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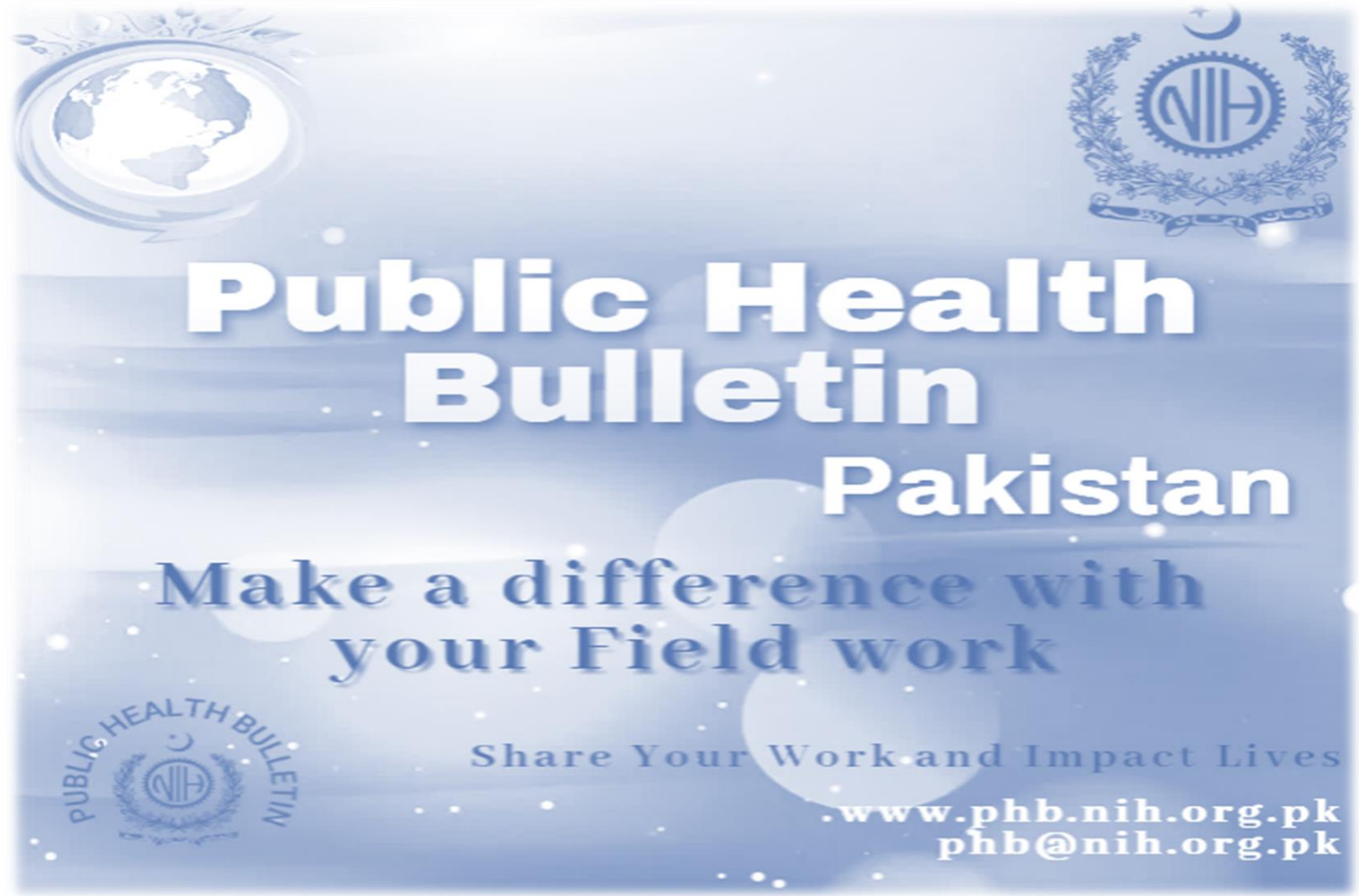
Integrated Disease Surveillance & Response (IDSR) Report

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 45, 2023

This edition of the Public Health Bulletin summarizes the most significant public health developments in Pakistan during Week 45 of 2023.

Acute Diarrhea (Non-Cholera) emerged as the most prevalent reported disease during Week 45, followed by Malaria, Influenza-Like Illness (ILI), Acute Lower Respiratory Infection (ALRI) in children under five, Bacterial Diarrhea, Severe Acute Respiratory Infection (SARI), dog bites, and Mumps. Twenty-eight suspected Diphtheria cases were reported from Khyber Pakhtunkhwa (KPK). These cases require field verification for confirmation. Sindh, KPK, and Balochistan have reported an overall increase in vaccine-preventable diseases such as Measles, Pertussis, Diphtheria, and Mumps. Field investigations are necessary to validate these cases and initiate appropriate response measures.

This issue of the Public Health Bulletin also provides updates on: Outbreak Investigation of Chickenpox at a Private School in Jhung, Punjab, Acute Watery Diarrhea (AWD) in Town Area of Sibi, Balochistan, Field Activity Report on Workshop on IDSR Trainings in Punjab and Persistent Issues of Smog in Punjab. Educational Awareness Essay on Chickenpox: Guide to Awareness and prevention

The Public Health team urges the public to remain vigilant and seek immediate medical attention if they experience symptoms associated with any of the aforementioned diseases. By working together, we can effectively safeguard the health and well-being of our communities.

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

Sincerely,
The Chief Editor

- *During week 45, most frequent reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, ALRI <5 years, B. Diarrhea, SARI, dog bite and Mumps.*
- *Twenty-eight cases of Diphtheria reported from KPK. All are suspected cases and need field verification.*
- *There is an overall increase in vaccine preventable diseases e.g. Measles, Pertussis, Diphtheria and Mumps from Sindh, KPK and Balochistan. Field investigation required to verify cases to initiate response.*

IDSR compliance attributes

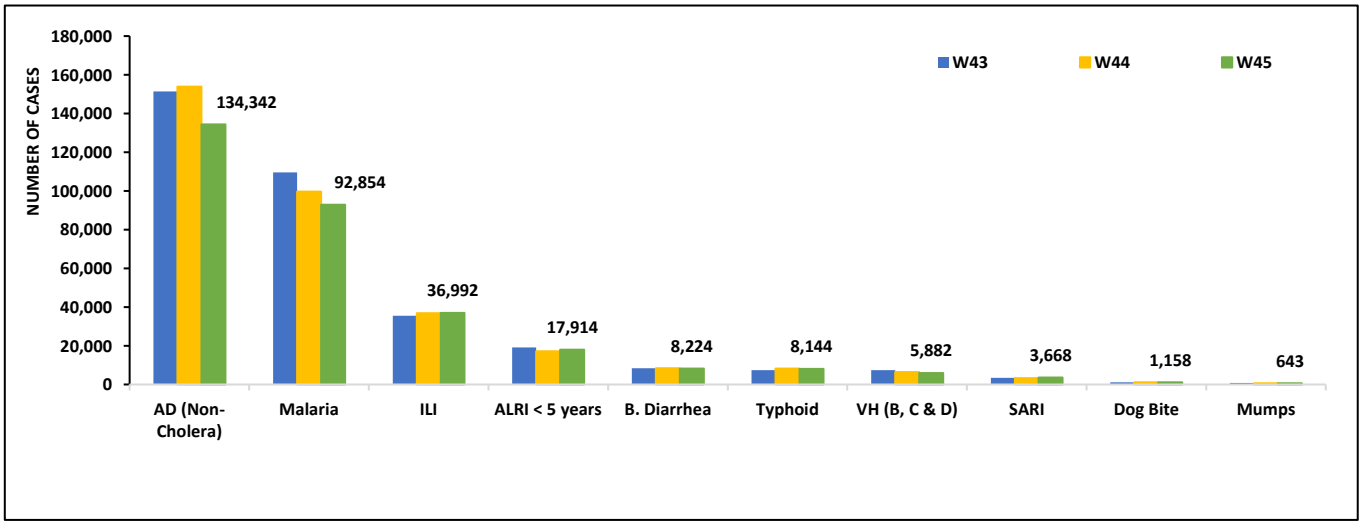
- *The national compliance rate for IDSR reporting in 121 implemented districts* is 74%
- *Sindh and AJK are the top reporting region with a compliance rate of 89% and 76% followed by Khyber Pakhtunkhwa AND BOLACHISTAN with 71%*
- *The lowest compliance rate was observed in ICT and Gilgit Baltistan.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2017	1406	71
Azad Jammu Kashmir	404	308	76
Islamabad Capital Territory	70	24	34
Balochistan	1238	881	71
Gilgit Baltistan	440	183	42
Sindh	2088	1852	89
National	6257	4654	74

