

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.

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Overview

Public Health Bulletin - Pakistan, Week 43, 2024

IDSR Reports

Ongoing Events

Field Reports

Evolving from a basic disease registry, Pakistan's Public Health Bulletin has become an indispensable tool for safeguarding public health. By meticulously tracking disease trends, the Bulletin serves as an early warning system, enabling timely interventions to prevent outbreaks.

Beyond data compilation, this week's bulletin also includes updates on NIH team conducting a roundtable meeting on One Health, an Outbreak Investigation of Measles, and a knowledge review on TB

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*Sincerely,
The Chief Editor*



- During week 43, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, TB, ALRI <5 years, dog bite, B. Diarrhea, VH (B, C & D), Typhoid and SARI.
- Thirty-one cases of AFP reported from KP, thirteen from Punjab, eleven from Sindh, six from AJK and one each from Balochistan and GB. All are suspected cases and need field verification.
- Seventeen suspected cases of HIV/ AIDS reported from Punjab, eight from Sindh, seven from KP and one from Balochistan. Field investigation required to verify the cases.
- Ten suspected cases of Brucellosis reported from KP. Field investigation required to verify the cases.
- There is a decreasing trend observed for Acute Diarrhea (Non-Cholera), Malaria, TB, ALRI <5 years, B. Diarrhea, VH (B, C & D) and Typhoid cases this week.

IDSR compliance attributes

- The national compliance rate for IDSR reporting in 158 implemented districts is 81%
- Gilgit Baltistan and AJK are the top reporting regions with a compliance rate of 100% and 95%, followed by Sindh 94% and ICT 80%
- The lowest compliance rate was observed in KPK 75% and Balochistan 70%.

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2319	1737	75
Azad Jammu Kashmir	405	382	94
Islamabad Capital Territory	36	29	80
Balochistan	1308	828	70
Gilgit Baltistan	407	406	100
Sindh	2094	1966	94
National	6569	5348	81



Public Health Actions

1. Acute Diarrhea (Non-Cholera)

- **Community Education:** Launch health education campaigns on hand washing, food hygiene, and safe drinking water.
- **Field Verification:** Health workers should verify suspected cases and report them immediately.
- **Strengthen Surveillance:** Quickly enhance reporting systems for acute diarrhea and suspected cholera cases, particularly in high-risk areas.

2. Malaria

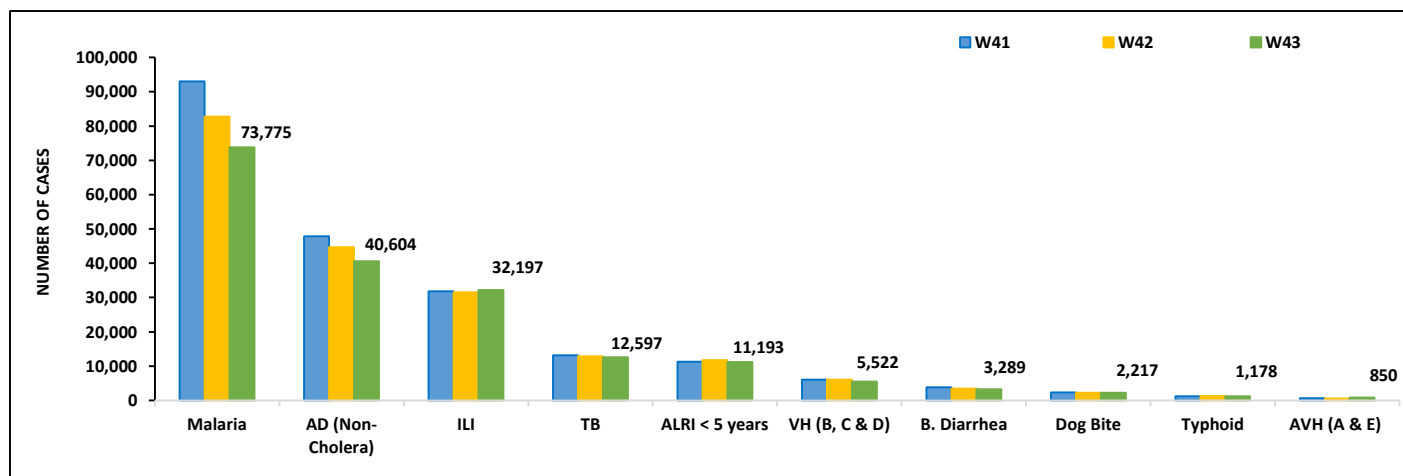
- **Expand Distribution of Insecticide-Treated Nets (ITNs):** Distribute ITNs and ensure their use, particularly in malaria-endemic areas.
- **Strengthen Case Management:** Ensure malaria diagnosis and treatment are available, particularly at the community level.
- **Public Awareness:** Run health education and community awareness campaigns, especially targeting high-risk groups.
- **Improve Malaria Surveillance:** Strengthen malaria case surveillance and data reporting systems to identify and manage outbreaks.



Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 43, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	1,363	5,892	1,004	386	19,866	74,332	40,604	143,447
Malaria	10	6,598	0	3	7,866	3,589	73,775	91,841
ILI	2,203	7,480	427	1,974	5,149	1	32,197	49,431
TB	44	154	100	5	442	10,249	12,597	23,591
ALRI < 5 years	1,070	1,623	651	3	1,714	1,243	11,193	17,497
Dog Bite	95	180	6	1	457	3,942	2,217	6,898
B.Diarrhea	48	1,227	65	0	1,104	779	3,289	6,512
VH (B, C & D)	6	205	11	0	93	0	5,522	5,837
Typhoid	9	561	60	2	793	2,383	1,178	4,986
Dengue	20	3	92	15	421	2,325	87	2,963
SARI	287	560	308	0	1,268	0	203	2,626
AWD (S. Cholera)	112	143	27	0	78	1,234	6	1,600
AVH (A&E)	15	36	2	0	285	0	850	1,188
Measles	6	27	2	3	175	223	34	470
Chikungunya	0	2	0	0	0	4	382	388
CL	0	126	0	0	156	2	1	285
Mumps	12	60	3	0	97	2	102	276
Gonorrhoea	0	50	0	0	20	0	13	83
Chickenpox/ Varicella	8	2	10	2	42	11	8	83
Meningitis	0	0	0	0	1	65	6	72
AFP	6	1	1	0	31	13	11	63
Pertussis	0	40	5	0	0	1	0	46
Diphtheria (Probable)	0	9	0	0	10	13	4	36
HIV/AIDS	0	1	0	0	7	17	8	33
Syphilis	0	1	0	0	0	0	19	20
Leprosy	0	1	0	0	0	0	14	15
Brucellosis	0	0	0	0	10	0	0	10
Rubella (CRS)	0	8	0	0	0	0	0	8
NT	0	2	0	0	4	1	0	7

Figure 1: Most frequently reported suspected cases during Week 43, Pakistan.

