PUBLIC HEALTH BULLETIN-PAKISTAN

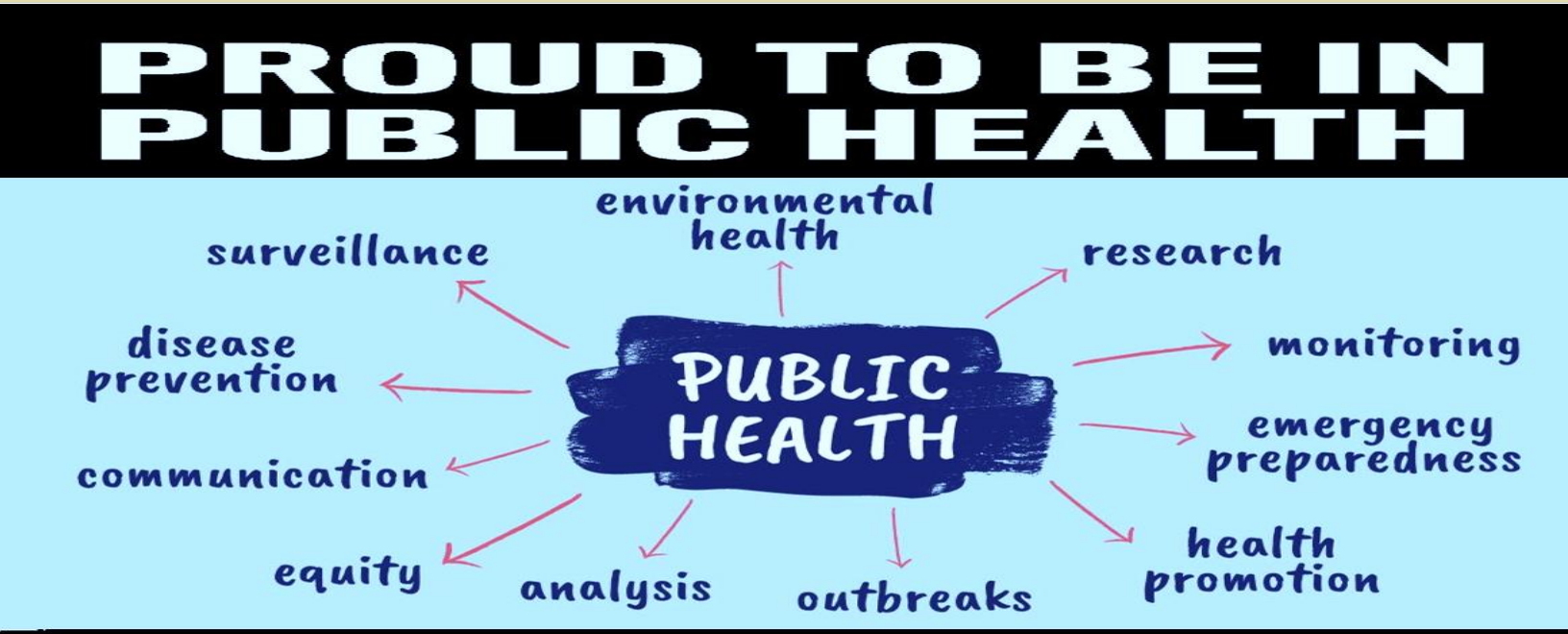
Vol. 3 | Week 30
08th Aug 2023

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. Together, let's build a safer, more resilient and healthier future for everyone.



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Greetings
Team PHB-Pakistan

Preface

The Weekly Public Health Bulletin-Pakistan provides an overview of the most important public health events that occurred during week 30 of 2023. The most reported diseases during the week were Acute Diarrhea, Malaria, ILI, ALRI, B. Diarrhea, Typhoid, VH (B&C), SARI, AWD, AVH (A&E). There are a high number of suspected VH (B&C) cases reported from Sindh. Cases of CL were reported mostly from KP and Balochistan. Overall number of reported cases decreased this week compared to the previous week. We need to remain vigilant and continue to monitor the situation.

The PHB team would like to express its sincere gratitude to all of the health workers who have contributed to the reporting of these cases. We would also like to remind the public to stay vigilant and to seek medical attention immediately if they experience any symptoms of these diseases.

This week's bulletin also includes an update on PHB activities, on field activities and surveillance reports on Measles cases of Karak and acute watery diarrhea cases of Malakand. Polio case response activities in district Rawalpindi and a knowledge review on acute flaccid Paralysis.

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Sincerely,
The Chief Editor

- During week 30, most frequent reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, ALRI <5 years, B. Diarrhea, Typhoid, VH (B, C), SARI, AWD (suspected Cholera) and AVH (A&E).
- There is overall decrease in number of disease cases observed this week.
- High Number of VH (B&C) cases reported from Sindh. All are suspected cases and need field verification.
- Cases of Cutaneous Leishmaniasis (CL) reported mostly from KP and Balochistan. Case categorization is required to distinguish between old and new cases for management and control.

- All are suspected cases and need field verification.

IDSR compliance attributes

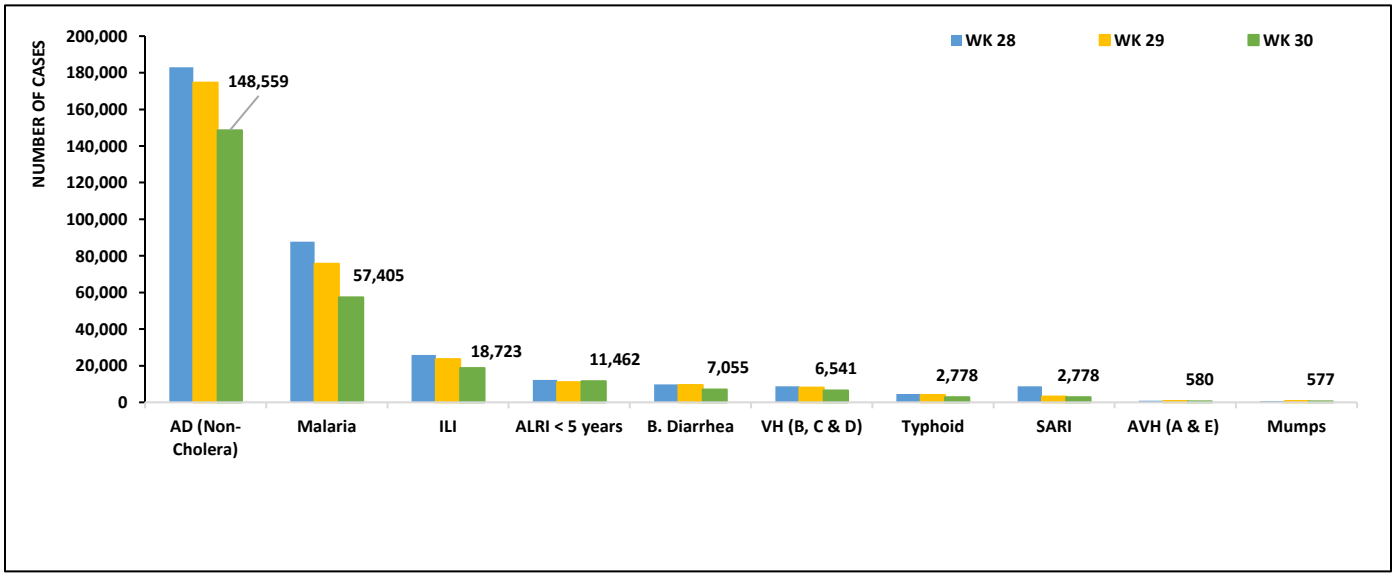
- *The national compliance rate for IDSR reporting in 125 implemented districts* is 74%
  AJK *and Sindh province are the top reporting region with a compliance rate of above 85% followed by Khyber Pakhtunkhwa with 77% and ICT 74%*
- *The lowest compliance rate was observed in Gilgit Baltistan.*

