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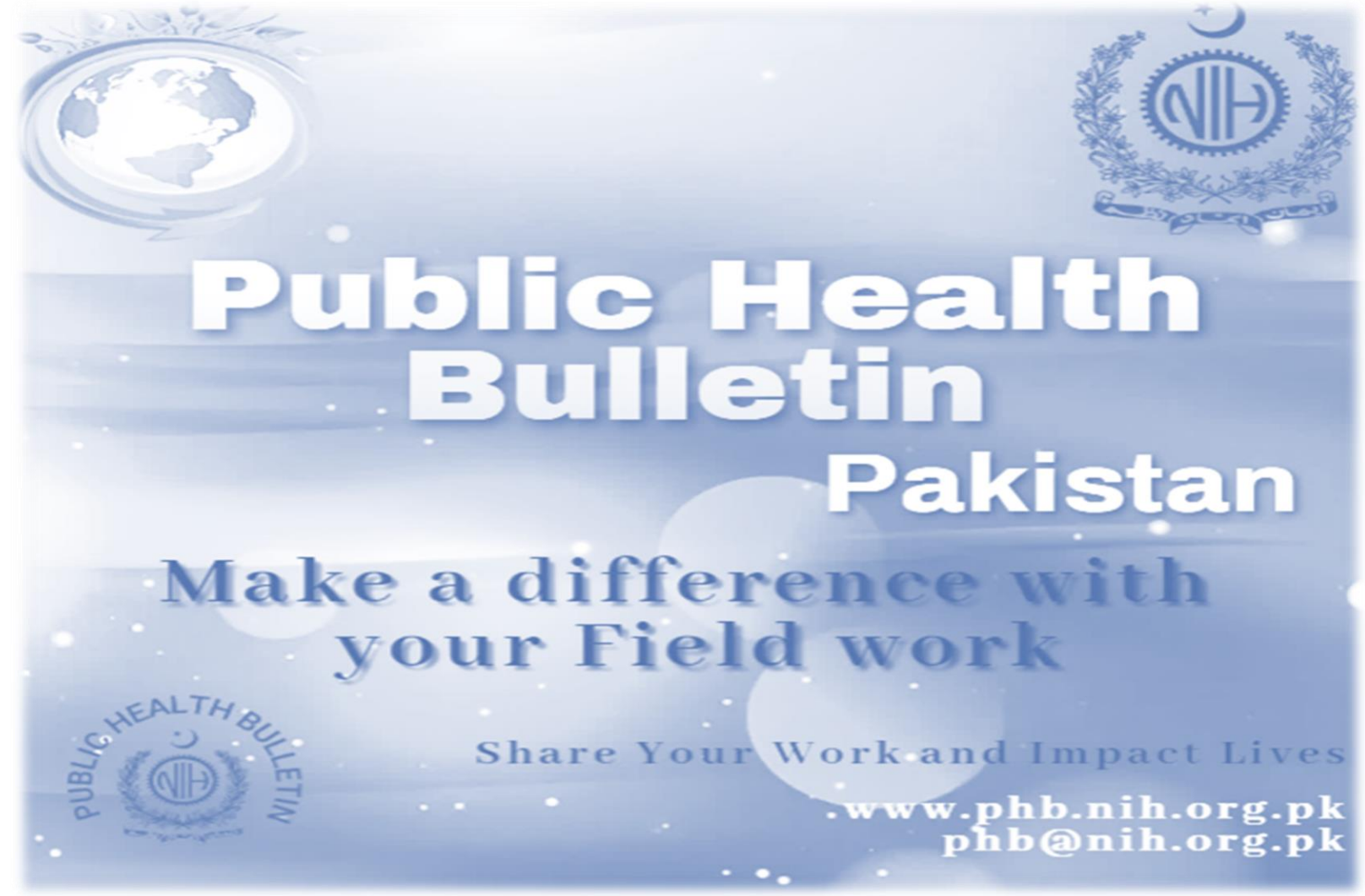
Integrated Disease Surveillance & Response (IDSR) Report

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.



UK Health Security Agency
World Health Organization
USAID
safetynet

Public Health Bulletin - Pakistan, Week 18, 2024

Overview

IDSR Reports

Ongoing Events

Field Reports

The latest Public Health Bulletin transcends a mere list of illnesses, establishing itself as a comprehensive resource for healthcare professionals and the public. This report offers a detailed analysis of prevalent diseases, including granular data on critical areas like tuberculosis and dog bites. This empowers stakeholders with the information needed to tailor preventive interventions and address emerging public health concerns.

The Bulletin functions not only as a data repository but also as an early warning system. Proactive investigations into potential outbreaks of concerning diseases like Acute Flaccid Paralysis and Brucellosis are facilitated, allowing for swift responses to contain the spread and protect public health.

Beyond data presentation, the Bulletin delves deeper through dedicated reports on specific outbreaks, such as the Measles Outbreak in Kohat District and the Measles Outbreak Investigation in Chandroo Mohajir Village. Additionally, a case report on Crimean-Congo Hemorrhagic Fever (CCHF) and insightful commentary on initiatives like the Local Hepatitis Elimination and Prevention (LHEAP) Initiative in Rawalpindi are included.

The "Knowledge Hub" section further empowers individuals by providing resources like the informative article titled "Public Health Education: A Crucial Weapon in Combating Brucellosis."

By staying informed through the Public Health Bulletin and translating its insights into action, we can collectively build a healthier Pakistan. This essential tool empowers all stakeholders to play a vital role in safeguarding the nation's health and well-being.

Sincerely,

The Chief Editor

Overview

- *During week 18, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, ALRI <5 years, TB, B. Diarrhea, dog bite, VH (B, C & D), Typhoid and SARI.*
- *Fifteen cases of AFP reported from KP, eleven from Sindh, six from AJK, two from Punjab and one from GB. All are suspected cases and need field verification.*
- *Eight suspected cases of HIV/ AIDS reported from Sindh, six from KP and four from Balochistan. Field investigation required to verify the cases.*
- *Fourteen cases of Brucellosis reported from KP and three from Balochistan. These are suspected cases and require field verification.*
- *One suspected case each of CCHF reported from Punjab and KP. Field investigation required to verify the cases.*
- *There is an decreasing trend observed for Acute Diarrhea (Non-Cholera), Malaria, ILI, B. Diarrhea and Typhoid while an increasing trend observed for ALRI <5 years, TB and dog bite cases this week.*