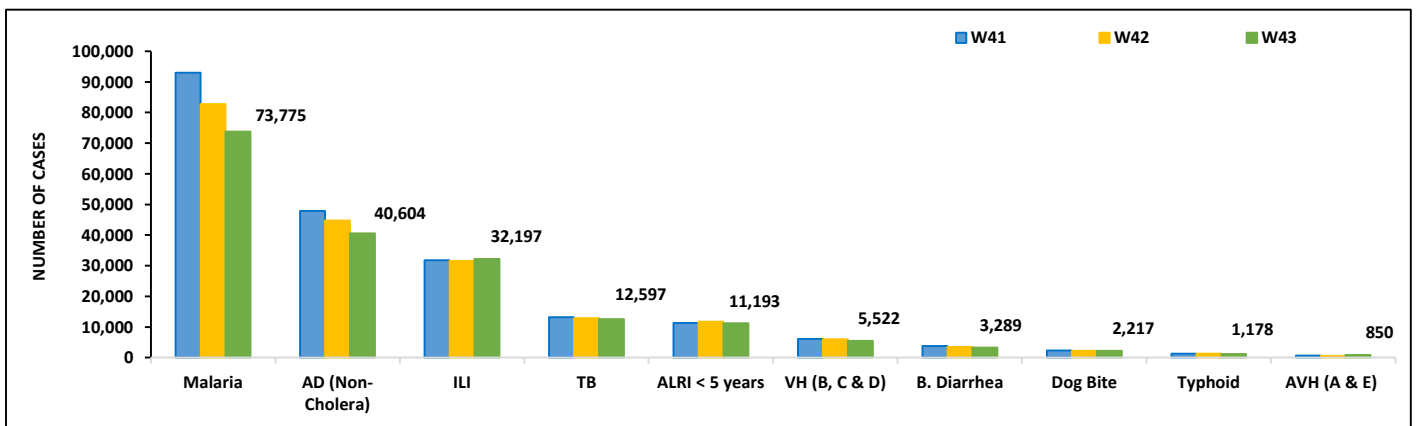


- Malaria cases were maximum followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, dog bite, Typhoid and AVH (A & E).
- Malaria cases are mostly from Larkana, Khairpur and Kamber whereas AD (Non-Cholera) cases are from Khairpur, Dadu and Mirpurkhas.
- Twenty cases of AFP, One case of HIV/ AIDS, Eight cases of Brucellosis reported from Sindh. All are suspected cases and need field verification.
- There is an increasing trend observed for Malaria, ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea and AVH (A & E) cases this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 43, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	3,359	1,941	638	846	636	215	193	74	114	8
Dadu	5,357	2,184	337	468	961	46	404	287	117	43
Ghotki	2,384	1,049	113	325	490	409	72	212	3	3
Hyderabad	428	1,635	2,646	84	152	80	0	0	25	0
Jacobabad	1,153	857	625	155	394	196	114	142	22	0
Jamshoro	2,926	1,904	148	517	379	339	99	45	75	25
Kamber	5,595	1,932	0	1008	282	137	143	170	18	0
Karachi Central	30	1,036	1,676	12	24	5	10	0	139	20
Karachi East	71	379	373	15	15	3	10	13	3	0
Karachi Keamari	7	352	264	13	102	0	1	0	3	3
Karachi Korangi	57	326	0	13	3	0	4	0	0	1
Karachi Malir	612	1,478	4,106	166	360	69	50	41	40	14
Karachi South	43	67	2	0	0	0	0	0	0	0
Karachi West	261	894	1,369	144	200	127	35	46	32	6
Kashmore	1,892	514	734	314	186	31	84	125	2	0
Khairpur	6,336	2,623	6,601	1199	1,040	236	360	144	175	6
Larkana	8,214	1,784	9	1008	470	73	402	20	11	50
Matiali	2,488	1,411	3	711	347	357	51	31	9	3
Mirpurkhas	3,601	2,086	4,709	608	571	184	62	36	8	4
Naushero Feroze	2,808	1,413	1,055	671	474	9	115	169	106	2
Sanghar	4,664	1,892	47	1119	540	1,253	64	143	82	8
Shaheed Benazirabad	2,028	1,679	8	386	286	77	77	94	97	2
Shikarpur	3,335	1,296	2	332	321	949	198	126	9	0
Sujawal	1,474	1,463	0	201	327	27	99	35	15	25
Sukkur	3,399	1,098	1,732	502	302	130	179	108	15	0
Tando Allahyar	3,056	1,208	1,043	440	246	337	122	40	14	12
Tando Muhammad Khan	1,232	967	4	510	180	12	80	0	0	0
Tharparkar	3,428	1,914	1,810	420	902	60	127	0	21	45
Thatta	1,514	1,738	2,143	31	562	105	83	116	10	569
Umerkot	2,023	1,484	0	379	441	56	51	0	13	1
Total	73,775	40,604	32,197	12,597	11,193	5,522	3,289	2,217	1,178	850

Figure 2: Most frequently reported suspected cases during Week 43 Sindh

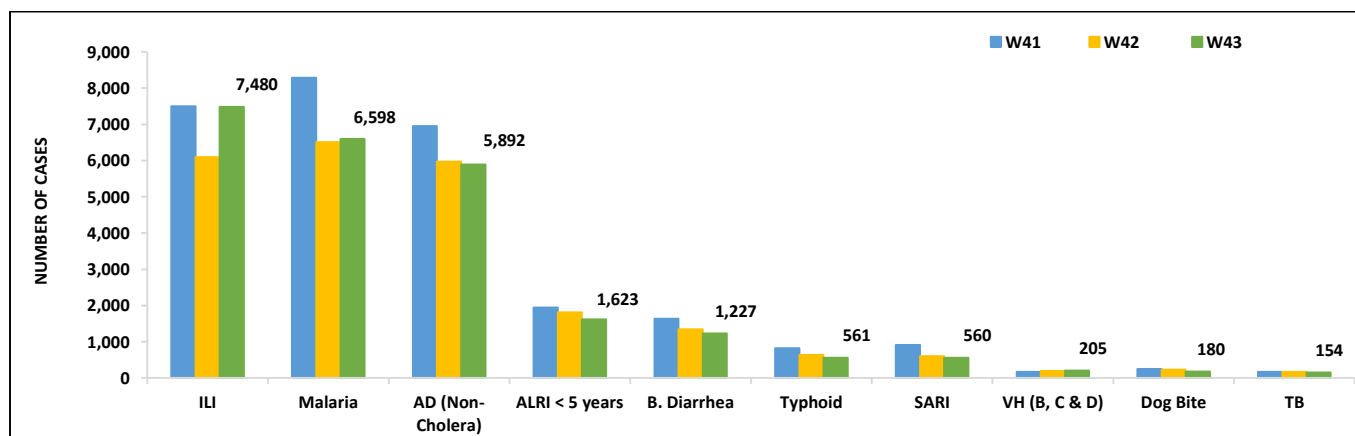


- Malaria, ILI, AD (Non-Cholera), ALRI <5 years, B. Diarrhea, SARI, Typhoid, dog bite, AWD (S. Cholera) and VH (B, C & D) cases were the most frequently reported diseases from Balochistan province.
- Malaria cases are mostly reported from Jaffarabad, Kech (Turbat) and Lesbella while ILI cases are mostly reported from Kech, Khuzdar and Quetta.
- Two cases of HIV/AIDs, One case of AFP, One case of Brucellosis reported from Balochistan. All are suspected case and needs field verification.
- Malaria, ILI, AD (Non-Cholera), ALRI <5 years, B. Diarrhea, SARI, Typhoid, dog bite, AWD (S. Cholera) and VH (B, C & D) cases showed an increasing trend this week.