Region	*Expected Reports*	*Received Reports*	*Compliance (%)*
Khyber Pakhtunkhwa	1570	1207	77
Azad Jammu Kashmir	380	356	94
Islamabad Capital Territory	27	20	74
Balochistan	1101	550	50
Gilgit Baltistan	99	47	47
Sindh	1846	1546	85
National	5023	3726	74

Table 1: Province/Area wise distribution of most frequently reported cases during week 30, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
ILI	2011	2,360	37	668	3,585	317	9,745	18,723
AD (Non-Cholera)	2,298	4,807	219	349	26,347	79,966	34,573	148,559
Malaria	98	4,793	0	7	5,454	3,601	43,452	57,405
B. Diarrhea	110	1490	29	7	874	2,386	2159	7,055
Typhoid	111	591	9	0	699	3,734	1,397	6,541
SARI	288	736	38	0	1,181	NR	535	2,778
ALRI < 5 years	461	1272	48	0	733	2,636	6,312	11,462
CL	0	72	0	0	255	7	0	334
AWD (S. Cholera)	91	184	25	22	73	2,356	51	2,802
Measles	17	31	3	0	119	NR	64	234
Dog Bite	70	73	0	0	90	NR	316	549
Dengue	0	1	0	0	5	NR	71	77
VH (B & C))	7	76	0	0	59	NR	2636	2,778
Gonorrhea	11	99	0	0	5	NR	34	149
Pertussis	7	66	0	0	4	NR	12	89
VL	0	0	0	0	0	NR	0	0
NT	0	3	0	0	6	NR	8	17
Mumps	94	81	9	5	113	NR	275	577
AFP	6	0	0	0	20	NR	8	34
Chickenpox/ Varicella	28	21	0	4	101	67	9	230
AVH (A & E)	34	25	0	1	222	NR	298	580
Meningitis	1	5	0	0	7	NR	14	27
Syphilis	0	1	0	0	0	NR	10	11
Leprosy	0	13	0	0	0	NR	0	13
Diphtheria (Probable)	2	3	0	0	0	NR	0	5
Chikungunya	0	0	0	0	0	NR	0	0
Anthrax	2	7	0	0	0	NR	0	9
Brucellosis	0	4	0	0	0	NR	0	4
CCHF	0	0	0	0	0	NR	0	0
Rubella (CRS)	0	0	0	0	0	NR	0	0
HIV/AIDS	3	1	0	0	0	NR	7	11

Figure 1: Most frequently reported suspected cases during week 30, Pakistan



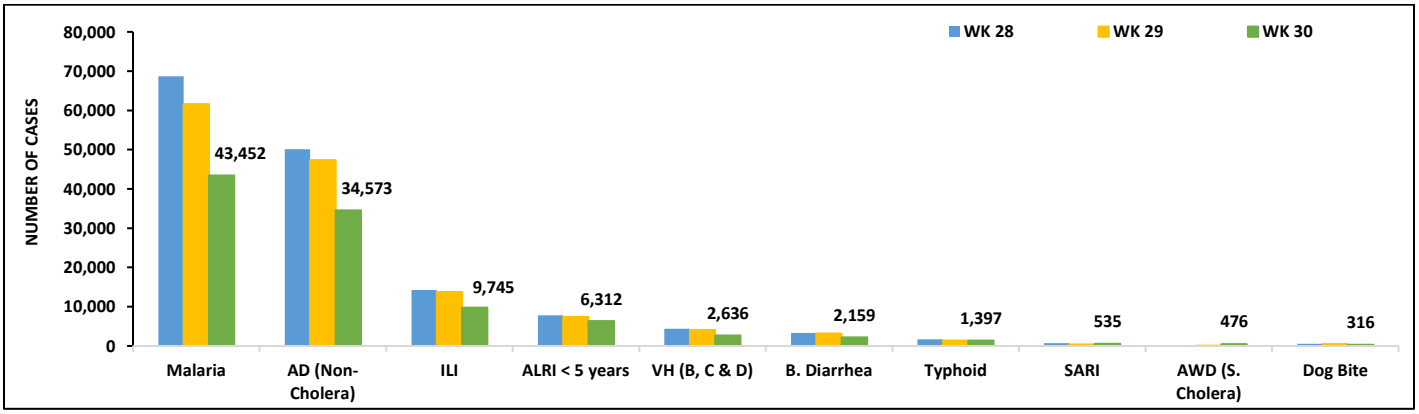
Sindh

- Malaria cases were most frequently reported cases, followed by AD (Non-Cholera), ILI, ALRI<5 Years, VH (B, C), B. Diarrhea, Typhoid, SARI, AWD (susp. Cholera) and dog bite.
- Malaria cases are from Larkana, Kambar, Khairpur, Dadu and Badin whereas AD cases are mostly from Badin, Dadu and Khairpur however, overall number of cases decreased this week.
- VH (B & C) cases reported in high numbers mostly reported from Sanghar, Badin, Sukkar and Jacobabad. Field investigation along with lab confirmation 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 30, Sindh

DISTRICTS	Malaria	AD (Non-Cholera)	ILI	ALRI < 5 years	B. Diarrhea	Typhoid	SARI	Measles	VH (B, C & D)	Dengue	Dog Bite
Badin	3,852	3,343	208	502	230	46	0	10	182	0	59
Dadu	2,198	2,283	10	517	140	85	2	0	3	0	0
Ghotki	540	777	0	252	71	38	0	1	299	0	0
Hyderabad	293	1,315	179	32	5	24	0	5	29	0	0
Jacobabad	1,078	911	58	960	94	38	23	41	140	0	26
Jamshoro	93	71	0	2	1	9	0	0	0	0	0
Kamber	3,731	1,863	0	172	63	11	0	0	39	0	0
Karachi Central	71	767	824	30	40	261	0	1	69	0	0
Karachi East	58	214	36	0	1	0	0	0	4	9	1
Karachi Keamari	3	228	74	20	0	2	0	1	0	0	0
Karachi Korangi	52	280	0	2	3	0	0	0	0	2	0
Karachi Malir	38	688	673	181	17	3	36	0	43	0	3
Karachi South	21	94	0	0	0	2	0	0	0	0	0
Karachi West	82	516	346	208	39	25	31	0	23	9	35
Kashmore	888	472	308	112	79	3	0	0	31	0	0
Khairpur	3,220	2,685	436	701	296	277	354	0	112	0	29
Larkana	7,288	1,197	0	191	167	0	0	0	64	0	0
Matiari	465	1,185	0	114	36	6	0	0	124	0	7
Mirpurkhas	2,882	1,765	1,924	185	63	53	0	0	34	0	0
Naushero Feroze	1,686	1,761	339	201	64	98	0	0	69	0	0
Sanghar	949	1,814	53	204	49	34	42	0	471	0	54
Shaheed Benazirabad	1,546	1,786	23	287	63	250	1	0	108	0	0
Shikarpur	926	874	0	104	81	1	2	1	106	0	0
Sujawal	1,052	437	0	168	51	0	0	0	3	0	2
Sukkur	1,834	1,390	1,315	266	192	21	1	1	212	0	0
Tando Allahyar	1,001	960	198	165	68	17	0	0	140	0	4
Tando Muhammad Khan	369	262	0	18	11	1	0	0	0	0	18
Tharparkar	2,144	1,308	1,129	436	124	14	11	1	61	51	3
Thatta	1,809	1,421	1,612	33	25	16	28	0	117	0	75
Umerkot	3,283	1,906	0	249	86	62	4	2	153	0	0
Total	43,452	34,573	9,745	6,312	2,159	1,397	535	64	2,636	71	316