Table 1: Province/Area wise distribution of most frequently reported cases during week 45, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	918	6,558	334	37	16,626	71,229	38,640	134,342
Malaria	48	9,512	0	2	4,588	3,520	75,184	92,854
ILI	2,046	7,569	243	177	5,582	NR	21,375	36,992
ALRI < 5 years	980	2,194	415	3	2,308	NR	12,014	17,914
B. Diarrhea	62	1,820	49	1	854	2,054	3,384	8,224
Typhoid	33	988	57	0	699	4,266	2,101	8,144
VH (B, C & D)	10	94	1	0	93	NR	5,684	5,882
SARI	249	1,275	332	0	1,166	NR	646	3,668
Dog Bite	27	217	0	0	139	NR	775	1,158
Mumps	56	137	25	0	107	NR	318	643
AWD (S. Cholera)	31	296	74	0	103	NR	60	564
CL	9	174	1	0	359	1	2	546
Measles	11	184	12	0	172	NR	100	479
AVH(A&E)	18	25	7	1	200	NR	191	442
Pertussis	1	142	87	0	30	NR	52	312
Dengue	0	27	0	1	28	NR	250	306
Gonorrhea	3	95	4	0	14	NR	181	297
Chickenpox/ Varicella	11	17	16	0	140	60	13	197
Syphilis	32	25	0	0	6	1	31	95
Leprosy	0	33	0	0	16	NR	28	77
VL	1	24	0	0	32	NR	7	64
AFP	0	13	0	0	18	NR	23	54
Diphtheria (Probable)	0	5	0	0	28	NR	0	33
Meningitis	2	4	3	0	4	NR	19	32
Rubella (CRS)	0	2	1	0	8	NR	1	12
HIV/AIDS	0	0	0	0	1	NR	05	06
NT	1	0	0	0	8	NR	0	9
Anthrax	0	0	0	0	0	NR	0	0
Brucellosis	0	0	0	0	0	NR	2	2
Chikungunya	0	0	4	0	0	NR	1	5
CCHF	0	0	0	0	0	NR	0	0

Figure 1: Most frequently reported suspected cases during week 45, Pakistan



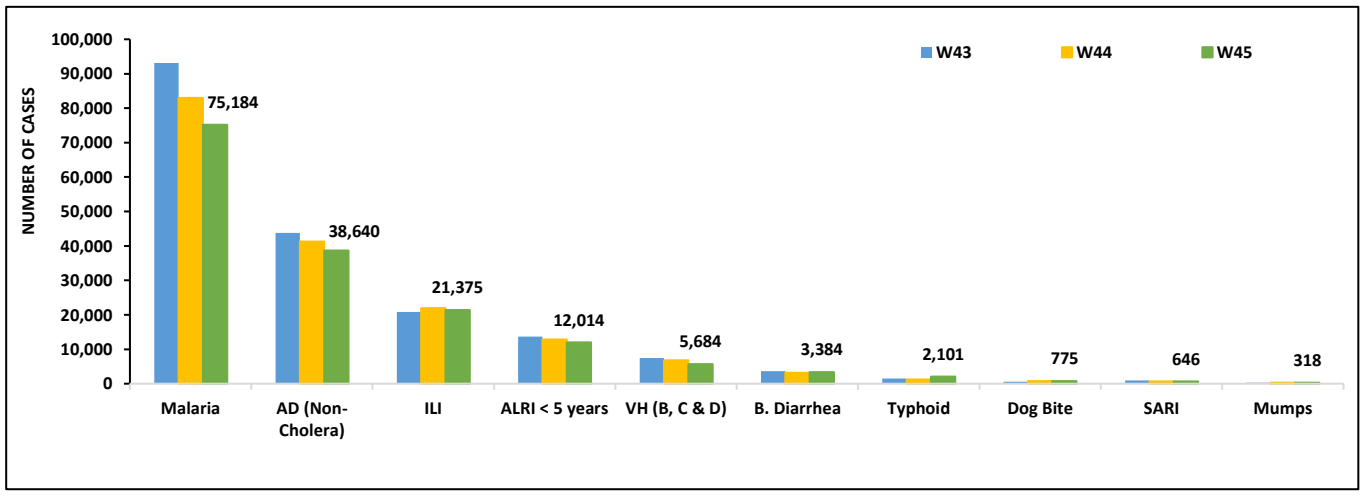
Sindh

- Malaria cases were maximum followed by AD (Non-Cholera), ILI, ALRI<5 Years, VH (B, C, D), B. Diarrhea, Typhoid, dog bite, SARI and Mumps.
- Trends for malaria, ILI and AD cases decline this week.
- Badin and Tharparkar reported maximum cases of Mumps. All are suspected cases and require urgent attention to verify cases.
- Dadu reported maximum cases of Typhoid fever followed by Khairpur, Karachi central and Shaheed Benazirabad districts. Field investigation is required to identify the source to control the spread of disease.

Table 2: District wise distribution of most frequently reported suspected cases during week 45, Sindh

DISTRICTS	Malaria	AD (Non-Cholera)	ILI	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Typhoid	Dog Bite	SARI	Mumps
Badin	3,906	2,538	919	703	381	227	42	48	34	40
Dadu	6,645	3,606	1,704	1,351	21	537	995	135	113	8
Ghotki	1,319	764	0	664	346	121	0	0	0	0
Hyderabad	473	1,684	401	48	55	17	12	3	0	15
Jacobabad	3,227	902	331	1,213	261	94	30	46	27	3
Jamshoro	2,161	1,134	36	218	125	107	56	8	0	5
Kamber	5,701	1,989	0	421	758	212	31	21	16	2
Karachi Central	44	862	1,408	43	99	15	100	3	0	2
Karachi East	120	453	105	50	1	7	4	4	1	1
Karachi Keamari	2	249	139	33	0	1	0	0	0	0
Karachi Korangi	57	189	4	1	0	0	2	0	0	1
Karachi Malir	114	694	2,431	191	13	45	29	25	27	6
Karachi South	31	103	0	0	0	0	0	0	0	0
Karachi West	126	853	791	136	19	36	38	29	30	3
Kashmore	2,766	514	643	308	78	76	13	23	0	8
Khairpur	6,646	3,246	1,426	1,299	627	429	273	66	231	7
Larkana	10,707	1,951	3	498	146	315	7	0	0	3
Matiari	1,871	1,239	38	492	327	53	3	20	1	11
Mirpurkhas	3,404	1,735	4,149	404	66	82	36	1	0	22
Naushero Feroze	1,417	1,150	936	160	58	30	51	59	0	4
Sanghar	3,325	1,792	96	560	748	76	87	134	91	19
Shaheed Benazirabad	1,704	1,835	0	511	127	73	165	8	3	11
Shikarpur	4,065	1,187	3	227	230	163	1	89	7	9
Sujawal	1,305	998	0	157	0	17	23	15	27	0
Sukkur	4,034	1,547	2,003	432	228	197	9	4	0	0
Tando Allahyar	1,613	1,323	1,009	366	551	118	10	2	0	28
Tando Muhammad Khan	1,653	1,062	0	285	31	141	1	0	0	1
Tharparkar	3,397	1,425	1,915	871	187	64	47	4	36	86
Thatta	1,576	756	882	153	55	82	15	28	2	0
Umerkot	1,775	860	3	219	146	49	21	0	0	23
Total	75,184	38,640	21,375	12,014	5,684	3,384	2,101	775	646	318