Table 3: District wise distribution of most frequently reported suspected cases during Week 43, Balochistan

Districts	AD (Non-Cholera)	Malaria	ILI	B. Diarrhea	ALRI < 5 years	Typhoid	SARI	AWD (S.Cholera)	TB	CL
Barkhan	65	128	82	13	6	39	2	0	6	6
Chagai	399	158	179	0	51	23	0	3	0	0
Dera Bugti	48	166	76	47	28	14	22	0	0	0
Duki	37	22	66	16	25	4	9	2	15	0
Gwadar	1,500	294	519	14	58	58	0	3	0	1
Harnai	28	104	112	190	70	0	0	4	2	4
Hub	54	193	128	4	9	2	0	0	0	0
Jaffarabad	103	1,068	364	35	82	9	15	55	22	78
Jhal Magsi	389	563	182	9	4	1	0	0	0	4
Kalat	8	14	26	10	6	14	2	0	0	0
Kharan	1,016	563	272	6	35	NR	NR	NR	NR	NR
Khuzdar	430	83	148	0	70	4	4	0	0	0
Killa Abdullah	466	258	332	0	130	44	17	0	0	0
Killa Saifullah	79	7	89	10	21	12	19	0	1	1
Kohlu	0	146	142	118	43	10	0	0	0	0
Lasbella	299	161	215	8	79	35	64	4	NR	1
Loralai	41	653	334	79	38	7	0	2	24	1
Mastung	349	50	189	44	45	16	105	0	0	0
Musakhel	295	143	204	83	36	64	65	37	3	4
Naseerabad	30	427	372	44	33	74	7	69	89	4
Nushki	34	61	208	0	48	0	0	0	0	0
Panjgur	110	215	221	75	59	14	25	0	0	0
Pishin	338	40	150	33	52	9	5	0	0	0
Quetta	621	32	333	180	52	43	87	0	0	2
Sherani	44	8	17	0	7	5	1	0	0	0
Sibi	167	57	13	5	1	17	3	0	0	0
Sohbat pur	13	535	249	166	68	24	19	4	8	6
Surab	120	28	54	0	0	0	0	0	0	0
Usta Muhammad	153	314	499	163	46	7	19	22	10	0
Zhob	244	107	117	271	25	12	70	0	0	42
Total	7,480	6,598	5,892	1,623	1,227	561	560	205	180	154

Figure 3: Most frequently reported suspected cases during Week 43, Balochistan

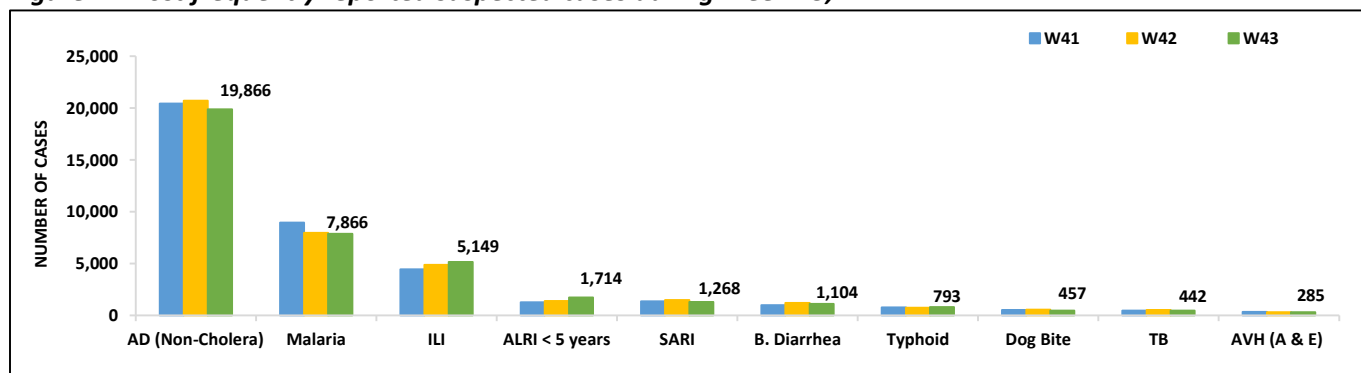


- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, SARI, ALRI<5 Years, B. Diarrhea, Typhoid , dog bite, TB and AVH (A & E) cases.
- Malaria, ILI, SARI, ALRI<5 Years, B. Diarrhea, Typhoid , dog bite and TB cases showed an increasing trend this week.
- Thirty-two cases of AFP, Seven suspected cases of HIV/ AIDS, Twenty-one suspected cases of Brucellosis reported from KP. All are suspected cases and need field verification.

Table 4: District wise distribution of most frequently reported suspected cases during Week 43, KP

Districts	AD (Non-Cholera)	Malaria	ILI	B.Diarrhea	SARI	ALRI <5 Years	Typhoid	Dog Bite	TB	AVH (A&E)
Abbottabad	437	3	97	24	1	9	41	6	23	1
Bajaur	1,112	313	75	366	68	80	4	35	15	60
Bannu	666	1,606	3	35	53	32	131	2	23	13
Battagram	28	NR	102	NR	NR	NR	NR	NR	NR	NR
Buner	226	282	0	13	0	0	8	11	5	0
Charsadda	948	407	673	66	0	28	66	5	14	11
Chitral Lower	245	17	70	14	28	20	7	14	6	1
Chitral Upper	130	1	18	11	9	9	5	0	2	1
D.I. Khan	1,012	708	0	11	0	16	0	12	57	0
Dir Lower	1,273	350	2	56	0	160	49	23	13	5
Dir Upper	766	15	89	27	0	6	1	0	15	3
Hangu	85	68	0	40	0	7	0	0	2	0
Haripur	654	55	387	30	6	11	15	1	28	32
Karak	250	270	91	17	179	9	4	8	4	0
Khyber	409	286	29	31	31	115	43	27	10	15
Kohat	401	264	126	13	21	11	12	0	0	1
Kohistan Lower	121	4	2	4	11	11	8	0	0	0
Kohistan Upper	422	28	15	65	20	19	0	0	0	0
Kolai Palas	82	9	2	1	8	5	2	0	0	0
L & C Kurram	27	37	72	0	0	22	5	1	0	0
Lakki Marwat	623	536	0	18	0	23	9	33	5	0
Malakand	720	25	46	43	17	33	26	0	3	12
Mansehra	378	12	276	10	68	13	9	5	3	1
Mardan	413	56	0	93	0	5	0	9	5	2
Mohmand	134	319	174	7	153	31	8	16	7	0
North Waziristan	59	38	16	54	39	42	7	0	0	3
Nowshera	1,266	322	55	5	68	25	13	8	12	28
Orakzai	153	35	23	0	0	0	15	2	1	0
Peshawar	2,745	95	1,027	85	112	126	94	1	21	4
SD Peshawar	7	1	0	0	0	0	0	0	0	0
SD Tank	27	20	3	0	0	9	0	0	0	0
Shangla	909	641	0	40	0	8	54	69	94	5
SWA	62	74	196	16	118	8	15	4	4	0
Swabi	1,002	72	868	358	52	10	32	70	41	33
Swat	1,497	107	193	128	0	139	50	78	9	54
Tank	340	677	205	5	0	10	50	3	15	0
Tor Ghar	29	75	0	1	14	15	1	6	0	0
Upper Kurram	208	38	214	27	192	37	9	8	5	0
Total	19,866	7,866	5,149	1,714	1,268	1,104	793	457	442	285

Figure 4: Most frequently reported suspected cases during Week 43, KP



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

AJK: ILI cases were maximum followed by AD (Non-Cholera), ALRI <5 years, SARI, dog bite, B. Diarrhea, TB, AWD (S. Cholera), AVH (A & E) and Malaria cases. A decreasing trend observed for AD (Non-Cholera), dog bite, B. Diarrhea, TB, AWD (S. Cholera), AVH (A & E) and Malaria cases while an increasing trend observed for ILI, ALRI <5 years and SARI cases this week. Four suspected cases of AFP reported from AJK. Field investigation required to verify the cases.