IDSR compliance attributes

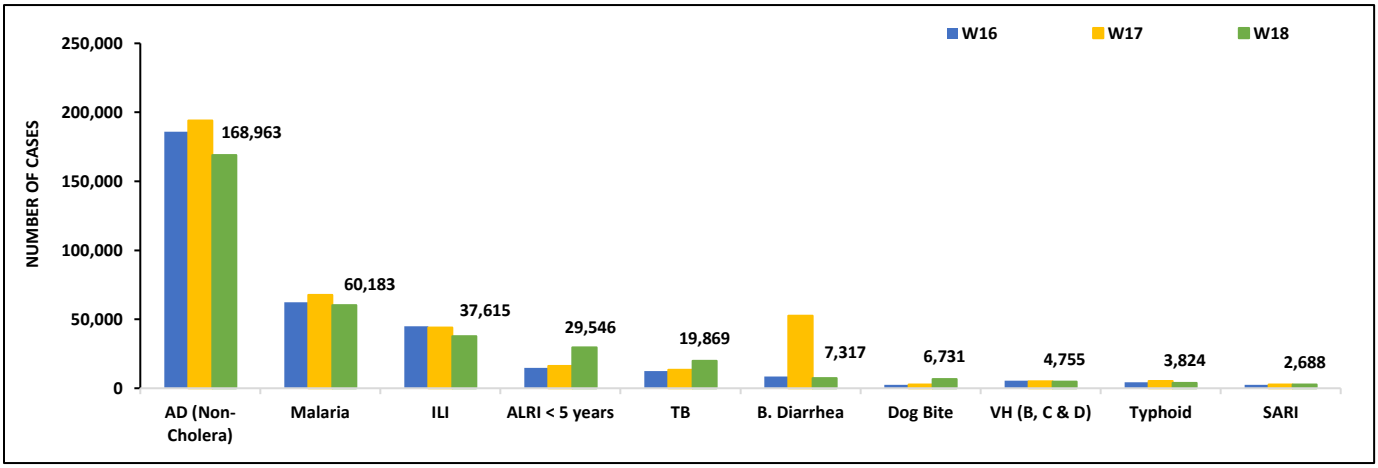
- *The national compliance rate for IDSR reporting in 149 implemented districts* is 76%
- *Gilgit Baltistan and AJK are the top reporting regions with a compliance rate of 99%, followed by Sindh 93% and ICT 80%*
- *The lowest compliance rate was observed in KPK.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	*2740*	*1642*	*60*
Azad Jammu Kashmir	*382*	*379*	*99*
Islamabad Capital Territory	*35*	*28*	*80*
Balochistan	*1220*	*852*	*70*
Gilgit Baltistan	*374*	*369*	*99*
Sindh	*2086*	*1941*	*93*
National	*6837*	*5211*	*76*

Table 1: Province/Area wise distribution of most frequently reported suspected cases during week 18, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	1611	5,544	646	349	20,734	95,344	44,735	168,963
Malaria	5	3,760	0	0	3,581	2,875	49,962	60,183
ILI	2,083	6,181	321	1345	4,308	5	23,372	37,615
ALRI < 5 years	1081	1546	589	2	1,198	1,698	9,508	29,546
TB	56	59	58	13	424	8,211	11,048	19,869
B.Diarrhea	66	1,375	71	3	1,039	1,210	3,553	7,317
Dog Bite	39	68	2	0	341	4,309	1,972	6,731
VH (B, C & D)	3	67	2	1	187	0	4,495	4,755
Typhoid	22	471	31	1	553	1,725	1,021	3,824
SARI	275	659	218	1	1,404	0	131	2,688
AWD (S. Cholera)	21	196	38	1	65	2,320	17	2,658
Dengue	0	291	0	0	38	826	137	1,292
Measles	17	34	11	0	358	102	216	738
AVH (A&E)	22	17	0	0	175	0	441	655
CL	1	82	0	0	323	6	1	413
Mumps	7	58	3	0	52	0	196	316
Chickenpox/ Varicella	6	10	10	1	37	16	83	163
Pertussis	1	51	0	0	14	0	1	67
Gonorrhea	0	38	0	0	12	0	9	59
Meningitis	7	2	0	0	2	27	10	48
AFP	6	0	1	0	15	2	11	35
Syphilis	1	12	0	0	10	0	4	27
HIV/AIDS	0	4	0	0	6	1	8	19
Brucellosis	0	3	0	0	14	0	0	17
NT	0	0	0	0	8	1	0	9
Diphtheria (Probable)	0	1	0	0	4	0	0	5
Chikungunya	0	3	0	0	0	1	0	4
CCHF	0	0	0	0	1	1	0	2
VL	0	1	0	0	0	0	0	1
Leprosy	1	0	0	0	0	0	0	1
Rubella (CRS)	0	1	0	0	0	0	0	1

Figure 1: Most frequently reported suspected cases during week 18, Pakistan.



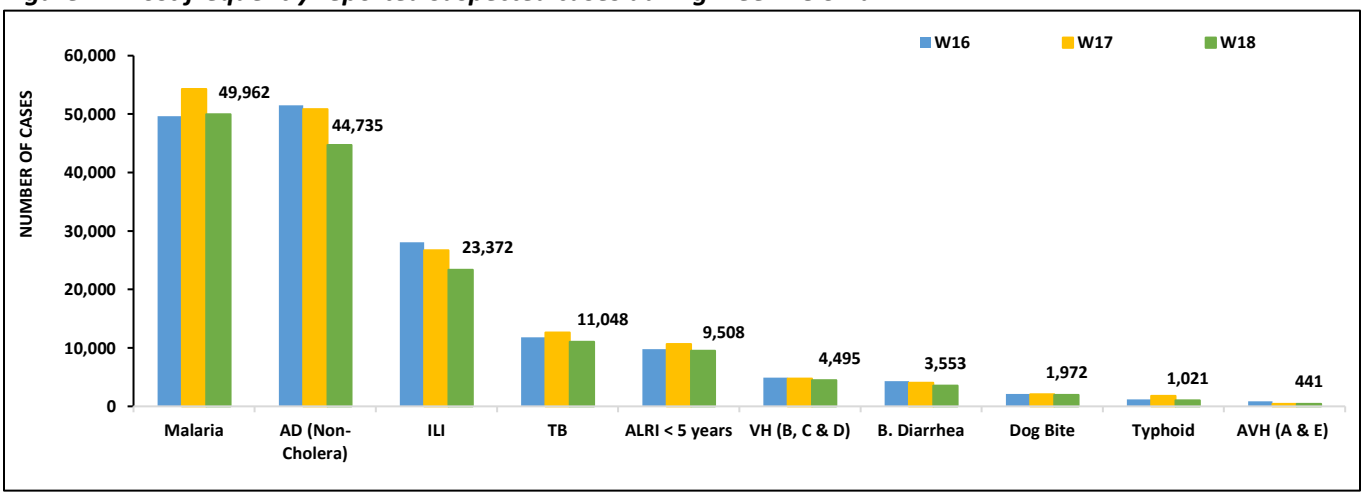
Sindh

- Malaria cases were maximum followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, dog bite, Typhoid and AVH (A & E).
- Malaria cases are mostly from Larkana, Khairpur and Badin whereas AD (Non-Cholera) cases are from Khairpur,Dadu and Badin.
- Eight suspected cases of HIV/ AIDS reported from Sindh. Field investigation required to verify the cases.
- There is a decreasing trend observed for Malaria, AD (Non-Cholera), ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea and Typhoid cases this week.

Table 2: District wise distribution of most frequently reported suspected cases during week 18, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	3483	3076	397	827	571	167	213	73	68	6
Dadu	3469	3383	271	449	1089	59	573	179	98	7
Ghotki	793	1073	0	208	325	327	146	180	5	8
Hyderabad	171	953	1093	23	56	18	0	0	10	0
Jacobabad	670	766	291	69	314	83	120	118	36	0
Jamshoro	1902	2728	303	397	190	59	91	47	54	7
Kamber	3249	1659	0	770	377	256	157	149	25	0
Karachi Central	89	1187	1597	721	113	207	17	2	61	2
Karachi East	54	496	220	0	2	1	10	7	1	0
Karachi Keamari	2	165	50	0	14	0	0	0	3	1
Karachi Korangi	37	208	0	1	1	0	7	0	2	0
Karachi Malir	178	1687	3037	106	287	63	52	49	31	4
Karachi South	41	94	6	0	0	0	0	0	0	0
Karachi West	141	1132	2222	156	138	112	57	96	37	24
Kashmore	1318	597	554	321	218	37	65	183	6	0
Khairpur	4432	3848	4506	877	907	191	491	124	259	2
Larkana	5782	2203	3	826	554	86	299	0	1	0
Matiari	1574	2329	10	535	382	251	101	40	11	2
Mirpurkhas	2482	2459	2935	591	553	255	121	54	21	8
Naushero Feroze	830	576	750	309	109	35	75	99	48	0
Sanghar	3481	1360	2	1138	359	959	30	89	23	1
Shaheed Benazirabad	1784	2188	0	383	336	104	95	230	133	0
Shikarpur	1944	1186	2	156	107	560	137	50	1	0
Sujawal	1429	767	0	100	88	61	88	40	9	61
Sukkur	1743	1500	1387	416	223	53	161	39	6	0
Tando Allahyar	1379	1534	875	481	226	172	144	32	6	1
Tando Muhammad Khan	1728	1274	0	443	143	79	98	0	2	0
Tharparkar	2031	1352	1154	367	776	98	99	8	20	29
Thatta	1769	1521	1707	37	515	128	57	84	28	276
Umerkot	1977	1434	0	341	535	74	49	0	16	2
Total	49,962	44,735	23,372	11,048	9,508	4,495	3,553	1,972	1,021	441

