PUBLIC HEALTH BULLETIN-PAKISTAN

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.

Overview

IDSR Reports

Ongoing Events

Field Reports

Public Health Bulletin - Pakistan, Week 41, 2024

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 Risk assessment and profiling workshop in Sindh, an Outbreak Investigation of Acute diarrhea in a village in Tharparkar Sindh, and a knowledge review on Neonatal tetanus

Stay well-informed about public health matters. Subscribe to the Weekly Bulletin today! By equipping everyone with knowledge, the Public Health Bulletin empowers Pakistanis to build a healthier nation.

Sincerely,
The Chief Editor

- *During week 41, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, TB, ALRI <5 years, B. Diarrhea, dog bite, VH (B, C & D), Typhoid and SARI.*

- *Thirty-two cases of AFP reported from KP, twenty from Sindh, six from Punjab, four from AJK and one from Balochistan. All are suspected cases and need field verification.*

- *Seven suspected cases of HIV/ AIDS reported from KP, three from Punjab, two from Balochistan and one from Sindh. Field investigation required to verify the cases.*

- *Twenty-one suspected cases of Brucellosis reported from KP, eight from Sindh and one from Balochistan. Field investigation required to verify the cases.*

- *There is an increasing trend observed for Malaria, ILI, TB, ALRI <5 years, B. Diarrhea, VH (B, C & D), Typhoid and SARI cases this week.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts is 83%*
- *Gilgit Baltistan and AJk are the top reporting regions with a compliance rate of 100% and 99%, followed by Sindh 95% and ICT 80%*
- *The lowest compliance rate was observed in Balochistan 77% and KPK 70%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2330	1606	70
Azad Jammu Kashmir	382	378	99
Islamabad Capital Territory	36	29	80
Balochistan	1308	1003	77
Gilgit Baltistan	374	373	100
Sindh	2086	1986	95
National	6516	5375	83

Pakistan

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 41, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	1,320	6,946	1,294	372	20,427	83,489	47,811	161,659
Malaria	12	8,250	2	3	8,939	3,944	93,002	114,152
ILI	1,765	7,437	384	1,836	4,444	0	31,742	47,608
TB	32	170	81	18	439	10,455	13,150	24,345
ALRI < 5 years	908	1,943	770	8	1,259	1,056	11,263	17,207
B.Diarrhea	41	1,636	101	0	981	921	3,833	7,513
Dog Bite	98	246	0	0	508	4,025	2,311	7,188
VH (B, C & D)	12	175	1	0	63	0	6,087	6,338
Typhoid	12	822	69	0	747	2,734	1,254	5,638
Dengue	18	2	33	19	316	2,454	249	3,091
SARI	111	915	236	1	1,337	0	262	2,862
AWD (S. Cholera)	21	233	45	0	56	1,279	3	1,637
AVH (A&E)	14	27	4	0	318	0	634	997
Chikungunya	0	9	0	0	1	0	555	565
Measles	8	31	0	1	168	272	40	520
CL	0	138	0	0	193	6	1	338
Mumps	5	60	1	1	71	1	101	240
Pertussis	0	94	0	0	10	0	8	112
Gonorrhea	0	89	0	0	7	0	10	106
Chickenpox/ Varicella	4	1	8	2	66	4	19	104
Meningitis	0	3	0	0	2	66	22	93
AFP	4	1	0	0	32	6	20	63
Brucellosis	0	1	0	0	21	0	8	30
Diphtheria (Probable)	0	12	0	0	3	2	7	24
Syphilis	0	6	0	0	0	1	16	23
HIV/AIDS	0	2	0	0	7	3	1	13
Leprosy	0	2	0	0	0	9	0	11
NT	0	1	0	0	2	0	2	5
Rubella (CRS)	0	2	0	0	1	0	2	5
VL	0	2	0	0	0	0	1	3