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

Figure 5: Most frequently reported suspected cases during Week 43, ICT

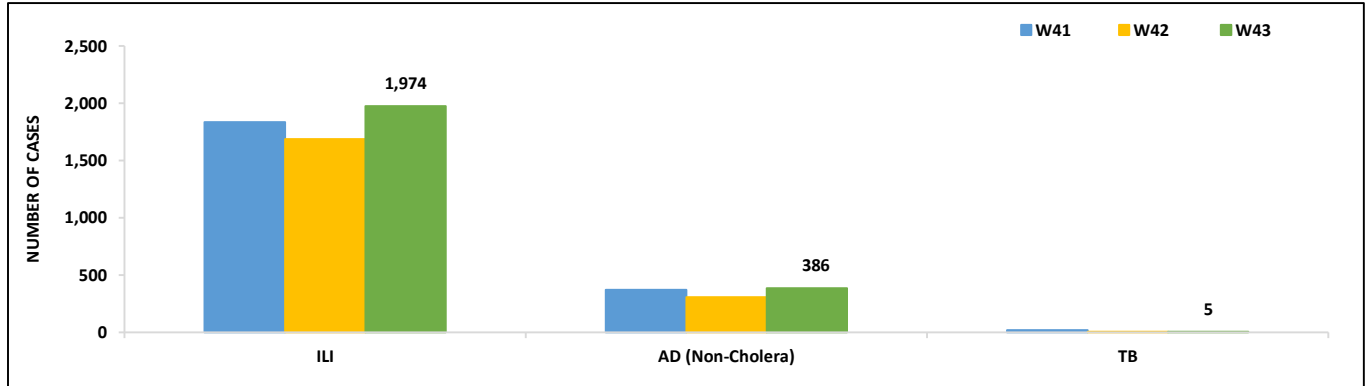


Figure 6: Week wise reported suspected cases of ILI, ICT

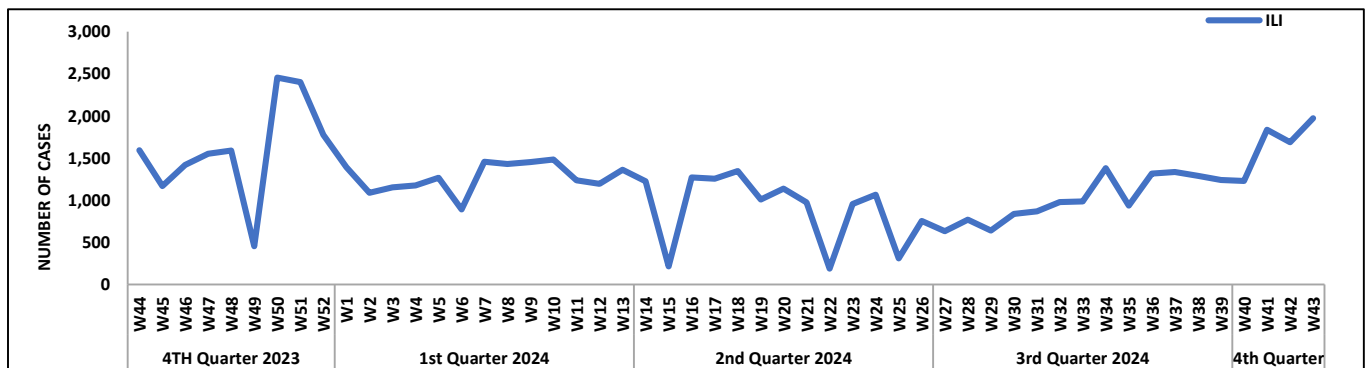


Figure 7: Most frequently reported suspected cases during Week 43, AJK

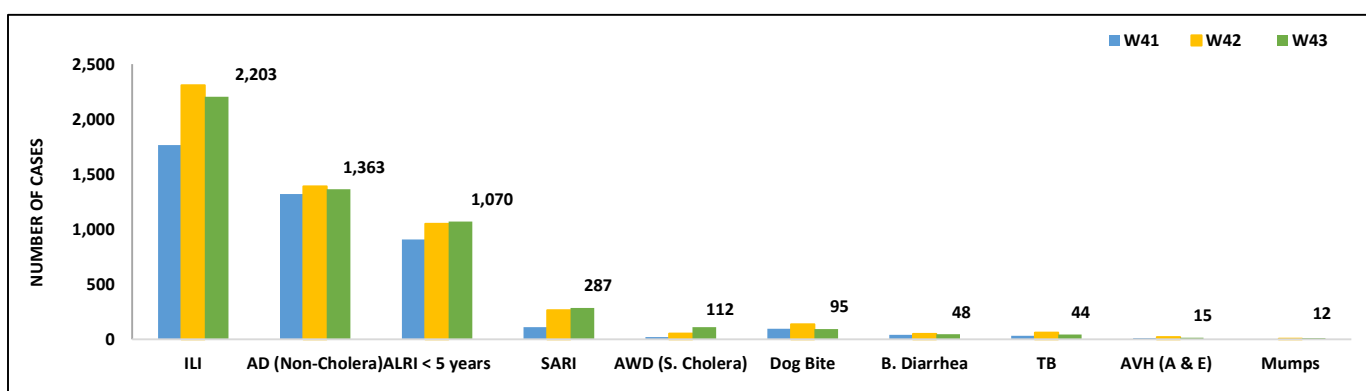


Figure 8: Week wise reported suspected cases of ILI and AD (Non-Cholera) AJK

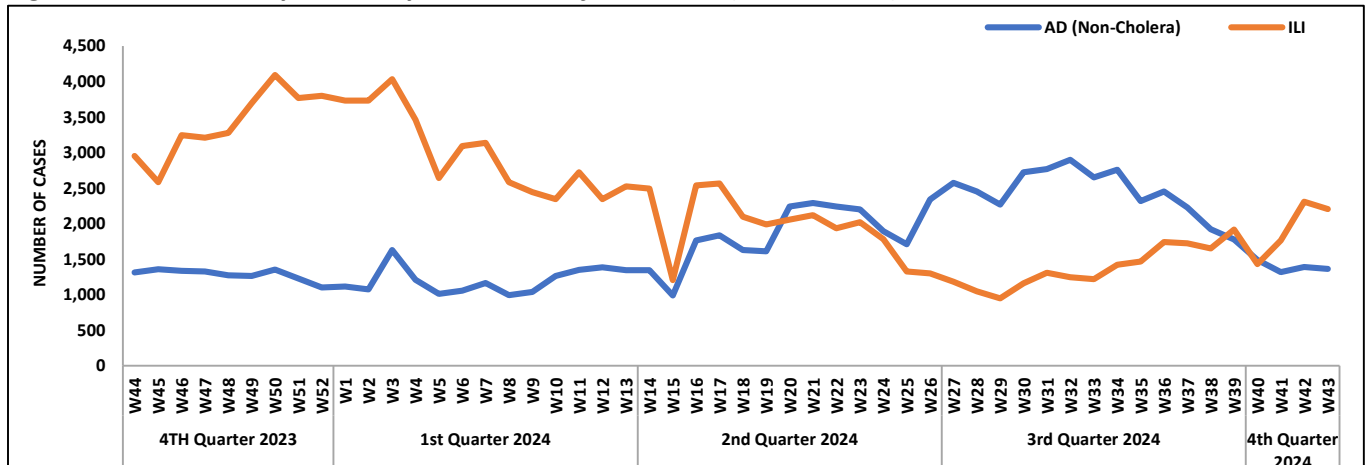


Figure 9: Most frequent cases reported during Week 43, GB

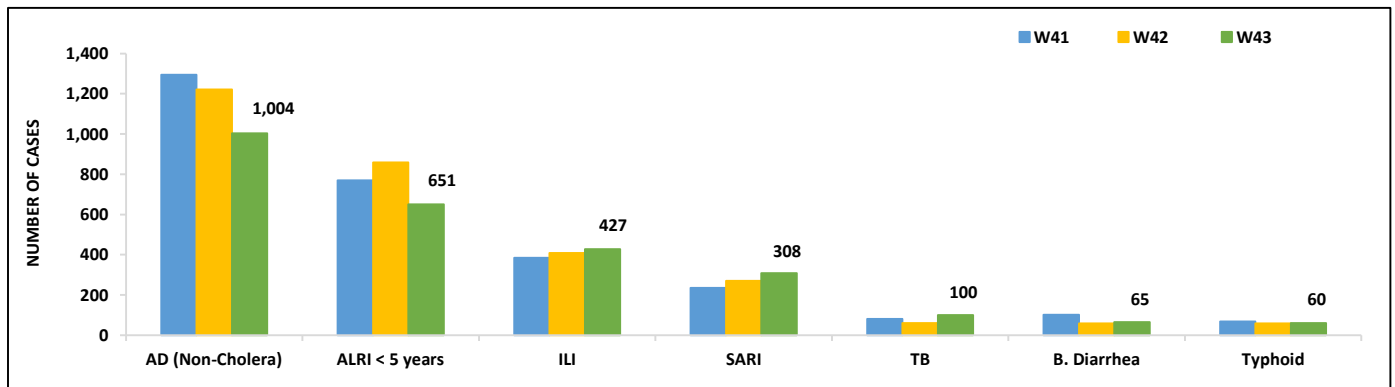
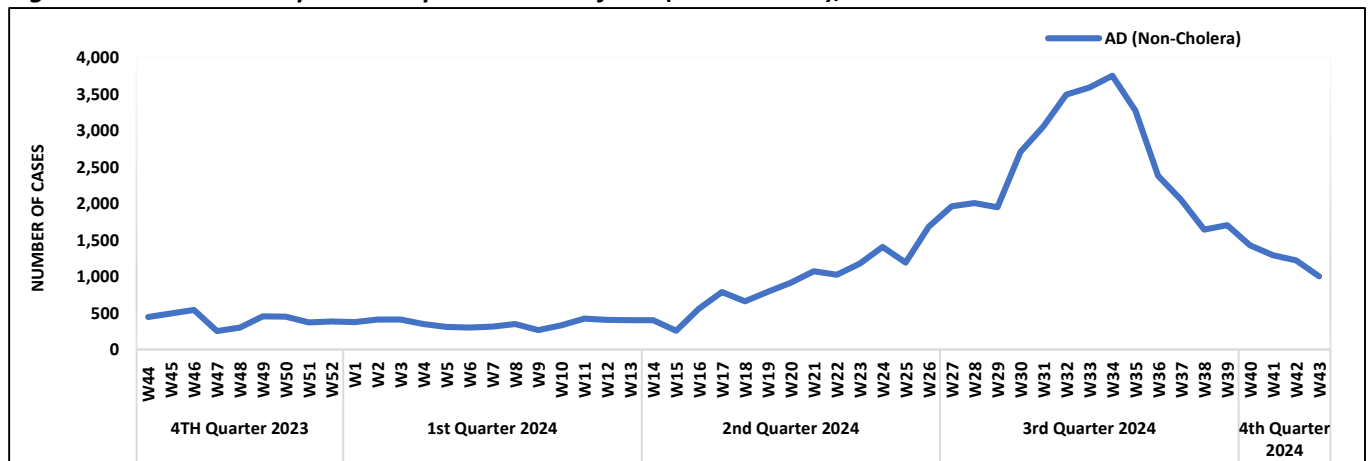