Figure 2: Most frequently reported suspected cases during week 30, Sindh



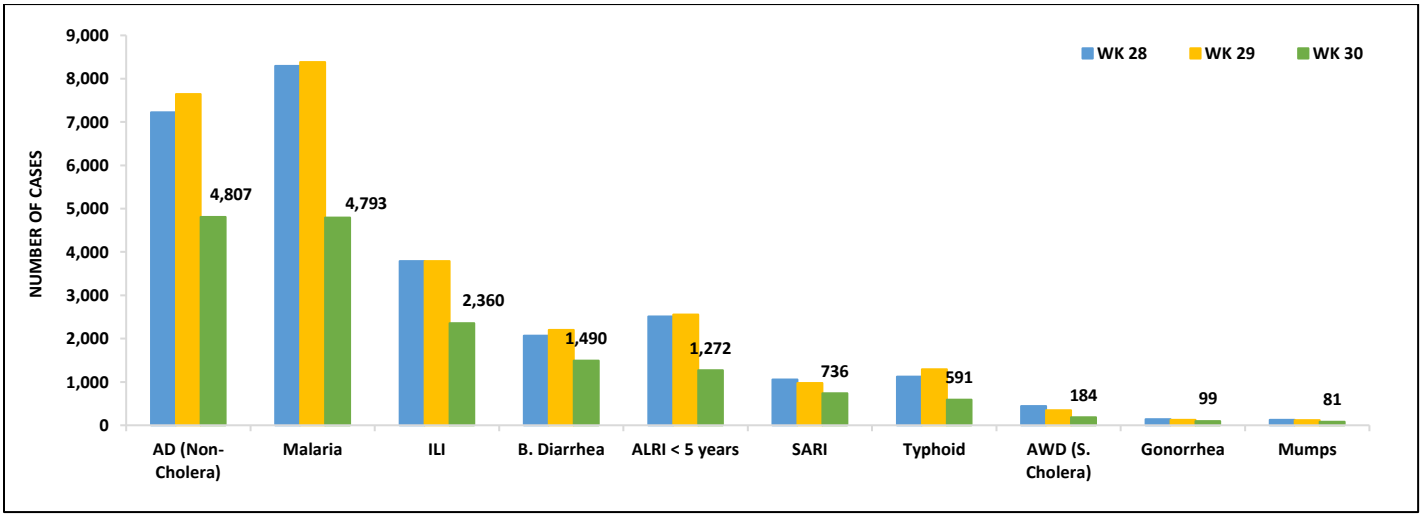
Balochistan

- AD (Non-Cholera), Malaria, ILI, B. Diarrhea, ALRI <5 years, SARI, Typhoid, AWD (S. Cholera), Gonorrhea and Mumps were the most frequently reported diseases from Balochistan province.
- There was overall downward trend for ILI, AD and Malaria cases this week.
- Cases of Typhoid reported from Lesbella, Panjgur, Mastung and Sobatpur. All are suspected cases and need field investigation to verify the cases.

Table 3: District wise distribution of most frequently reported suspected cases during week 30, Balochistan

Districts	Malaria	AD (Non-Cholera)	ILI	B. Diarrhea	ALRI < 5 Years	Typhoid	SARI	CL	Dog Bite	AWD (S. Cholera)
Awaran	283	68	36	33	28	30	7	3	0	25
Chagai	10	150	169	39	0	26	3	0	1	3
Dera Bugti	245	42	15	37	21	20	15	0	1	9
Duki	16	23	19	21	1	7	6	2	0	3
Harnai	126	161	9	287	283	4	0	0	5	15
Jhal Magsi	591	314	0	15	40	8	13	0	13	29
Kachhi (Bolan)	83	74	28	29	7	27	24	0	0	3
Kech (Turbat)	102	138	252	11	56	1	0	0	0	0
Khuzdar	151	96	59	56	0	18	17	6	13	0
Kohlu	120	58	148	75	8	22	26	1	0	2
Lasbella	582	503	22	78	113	19	163	1	9	0
Loralai	73	210	178	43	43	26	75	0	0	8
Mastung	124	815	91	87	23	92	45	2	10	11
Naseerabad	475	167	0	12	7	44	1	0	4	3
Nushki	58	182	0	65	0	0	0	0	0	10
Panjgur	355	300	87	86	104	62	41	1	8	13
Pishin	18	157	140	72	22	13	3	21	3	0
Quetta	34	381	548	109	30	36	57	12	0	4
Sherani	13	13	28	8	0	7	2	8	2	2
Sibi	265	124	95	29	16	31	16	8	1	20
Sohbat pur	695	321	9	105	108	63	165	7	0	0
SURAB	2	1	0	0	0	0	0	0	0	0
Washuk	154	214	246	110	1	3	20	0	0	1
Zhob	190	225	102	62	341	26	32	0	0	10
Ziarat	28	70	79	21	20	6	5	0	3	13
Total	4,793	4,807	2,360	1,490	1,272	591	736	72	73	184

Figure 3: Most frequently reported suspected cases during week 30, Balochistan



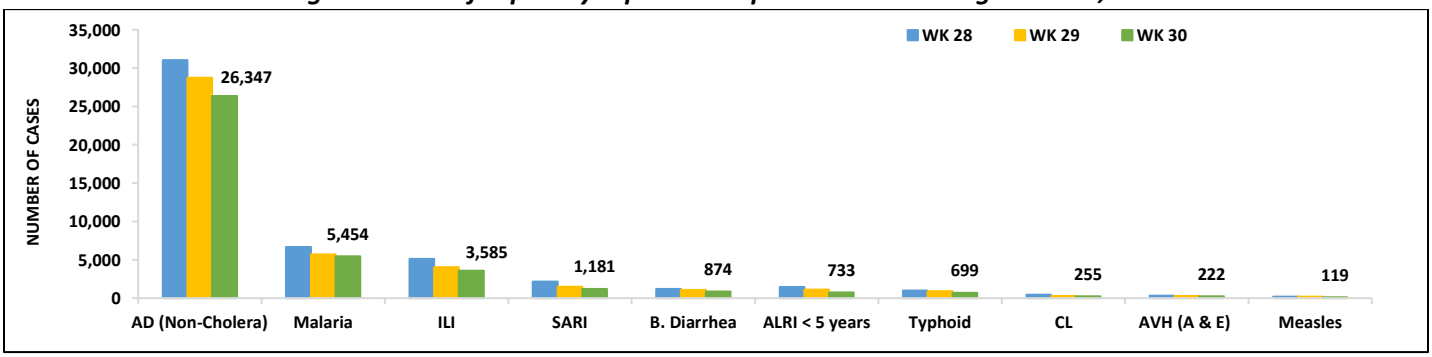
Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were the most frequently reported followed by Malaria, ILI, SARI, B. Diarrhea, ALRI<5 Years, Typhoid, CL, AVH (A&E) and Measles cases.
- There is decline trend for AD cases whereas Malaria and ILI cases remained same this week.
- Typhoid cases reported from Peshawar and Swat. These are suspected cases and a field investigation is required to verify the numbers.
- AD cases are endemic and public health measures are enhanced the province due to ongoing rains. Field investigation along with control measures are taking place in the affected districts of the province.