Figure 1: Most frequently reported suspected cases during Week 41, Pakistan.
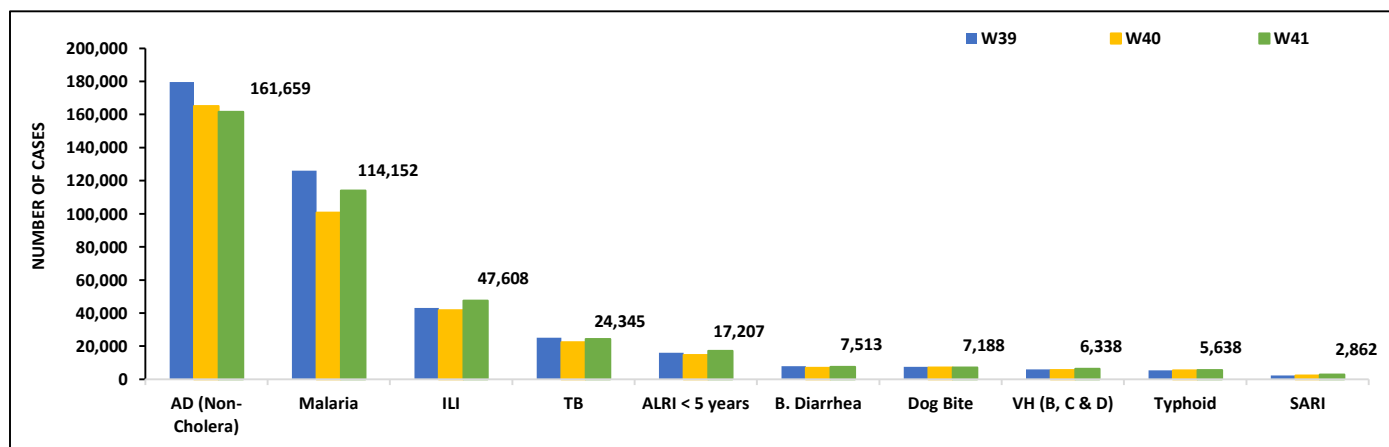
- Malaria cases were maximum followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, dog bite, Typhoid and AVH (A & E).
- Malaria cases are mostly from Larkana, Khairpur and Kamber whereas AD (Non-Cholera) cases are from Khairpur, Dadu and Mirpurkhas.
- Twenty cases of AFP, One 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 41, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	4,204	2,290	668	864	496	289	196	78	82	13
Dadu	5,980	2,792	397	516	1,067	50	498	226	141	43
Ghotki	3,132	1,413	99	366	493	451	118	235	0	2
Hyderabad	978	1,674	2,102	132	118	44	0	0	15	0
Jacobabad	1,327	1,028	502	152	342	218	158	130	32	0
Jamshoro	3,586	2,086	146	602	374	288	122	39	63	26
Kamber	7,525	2,275	0	931	334	216	153	181	24	0
Karachi Central	161	1,575	2,907	250	78	40	12	33	178	26
Karachi East	140	423	394	7	23	5	9	8	5	1
Karachi Keamari	24	407	258	24	104	0	6	4	10	6
Karachi Korangi	68	350	0	30	2	0	4	0	2	0
Karachi Malir	566	1,703	3,952	164	359	71	63	53	43	4
Karachi South	41	80	2	0	0	0	0	0	0	0
Karachi West	204	921	1,298	157	255	150	50	50	30	9
Kashmore	2,543	610	606	304	180	48	99	140	9	0
Khairpur	7,858	3,044	6,024	1,116	1,087	234	366	144	211	10
Larkana	10,427	2,420	6	1,107	420	102	429	37	26	5
Matiari	2,867	1,559	5	612	320	308	58	36	4	1
Mirpurkhas	5,655	2,746	4,427	615	650	172	117	30	8	1
Naushero Feroze	3,682	1,583	1,342	641	495	57	176	190	141	1
Sanghar	5,488	1,919	102	1,233	470	1,554	118	170	56	4
Shaheed Benazirabad	2,560	1,834	10	318	232	83	98	81	82	0
Shikarpur	4,186	1,436	2	379	214	897	206	180	9	0
Sujawal	1,672	1,993	0	199	313	90	114	43	8	24
Sukkur	4,249	1,203	1,657	538	671	79	168	72	4	0
Tando Allahyar	4,130	1,344	1,018	484	226	389	123	36	12	3
Tando Muhammad Khan	1,460	1,062	0	473	171	13	92	0	0	0
Tharparkar	4,099	2,484	1,596	511	886	114	142	0	41	23
Thatta	1,505	1,740	2,222	42	481	93	74	115	12	429
Umerkot	2,685	1,817	0	383	402	32	64	0	6	3
Total	**93,002**	**47,811**	**31,742**	**13,150**	**11,263**	**6,087**	**3,833**	**2,311**	**1,254**	**634**