Figure 10: Week wise reported suspected cases of AD (Non-Cholera), GB



Punjab

- AD (Non-Cholera) cases were maximum followed by TB, dog bite, Malaria, Typhoid, AWD (S. Cholera), ALRI<5 Years, B. Diarrhea and Measles cases.
- AD (Non-Cholera), dog bite, Typhoid, AWD (S. Cholera), ALRI<5 Years, B. Diarrhea and Measles cases showed a decreasing trend this week.
- Six cases of AFP, Three cases of HIV/ AIDS reported from Punjab. All are suspected cases and need field verification.

Figure 11: Most frequently reported suspected cases during Week 43, Punjab.

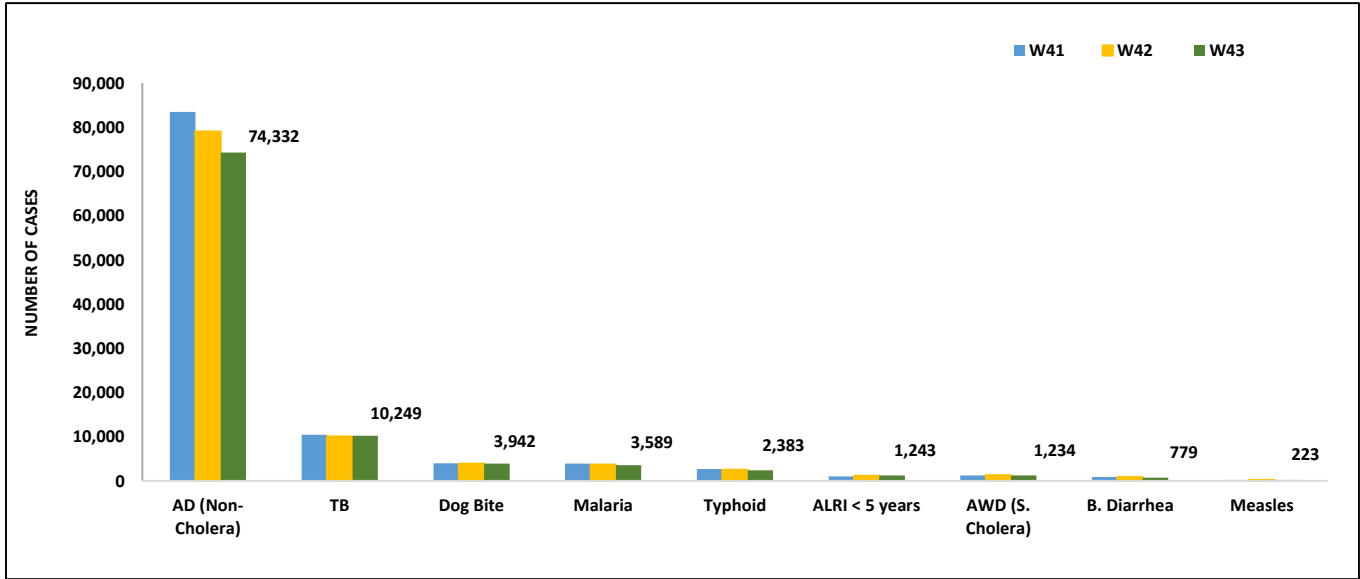


Figure 12: Week wise reported suspected cases of AD (Non-Cholera), Punjab.