Figure 2: Most frequently reported suspected cases during week 45 Sindh



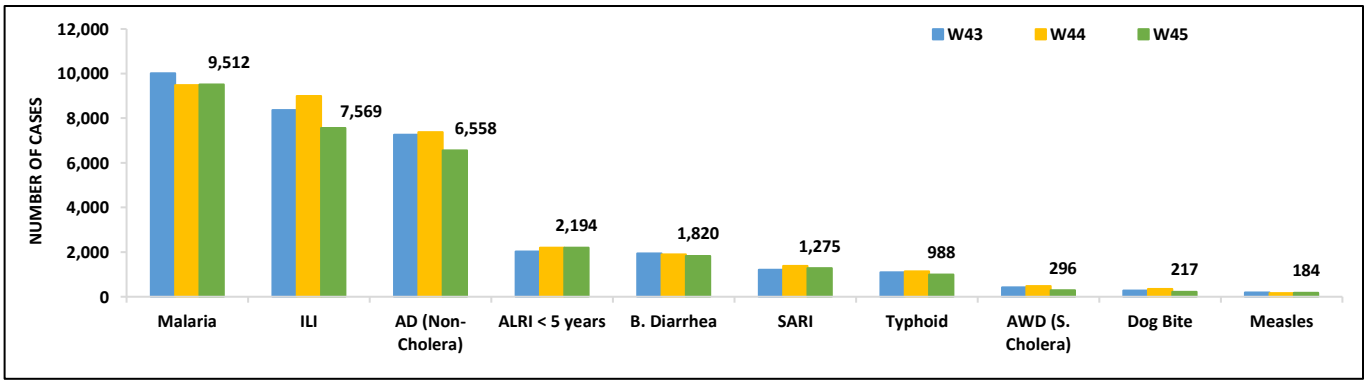
Balochistan

- Malaria, ILI, AD (Non-Cholera), ALRI <5 years, B. Diarrhea, SARI, Typhoid, AWD (S. Cholera), dog bite and Measles were the most frequently reported diseases from Balochistan province.
- Trend for ILI, AD declined whereas remained static for Malaria.
- One hundred and fifteen cases of Measles reported from Chaman district. All are suspected cases and need field investigation to verify the cases.
- Hub, Loralai and Mastung districts reported cases of SARI in high numbers which need verification to distinguish from COVID-19.

Table 3: District wise distribution of most frequently reported suspected cases during week 45, Balochistan

Districts	Malaria	ILI	AD Non-Cholera)	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	AWD (S.Cholera)	Dog Bite	Measles
Barkhan	123	145	146	133	48	16	69	25	16	0
Chagai	13	277	187	0	64	0	28	16	0	0
Chaman	47	268	102	6	122	53	58	17	10	115
Dera Bugti	259	94	73	63	52	15	13	0	0	0
Duki	79	69	106	23	89	78	15	28	3	0
Gwadar	606	801	277	31	47	1	41	0	0	0
Harnai	108	25	109	251	84	0	2	2	0	0
Hub	303	133	232	64	53	125	4	0	93	0
Jaffarabad	1,213	204	509	53	44	28	10	0	9	0
Jhal Magsi	1,065	177	346	99	25	0	12	5	9	0
Kachhi (Bolan)	291	236	310	11	47	71	64	29	13	26
Kalat	51	11	40	17	22	4	42	0	0	12
Kharan	72	404	131	0	65	2	7	2	0	0
Khuzdar	114	188	144	4	48	5	9	0	12	13
Killa Saifullah	239	2	173	139	79	29	25	8	0	1
Kohlu	224	678	268	80	168	186	59	17	0	0
Lasbella	686	136	412	153	6	25	10	0	8	0
Loralai	50	325	170	60	54	119	31	4	0	0
Mastung	91	202	232	15	51	121	58	2	18	4
Musakhel	115	49	43	15	22	4	19	19	0	12
Naseerabad	659	0	223	5	20	0	61	3	4	0
Nushki	41	12	181	0	55	0	0	1	0	0
Panjgur	153	48	75	16	20	18	61	12	0	0
Pishin	9	75	23	20	33	0	9	0	3	0
Quetta	16	845	251	47	54	8	34	2	0	0
Sherani	7	96	68	1	14	81	3	0	0	0
Sibi	555	936	633	34	83	54	33	57	11	0
Sohbat pur	1,018	14	304	150	97	68	68	1	2	0
Surab	23	84	21	0	6	0	24	0	0	0
Usta Muhammad	1,005	196	378	226	51	39	15	0	2	0
Washuk	61	284	137	1	89	6	2	0	0	0
Zhob	166	242	164	436	45	109	74	8	0	1
Ziarat	50	313	90	41	63	10	28	38	4	0
Total	9,512	7,569	6,558	2,194	1,820	1,275	988	296	217	184

Figure 3: Most frequently reported suspected cases during week 45, Balochistan



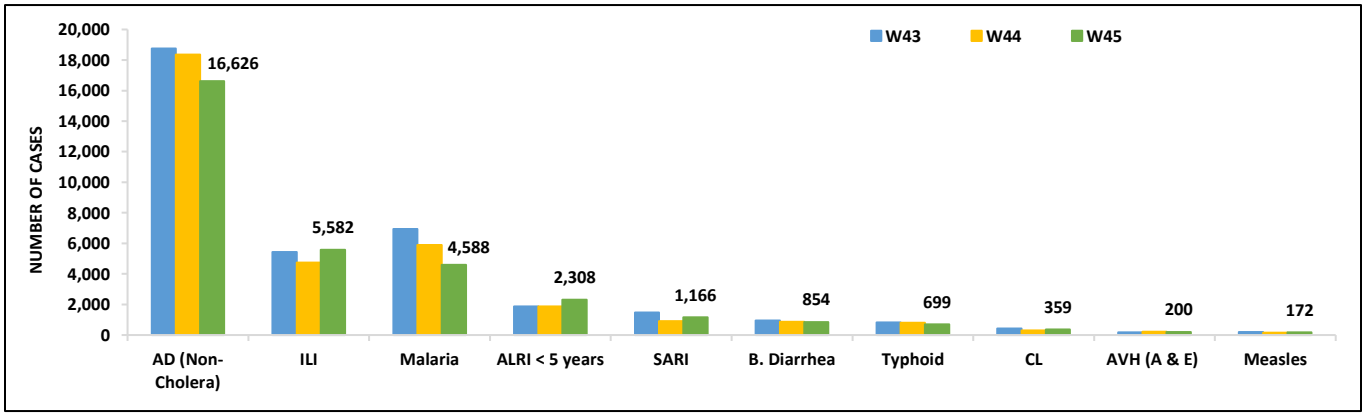
Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, SARI, B. Diarrhea, Typhoid, CL, AVH (A&E) and Measles cases.
- ILI cases showed a rise this week.
- Upper Kurrum, Peshawar and Dir Lower have reported SARI cases in high numbers. These are suspected cases and a field investigation is required to verify cases.