Figure 2: Most frequently reported suspected cases during week 18 Sindh



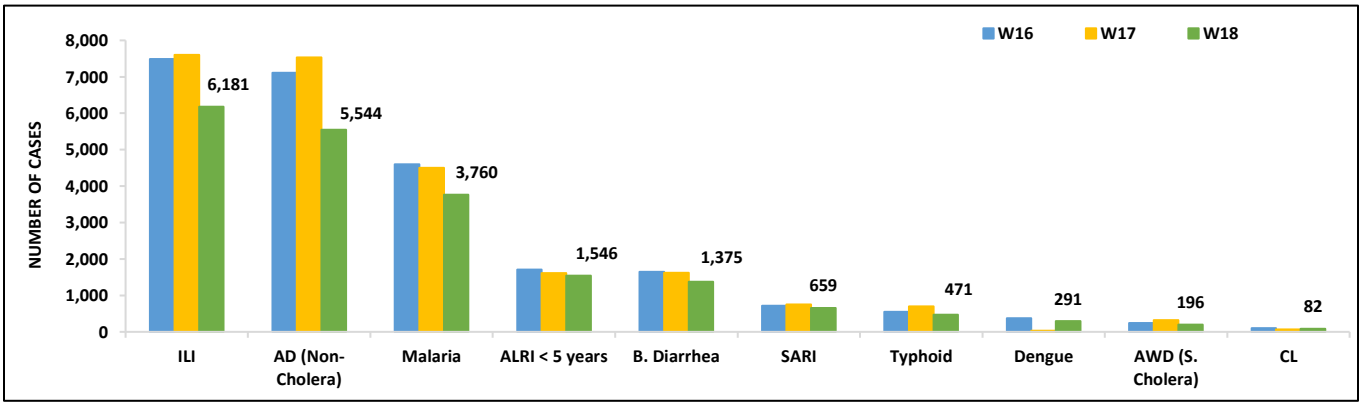
Balochistan

- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, Dengue, AWD (S. Cholera) and CL cases were the most frequently reported diseases from Balochistan province. ILI cases are mostly reported from Kech (Turbat), Gwadar and Quetta while AD (Non-Cholera) cases are mostly reported from Gwadar, Usta Muhammad and Kech (Turbat).
- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid and AWD (S. Cholera) cases showed a decreasing trend this week.
- Three cases of Brucellosis and Four cases of HIV/AIDS reported from Balochistan. All are suspected cases and need field verification.

Table 3: District wise distribution of most frequently reported suspected cases during week 18, Balochistan

Districts	ILI	AD Non-Cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dengue	AWD (S.Cholera)	CL
Awaran	76	17	88	0	16	3	4	0	9	1
Barkhan	91	100	64	22	2	8	60	0	33	0
Chagai	223	139	49	2	46	4	17	0	13	0
Chaman	104	23	1	5	39	4	18	0	0	7
Dera Bugti	51	65	139	42	44	16	6	0	0	0
Duki	36	77	30	28	63	19	8	0	17	3
Gwadar	770	500	82	13	40	0	0	8	0	3
Harnai	16	81	50	146	69	0	5	0	10	0
Hub	37	210	165	7	41	0	5	0	5	1
Jaffarabad	143	252	335	26	56	27	4	0	0	10
Jhal Magsi	134	276	331	28	1	12	15	0	0	1
Kachhi (Bolan)	41	140	122	13	41	71	33	1	6	0
Kalat	1	30	21	12	7	2	16	0	0	1
Kech (Turbat)	1006	453	187	28	183	2	1	280	15	NR
Kharan	359	167	37	0	61	0	5	0	0	0
Khuzdar	100	92	52	0	22	3	6	0	0	0
Killa Saifullah	2	132	137	144	92	21	9	0	1	7
Kohlu	352	192	96	24	81	71	30	0	8	3
Lasbella	79	309	322	138	14	5	9	2	0	1
Loralai	237	158	25	37	30	123	14	0	0	0
Mastung	122	138	46	67	41	11	13	0	8	1
Naseerabad	8	274	148	19	18	3	29	0	0	4
Panjgur	64	235	145	114	64	11	11	0	24	1
Pishin	217	76	9	15	44	7	6	0	0	6
Quetta	759	266	5	28	29	21	19	0	0	11
Sherani	61	17	11	1	12	27	12	0	10	9
Sibi	491	205	264	65	43	56	50	0	32	6
Sohbat pur	5	197	346	169	65	22	15	0	5	6
Surab	163	55	12	8	0	0	28	0	0	0
Usta Muhammad	157	468	384	127	53	32	14	0	0	0
Washuk	107	76	15	0	23	0	0	0	0	0
Zhob	169	124	42	218	35	78	9	0	0	0
Total	6,181	5,544	3,760	1,546	1,375	659	471	291	196	82

Figure 3: Most frequently reported suspected cases during week 18, Balochistan



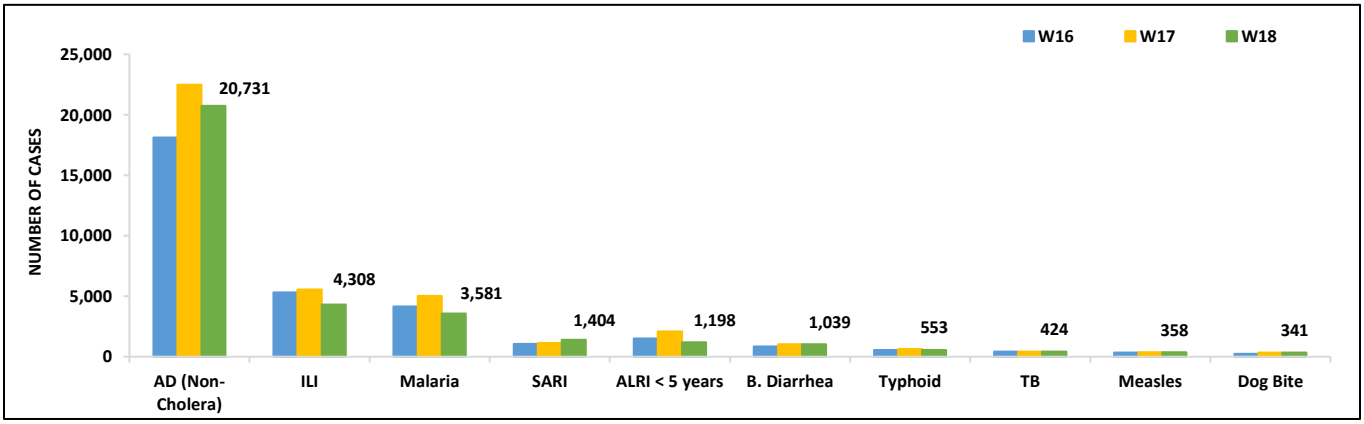
Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, SARI, ALRI<5 Years, B. Diarrhea, Typhoid, TB, Measles and dog bite cases. AD (Non-Cholera), ILI, Malaria, ALRI<5 Years and Typhoid cases showed a decreasing trend while SARI and B. Diarrhea cases showed an increasing trend this week.
- Fourteen cases of Brucellosis and Six suspected cases of HIV/ AIDS reported from KP. Field investigation required to verify the cases.
- One suspected case of CCHF reported from KP. Field investigation required to verify the case.