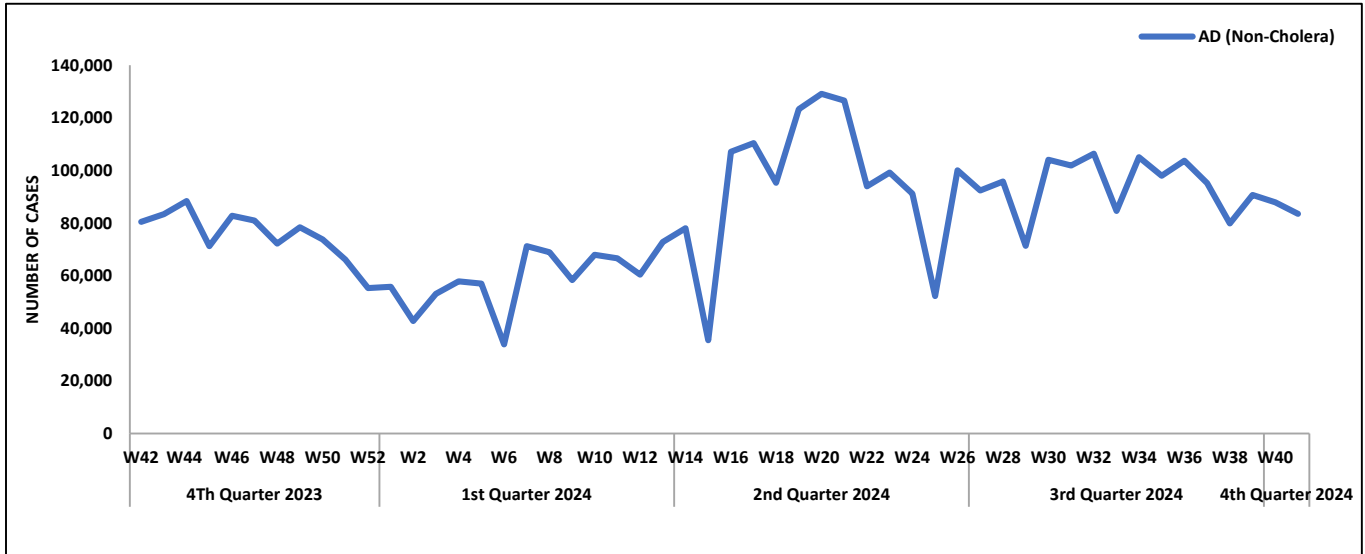


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 43

Diseases	Sindh		Balochistan		KPK		ISL		GB		Punjab		AJK	
	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos
AWD (S. Cholera)	13	0	-	-	2	0	1	0	-	-	-	-	6	0
AD (Non-Cholera)	78	0	-	-	-	-	-	-	-	-	-	-	25	0
Malaria	1,241	103	-	-	-	-	-	-	-	-	-	-	310	11
CCHF	-	-	7	2	1	0	-	-	-	-	-	-	0	0
Dengue	1,253	63	5	0	4	0	-	-	-	-	-	-	339	43
VH (B)	2,895	75	88	73	-	-	-	-	193	5	-	-	1,778	16
VH (C)	2,760	235	91	38	-	-	-	-	171	0	-	-	1,784	13
VH (A&E)	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Covid-19	-	-	17	0	10	2	-	-	-	-	-	-	40	0
HIV	-	-	-	-	-	-	-	-	-	-	-	-	533	1
TB	2	0	-	-	-	-	-	-	-	-	-	-	46	3
Syphilis	-	-	-	-	-	-	-	-	-	-	-	-	22	0
Typhoid	583	9	-	-	-	-	16	2	-	-	-	-	20	0
Diphtheria (Probabale)	-	-	-	-	1	0	119	38	-	-	-	-	0	0
Pertussis	-	-	-	-	-	-	0	0	-	-	-	-	0	0
M-POX	-	-	0	0	-	-	-	-	-	-	-	-	11	0
Measles	44	17	26	17	183	88	4	1	1	0	247	76	14	4
Rubella	44	0	26	0	183	7	4	0	1	0	247	7	14	0
B.Diarrhea	-	-	-	-	-	-	-	-	-	-	-	-	12	0
Chikungunya	-	-	5	1	-	-	-	-	-	-	-	-	0	0
SARI-Covid-19	3	0	0	0	11	0	22	0	0	0	87	0	0	0
SARI-Influenza A	3	2	0	0	11	0	22	2	0	0	87	1	0	0
SARI-Influenza B	3	0	0	0	11	0	22	0	0	0	87	0	0	0
SARI-RSV	3	0	0	0	11	0	22	0	0	0	87	0	0	0
ILI-Covid-19	0	0	0	0	18	0	36	1	0	0	74	0	0	0
ILI-Influenza A	0	0	0	0	18	0	36	2	0	0	74	4	0	0
ILI-Influenza B	0	0	0	0	18	0	36	0	0	0	74	1	0	0
ILI-RSV	0	0	0	0	18	0	36	0	0	0	74	0	0	0



IDSR Reports Compliance

- Out of 158 IDSR implemented districts, compliance is low from KP and Balochistan. Green color highlights >50% compliance while red color highlights <50% compliance

Table 6: IDSR reporting districts Week 43, 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	238	137	58%
	Battagram	63	11	17%
	Buner	34	34	100%
	Bajaur	44	40	91%
	Charsadda	59	57	97%
	Chitral Upper	34	28	82%
	Chitral Lower	35	35	100%
	D.I. Khan	114	113	99%
	Dir Lower	74	74	100%
	Dir Upper	37	30	81%
	Hangu	22	12	55%
	Haripur	72	69	96%
	Karak	35	35	100%
	Khyber	52	19	37%
FATA	Kohat	61	61	100%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	15	36%
	Upper Kurram	41	31	76%
	Malakand	42	31	74%
	Mansehra	136	113	83%
	Mardan	80	34	43%
	Nowshera	55	53	96%
	North Waziristan	13	7	54%
	Peshawar	153	131	86%
	Shangla	37	32	86%
	Swabi	64	60	94%
	Swat	77	73	95%
	South Waziristan	135	57	42%
	Tank	34	33	97%
	Torghar	14	14	100%
	Mohmand	68	64	94%
	SD Peshawar	5	1	20%
	SD Tank	58	8	14%
	Orakzai	69	12	17%
Balochistan	Mirpur	37	37	100%
	Bhimber	42	20	48%
	Kotli	60	60	100%