Table 4: District wise distribution of most frequently reported suspected cases during week 45, KP

Districts	AD (Non-Cholera)	ILI	Malaria	ALRI <5 Years	SARI	B. Diarrhea	Typhoid	CL	AVH (A & E)	Measles
Abbottabad	379	33	3	20	23	2	10	0	0	1
Bajaur	100	15	28	31	49	9	0	2	0	2
Bannu	699	65	839	7	1	13	48	0	2	2
Battagram	165	421	96	0	0	1	0	1	2	2
Buner	242	0	343	0	0	0	9	0	0	3
Charsadda	849	325	417	49	91	36	14	17	7	0
Chitral Lower	174	81	12	13	26	17	8	8	3	0
Chitral Upper	97	7	1	17	5	6	23	0	2	0
D.I. Khan	864	6	334	6	28	15	2	6	0	26
Dir Lower	908	0	467	125	5	66	41	3	35	18
Dir Upper	296	10	7	34	0	14	16	5	4	1
Hangu	204	163	367	11	53	18	8	62	5	1
Haripur	970	739	21	251	59	4	58	0	38	0
Karak	251	74	207	3	0	0	5	31	0	22
Khyber	96	0	62	18	0	31	4	0	0	0
Kohat	55	0	22	1	0	0	0	2	0	0
Kohistan Lower	75	0	4	33	0	15	1	0	0	0
Kohistan Upper	250	28	14	5	8	2	41	0	0	6
Kolai Palas	49	0	4	11	13	2	0	0	0	0
L & C Kurram	13	100	0	0	0	3	4	0	0	0
Lakki Marwat	364	0	254	80	0	30	12	7	0	2
Malakand	507	0	38	44	7	45	19	35	31	13
Mansehra	347	527	2	45	105	16	1	0	8	2
Mardan	1,045	148	31	837	0	27	0	15	5	1
Mohmand	189	60	155	12	17	17	27	82	0	1
Nowshera	1,324	6	66	3	24	11	18	15	3	1
Peshawar	2,551	1,278	66	197	228	165	63	4	14	28
Shangla	324	26	102	31	20	4	17	0	0	4
SWA	76	359	159	201	60	35	63	41	2	6
Swabi	888	491	39	110	8	12	30	0	7	4
Swat	1,727	249	17	86	0	14	3	0	23	7
Tank	244	0	328	4	0	5	55	15	0	2
Tor Ghar	40	0	77	1	14	17	7	8	2	0
Upper Kurram	264	371	6	22	322	202	92	0	7	17
Total	16,626	5,582	4,588	2,308	1,166	854	699	359	200	172