Table 4: District wise distribution of most frequently reported suspected cases during week 18, KP

Districts	AD (Non-Cholera)	ILI	Malaria	SARI	ALRI <5 Years	B. Diarrhea	Typhoid	TB	Measles	Dog Bite
Abbottabad	518	43	4	16	15	4	17	12	16	4
Bajaur	145	30	85	312	55	211	10	9	10	21
Bannu	763	0	1316	19	19	35	73	33	23	1
Battagram	96	254	0	0	0	0	0	0	0	0
Buner	338	0	216	0	0	0	7	2	0	4
Chitral Lower	178	25	3	23	25	12	25	4	2	15
Chitral Upper	78	5	3	4	4	4	17	1	1	1
D.I. Khan	2,208	0	258	0	3	33	4	38	88	1
Dir Lower	890	0	324	0	159	55	56	20	8	10
Dir Upper	346	71	8	0	5	6	28	20	7	0
Hangu	6	5	11	0	0	0	1	0	0	0
Haripur	1,206	233	17	39	66	32	33	15	16	0
Karak	277	16	136	0	14	0	9	11	41	26
Khyber	265	44	126	9	14	48	50	14	2	30
Kohat	65	51	66	7	2	3	4	0	0	2
Kohistan Lower	108	0	1	0	4	6	0	0	2	0
Kohistan Upper	482	66	3	8	14	31	39	39	0	0
Kolai Palas	64	0	6	4	17	3	4	0	0	0
L & C Kurram	6	44	6	0	0	3	1	0	0	0
Lakki Marwat	717	30	129	0	5	23	5	17	6	20
Malakand	621	48	12	8	36	61	12	4	20	0
Mansehra	599	825	3	23	53	12	20	13	3	48
Mardan	477	0	5	0	308	18	0	8	0	1
Mohmand	199	81	141	31	6	48	9	2	3	6
Nowshera	2,007	57	60	7	0	16	4	13	22	5
Orakzai	45	15	25	0	0	4	1	1	0	0
Peshawar	3,990	776	40	73	67	211	51	30	41	4
SD Peshawar	1	0	2	0	0	0	0	0	0	0
SD Tank	18	0	35	0	0	0	0	0	0	0
Shangla	307	0	318	0	8	2	16	38	3	27
SWA	62	261	77	136	71	21	24	0	0	3
Swabi	1,487	950	39	94	113	12	11	58	36	16
Swat	1,811	90	14	12	56	80	0	17	1	73
Tank	185	2	37	0	0	0	1	0	1	0
Tor Ghar	62	0	32	6	0	20	7	2	0	9
Upper Kurram	104	286	23	573	59	25	14	3	6	14
Total	20,731	4,308	3,581	1,404	1,198	1,039	553	424	358	341

Figure 4: Most frequently reported suspected cases during week 18, KP



ICT, AJK & GB

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

AJK: ILI cases were maximum followed by AD (Non-Cholera), ALRI <5 years, SARI, B. Diarrhea, TB, dog bite, AVH (A & E), Typhoid and AWD (S. Cholera) cases. Cases of ILI, AD (Non-Cholera), ALRI <5 years, SARI, B. Diarrhea, dog bite, AVH (A & E), Typhoid and AWD (S. Cholera). showed a decreasing trend this week.

GB: AD (Non-Cholera) cases were the most frequently reported diseases followed by ALRI <5 Years, ILI, SARI, B. Diarrhea, TB, AWD (S. Cholera) and Typhoid cases. Decreasing trend for AD (Non-Cholera), ALRI <5 Years, ILI, SARI, TB, AWD (S. Cholera) and Typhoid cases observed this week.