Table 4: District wise distribution of most frequently reported suspected cases during week 30, KP

Diseases	AD (Non-Cholera)	Malaria	ILI	SARI	ALRI < 5 years	B. Diarrhea	Typhoid	Dog Bite	AWD (S. Cholera)	AVH (A & E)
Abbottabad	772	3	5	6	7	1	16	1	0	0
Bajaur	82	46	1	0	0	3	2	0	3	0
Bannu	741	1,078	122	1	3	4	43	0	0	0
Buner	509	459	0	0	0	8	9	7	0	0
Charsadda	1,224	74	157	33	0	0	0	0	0	0
Chitral Lower	760	9	58	412	4	0	2	0	0	3
Chitral Upper	93	5	0	114	0	0	17	0	0	0
D.I. Khan	999	351	15	36	15	19	1	5	0	0
Dir Lower	2,247	588	76	2	75	128	47	8	0	3
Dir Upper	786	8	83	0	16	36	40	0	16	5
Hangu	395	384	467	117	7	36	15	2	0	10
Haripur	1,183	32	374	11	115	2	57	0	0	60
Karak	341	137	25	18	15	4	10	28	15	0
Khyber	10	44	62	3	3	4	5	0	1	0
Kohat	67	35	1	1	2	0	1	3	0	0
Kohistan Lower	120	8	0	140	7	27	0	0	0	0
Kohistan Upper	530	1	42	23	1	9	16	0	2	0
Kolai Palas	91	3	0	14	4	16	0	0	3	0
L & C Kurram	9	10	12	0	0	4	3	0	0	0
Lakki Marwat	507	881	0	0	11	13	28	0	0	0
Malakand	945	79	0	52	25	165	39	0	5	48
Mansehra	1,027	7	384	37	52	43	56	0	13	9
Mardan	1,316	49	539	48	137	30	0	0	0	7
Nowshera	2,162	108	50	14	0	33	22	0	0	11
Peshawar	2,734	124	474	35	71	145	101	3	0	17
Shangla	572	465	0	0	0	6	2	18	15	0
Swabi	1,592	30	370	44	82	11	21	7	0	35
Swat	4,275	81	266	0	81	92	127	3	0	7
Tank	156	235	0	0	0	3	6	0	0	0
Tor Ghar	102	120	2	20	0	32	13	5	0	7
Total	26,347	5,454	3,585	1,181	733	874	699	90	73	222

Figure 4: Most frequently reported suspected cases during week 30, KP



ICT, AJK & GB

ICT: The most frequently reported cases were of ILI followed by AD (Non-Cholera). ILI cases showed an upward trend in cases this week.

AJK: AD (Non-Cholera), ILI, ALRI <5 years, SARI, Typhoid, B. Diarrhea,Malaria, Mumps, AWD (S. Cholera), and dogbite were the most frequently reported diseases this week. Both ILI and ALRI <5 years cases showed a downward trend in cases this week.

GB: AD (Non. Cholera), ALRI<5 years, SARI, ILI, B. Diarrhea, AWD (susp. Cholera), typhoid, mumps and Measles. Overall decrease in reported cases for all diseases observed. There is decline rend in AD cases this week.