Figure 4: Most frequently reported suspected cases during week 45, KP



ICT, AJK & GB

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

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

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

Figure 5: Week wise reported suspected cases of ILI, ICT

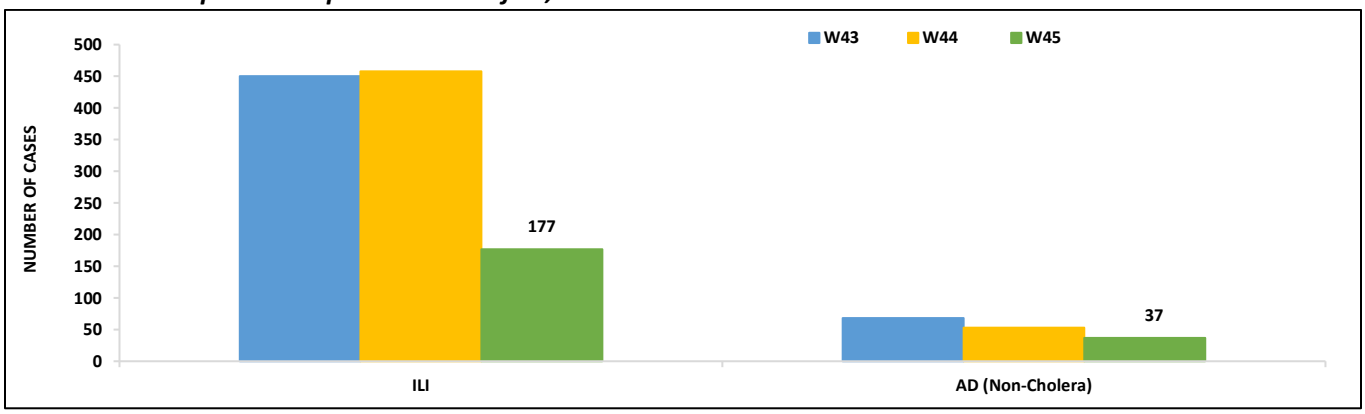


Figure 6: Week wise reported suspected cases of ILI, ICT

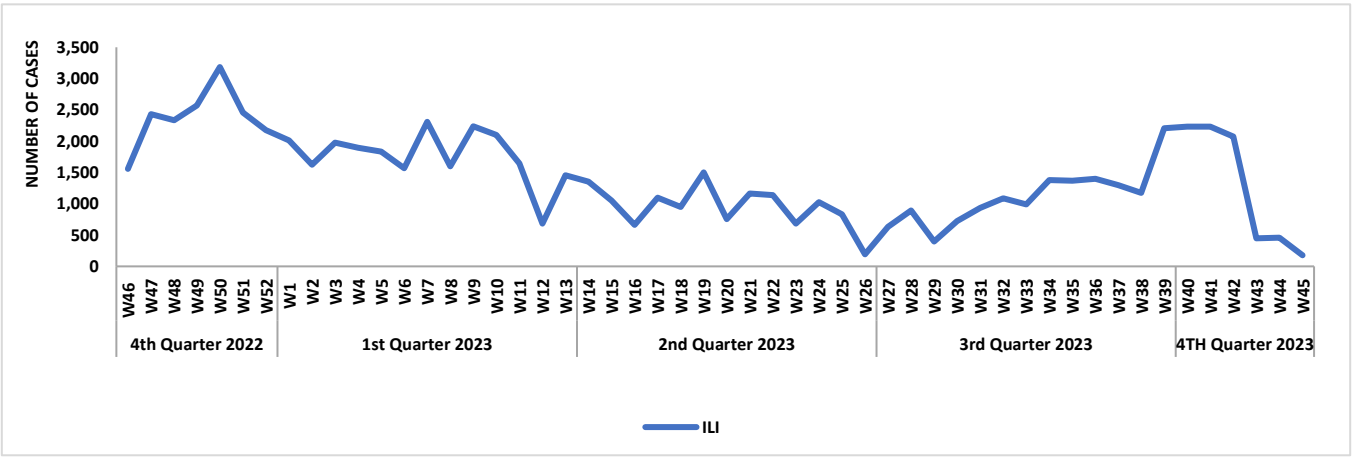


Figure 7: Most frequently reported suspected cases during week 45, AJK

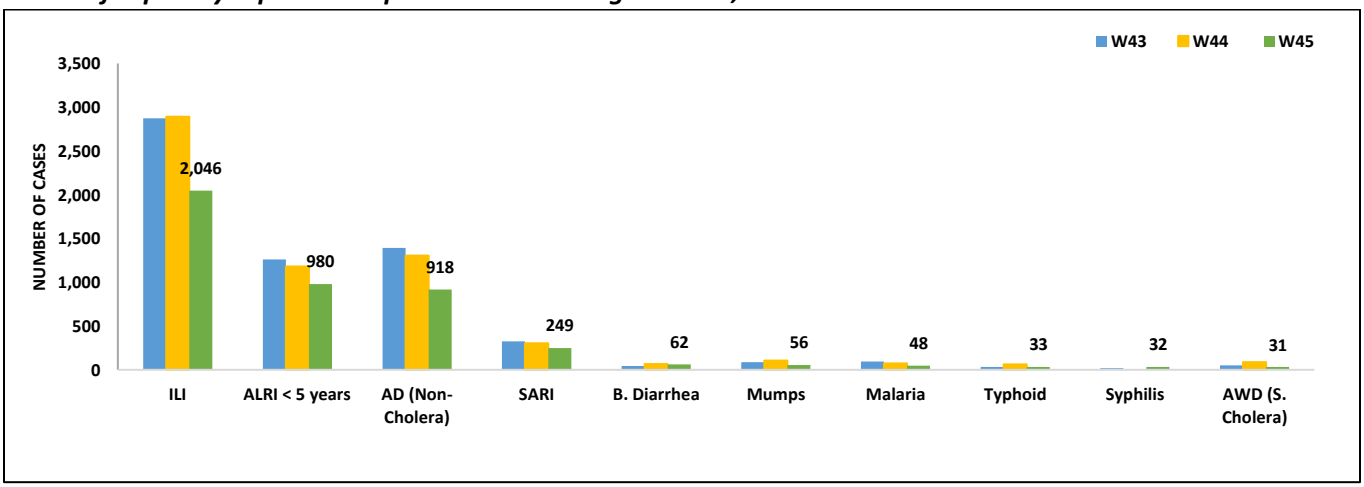


Figure 8: Week wise reported suspected cases of ILI, ALRI and ILI, AJK

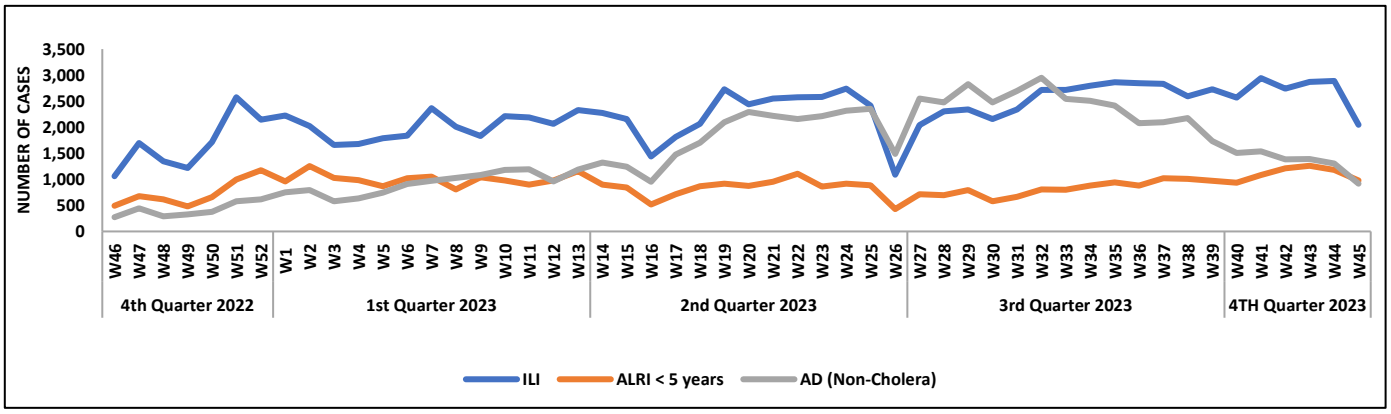


Figure 9: Most frequent cases reported during WK 45, GB

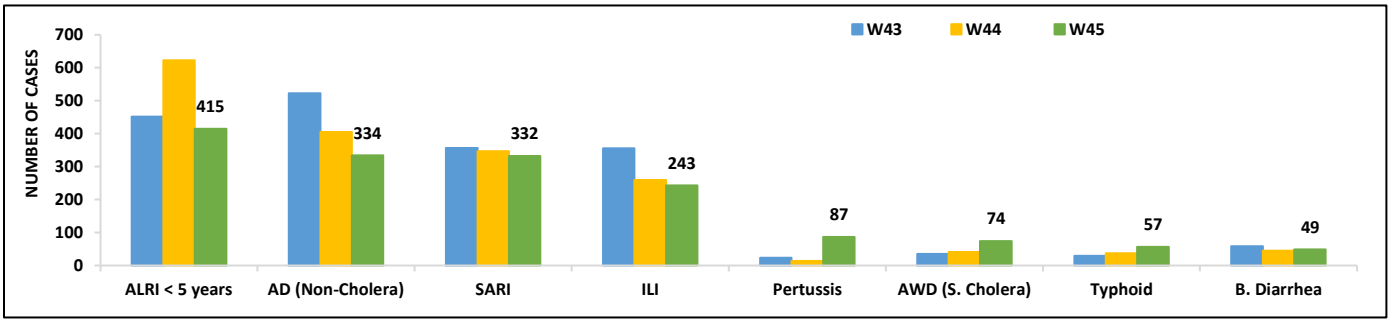
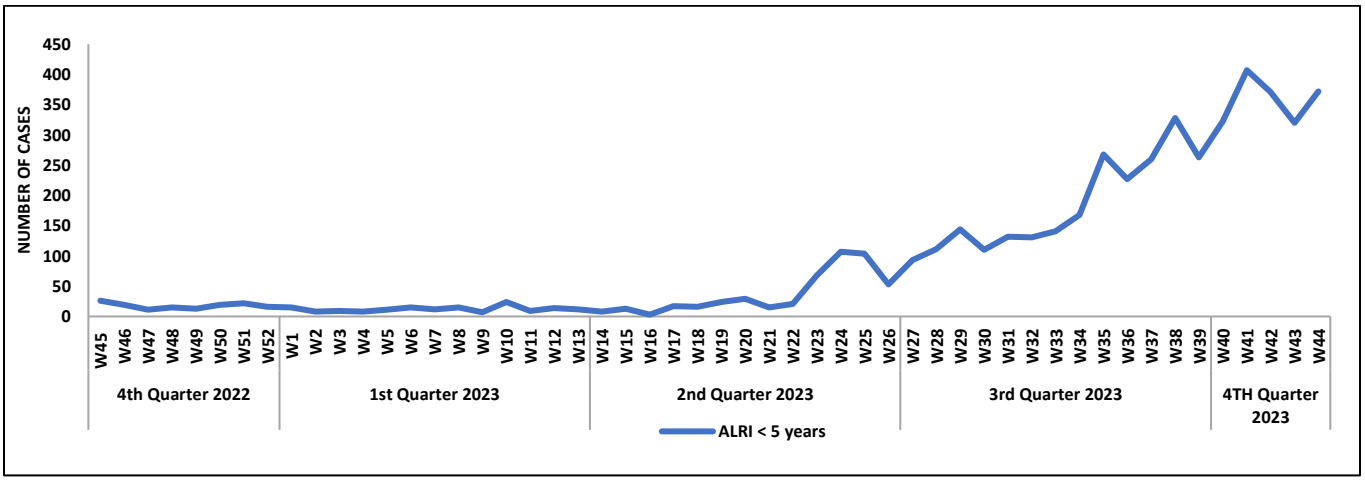