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

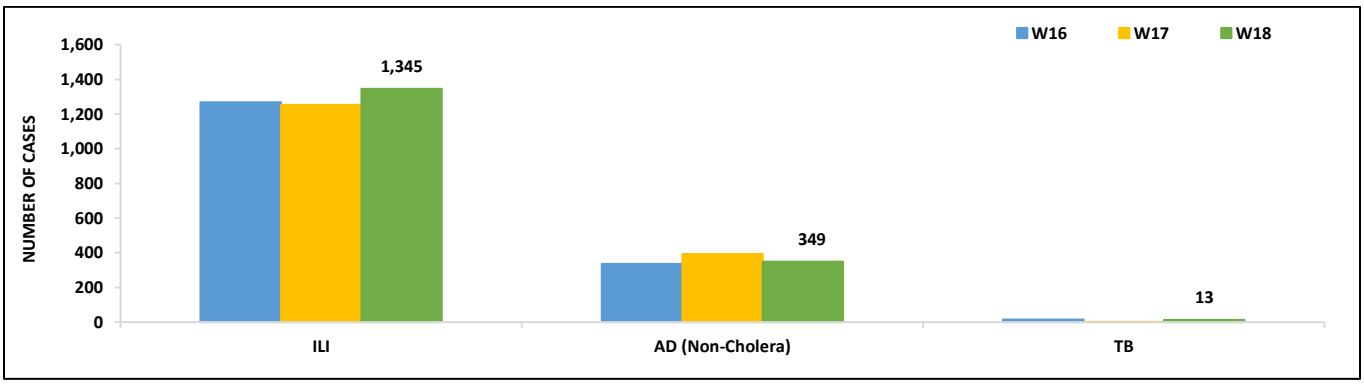


Figure 6: Week wise reported suspected cases of ILI, ICT

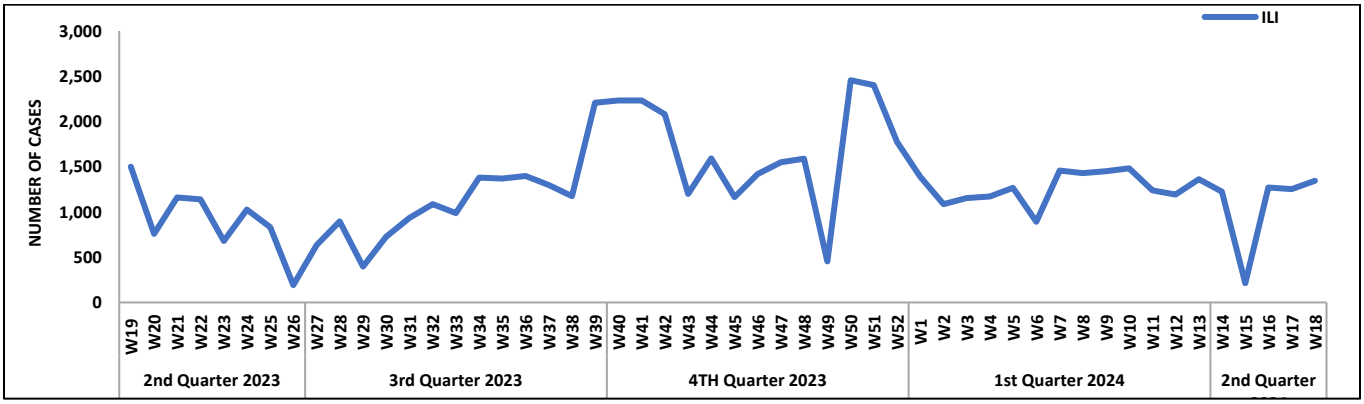


Figure 7: Most frequently reported suspected cases during week 18, AJK

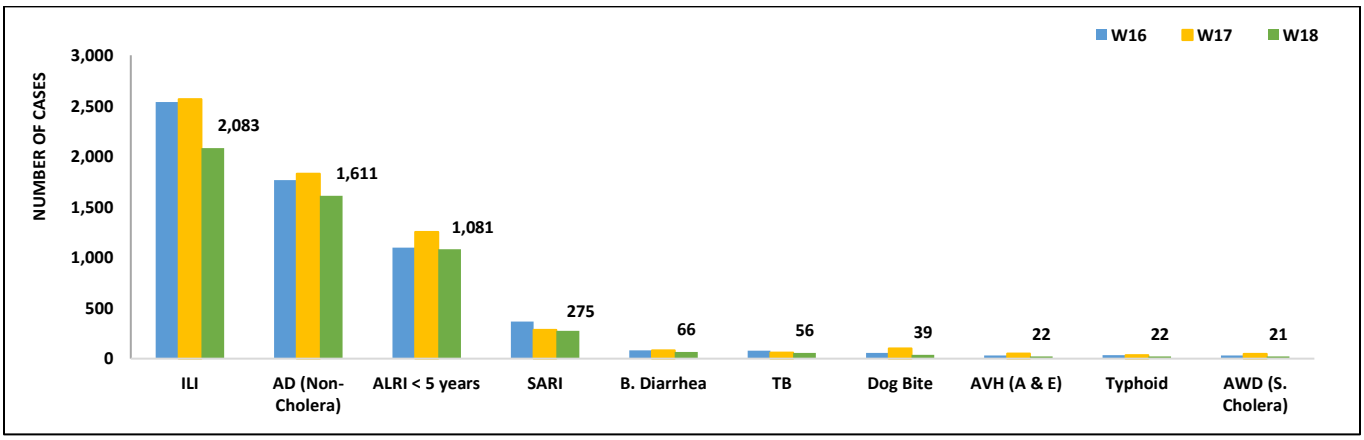


Figure 8: Week wise reported suspected cases of ILI and AD (Non-Cholera) AJK

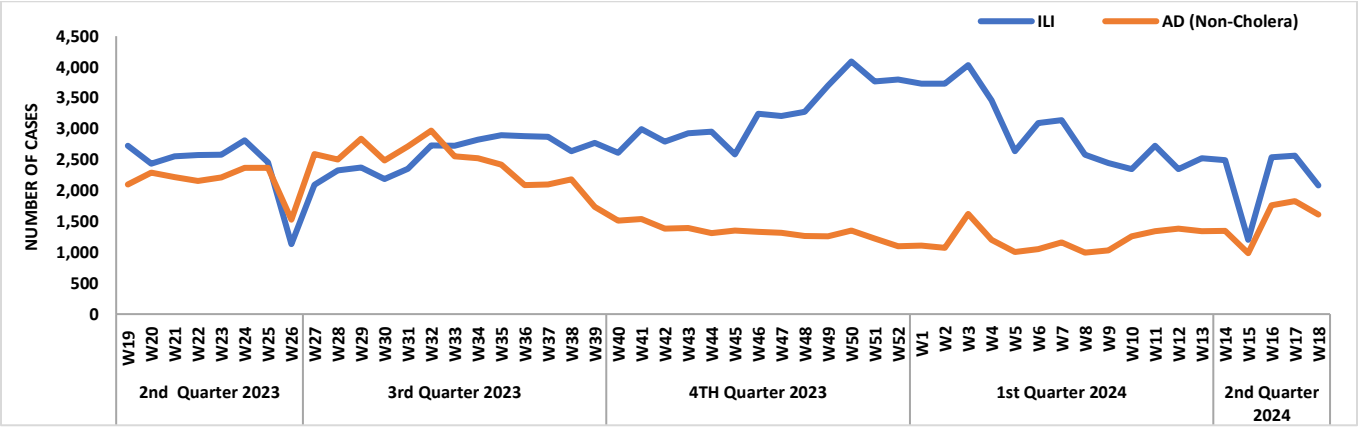


Figure 9: Most frequent cases reported during Week 18, GB

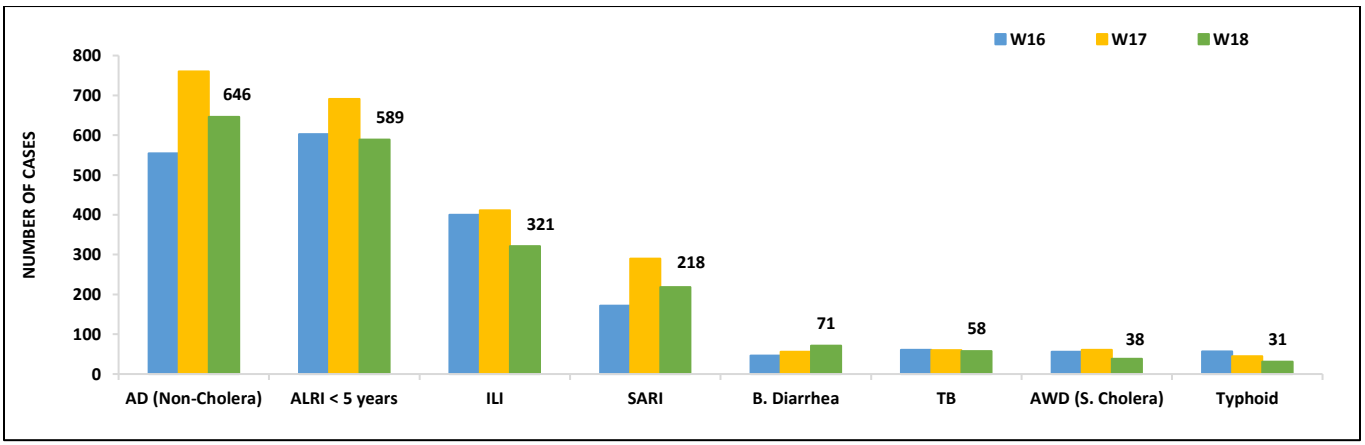


Figure 10: Week wise reported suspected cases of ALRI, GB

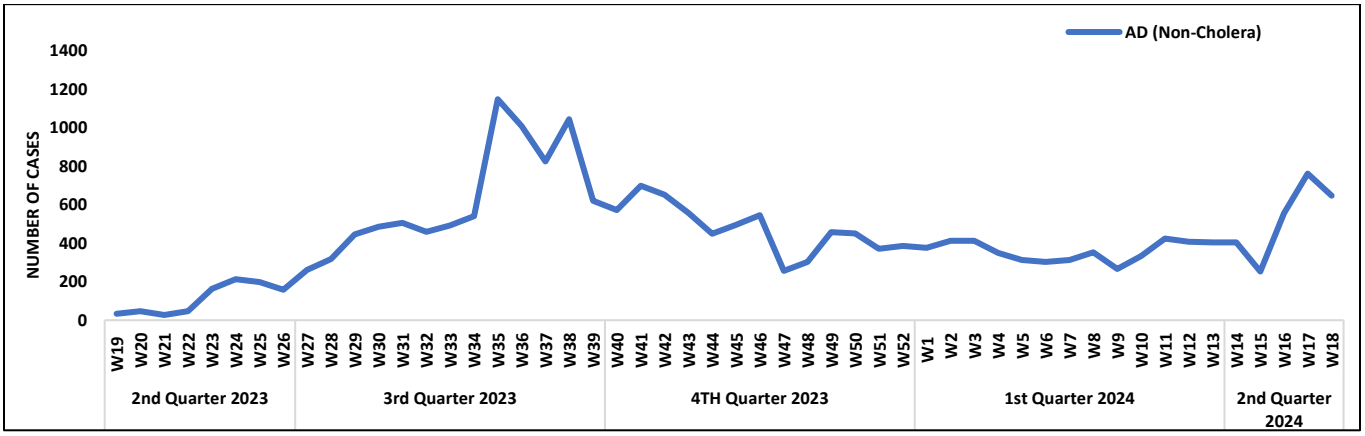


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 18

Diseases	Sindh		Balochistan		KPK		ISL		GB	
	Total Test	Total Positive	Total Test	Total Positive	Total Test	Total Positive	Total Test	Total Positive	Total Test	Total Positive
AWD (S. Cholera)	11	0	-	-	-	-	-	-	-	-
AD (Non-Cholera)	72	0	-	-	-	-	-	-	-	-
Malaria	2,525	95	-	-	-	-	-	-	-	-
CCHF	-	-	6	0	-	-	***1***	***1****	-	-
Dengue	469	25	0	0	1	0	5	0	-	-
VH (B)	3,575	109	0	0	-	-	-	-	149	1
VH (C)	3,741	340	0	0	-	-	-	-	149	0
VH (A&E)	10	0	-	-	3	1	-	-	-	-
Covid-19	-	-	119	0	5	0	72	3	-	-
HIV	142	0	-	-	-	-	-	-	-	-
Diphtheria	-	-	-	-	1	1	-	-	-	-
Influenza A	9	0	0	0	4	0	87	7	0	0
TB	114	0	-	-	-	-	-	-	-	-
Syphilis	105	0	-	-	-	-	-	-	-	-
Pertussis	-	-	-	-	-	-	-	-	-	-
Typhoid	-	-	-	-	-	-	-	-	-	-
Mumps	-	-	-	-	-	-	**0**	**0**	-	-
Measles	-	-	-	-	-	-	-	-	-	-

**CCHF Positive case Of District Attock, Punjab*

IDSR Reports Compliance

- Out OF 149 IDSR implemented districts, compliance is low from KPK. Green color showing >50% compliance while red color is <50% compliance

Table 6: IDSR reporting districts Week 18, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	103	93%
	Bannu	234	134	57%
	Battagram	63	20	32%
	Buner	34	25	74%
	Bajaur	44	28	64%
	Charsadda	59	0	0%
	Chitral Upper	34	28	82%
	Chitral Lower	35	34	97%
	D.I. Khan	114	109	96%
	Dir Lower	74	73	99%
	Dir Upper	53	43	81%
	Hangu	22	2	9%
	Haripur	72	69	96%
	Karak	35	35	100%
	Khyber	64	19	30%
	Kohat	61	61	100%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	70	100%
	Lower & Central Kurram	40	5	13%
	Upper Kurram	42	26	62%
	Malakand	42	39	93%
	Mansehra	136	105	77%
	Mardan	80	72	90%
	Nowshera	55	52	95%
	North Waziristan	380	0	0%
	Peshawar	151	132	87%
	Shangla	65	15	23%
	Swabi	63	59	94%
	Swat	77	74	96%
	South Waziristan	134	59	44%
	Tank	34	32	94%
	Torghar	14	13	93%
	Mohmand	86	41	48%
	SD Peshawar	5	1	20%
	SD Tank	58	4	7%
	Orakzai	68	19	28%
	Mirpur	37	37	100%
	Bhimber	20	20	100%
	Kotli	60	60	100%
	Muzaffarabad	45	45	100%
	Poonch	46	45	98%
	Haveli	39	39	100%

Azad Jammu Kashmir	Bagh	40	38	95%
	Neelum	39	39	100%
	Jhelum Vellay	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	21	19	90%
	CDA	14	9	64%
Balochistan	Gwadar	25	24	96%
	Kech	40	35	88%
	Khuzdar	20	18	90%
	Killa Abdullah	20	0	0%
	Lasbella	55	55	100%
	Pishin	62	8	13%
	Quetta	43	14	33%
	Sibi	36	35	97%
	Zhob	39	27	69%
	Jaffarabad	16	15	94%
	Naserabad	32	32	100%
	Kharan	30	29	97%
	Sherani	15	15	100%
	Kohlu	75	52	69%
	Chagi	35	25	71%
	Kalat	41	38	93%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	35	100%
	Jhal Magsi	26	26	100%
	Sohbat pur	25	25	100%
	Surab	32	32	100%
	Mastung	45	45	100%
	Loralai	33	25	76%
	Killa Saifullah	28	27	96%
	Ziarat	29	0	0%
	Duki	31	16	52%
	Nushki	32	29	91%
	Dera Bugti	45	27	60%
	Washuk	46	12	26%
	Panjgur	38	23	61%
	Awaran	23	7	30%
	Chaman	24	11	46%
	Barkhan	20	20	100%
	Hub	33	19	58%
	Musakhel	41	0	0%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	30	94%