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

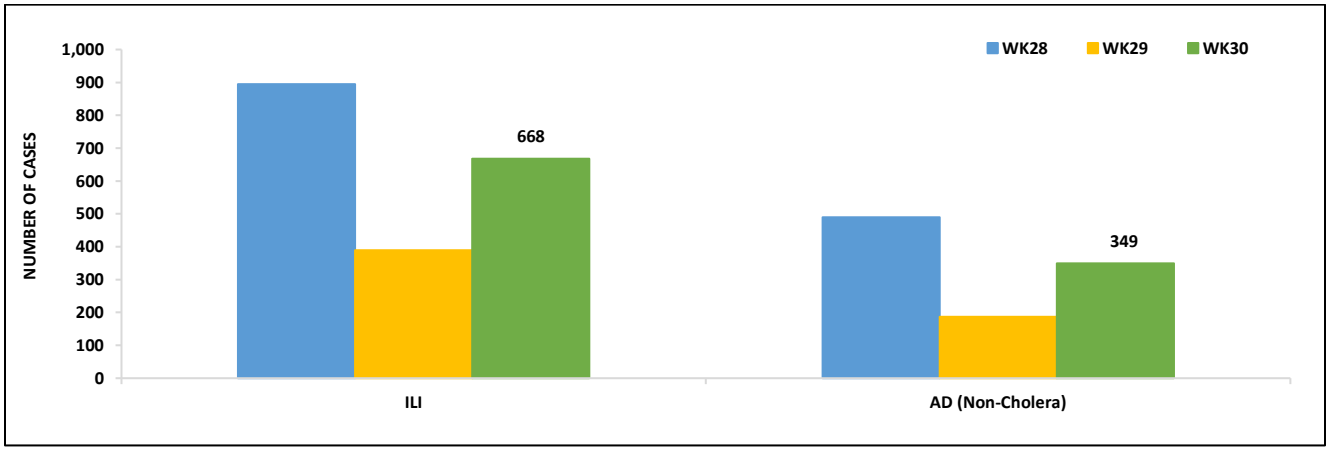


Figure 6: Week wise reported suspected cases of ILI, ICT

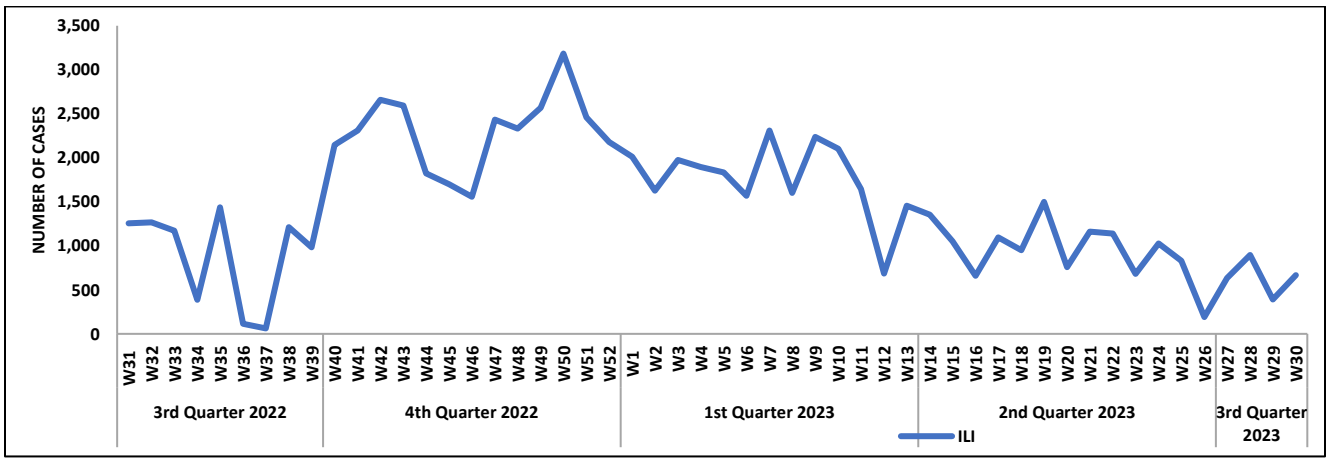


Figure 7: Most frequently reported suspected cases during week 30, AJK

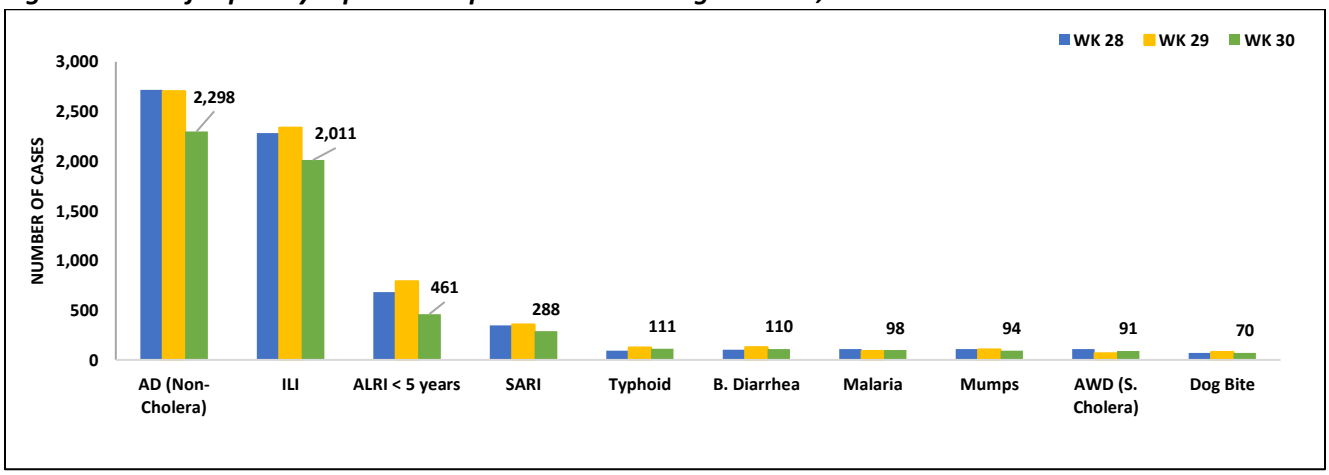


Figure 8: Week wise reported suspected cases of AD (Non-Cholera) and ALRI <5 years, AJK

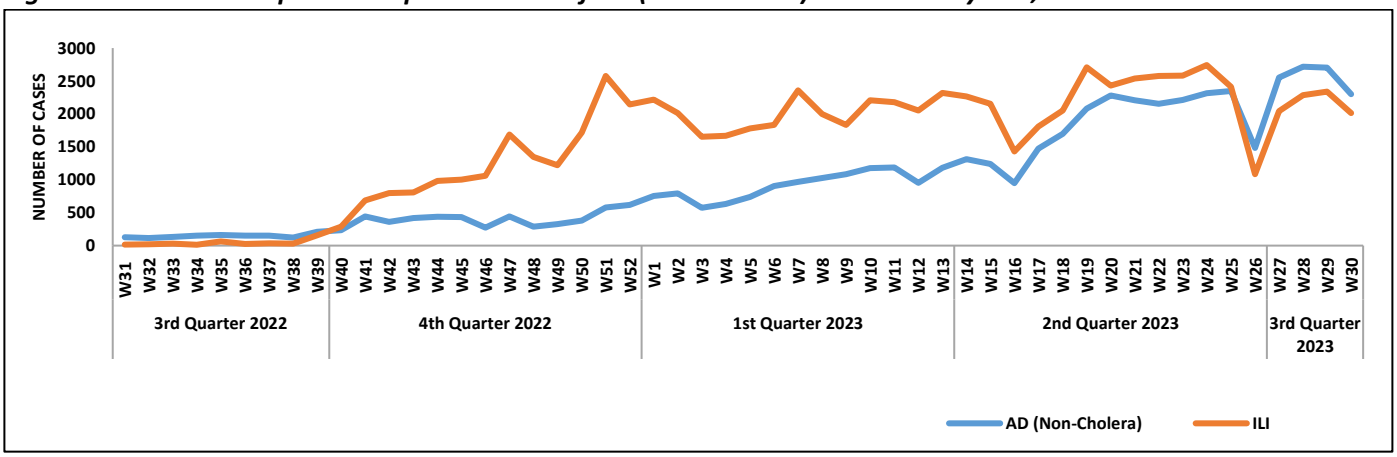


Figure 9: Most frequent cases reported during WK 30, GB

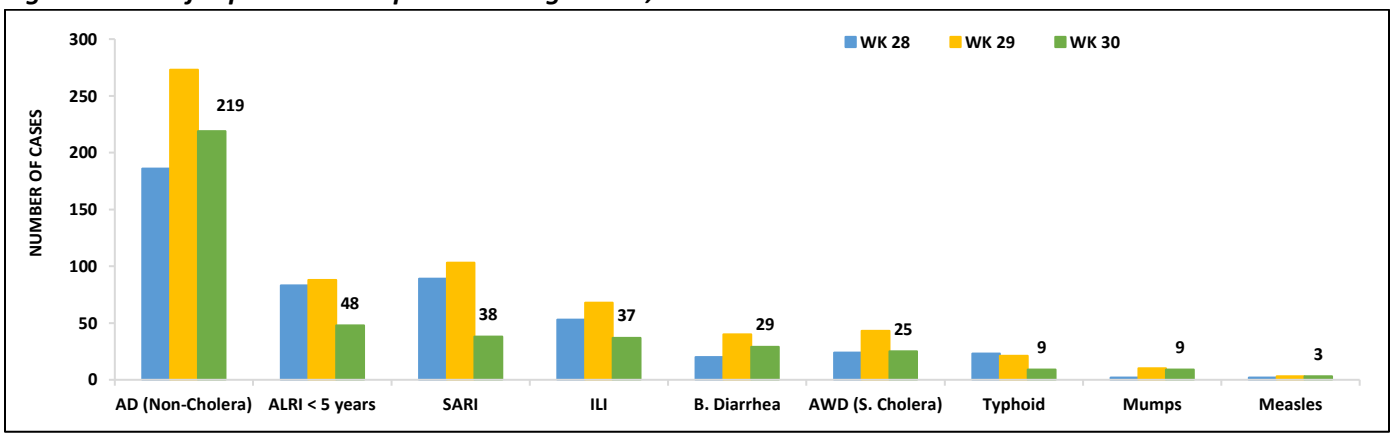
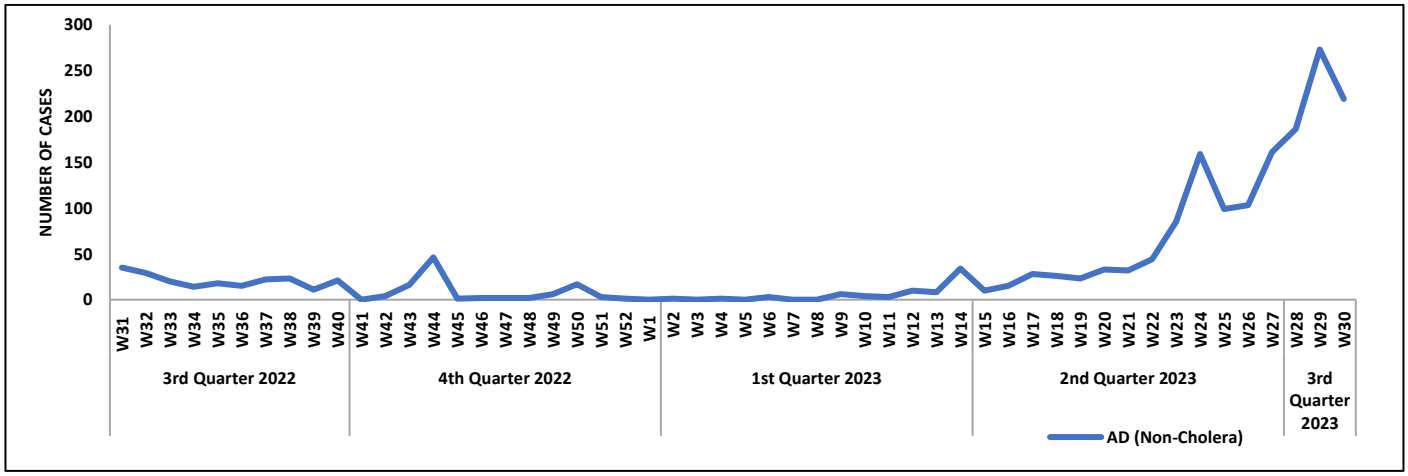