Figure 10: Week wise reported suspected cases of ALRI, GB



Punjab

- Cases of AD (Non-Cholera) were the most frequently reported followed by Typhoid, Malaria and B. Diarrhea. AD (Non-cholera) cases showed a decline trend this week

Figure 11: District wise distribution of most frequently reported suspected cases during week 45, Punjab

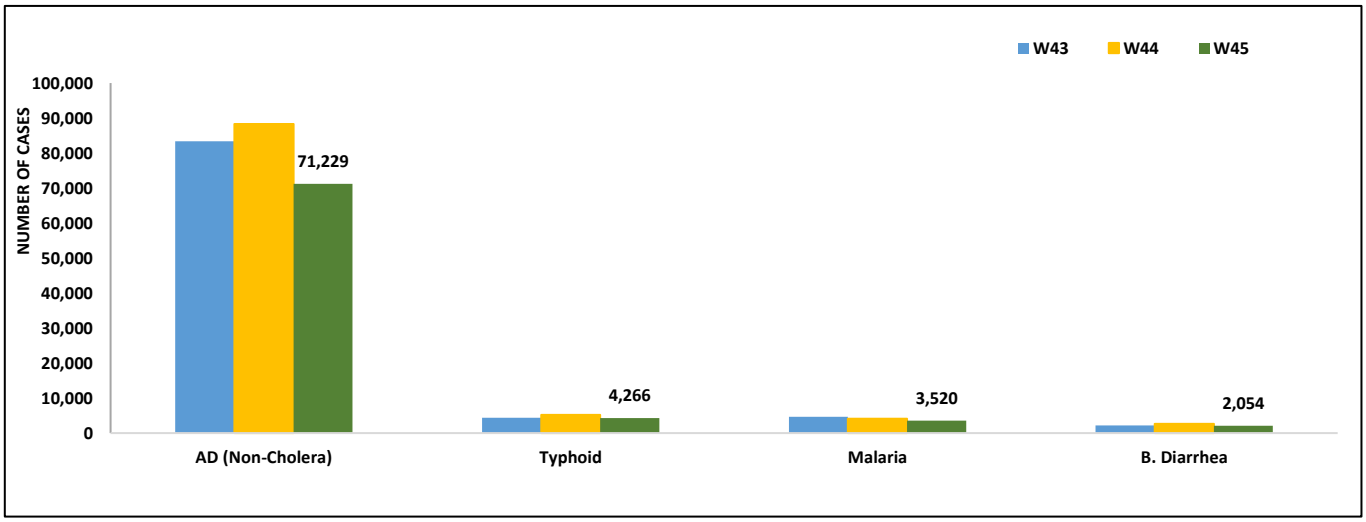


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 45

Diseases	Sindh	Balochistan	Punjab	KPK	ISL	Gilgit
Acute Watery Diarrhoea (S. Cholera)	1	0	-	0	0	0
Acute diarrhea(non-cholera)	0	0	-	0	0	0
Malaria	69	0	-	0	0	0
CCHF	0	7	-	2	0	0
Dengue	38	0	-	0	15	0
MPOX	0	0	-	0	0	0
Acute Viral Hepatitis(B)	0	0	-	0	3	1
Acute Viral Hepatitis(C)	0	8	-	0	0	1
Acute Viral Hepatitis(E)	0	0	-	0	0	0
Typhoid	6	0	-	0	1	0
Covid 19	0	1	-	0	0	0
Tb	0	0	-	0	0	0

IDSR Reports Compliance

- Out OF 121 IDSR implemented districts, compliance is low from ICT & Gilgit Baltistan districts. Green color showing >50% compliance while red color is <50% compliance

Table 6: IDSR reporting districts Week 45

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	110	102	93%
	Bannu	244	90	37%
	Battagram	63	18	29%
	Buner	33	27	82%
	Bajaur	44	13	30%
	Charsadda	59	56	95%
	Chitral Upper	34	27	79%
	Chitral Lower	35	34	97%
	D.I. Khan	94	88	94%
	Dir Lower	74	71	96%
	Dir Upper	52	42	81%
	Hangu	22	22	100%
	Haripur	71	60	85%
	Karak	39	39	100%
	Khyber	64	12	19%
	Kohat	96	61	64%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	69	69	100%
	Lower & Central Kurram	40	7	18%
	Upper Kurram	42	16	38%
	Malakand	48	37	77%
	Mansehra	150	81	54%
	Mardan	80	73	91%
	Nowshera	54	52	96%
	North Waziristan	22	0	0%
	Peshawar	152	117	77%
	Shangla	65	19	29%
	Swabi	67	64	96%
	Swat	76	68	89%
	South Waziristan	78	42	54%
	Tank	34	27	79%
	Torghar	18	18	100%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	42	15	36%
	Kotli	60	60	100%
	Muzaffarabad	45	43	96%
	Poonch	46	46	100%
	Haveli	39	0	0%
	Bagh	40	14	35%
	Neelum	39	37	95%
	Jhelum Vellay	29	29	100%

	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	35	12	34%
	CDA	35	12	34%
Balochistan	Gwadar	73	19	26%
	Kech	39	0	0%
	Khuzdar	20	20	100%
	Killa Abdullah	20	0	0%
	Lasbella	55	55	100%
	Pishin	62	7	11%
	Quetta	43	19	44%
	Sibi	36	36	100%
	Zhob	39	33	85%
	Jaffarabad	16	16	100%
	Naserabad	37	37	100%
	Kharan	33	30	91%
	Sherani	18	16	89%
	Kohlu	75	71	95%
	Chagi	35	28	80%
	Kalat	41	40	98%
	Harnai	17	15	88%
	Kachhi (Bolan)	35	35	100%
	Jhal Magsi	26	26	100%
	Sohbat pur	25	25	100%
	Surab	32	11	34%
	Mastung	45	45	100%
	Loralai	33	25	76%
	Killa Saifullah	28	27	96%
	Ziarat	29	25	86%
	Duki	31	22	71%
	Nushki	32	30	94%
	Dera Bugti	45	26	58%
	Washuk	46	23	50%
	Panjgur	38	12	32%
	Awaran	23	0	0%
	Chaman	24	20	83%
	Barkhan	20	20	100%
	Hub	33	33	100%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	31	97%
	Nagar	20	0	0%
	Ghizer	62	3	5%
	Gilgit	40	40	100%
	Diamer	78	24	31%
	Astore	54	2	4%
	Shigar	27	23	85%
	Skardu	52	43	83%
	Ganche	29	9	31%
	Kharmang	46	8	17%

Sindh	Hyderabad	73	32	44%
	Ghotki	64	64	100%
	Umerkot	43	30	70%
	Naushahro Feroze	107	62	58%
	Tharparkar	282	253	90%
	Shikarpur	60	60	100%
	Thatta	53	42	79%
	Larkana	67	60	90%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	21	91%
	Karachi-West	20	20	100%
	Karachi-Malir	37	20	54%
	Karachi-Kemari	18	8	44%
	Karachi-Central	11	10	91%
	Karachi-Korangi	18	11	61%
	Karachi-South	4	4	100%
	Sujawal	54	35	65%
	Mirpur Khas	106	98	92%
	Badin	124	110	89%
	Sukkur	64	64	100%
	Dadu	90	89	99%
	Sanghar	100	100	100%
	Jacobabad	44	43	98%
	Khairpur	168	166	99%
	Kashmore	59	57	97%
	Matiari	42	41	98%
	Jamshoro	68	68	100%
	Tando Allahyar	54	49	91%
	Tando Muhammad Khan	40	40	100%
	Shaheed Benazirabad	124	124	100%

A note from Field Activities.