Figure 2: Most frequently reported suspected cases during Week 41 Sindh
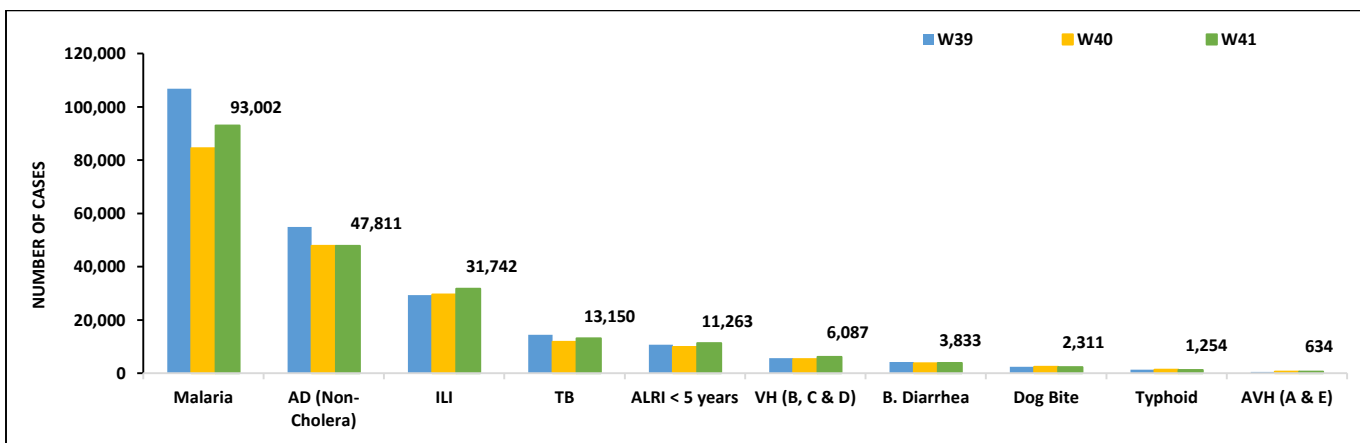
Figure 2: Most frequently reported suspected cases during Week 41 Sindh