Figure 10: Week wise reported suspected cases of ALRI < 5 years, GB



Punjab

- AD (Non. Cholera) cases were most frequent followed by Malaria and Typhoid.
- Diarrhea cases were reported in high numbers from Lahore, Faisalabad, and Gujranwala. All are suspected cases and need verification.

Table 5: District wise distribution of most frequently reported suspected cases during week 30, Punjab

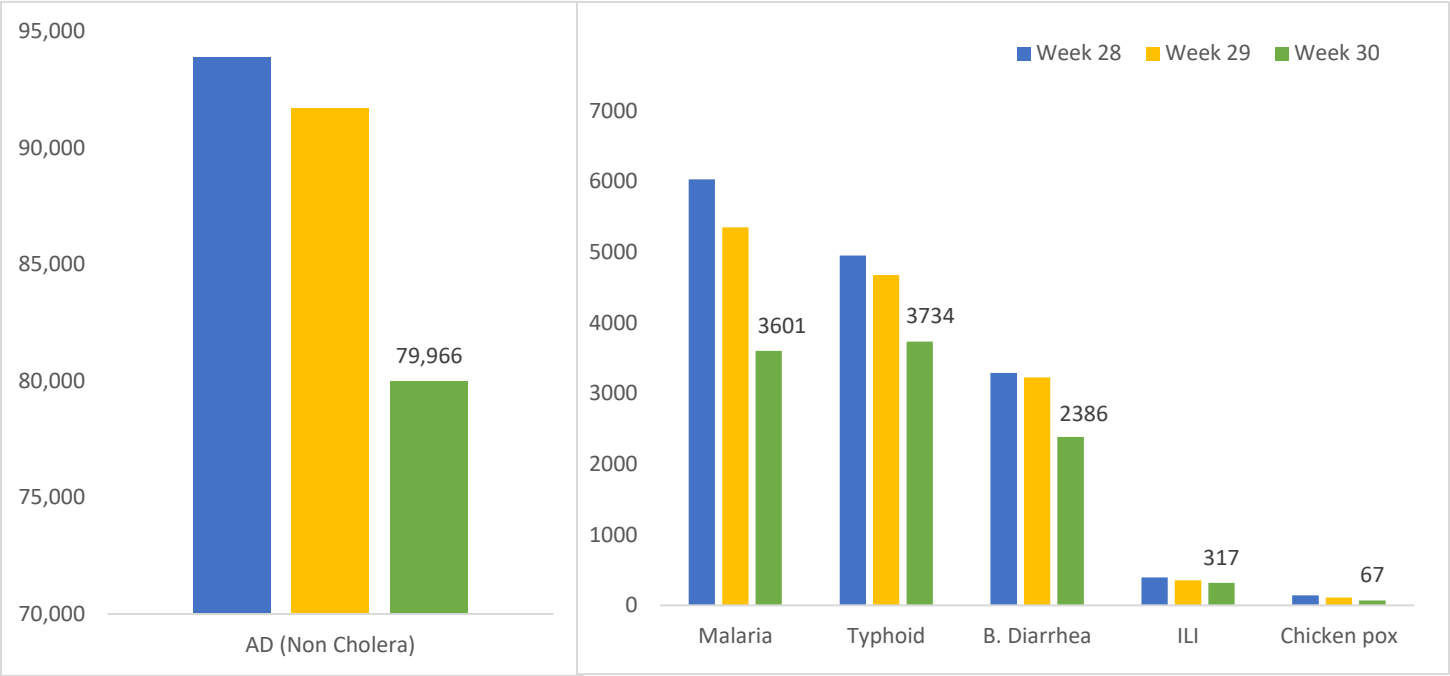


Table 6: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 30

Diseases	KPK	Sindh	Balochistan	Punjab	Gilgit
Acute Watery Diarrhoea (S. Cholera)	0	-	-	7	-
Acute diarrhea(non-cholera)	0	-	0	-	-
Malaria	102	-	-	-	-
CCHF	-	2	-	3	-
Dengue	-	-	-	-	-
Acute Viral Hepatitis(A)	1	-	-	-	-
Acute Viral Hepatitis(B)	56	-	-	-	0
Acute Viral Hepatitis(C)	124	32	0	-	0
Acute Viral Hepatitis(E)	5	-	-	-	-
Typhoid	2	-	-	10	-

Table 7: IDSR reporting districts Week 30

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	60	65%
	Battagram	43	43	22	51%
	Buner	34	34	28	82%
	Charsadda	61	61	51	84%
	Chitral Upper	33	33	8	24%
	Chitral Lower	35	35	32	91%
	D.I. Khan	89	89	66	74%
	Dir Lower	75	75	60	80%
	Dir Upper	55	55	44	80%
	Hangu	22	22	22	100%
	Haripur	69	69	60	87%
	Karak	34	34	34	100%
	Khyber	40	40	5	13%
	Kohat	59	59	59	100%
	Kohistan Lower	11	11	8	73%
	Kohistan Upper	20	20	19	95%
	Kolai Palas	10	10	10	100%
	Lakki Marwat	49	49	49	100%
	Malakand	42	42	35	83%
	Mansehra	133	133	68	51%
	Mardan	84	84	55	65%
	Nowshera	52	52	52	100%
	Peshawar	101	101	87	86%
	Shangla	36	36	9	25%
	Swabi	60	60	54	90%
	Swat	77	77	69	90%
	Tank	34	34	31	91%
	Torghar	10	10	10	100%
Azad Jammu Kashmir	Mirpur	37	37	34	100%
	Bhimber	20	20	20	100%
	Kotli	60	60	58	97%
	Muzaffarabad	43	43	43	100%
	Poonch	46	46	46	100%
	Haveli	39	39	32	82%
	Bagh	40	40	37	93%
	Neelum	39	39	33	85%
	Jhelum Vellay	29	29	27	93%
	Sudhnooti	27	27	26	96%
Islamabad Capital Territory	ICT	18	18	12	67%
	CDA	9	9	8	89%
Balochistan	Gwadar	24	24	2	8%
	Kech	78	44	31	70%