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

Outbreak Investigation of Chickenpox at a Private School in District and Tehsil Jhang (UC 89 & 96) from 10th-13th November 2023

Introduction

Chickenpox is a highly contagious viral infection characterized by an itchy, blister-like rash. It is caused by the varicella-zoster virus and primarily affects children. While chickenpox is usually mild and self-limiting, it can lead to serious complications in vulnerable populations such as pregnant women, newborns, and immunocompromised individuals.

Background

In November 2023, several cases of chickenpox were reported from a private school in Jhang, Pakistan. Upon investigation, it was found that the cases were clustered within a single class and that additional cases had been reported to private clinics in the area. A team of epidemiologists was dispatched to Jhang to investigate the suspected outbreak.

Methods

A descriptive study followed by a case-control study was conducted using a standardized pre-tested questionnaire. The team interviewed school staff, parents of infected children, and community members to gather information about the outbreak.

Results

A total of 19 cases of chickenpox were confirmed among school children, and 13 additional cases were identified through active surveillance in the community. The index case was traced to a nursery class student who had recently traveled to attend a large gathering where they were in close contact with a young adult with maculopapular rashes. The incubation period for the majority of cases was consistent with the date of the gathering.

Discussion

The outbreak of chickenpox at the private school in Jhang highlights the importance of immunization and infection prevention and control (IPC) practices in school settings. The lack of vaccination among students and the absence of proper IPC measures likely contributed to the spread of the virus.

Recommendations

To prevent future outbreaks of chickenpox and other communicable diseases in educational institutions, the following recommendations are made:

1. Disseminate accurate information about chickenpox, including its signs and symptoms, diagnostic criteria, and the importance of timely reporting.
2. Implement enhanced surveillance measures to monitor the spread of the virus and identify new cases promptly.
3. Provide support and resources for vulnerable groups, such as pregnant women, newborns, and immunocompromised children, to ensure they have access to appropriate care and prevention measures.
4. Work closely with schools to identify and manage cases, ensuring appropriate measures are in place to prevent the spread of chickenpox within educational settings.
5. Promote routine vaccination against chickenpox among eligible children to reduce the risk of outbreaks and complications.

A Note from Field Activities.

Outbreak Investigation of Acute Watery Diarrhea (AWD) in Town Area of Sibi

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

Introduction

Acute watery diarrhea (AWD) is a common public health concern in Balochistan, Pakistan, particularly in areas with poor sanitation and access to clean water. In November 2023, there was an outbreak of AWD in the Town area of Sibi, Pakistan.

This report describes the investigation of the outbreak and the recommended interventions to prevent future outbreaks.

Methods

An outbreak investigation was conducted in Sibi from November 01st to November 12th, 2023. A structured questionnaire of the IDSR for AWD was used to assess the clinical signs and symptoms, as well as a source of drinking water, travel history, treatment history, and contact tracing done with the suspected patients. Lab Results Are Awaited.

Results

A total of 297 suspected cases of AWD were reported during the outbreak period. The affected population included individuals of various age groups, with a slight predominance of cases among the <5 Years to 5 years age group. 56.6% of cases were male, while 43.3% were female. Common clinical symptoms among suspected cases included Abdominal Cramps, diarrhea, and vomiting. Cases were dispersed throughout the Town area of Sibi, with specific clusters identified in Luni Road, Police line and Allahabad area. Lab Results for stool and water samples taken during investigation are Awaited. The investigation strongly suggests that the primary mode of transmission for this outbreak was the consumption of contaminated water, with secondary person-to-person transmission occurring within households and close communities.

Discussion

The recent outbreak of acute watery diarrhea (AWD) in Sibi, Pakistan, has highlighted the critical need for prompt and coordinated action among healthcare authorities, local communities, and relevant stakeholders to effectively control the spread of waterborne diseases and enhance overall public health resilience.

Recommendations

1. Promoting hand washing with soap and water: Hand washing is the most important measure for preventing the spread of AWD. People should wash their hands frequently, especially before eating, after using the toilet, and after cleaning up feces.
2. Ensuring access to clean water: People should drink only clean water from a safe source.
3. Practicing safe food handling and storage: Food should be cooked thoroughly, especially seafood and shellfish. Vegetables and fruits should be washed thoroughly before eating. Food should be stored at a safe temperature to prevent the growth of bacteria.
4. Improving sanitation infrastructure: Adequate sanitation infrastructure, such as toilets and latrines, is essential for preventing the spread of AWD. People should dispose of feces properly and avoid open defecation.
5. Providing oral rehydration solutions (ORS): ORS can help to prevent and treat dehydration, which is a serious complication of AWD. ORS is available at most pharmacies and health centers.
6. Vaccinating children against rotavirus: Rotavirus is a common cause of AWD in children. Vaccination can help to protect children from this disease.

A Note from Field Activities.

Advancing Public Health in Punjab: IDSR District Master Trainers Program Fosters Data-Driven Decision-Making

Dr. Shahban Nadeem
Manager Operations,
CD&EPC, Punjab

The Integrated Disease Surveillance and Response (IDSR) system serves as a cornerstone of Pakistan's public health infrastructure. This system facilitates the collection, analysis, and dissemination of disease-related data, enabling early detection and prompt response to outbreaks.

In a concerted effort to bolster the IDSR system, the Primary and Secondary Healthcare

Department of the Ministry of Health Punjab, in collaboration with the National Institute of Health Islamabad and UKHSA, conducted an intensive training program for IDSR District Master Trainers in Multan from October 31 to November 2, 2023. This training initiative engaged the participation of over 25 individuals from across Punjab.

Training Program Overview

The training program encompassed a comprehensive curriculum, delving into various critical aspects of the IDSR system. The participants gained a thorough understanding of the IDSR system's structure, purpose, and overarching importance in safeguarding public health. The training emphasized the meticulous collection and accurate reporting of disease-related data, ensuring timely identification

and monitoring of potential outbreaks, and acquire essential skills in conducting thorough outbreak investigations, encompassing case identification, contact tracing, and risk assessment. The training also highlighted the crucial role of laboratory testing in outbreak investigations and disease surveillance, providing participants with insights into specimen collection, handling, and testing procedures. Participants were equipped with the knowledge and skills to effectively manage and analyze disease-related data, ensuring its utilization for informed decision-making.

To solidify their understanding and practical skills, participants were immersed in a simulated outbreak scenario. This hands-on exercise provided them with the opportunity to apply the acquired knowledge and techniques in a realistic setting, further enhancing their preparedness for real-world outbreak management.

The IDSR District Master Trainers training program emerged as a resounding success, contributing significantly to the strengthening of Pakistan's IDSR system. The newly trained master trainers will be empowered to cascade their expertise to IDSR staff at the district level, fostering a culture of enhanced data collection and reporting practices. Ultimately, these improvements in data quality and timeliness will translate into better public health outcomes for the people of Pakistan.

The training on IDSR District Master Trainers held in Multan marked a pivotal step in solidifying Pakistan's IDSR system. The trained master trainers will serve as catalysts for improvement, ensuring the effective dissemination of disease-related data and enabling timely outbreak response. This collective effort will undoubtedly contribute to the advancement of public health and well-being in Pakistan.

Letter to the Editor:

Punjab Grapples with Persistent Smog Despite 'Smart Lockdown' Measures

Dr. Muhammad Ali Mirza
District Surveillance coordinator
Rawalpindi.

Lahore, Pakistan, is facing a persistent smog crisis, with the city's air quality index (AQI) reaching a very unhealthy score of 224. The main culprit is PM2.5, a fine particulate matter that

can penetrate the lungs and bloodstream, posing severe health risks.