Balochistan

- 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 41, Balochistan

Districts	AD (Non-Cholera)	Malaria	ILI	B. Diarrhea	ALRI < 5 years	Typhoid	SARI	AWD (S.Cholera)	TB	CL
Barkhan	146	101	105	34	6	1	38	5	0	1
Chagai	105	380	198	3	73	4	23	5	20	0
Chaman	51	186	155	44	88	70	36	4	1	1
Dera Bugti	182	45	89	45	46	13	24	1	0	0
Duki	57	79	116	18	47	18	3	10	1	2
Gwadar	15	34	23	11	8	2	5	4	0	2
Harnai	100	22	110	145	61	0	0	0	25	1
Hub	83	7	65	0	11	0	3	0	0	0
Jaffarabad	1,168	150	448	27	89	14	5	25	0	63
Jhal Magsi	690	346	302	51	6	2	33	9	0	0
Kalat	46	6	25	12	10	2	19	0	0	0
Kech (Turbat)	1,027	1,329	414	69	76	NR	2	NR	NR	NR
Kharan	82	401	146	0	85	0	5	0	4	0
Khuzdar	257	690	351	2	110	23	54	0	5	0
Killa Abdullah	19	93	103	0	48	34	40	11	0	0
Killa Saifullah	141	0	171	95	31	0	11	0	0	0
Kohlu	244	429	224	29	137	105	75	1	2	2
Lasbella	766	79	407	74	36	8	26	39	0	1
Loralai	60	376	209	58	35	120	23	9	1	0
Mastung	211	172	201	94	40	28	53	16	3	40
Musakhel	257	71	60	21	10	17	24	1	13	12
Naseerabad	488	11	373	38	22	5	78	84	1	10
Nushki	12	11	210	0	49	0	0	0	7	0
Panjgur	266	138	233	107	61	30	11	0	28	0
Pishin	58	479	234	97	97	32	31	3	39	0
Quetta	41	684	504	106	55	91	56	1	30	0
Sherani	11	62	14	0	7	27	4	0	5	0
Sibi	269	128	167	139	45	153	80	3	32	1
Sohbat pur	547	13	315	135	54	11	31	5	0	8
Surab	42	138	53	0	0	0	0	0	0	0
Usta Muhammad	441	169	568	224	67	15	9	8	13	31
Washuk	257	360	247	8	102	16	10	2	3	0
Zhob	111	248	106	257	24	74	10	0	0	0
Total	8,250	7,437	6,946	1,943	1,636	915	822	246	233	175

Figure 3: Most frequently reported suspected cases during Week 41, Balochistan
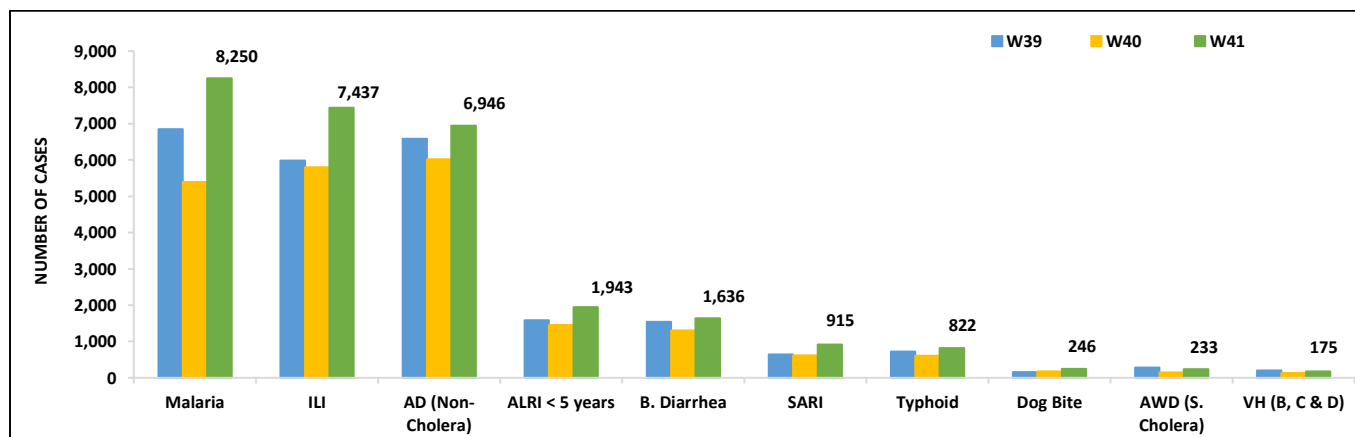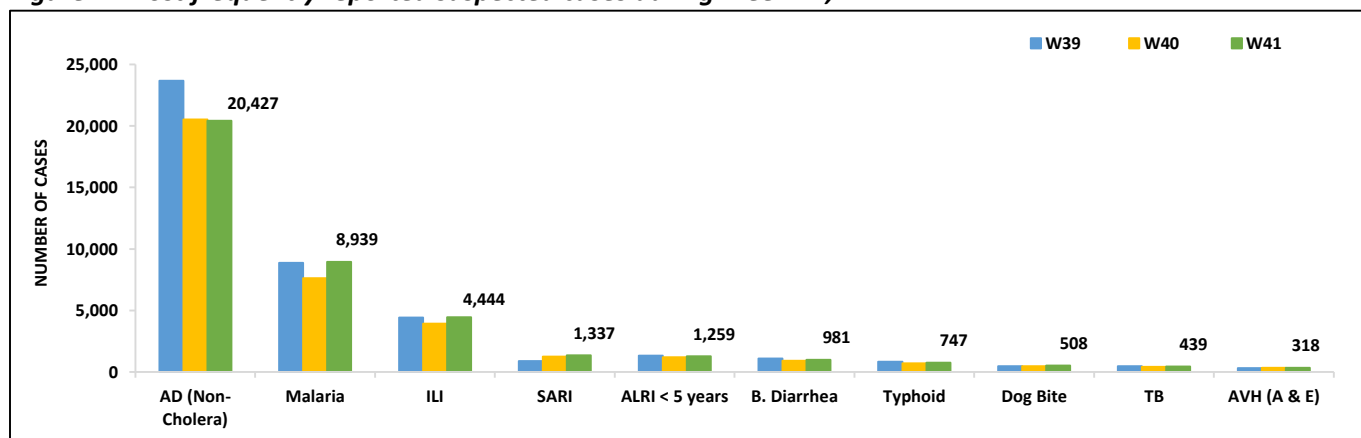
- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, SARI, ALRI<5 Years, B. Diarrhea, Typhoid , dog bite, TB and AVH (A & E) cases.
- Malaria, ILI, SARI, ALRI<5 Years, B. Diarrhea, Typhoid , dog bite and TB cases showed an increasing trend this week.
- Thirty-two cases of AFP, Seven suspected 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 41, KP