	Nagar	20	20	100%
	Ghizer	40	40	100%
	Gilgit	40	37	93%
	Diamer	62	62	100%
	Astore	54	54	100%

	Shigar	27	27	100%
	Skardu	52	52	100%
	Ganche	29	29	100%
	Kharmang	18	18	100%
Sindh	Hyderabad	73	45	62%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	107	62	58%
	Tharparkar	282	242	86%
	Shikarpur	60	60	100%
	Thatta	52	52	100%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	20	87%
	Karachi-West	20	20	100%
	Karachi-Malir	37	37	100%
	Karachi-Kemari	18	8	44%
	Karachi-Central	11	10	91%
	Karachi-Korangi	18	12	67%
	Karachi-South	4	4	100%
	Sujawal	54	50	93%
	Mirpur Khas	106	103	97%
	Badin	124	120	97%
	Sukkur	63	63	100%
	Dadu	90	90	100%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	169	168	99%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	68	68	100%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	40	40	100%
	Shaheed Benazirabad	124	123	99%

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A note from Field Activities.

Measles Outbreak in Kohat District, Khyber Pakhtunkhwa, Pakistan

Dr. Ahmed Dawar Afridi
Fellow FETP 14th Cohort

Dr. Majid Salim
Technical Support Officer, DGHS, KP

Dr. Irshad Roghani
Director Public Health, DGHS, KP

Introduction

A recent surge in measles cases in Kohat District, Khyber Pakhtunkhwa, Pakistan, prompted a public health investigation (EPID weeks 11-15, 2024). Measles, a highly contagious and potentially severe viral illness, affected 23 individuals across various UCs (Union Councils) in Kohat during this period. This spike in cases coupled with three suspected measles deaths triggered the official declaration of a measles outbreak in the district.

Aims and Objectives

The public health investigation in Kohat District, Pakistan, aimed to comprehensively address the recent measles outbreak through several key objectives.

- Firstly, to assess the outbreak's magnitude, determining the number of confirmed cases, their geographical distribution, and the overall trend over time.
- Secondly, to investigate the three suspected measles deaths in Rehmanabad village to confirm the cause and identify any contributing factors.
- To Identify risk factors for measles transmission formed the third objective. This included evaluating vaccination coverage, access to healthcare, population demographics, and potential sources of transmission.
- The investigation also aimed to develop control measures to contain the current outbreak, potentially including mass vaccination campaigns, isolation protocols, and public health awareness initiatives.
- Finally, to formulate long-term prevention strategies by addressing identified risk factors and improving overall vaccination coverage in the district to prevent future outbreaks.

Methodology

A descriptive study, conducted between EPID weeks 11 and 15 of 2024, investigated the measles outbreak in Kohat District, Pakistan. The study focused particularly on UC Jarma, identified as the outbreak's epicenter. To identify potential cases, active case search activities were conducted, involving interviews with 30 households using a standardized format.

Clear case definitions were established to categorize suspected, probable, and confirmed measles cases. A suspected case required the presence of fever, rash, and at least one of the following symptoms: cough, runny nose, conjunctivitis, ear infection, or pneumonia. Probable cases were those suspected cases with a link to a confirmed case. Confirmed cases were diagnosed through laboratory detection of either measles-specific IgM antibody or measles RNA.