In response to the deteriorating air quality, the Punjab government imposed a 'smart lockdown' in Lahore and other districts on Nov 18, closing schools, colleges, universities, and offices. However, these measures appear to have had little effect, as smog continues to blanket the city.

Numerical value	Air Quality Index levels of health concern
0 to 50	Good
51 to 100	Moderate
101 to 150	Unhealthy for sensitive groups
151 to 200	Unhealthy
201 to 300	Very Unhealthy
301 to 500	Hazardous

The ineffectiveness of the lockdown may be partly attributed to continued vehicular traffic and inadequate compliance with the restrictions. Moreover, the root causes of smog, such as low wind speed, high humidity, temperature inversion, and emissions from vehicles, industries, and brick kilns, remain unaddressed.

The smog poses significant health hazards, particularly for those with respiratory and cardiovascular conditions, children, the elderly, and pregnant women. Symptoms of smog exposure include coughing, wheezing, chest pain, eye irritation, headache, nausea, and fatigue.

To mitigate the harmful effects of smog, experts recommend wearing masks, using air purifiers, avoiding outdoor activities during peak hours, and seeking medical attention if necessary.

The Punjab government had already intensified its efforts to combat smog, implementing stricter emission controls, promoting clean energy sources, and encouraging public awareness campaigns. The Punjab Government also announced a 1-week mandate for wearing of face masks for all citizens in smog-affected districts of Punjab. Addressing the smog crisis requires a multi-pronged approach that tackles both local and trans-boundary sources of pollution.

Precautionary Measures

Smog exposure can lead to a range of adverse health effects, including respiratory problems such as sore throat, coughing, and fever; eye irritation; itchy skin; and headaches. To minimize the impact of smog on health, it is crucial to adopt preventive measures:

1. Limit Outdoor Activities: Reduce unnecessary outdoor activities during periods of high smog concentrations.
2. Protective Gear: Utilize N95 face masks and goggles when engaging in outdoor activities to minimize inhalation of smog particles.
3. Avoid Smoking: Refrain from smoking, as it exacerbates the negative effects of smog on respiratory health.
4. Indoor Air Quality: When indoors, keep windows and other air inlets closed to reduce the penetration of smog particles.
5. Personal Hygiene: Wash your eyes and hands thoroughly after any outdoor activity to remove accumulated smog particles.
6. Hydration: Maintain adequate hydration by drinking plenty of water to help the body eliminate toxins and support overall health.
7. Driving Precautions: Drive slowly and utilize fog lights during periods of reduced visibility due to smog.
8. Weather Updates: Stay informed about weather forecasts and smog alerts throughout the winter season.
9. Inhaler Access: For individuals with asthma or Chronic Obstructive Pulmonary Disease (COPD), always carry their inhaler readily available.
10. Seek Medical Attention: Promptly seek medical attention if you experience any worsening of respiratory symptoms or other health concerns related to smog exposure.

Knowledge Hub

Chicken Pox: A Comprehensive Guide to Awareness and Prevention

Chicken pox, a highly contagious childhood illness caused by the varicella-zoster virus, is characterized by an itchy rash of blister-like lesions

that progress through distinct stages of development. While typically mild and self-limiting, chicken pox can cause significant discomfort and occasionally lead to complications. Knowing the signs, symptoms, and preventive measures is crucial for effectively managing chicken pox and protecting others from infection.

Symptoms and Signs of Chicken Pox

The onset of chicken pox is often marked by a fever, headache, and malaise, followed by the appearance of an itchy, red rash. This rash typically begins on the face and scalp, spreading to the body and extremities. The lesions progress through distinct stages:

1. Macules: Small, flat, red spots appear on the skin.
2. Papules: The red spots develop into raised bumps.
3. Vesicles: Fluid-filled blisters form on top of the papules.
4. Pustules: The blisters become cloudy or yellow as the fluid turns into pus.
5. Scabs: The pustules dry up and form scabs, which eventually fall off, leaving behind pink or white marks that may take weeks to fade.

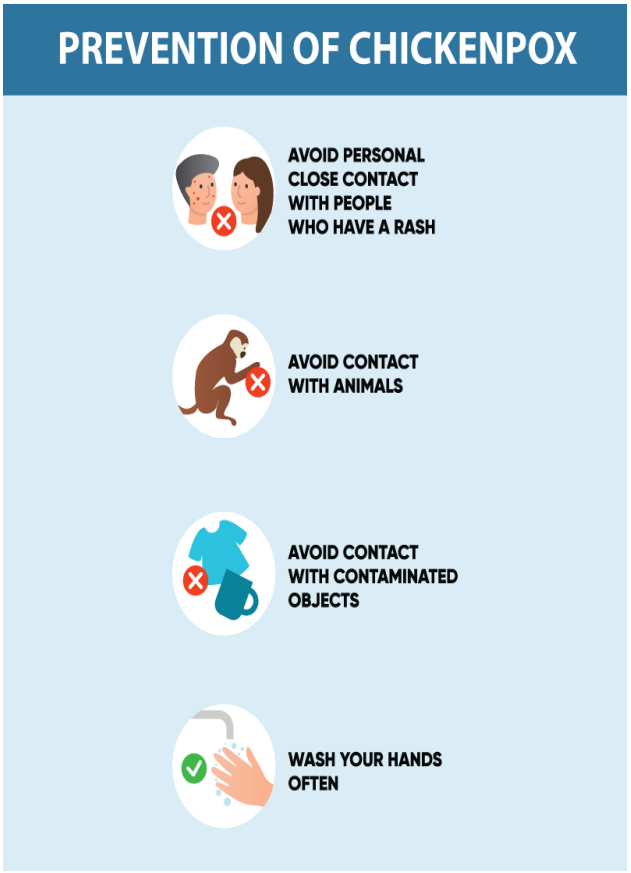
Preventive Measures to Shield Against Chicken Pox

Fortunately, the introduction of the varicella vaccine in the late 1990s has significantly reduced the incidence of chicken pox worldwide. Vaccination is highly effective, preventing up to 98% of cases and minimizing the severity of breakthrough infections. The Centers for Disease Control and Prevention (CDC) recommends two doses of the varicella vaccine, one at 12-15 months of age and the second at 4-6 years of age.

Apart from vaccination, additional preventive measures can help curb the spread of chicken pox:

1. Isolation: Chicken pox is highly contagious, especially during the first 5-7 days after the rash appears. Isolating infected individuals from others can help prevent the spread of the virus.
2. Good Hygiene: Frequent hand washing with soap and water, especially after touching lesions or contaminated surfaces, is essential to prevent the spread of the virus.
3. Avoidance of Contact: Avoiding direct contact with infected individuals, especially those with active lesions, is crucial to minimize the risk of transmission.
4. Disinfection: Disinfecting frequently touched surfaces and objects can help eliminate the virus and prevent further transmission.
5. Covering Lesions: Covering lesions with loose-fitting clothing or bandages can prevent scratching and the spread of the virus through contact with other individuals or surfaces.

Chicken pox, though often mild, can cause significant discomfort and occasional complications. Understanding the symptoms, signs, and preventive measures is crucial for effectively managing chicken pox and protecting others from infection. Vaccination is the most effective preventive measure, and additional precautions such as isolation, good hygiene, and disinfection can further curtail the spread of the virus. With proper management, chicken pox can be successfully resolved and its impact minimized.



Public Health Bulletin- Pakistan

World AMR Awareness Week, November 18th to 24th, 2023, A global initiative dedicated to combating the escalating threat of antibiotic resistance.

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