Azad Jammu Kashmir	Muzaffarabad	45	44	98%
	Poonch	46	46	100%
	Haveli	40	40	100%
	Bagh	40	40	100%
	Neelum	39	39	100%
	Jhelum Vellay	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	21	20	95%
	CDA	15	8	53%
Balochistan	Gwadar	25	24	96%
	Kech	44	22	50%
	Khuzdar	74	68	92%
	Killa Abdullah	26	13	50%
	Lasbella	55	39	71%
	Pishin	69	25	36%
	Quetta	55	33	60%
	Sibi	36	20	56%
	Zhob	39	27	69%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	4	27%
	Kohlu	75	49	65%
	Chagi	36	27	75%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	0	0%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	22	69%
	Mastung	45	45	100%
	Loralai	33	25	76%
	Killa Saifullah	28	25	89%
	Ziarat	29	0	0%
	Duki	31	10	32%
	Nushki	32	29	91%
	Dera Bugti	45	32	71%
	Washuk	46	0	0%
	Panjgur	38	24	63%
	Awaran	23	0	0%
	Chaman	25	0	0%
Barkhan	20	19	95%	
Hub	33	24	73%	
Musakhel	41	0	0%	
Usta Muhammad	34	34	100%	
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	25	100%
	Ghizer	40	40	100%
	Gilgit	40	40	100%



	Diامر	62	62	100%
	Astore	54	54	100%
	Shigar	27	27	100%
	Skardu	52	52	100%
	Ganche	29	28	97%
	Kharmang	46	46	100%
Sindh	Hyderabad	74	57	77%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	107	94	88%
	Tharparkar	276	211	76%
	Shikarpur	60	59	98%
	Thatta	52	50	96%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	20	87%
	Karachi-West	20	20	100%
	Karachi-Malir	37	30	81%
	Karachi-Kemari	18	16	89%
	Karachi-Central	11	8	73%
	Karachi-Korangi	18	18	100%
	Karachi-South	4	4	100%
	Sujawal	55	53	96%
	Mirpur Khas	106	103	97%
	Badin	125	124	99%
	Sukkur	64	63	98%
	Dadu	90	88	98%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	169	166	98%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	54	100%
Tando Muhammad Khan	41	41	100%	
Shaheed Benazirabad	125	123	98%	

Table 7: IDSR reporting Tertiary care hospital Week 43, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
AJK	Mirpur	2	2	100%
	Bhimber	1	1	100%
	Kotli	1	1	100%
	Muzaffarabad	2	2	100%
	Poonch	2	2	100%
	Haveli	1	1	100%



	Bagh	1	1	100%
	Neelum	1	1	100%
	Jhelum Vellay	1	1	100%
	Sudhnooti	1	1	100%
Sindh	Karachi-South	1	0	0%
	Sukkur	1	1	100%
	Shaheed Benazirabad	1	1	100%
	Karachi-East	1	1	100%
	Karachi-Central	1	0	0%



Strengthening One Health for a Healthier Pakistan; A Roundtable Discussion at NIH Islamabad

The Center for Disease Control at the National Institute of Health (NIH), Islamabad, organized an impactful round table discussion on the synergetic collaboration of One-Health, Antimicrobial Resistance (AMR), and Infection Prevention and Control (IPC) in Pakistan



. Prof. Dr. Herman Barkema, an esteemed professor of Epidemiology in Infectious Disease and Scientific Director at the Antimicrobial Resistance - One Health Consortium, University of Calgary, Canada, provided valuable insights and shared his experiences on this crucial topic. The event was attended by experts from NIH, the Fleming Fund Pakistan Country Office, FAO, Arid Agriculture University, University of Veterinary and Animal Sciences Lahore, and the Punjab Health Department.



Participants actively engaged with Prof. Dr. Barkema, posing insightful questions that led to a productive dialogue and a deeper understanding of the subjects. Prof. Dr. Barkema commended the participants for

their enthusiasm and collaborative spirit. Key takeaways from this discussion included the integration of One-Health approaches to combat AMR, the reinforcement of IPC measures, and the importance of sustained collaboration and innovation in tackling these public health challenges. NIH extends its heartfelt gratitude to Prof. Dr. Herman Barkema for his invaluable contributions and to all participants for their active engagement in this significant event.

Notes from the field:

INVESTIGATION MEASLES OUTBREAK in UC Sadar Sohbat Pur Pur from May 1st to 30th, 2024

Dr. Mahkan Gul
18th Cohort, FETP Frontline

Introduction:

Measles, a highly contagious and potentially severe viral disease, remains a significant global health concern, especially in developing countries. Despite the availability of a safe and effective vaccine, measles continues to cause substantial morbidity and mortality, particularly among unvaccinated children. This outbreak investigation aims to understand the factors contributing to the ongoing persistence of measles in UC Sadar Sohbat Pur from May 1st to 30th, 2024. The objectives are to assess the extent and magnitude of the outbreak, analyze its underlying causes, and develop effective prevention and control measures

Methods:

A descriptive outbreak investigation was conducted to assess measles prevalence in UC Sadar Sohbat Pur from May 1st to 30th, 2024. The entire population of UC Sadar Sohbat Pur, comprising 17,633 individuals, served as the target population. Of these, 47 were children under one year of age, and 3,748 were under five years of age. Cases were defined as individuals with fever (temperature $>37.5^{\circ}\text{C}$), a

maculopapular skin rash lasting for at least three days, and at least one of the following symptoms: cough, coryza, or conjunctivitis. The Expanded Program on Immunization (EPI) Measles Case Investigation form was used to collect data through interviews, clinical assessments, and a review of hospital records. Additionally, exploratory data analysis was conducted to identify potential risk factors and patterns within the data.

Results:

The measles outbreak in UC Sadder during May 2024 exhibited a localized and time-limited pattern, peaking between May 13th and 15th. The epidemiological analysis revealed a distinct age distribution, with the majority of cases affecting children under 30 months of age. The 20-29-month age group was particularly vulnerable. The most prevalent clinical manifestations included fever (100%), rash (96%), cough (79%), and coryza (67%). Less frequently, conjunctivitis, sore throat, diarrhea, and pneumonia were also observed. Risk factor analysis identified incomplete immunization as the primary determinant, contributing to 80% of the cases. A history of positive contact and overcrowding were secondary risk factors, affecting 77% and 70% of the cases, respectively.

Discussion:

The measles outbreak in UC Sadar Sohbat Pur highlights the persistent challenges in controlling preventable diseases in developing countries. This aligns with previous studies on measles outbreaks, which emphasize vaccination, infection control, and timely diagnosis and treatment. The outbreak, peaking between May 13th and 15th, showed effective containment measures due to its short duration and quick decline in cases. The majority of cases in children under 30 months reflects the protective effect of immunity from vaccination or prior infection. Classic symptoms like fever, rash, and cough were observed, alongside complications such as conjunctivitis and pneumonia, highlighting the disease's severity in vulnerable populations. The main risk factor was incomplete immunization, underscoring vaccination's importance, while overcrowding and contact with confirmed cases further exacerbated the situation.

Conclusion:

By addressing the identified risk factors and implementing effective prevention and control measures, the burden of measles can be significantly reduced in this community and in Pakistan as a whole.