Districts	AD (Non-Cholera)	Malaria	ILI	B.Diarrhea	SARI	ALRI <5 Years	Typhoid	Dog Bite	TB	AVH (A&E)
Abbottabad	486	1	63	1	20	3	34	3	10	0
Bajaur	1,246	354	46	50	431	121	5	49	10	50
Bannu	865	1,827	3	62	29	39	115	3	30	23
Buner	229	302	0	0	0	0	7	13	1	0
Charsadda	740	381	567	0	62	32	58	0	2	14
Chitral Lower	255	22	87	16	10	21	11	8	5	1
Chitral Upper	121	4	10	7	2	1	10	0	1	3
D.I. Khan	1,146	908	0	0	7	20	3	19	44	0
Dir Lower	1,246	380	5	1	101	119	49	30	18	6
Dir Upper	812	8	82	0	12	1	2	0	19	2
Hangu	67	103	0	0	0	12	0	0	0	0
Haripur	700	52	285	4	50	9	17	4	23	37
Karak	430	339	63	334	18	12	6	10	7	0
Khyber	316	328	61	35	38	114	30	15	15	8
Kohat	388	302	75	41	11	21	14	7	2	0
Kohistan Lower	99	7	0	15	0	11	0	0	0	0
Kohistan Upper	337	33	0	0	8	13	1	0	15	0
Kolai Palas	68	5	12	7	4	4	1	0	0	0
L & C Kurram	24	12	81	1	0	11	2	0	0	0
Lakki Marwat	708	706	0	0	16	21	2	35	8	0
Malakand	965	32	50	6	26	54	26	0	3	12
Mansehra	434	8	235	34	7	6	5	0	3	0
Mardan	557	47	0	0	25	11	3	6	8	0
Mohmand	132	417	174	188	10	53	12	11	3	2
North Waziristan	16	15	0	12	7	4	3	11	0	3
Nowshera	1,247	318	34	10	4	29	13	6	8	21
Orakzai	10	16	18	0	0	3	1	0	0	0
Peshawar	2,736	94	900	113	77	134	105	9	16	27
SD Peshawar	2	2	0	0	0	0	0	0	0	0
SD Tank	19	52	3	0	0	0	0	0	0	0
Shangla	930	886	0	24	27	14	39	45	81	4
SWA	79	96	182	106	18	9	25	11	5	0
Swabi	1,282	107	777	108	115	9	45	122	57	30
Swat	1,156	118	99	25	89	12	3	46	20	74
Tank	351	532	231	0	12	11	68	23	18	0
Tor Ghar	63	101	7	16	4	11	2	2	2	1
Upper Kurram	165	24	294	121	19	36	30	20	5	0
Total	20,427	8,939	4,444	1,337	1,259	981	747	508	439	318

