebook.com/NIH.PK/

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