Recommendations:

To effectively address the measles outbreak, it is recommended that outreach and mobile vaccination sessions be expanded to improve vaccine coverage. Resources should be allocated efficiently, with accurate forecasting of needs. Cold chain management and vaccine efficacy should be monitored using Vaccine Vial Monitors (VVMs). Vaccinators should receive training and be recruited as needed. Data analysts should monitor trends, provide alerts, and inform decision-making. By implementing these recommendations, UC Sadar Sohbat Pur can enhance its capacity to prevent and control future measles outbreaks.

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Knowledge hub Tuberculosis (TB): A Persistent Global Health Threat

What is Tuberculosis (TB)?

Tuberculosis (TB) is an infectious disease primarily affecting the lungs. It's caused by the bacterium *Mycobacterium tuberculosis*. While often curable and preventable, TB remains a significant global health concern, particularly in low- and middle-income countries.

How is TB Spread?

TB is spread through the air when a person with active TB disease coughs, sneezes, or speaks. When someone nearby inhales these droplets, they may become infected.



Symptoms of TB

Symptoms of active TB disease can include:

- Persistent cough
- Fever
- Night sweats
- Weight loss
- Fatigue
- Chest pain
- Coughing up blood

Diagnosis of TB

Diagnosing TB involves a combination of:

- **Medical history and physical exam:** A healthcare provider will ask about symptoms and conduct a physical exam.
- **Skin test:** This test involves injecting a small amount of TB bacteria under the skin. A positive result indicates exposure to TB bacteria, but it doesn't necessarily mean active disease.
- **Blood test:** A blood test can detect TB infection and may help distinguish between latent and active TB.
- **Chest X-ray:** A chest X-ray can reveal abnormalities in the lungs, such as lung lesions.
- **Sputum culture:** A sample of sputum (mucus coughed up from the lungs) is collected and tested for the presence of TB bacteria.

Treatment of TB

TB is treated with a combination of antibiotics. The specific drugs and duration of treatment depend on the type of TB and the individual's health. It's crucial to complete the entire course of treatment to ensure the bacteria are fully eradicated and prevent drug resistance.

Challenges in treatment:

- **Adherence:** Completing the full course of antibiotics is crucial to prevent the development of drug-resistant TB, but many patients do not finish their treatment due to side effects, stigma, or difficulty accessing healthcare.

- **Drug resistance:** The rise of MDR-TB and XDR-TB poses significant challenges for treatment, requiring longer, more complex regimens with higher costs.
- **Healthcare infrastructure:** In many parts of the world, particularly in low-income settings, there is inadequate access to diagnostic services, medications, and trained healthcare workers, hindering effective TB control.

Prevention and Control Strategies

Preventing TB involves several key strategies:

- **BCG Vaccination:** The Bacillus Calmette-Guérin (BCG) vaccine, although not universally protective, is given to children in high-incidence areas to prevent severe forms of TB, such as TB meningitis and miliary TB.
- **Contact Tracing:** Identifying individuals who have been in close contact with TB patients and offering screening and preventive treatment can reduce transmission.
- **Infection Control Measures:** Hospitals and clinics should implement proper infection control measures to prevent airborne transmission of TB, such as ventilation and the use of protective masks.
- **Latent TB Treatment:** Treating individuals with latent TB infection (LTBI) with preventive antibiotics can reduce the risk of developing active TB.
- **Antibiotic Stewardship:** Proper use of antibiotics in both human and veterinary settings is essential to preventing the development of drug-resistant TB strains.

Additional Resources:

- World Health Organization (WHO): <https://www.who.int/>
- Centers for Disease Control and Prevention (CDC): <https://www.cdc.gov/>



ٹی بی کے بارے میں جانیں اور محفوظ رہیں!

ٹی بی جراثیم سے پھیلنے والا ایک متعدی مرض ہے۔ ٹی بی کے جراثیم عموماً پھیپھڑوں پر اثر انداز ہوتے ہیں۔ لیکن جسم کے دوسرے حصے بھی اس سے متاثر ہو سکتے ہیں۔

ٹی بی کی علامات کیا ہیں؟

- ⊕ مسلسل 2 ہفتے سے زائد کھانسی۔
- ⊕ بلغم یا بلغم میں خون آنا۔
- ⊕ رات کو ہلکا بخار اور پسینہ آنا۔
- ⊕ وزن میں کمی اور بھوک نہ لگانا۔

ٹی بی کیسے پھیلتی ہے؟

- ⊕ ٹی بی متاثرہ شخص کے کھانسنے، چھٹکنے یا تھوکنے سے
- ⊕ ٹی بی کے جراثیم ہوا میں شامل ہو جاتے ہیں
- ⊕ اور سانس کے ذریعے صحت مند افراد میں
- ⊕ منتقل ہو کر ٹی بی کا باعث بنتے ہیں۔

ٹی بی کا علاج کیا ہے؟

- ⊕ عالمی ادارہ صحت کے وضع کردہ زیر نگرانی طریقہ
- ⊕ علاج (DOTS) کے ذریعے 6 ماہ مسلسل علاج سے
- ⊕ ٹی بی سے مکمل طور پر صحت یابی ممکن ہے۔

ٹی بی کی تشخیص کیسے کی جاتی ہے؟

- ⊕ ٹی بی کی تشخیص بلغم کے ٹیسٹ کے
- ⊕ ذریعے کی جاتی ہے۔

نیشنل ٹی بی کنٹرول پروگرام نے ملک بھر میں 5,000 سے زائد سرکاری مراکز صحت اور منتخب پرائیویٹ کلینک پر ٹی بی کے مفت علاج کی سہولت کو یقینی بنایا ہے۔

ٹی بی کی علامات ظاہر ہونے کی صورت میں اپنے قریبی سرکاری مرکز صحت یا منتخب پرائیویٹ لیبارٹری سے بلغم کا مفت معائنہ کروائیں۔

ٹی بی روک تھام میں آپ کیا کردار ادا کر سکتے ہیں؟

- ⊕ ٹی بی کے بارے میں معلومات لوگوں تک پہنچانا۔
- ⊕ اپنے ارد گرد موجود افراد میں ٹی بی کی علامات ظاہر ہونے کی صورت میں قریبی مرکز صحت یا منتخب پرائیویٹ کلینک تک آگلی رہنمائی کرنا۔
- ⊕ ٹی بی کے بارے میں معلومات حاصل کرنے کے لئے
- ⊕ www.ntp.gov.pk ملاحظہ فرمائیں۔
- ⊕ مزید معلومات کے لئے اپنے علاقے کی ایڈری میٹھ وکر
- ⊕ یا قریبی مرکز صحت یا منتخب پرائیویٹ کلینک سے رابطہ کریں۔

آپ اپنے ارد گرد کے افراد کو ٹی بی سے کیسے بچا سکتے ہیں؟

- ⊕ کھانسنے اور چھٹکنے وقت منہ پر کپڑا یا رومال رکھیں۔
- ⊕ کسی ذمہ دار فرد کی زیر نگرانی ٹی بی کی ادویات
- ⊕ 6 ماہ تک بلاناغہ کھائیں۔
- ⊕ جہاں تک ممکن ہو کمرے کو روشن اور ہوادار رکھیں
- ⊕ کیونکہ سورج کی روشنی میں ٹی بی کے جراثیم ہلاک ہو جاتے ہیں۔