	Khuzdar	136	20	17	85%
	Killa Abdullah	50	32	0	0%
	Lasbella	85	85	80	94%
	Pishin	118	23	9	39%
	Quetta	77	22	16	73%
	Sibi	42	42	21	50%
	Zhob	37	37	25	68%
	Jaffarabad	47	47	30	64%
	Naserabad	45	45	37	82%
	kharan	32	32	27	84%
	sherani	32	32	4	13%
	kohlu	75	75	20	27%
	Chagi	65	65	20	31%
	kalat	65	65	11	17%
	Musa khail	68	68	7	10%
	Harnai	36	36	17	47%
	Kachhi (Bolan)	35	35	11	31%
	Jhal Magsi	39	39	22	56%
	Sohbat pur	26	26	24	92%
	Surab	33	33	2	6%
	Mastung	45	45	27	60%
	Loralai	25	25	23	92%
	Killa Saifullah	31	31	24	77%
	Ziarat	42	42	15	36%
	Duki	31	31	28	90%
Gilgit Baltistan	Hunza	31	31	29	94%
	Nagar	6	6	0	0%
	Ghizer	62	62	18	29%
Sindh	Hyderabad	71	71	25	35%
	Ghotki	93	65	65	100%
	Umerkot	98	43	43	100%
	Naushahro Feroze	120	61	27	44%
	Tharparkar	292	100	94	94%
	Shikarpur	60	60	60	100%
	Thatta	53	53	50	94%
	Larkana	67	67	67	100%
	Kamber Shadadkot	71	71	71	100%
	Karachi-East	14	14	11	79%
	Karachi-West	20	20	19	95%
	Karachi-Malir	37	37	9	24%
	Karachi-Kemari	17	17	12	71%
	Karachi-Central	11	11	10	91%
	Karachi-Korangi	17	17	12	71%
	Karachi-South	4	4	2	50%
	Sujawal	31	31	30	97%
	Mirpur Khas	104	104	103	99%
	Badin	144	144	110	76%
	Sukkur	64	64	64	100%
	Dadu	90	90	89	99%

	Sanghar	101	101	97	96%
	Jacobabad	43	43	36	84%
	Khairpur	168	168	162	96%
	kashmore	59	59	55	93%
	Matiari	42	42	40	95%
	Jamshoro	70	70	20	29%
	Tando Allahyar	54	54	48	89%
	Tando Muhammad Khan	41	41	11	27%
	Shaheed Benazirabad	124	124	122	98%

Public Health Bulletin (PHB) Pakistan

Public Health bulletin Pakistan.

The Pakistan Public Health Bulletin made significant strides during the quarter in improving data reporting, dissemination of surveillance information, and audience engagement. These accomplishments will help to guarantee that the PHB remains a valuable resource for public health professionals and stakeholders in Pakistan.

Key Achievements

During the quarter, provincial surveillance teams received technical assistance to improve data reporting from district to provincial and national levels. A monitoring dashboard was implemented, utilizing historical data for trend analysis and alert indicators establishment. The National Institute of Health (NIH) supported the dissemination of surveillance information to provincial health departments and other stakeholders, enhancing the epidemiological bulletin's standards, content, and format across all levels.

Provincial surveillance teams participated in regular teleconference sessions to strengthen their public health data analysis capabilities and effectively utilize Pakistan Public Health Bulletin (PHB) surveillance information at local and district levels. The PHB delivered timely, accurate, and relevant content, adhering to editorial standards in support of its mission. A comprehensive plan outlining strategy for audience engagement, retention, visibility expansion, and readership growth are being developed.

Effective collaboration with various stakeholders and partners facilitated the bulletin's broader reach and increased its impact. Senior and Associate editors diligently ensured quality control, timeliness, evaluation, and optimization of editorial processes. Bulletin development, review, and publication were executed punctually.

Management of the review process for surveillance publications involved addressing feedback accordingly. Disease trends were monitored; disease alerts and outbreaks identified; health departments engaged for response conduction; report submissions acquired for inclusion in the bulletin. The Pakistan Public Health Bulletin website was supervised and kept up-to-date.

Timely dissemination of the bulletin via email to an updated contact list ensured stakeholder engagement.

A note from Field Activities.

Investigation of the Measles Outbreak in UC Karak North, District Karak, Khyber Pakhtunkhwa, Pakistan

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

Background

This study investigated an outbreak of measles in UC Karak North, District Karak, Khyber Pakhtunkhwa, Pakistan, which has a population of 35,000 people. The first case was reported on January 19, 2023, and more cases occurred over a period of 26 weeks.

Objectives

The objectives of the outbreak investigation were to Determine the magnitude of the outbreak, Control further spread of the disease and Recommend actions to prevent future outbreaks.

Methods

A case was defined as "any person resident of UC Karak North, District Karak, who had an acute illness characterized by generalized, maculopapular rash lasting ≥3 days, temperature ≥ 101°F, and cough, coryza, or conjunctivitis from January 1, 2023 to July 11, 2023." A descriptive study design was employed, and data was collected through a semi-structured questionnaire/interview, examination of hospital records, laboratory records, and active case search in the community. The data was analyzed using Microsoft Excel and Epi-info.

Findings

A total of 149 cases were enrolled in the study. Out of these, 24 were laboratory-confirmed cases of measles and 125 were discarded. The maximum number of 8 laboratory-confirmed cases were reported during the 25th epi-week. The overall attack rate was 7 per 10,000. The age range of laboratory-confirmed cases varied from 7 to 48 months, with a median age of 20 months. Males were more affected (58%) than females (42%). Sixty-three percent (15) of the cases were unvaccinated, while 37% (9) were fully vaccinated.

Conclusion

The outbreak is currently ongoing and will be followed up. Based on the findings, it was concluded that vaccination coverage for measles is poor in the community. The study recommends the following:

- A mass vaccination campaign in UC Karak North.
- Extensive EPI outreach activities by EPI technicians in the community.
- Awareness and health education sessions in schools and the community.
- A case-control study to investigate potential risk factors.

Recommendations

The following recommendations are made to strengthen surveillance, control, and prevention of future measles outbreaks:

- Conduct a mass vaccination campaign in UC Karak North.
- Conduct extensive EPI outreach activities by EPI technicians in the community.
- Provide awareness and health education sessions in schools and the community.
- Conduct a case-control study to investigate potential risk factors.

A note from Field Activities.

Acute Watery Diarrhea Outbreak in UC Malakand Khas, Malakand, July 2023

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

Background

An outbreak of acute watery diarrhea (AWD) was initially reported from Civil Hospital Malakand in the second week of July. The outbreak was confirmed to be cholera after Vibrio cholerae was detected in 13 cases from the same vicinity.

Objective

The objective of this investigation was to identify and investigate the increase in AWD cases confirmed as cholera in UC Malakand Khas area, Ghareebabad and Irrigation Colony over the last 20 days. The ultimate goal was to detect and eliminate the cause of the outbreak in order to end it.

Methods

Information on suspected and confirmed cholera cases was collected from health facilities, community active surveillance, and laboratory reports. Interviews were conducted with confirmed cases to collect clinical, exposure, and health-seeking behavior information. Environmental investigations were conducted to assess water sources, sanitation, and hygiene practices in order to identify potential sources of contamination.

Findings

The investigation confirmed that the cholera outbreak was associated with poor sanitation in the area and poor hygiene practices in the households of confirmed cases. The common water supply source for daily use was also contaminated. The most common symptom among the affected individuals was abdominal discomfort secondary to diarrhea.