To contain the outbreak, an alert threshold of one suspected case and an outbreak threshold of one confirmed case with five or more suspected cases within 30 days were established. The study included any individual meeting the suspected case definition, while those with symptoms prior to the study period were excluded. Additionally, an outbreak response campaign was launched to vaccinate unvaccinated children. Data analysis for the defined period utilized MS Excel and EPI Info software.

Results

The investigation identified a total of 23 confirmed measles cases. The gender distribution was nearly even, with 12 males and 11 females infected. The mean age of those infected was 32 months, with children above 12 months being most susceptible (18 confirmed cases). Geographically, UC Jarma bore the brunt of the outbreak with 5 cases, followed by UC Muhammad Zai with 3. The outbreak peaked on

March 8th, 2024, with the highest surge of 5 confirmed cases on that day. An epidemic curve can further illustrate this trend.

Fever and rash were universal symptoms among all confirmed cases (23 patients). Conjunctivitis was the least common, observed in only one case.

The overall attack rate for children under 15 years in Kohat District was 4.6 per 100,000 population. Interestingly, UC Jarma had a lower attack rate (2.0 per 10,000) compared to UC Muhammad Zai (2.1 per 10,000).

A significant concern was the low vaccination rate – only 2 (9.52%) of the confirmed cases had documented vaccination during the study period. This data differed considerably from EPI-MIS records, suggesting potential discrepancies in reporting.

Fortunately, the investigation into the three suspected measles deaths in Rehmanabad village revealed that none of the cases met the established criteria for a measles case definition.

Conclusions

The investigation confirmed a measles outbreak in Kohat District, with UC Jarma identified as the epicenter. Low vaccination coverage and limited access to healthcare services in certain areas likely contributed to the outbreak. The investigation also revealed discrepancies in data reporting between different surveillance systems.

Recommendations

- Enhance access to hard-to-reach areas for comprehensive vaccination campaigns and improved VPD (Vaccine-Preventable Disease) surveillance.
- Strengthen measles surveillance and vaccination efforts in UC Jarma, focusing on identifying and vaccinating unvaccinated individuals.
- Conduct targeted awareness sessions on the importance of measles vaccination in high-risk UCs.
- Train IDSRS focal persons on accurate data entry and reporting.
- Organize a mass vaccination campaign in high-risk UCs to target unvaccinated children above 12 months who are ineligible for routine

Measles Outbreak Investigation Report: Chandroo Mohajir Village, Tando Allahyar District

Dr. Fahad Ahmed Memon
Assistant Director /FETP Fellow
PDSRU, Sindh

Dr. Khalil ur Rahman Memon
FETP fellow
PDSRU, Sindh

Introduction

This report details the investigation of a suspected measles outbreak in Chandroo Mohajir village, Tando Allahyar District, Pakistan. Five deaths in children under ten years old were reported on April 28, 2024. A team from the Provincial Disease Surveillance and Response Unit (PDSRU) was deployed to investigate the outbreak on April 29, 2024.

Methods:

To fully understand the measles outbreak in Chandroo Mohajir village, the PDSRU team employed a multi-pronged approach. This included conducting interviews with families of deceased children (verbal autopsies) to learn about the illness and their healthcare decisions. Additionally, they actively searched for new suspected cases based on established criteria. Vaccination status was assessed through a combination of reviewing existing records and speaking with parents. Health facility data provided further insight into overall measles vaccination coverage in the area. Finally, the team observed the community firsthand, evaluating the outreach efforts undertaken by vaccination teams. This comprehensive investigation allowed them to pinpoint the factors contributing to the outbreak.

Results:

An investigation into a measles outbreak in Chandroo Mohajir village revealed concerning trends. Five children exhibited classic measles symptoms (fever, rash, cough, and sometimes diarrhea) and tragically succumbed to the illness. Verbal autopsies indicated poor healthcare seeking behavior, with families turning to unqualified practitioners.

Additionally, nine more suspected cases were found during active case searching. Measles vaccination coverage in the area was low (first dose: 84%, second dose: 65%), and critically, no outreach vaccination sessions occurred in the village for four months prior to the outbreak. Furthermore, the investigation identified a cluster of cases within the same community, residing in close proximity. These findings point towards low vaccination coverage and vaccine hesitancy within the community as significant contributing factors to the outbreak.

Public health interventions were implemented to control the outbreak and prevent further spread. These included actively searching for new cases, conducting a comprehensive mop-up vaccination campaign in the affected village and surrounding areas (which is still ongoing), and administering Vitamin A supplements to children alongside vaccination to boost their immunity. Additionally, samples were collected for confirmatory testing (if applicable), and a suspected case (Baby Mubasshara) received proper medical care through hospitalization. Finally, to promote long-term prevention, community health awareness sessions were conducted to educate residents about measles prevention and the importance of vaccination.

Conclusion:

The outbreak investigation suggests that low measles vaccination coverage and poor health-seeking behavior in the community were the probable causes of the outbreak.

Recommendations:

- Investigate and potentially initiate disciplinary action against EPI staff responsible for the missed outreach activities and their supervisors.
- Strengthen routine immunization coverage across the district.
- Conduct targeted behavior change communication campaigns in collaboration with partners.
- Implement immediate mop-up vaccination activities in the affected and surrounding areas.
- Enhance outreach activities and monitoring of EPI teams to prevent future vaccine-preventable disease (VPD) outbreaks.

Crimean-Congo Hemorrhagic Fever (CCHF) Case Report: Attock District, Pakistan

Dr. Shoaib
Manager Surveillance,
CD&EPC, Punjab

Dr. Talib Hussain
DDSRU Attock

Dr. M. Haris
DDSRU Rawalpindi

Introduction:

Crimean-Congo Hemorrhagic Fever is a viral disease transmitted through contact with infected animals or their bodily fluids. While this is the first reported case of CCHF in Punjab, Pakistan for 2024, the disease has a presence in the country. This report details a confirmed case of Crimean-Congo Hemorrhagic Fever (CCHF) in a resident of Attock District, Pakistan. The case highlights the importance of public health vigilance and rapid response measures for controlling the spread of this potentially fatal viral disease.

Case Presentation:

A 44-year-old male resident of Malla Kalan village, Union Council Haroon, Attock District, presented with symptoms suggestive of CCHF on May 1, 2024. He was admitted to a hospital in Rawalpindi for treatment the same day and was notified as suspected CCHF. Subsequent investigation, including laboratory testing conducted at the National Institute of Health (NIH) in Islamabad, confirmed CCHF infection on May 3, 2024. Tragically, the patient succumbed to the disease the same night.

Public Health Response:

Upon notification of the case, the district health authorities in Attock and Rawalpindi promptly activated the Tehsil Rapid Response Team in collaboration with the District Livestock Department. These actions aimed to:

- Mitigate the spread of the virus through contact tracing and monitoring of close contacts and active case search.
- Implement safe burial practices for the deceased individual.
- Conduct inspections for tick presence in the vicinity of the deceased's residence.
- Administer preventive measures, including livestock spraying, for potentially exposed animals.

Investigation and Control Measures:

Examinations of the deceased's family members, close contacts, medical and paramedical staff involved in case management and surrounding livestock revealed no immediate evidence of CCHF transmission. However, the local administration declared an emergency in Hazro town as a precautionary measure. Collaborative efforts between health, livestock, and administrative departments are ongoing to prevent further spread of the virus. The absence of detected ticks in the immediate vicinity does not definitively rule out their role in transmission. Further investigation may be necessary. Targeted public health education campaigns were implemented as a vital component in the strategy to prevent future Crimean-Congo hemorrhagic fever (CCHF) outbreaks. These campaigns focused on empowering the public with knowledge on two key fronts: safe animal handling practices and early recognition of CCHF symptoms.