Conclusion

The epidemiological investigation confirmed a cholera outbreak in the vicinity. Risk factors indicated that poor sanitation linked to contaminated water supply and lack of awareness about proper hygiene practices were significant contributors to the outbreak.

Recommendations

The following recommendations are made to strengthen surveillance systems, improve response to cholera outbreaks, and prevent future outbreaks:

- Strengthen surveillance systems for early detection and response to cholera outbreaks.
- Streamline the flow of data on suspected cases and collection of samples to determine the extent of the outbreak.
- Provide adequate emergency room (ER) medicine to nearby health facilities.
- Conduct a cholera vaccination drive in the community to prevent the further spread of the disease.

- Coordinated efforts from all stakeholders are necessary to control the spread of the disease and prevent future outbreaks.

A note from Field Activities.

Polio Case Response Campaign in DHA Rawalpindi:

7-13th August 2023

Dr. Ehsan Ghani
District health officer
Preventive services

Background

Surveillance for Acute Flaccid Paralysis (AFP) is considered to be the 'gold standard' for polio surveillance in endemic and polio-free countries. However, environmental surveillance can also be used as an early warning system for the detection of poliovirus, especially in areas where high-risk groups, such as mobile populations, under- or unimmunized populations, reside.

Environmental surveillance has been used in Pakistan since July 2009 to support the AFP surveillance system. The district of Rawalpindi has three environmental sampling sites, which are located at Safdarabad, Dhok Dallal, and Serae Kala. Serae Kala Tehsil Taxila was added to the list of environmental sites only in December last year to reinforce polio virus surveillance and to plan any response on time.

On July 17, 2023, an environmental (sewage) sample was collected from the 'Sarae Kala' environmental sample collection site in Rawalpindi, Pakistan. The sample was tested positive for WPV-1, or wild poliovirus type 1. This is the first positive sample from Rawalpindi this year and the third sample which has tested positive in Punjab this year.

The positive sample in Rawalpindi indicates that the virus is circulating in the region. This is alarming, as the last wild poliovirus case in Rawalpindi was reported in June 2010. The circulating virus is a threat to all children in the area, and it is important to take steps to prevent its spread.

Following the detection of Pakistan's second polio case in Bannu, Type-1 Wild Poliovirus has been found in the environmental samples collected from Taxila Town of Rawalpindi district. These events triggered EOC and District Health Authority to conduct an extensive case response activity in five high risk tehsil of district Rawalpindi.

Response

In response to the positive environmental sample, the District Health

Authority (DHA) Rawalpindi has launched a mass vaccination campaign in five high-risk tehsils of the district. 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 breakdown of the teams by type is as follows:

Mobile teams: 2,835
Fix teams: 269
Transit teams: 147

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.

Conclusion

The detection of wild poliovirus in Rawalpindi is a serious development. However, the DHA's swift response is a positive sign. The polio case response campaign is a critical step in the fight to eradicate polio from Pakistan. With continued effort, Pakistan can achieve the goal of polio eradication and protect its children from this devastating disease.

Knowledge Hub

"Acute Flaccid Paralysis:

Acute flaccid paralysis (AFP) is a sudden onset of weakness or paralysis in the arms or legs. It is a clinical syndrome, which means that it is a collection of signs and symptoms. AFP is not a diagnosis, but rather a description of the symptoms that a person may experience.

There are many causes of AFP, including:

- Polio
- Guillain-Barre syndrome (GBS)
- Vaccine-derived polio virus (VDPV)
- Non-polio enterovirus
- Adenovirus
- Acute West Nile virus
- Campylobacter sp.
- Transverse myelitis
- Peripheral neuropathy
- Acute non-bacterial meningitis
- Tick paralysis
- Brain abscess

In countries where polio has been eradicated, most cases of AFP are caused by these non-polio causes. However, it is important to investigate all cases of AFP thoroughly to rule out polio. In countries where polio is still a problem, AFP can be a sign of a polio outbreak. This is why it is important to do surveillance for AFP in all countries, even in those where polio has been eradicated.

Surveillance for AFP is done by looking for cases of acute onset of weakness or paralysis in children under the age of 15 years. If a case of AFP is identified, it is investigated thoroughly to determine the cause. If the cause is not polio, the case is classified as a non-polio AFP case.

Surveillance for AFP is an important part of the global effort to eradicate polio. By monitoring cases of AFP, we can identify polio outbreaks early and take steps to contain them. This helps to protect children from this devastating disease.

What is polio?

Polio is a highly contagious disease that can cause paralysis or death. It is caused by a virus that can spread through contact with the saliva or stool of an infected person. Polio can affect people of all ages, but it is most dangerous for children under the age of 5. There is no cure for polio, but it can be prevented with vaccination. The polio vaccine is safe and effective, and it is the best way to protect your child from this devastating disease.

What is Guillain-Barre syndrome (GBS)?

Guillain-Barre syndrome (GBS) is a rare disorder that affects the nerves in the peripheral nervous system. It can cause a rapid onset of weakness or paralysis, usually in the legs and then spreading to the arms and face. In severe cases, GBS can be fatal. The cause of GBS is unknown, but it is thought to be triggered by an infection, such as the flu or a cold. GBS is not contagious. There is no cure for GBS, but most people make a full recovery. Treatment is aimed at managing the symptoms and preventing complications.

What is vaccine-derived polio virus (VDPV)?

Vaccine-derived polio virus (VDPV) is a type of polio virus that can occur when the live polio vaccine mutates. VDPV can spread from person to person, just like wild polio virus. However, VDPV is much less likely to cause paralysis than wild polio virus. VDPV is most likely to occur in countries with low vaccination rates. This is because the vaccine does not provide lifelong immunity to polio. People who are not vaccinated or who have not received a booster dose of the vaccine are at risk of getting VDPV.

Acute flaccid paralysis (AFP) is a serious condition that can have a devastating impact on children. However, it is a preventable disease. By getting vaccinated, you can help to protect your child from AFP and other serious diseases.

Stay informed and stay safe!

Etiology of Acute Flaccid Paralysis

Spinal cord injuries (acute phase)

- Infectious: Human immunodeficiency virus, syphilis, tuberculosis, bacterial, or viral infection
- Inflammatory: transverse myelitis, multiple sclerosis
- Compressive: tumor, hernias or disc protrusions, abscesses
- Vascular: ischemia, syringomyelia, epidural or subdural spinal cord hemorrhage

Previous spinal cord injuries

- Poliovirus infection, coxsackievirus infection, West Nile virus infection

Root or peripheral nerve disorders

- Guillain-Barre Syndrome
- Diphtheria Syndrome
- Paralytic seafood poisoning
- Tick Bite Paralysis
- Porphyria
- Heavy Metal Poisoning
- Critical disease polyneuropathy
- Acute Alcoholic Polyneuropathy
- Acute toxic or needy polyneuropathy

Neuromuscular Junction Disorders

- Myasthenia gravis
- Eaton-Lambert Myasthenic Syndrome
- Botulism
- Aminoglycoside Toxicity

Muscle disorders

- Necrotizing myopathies
- Metabolic Myopathies
- Acute Alcoholic Myopathy
- Muscular Dystrophies
- Hypo or severe hyperkalemia
- Periodic paralysis

Raposo et al. / GSC Biological and Pharmaceutical Sciences 2019,

UK Health Security Agency

World Health Organization

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FOR A NEW TOMORROW
FOR A NEW BEGINNING

LET'S MAKE PAKISTAN POLIO FREE

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