Though the source of infection in this case remains undetermined, Hyalomma ticks are known carriers of the CCHF virus. There is no vaccine available for CCHF so avoidance of tick bites is the only preventive measure.

Discussion:

This case underscores the potential risk factors for CCHF in Pakistan, particularly considering the upcoming Eid-ul-Azha festival and associated large-scale animal movement. Public health experts urge citizens to exercise caution while purchasing sacrificial animals, ensuring the absence of ticks on their bodies.

Conclusion:

The swift and decisive actions taken by public health and administrative authorities in Attock and Rawalpindi in response to a suspected Crimean-Congo hemorrhagic fever (CCHF) case exemplify the critical role of robust public health surveillance and control measures in containing outbreaks. Their proactive implementation of active case response strategies, even prior to laboratory confirmation, demonstrates a commendable commitment to public health protection.

This successful containment, preventing further spread of the disease, underscores the effectiveness of such a proactive approach. However, continued vigilance and public awareness campaigns remain crucial in mitigating the threat posed by this potentially fatal zoonotic disease.

Commentary.

A Beacon of Hope: The Local Hepatitis Elimination and Prevention (LHEAP) Initiative in Rawalpindi

Dr. Ansar Ishaq
Director, LHEAP

Dr. Waqar Ahmed
SafetyNet, NIH

The public health landscape in Rawalpindi has witnessed a significant development in the fight against hepatitis with the implementation of the Local Hepatitis Elimination and Prevention (LHEAP) initiative. This program has embarked on a comprehensive approach, actively reaching out to communities by visiting nearly 10,000 houses. Through this extensive house-to-house effort, LHEAP has successfully screened over 41,000 individuals for Hepatitis B (HBV) and Hepatitis C (HCV). The data garnered from this large-scale screening program sheds crucial light on the true scope of the hepatitis burden within the district.

The initial findings from LHEAP paint a concerning picture, revealing a substantial number of positive cases. A total of 226 individuals were diagnosed with HBV, while a considerably higher number, 1,086, tested positive for HCV. This significant prevalence of hepatitis underscores the urgent need for continued and intensified efforts in

three critical areas: testing, prevention, and treatment.

However, the impact of LHEAP extends far beyond the mere collection of data. The program has achieved a crucial milestone in identifying pregnant mothers carrying HBV or HCV. Early detection of these infections in expectant mothers is paramount in preventing mother-to-child transmission, a vital step towards interrupting the cycle of hepatitis propagation within the community. Furthermore, LHEAP has made a strong start in building community-wide immunity by vaccinating over 21,000 individuals against HBV. Notably, the high number of individuals receiving the first dose of the vaccine regimen signifies a promising initial step. However, ensuring completion of the full three-dose vaccination schedule remains crucial for achieving long-term protection against HBV.

Public Awareness Message:

Hepatitis is a silent disease, often progressing undetected for years and potentially leading to serious complications. Knowing your hepatitis status is the first step towards prevention and treatment. We urge all residents of Rawalpindi to get tested for Hepatitis B and C. Please consult your doctor to learn more about these infections and how to protect yourself and your loved ones.

A Call to Action: Eradicating Hepatitis Together

While LHEAP's initial achievements are commendable, the fight against hepatitis in Rawalpindi is far from over. The high prevalence of HCV identified through the program highlights the necessity for increased public awareness campaigns and expanded screening efforts. While the initial vaccination numbers are encouraging, ensuring completion of the full three-dose regimen for all individuals remains vital for achieving sustained protection within the population.

The continued success of the LHEAP initiative hinges on securing sustained resources. ***We call upon generous donors to lend their support to this critical public health program.*** Your contributions will directly translate into providing essential testing, vaccination, and treatment services to those most in need within the Rawalpindi community. By joining hands in this collective effort, we can eliminate the burden of hepatitis and create a healthier future for all residents of Rawalpindi.

Through targeted interventions, comprehensive public education campaigns, and unwavering support from donors and stakeholders, we can collectively transform Rawalpindi into a hepatitis-free zone.

Knowledge Hub

Public Health Education: A Crucial Weapon in Combating Brucellosis

Brucellosis, a zoonotic bacterial infection transmitted from animals to humans, presents a significant public health threat. This potentially debilitating illness can have a substantial impact on individual health and well-being, as well as on the economic stability of agricultural communities. Raising awareness about brucellosis through targeted public health education initiatives empowers individuals and communities to take preventative measures, ultimately mitigating the spread of the disease.

Understanding Brucellosis: A Bacterial Foe

Brucellosis arises from infection with bacteria belonging to the genus Brucella. These bacteria primarily target livestock populations, including cattle, goats, sheep, and swine. Humans can contract brucellosis through two key routes: direct contact with infected animals or their bodily fluids, and consumption of contaminated animal products. Unpasteurized milk and dairy products pose a particular risk, as the Brucella bacteria can survive in these products if proper pasteurization procedures are not followed.

Clinical Manifestations of Brucellosis: A Spectrum of Symptoms

Brucellosis presents with a diverse range of symptoms, often mimicking other illnesses. The most common clinical manifestations include:

- Febrile episodes, characterized by elevated body temperature.
- Myalgia, a medical term for muscle aches and fatigue.
- Diaphoresis, or excessive sweating.
- Arthralgia, referring to joint pain.
- Anorexia, or loss of appetite.

In severe and untreated cases, complications of brucellosis can arise, potentially affecting the bones, joints, and reproductive system. Early diagnosis and prompt treatment are crucial to prevent these complications and ensure a full recovery.

Prevention is Paramount: A Multifaceted Approach

Fortunately, effective strategies exist to prevent the spread of brucellosis and protect public health. These strategies involve a multifaceted approach, encompassing both animal and human health interventions:

- **Vaccinating Livestock Populations:** Implementing comprehensive vaccination programs for livestock, particularly cattle, goats, sheep, and swine, significantly reduces the risk of brucellosis transmission from animals to humans.
- **Safe Food Handling Practices:** Consumption of only pasteurized milk and dairy products is crucial. Additionally, thorough cooking of meat to an internal temperature of 160°F (71°C) eliminates any potential Brucella bacteria that might be present. Rigorous handwashing practices, especially after handling raw meat or animal products, further minimize the risk of transmission.
- **Biosecurity Measures on Farms:** Implementing and adhering to strict biosecurity protocols on farms is essential. Farmers and animal handlers should wear protective clothing, such as gloves and boots, while interacting with livestock. Furthermore, proper hygiene measures to minimize contact with animal fluids and tissues are crucial to prevent transmission.

Protecting Our Communities: A Collective Responsibility

Raising awareness about brucellosis among various population groups plays a critical role in preventing the spread of this zoonotic disease. Here's how individuals and communities can contribute:

- **Heightened Risk Awareness:** Individuals who work in occupations involving close contact with animals or who consume unpasteurized dairy products should be particularly cognizant of the signs and symptoms of brucellosis.
- **Seeking Prompt Medical Attention:** Early diagnosis is vital for effective treatment and preventing complications. If individuals experience symptoms suggestive of brucellosis, they should consult a healthcare professional promptly.
- **Empowering Others Through Education:** Sharing information about brucellosis with family, friends, and community members fosters a collective understanding of the risks and preventive measures. The more informed our communities are, the better equipped we are to combat the spread of brucellosis.

A United Front: A Call for Collaboration

Brucellosis control requires a collaborative effort from various stakeholders. Public health officials, veterinarians, farmers, and the general public all play critical roles in effectively combating this zoonotic disease. Public health education initiatives, coupled with robust animal health programs and responsible food handling practices, form the cornerstone of a comprehensive brucellosis prevention strategy. By working together, we can create a safer and healthier environment for all, mitigating the threat posed by brucellosis.

Public Health Bulletin Pakistan

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