Figure 4: Most frequently reported suspected cases during Week 41, KP

ICT, AJK & GB

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.
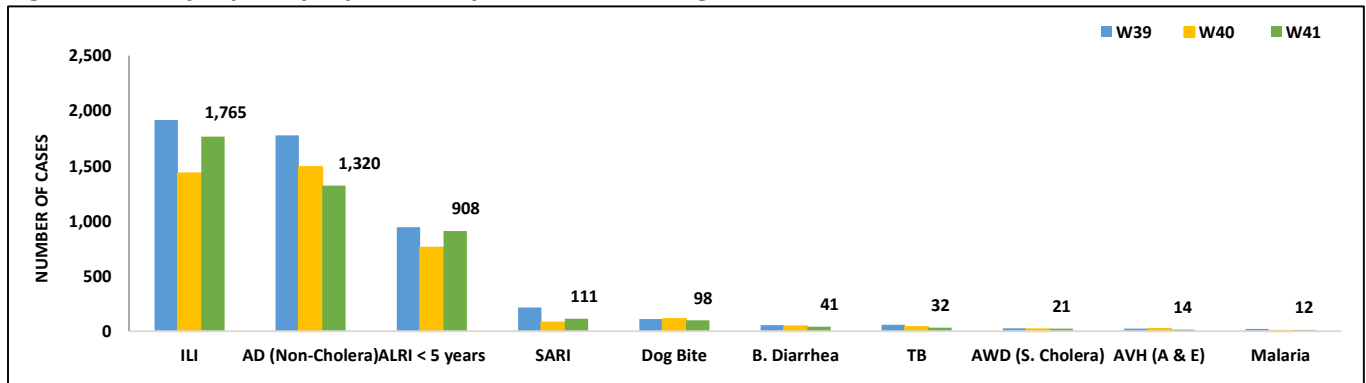
Figure 5: Most frequently reported suspected cases during Week 41, ICT
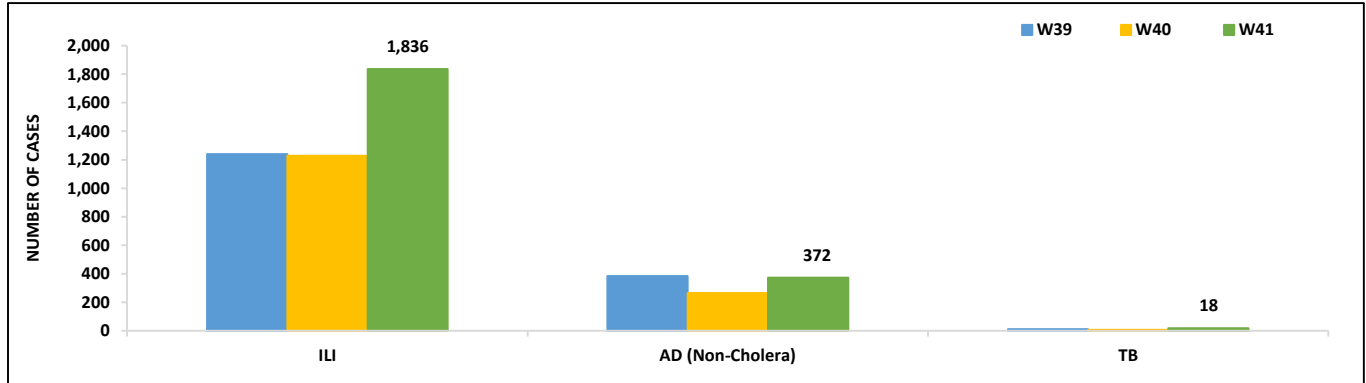
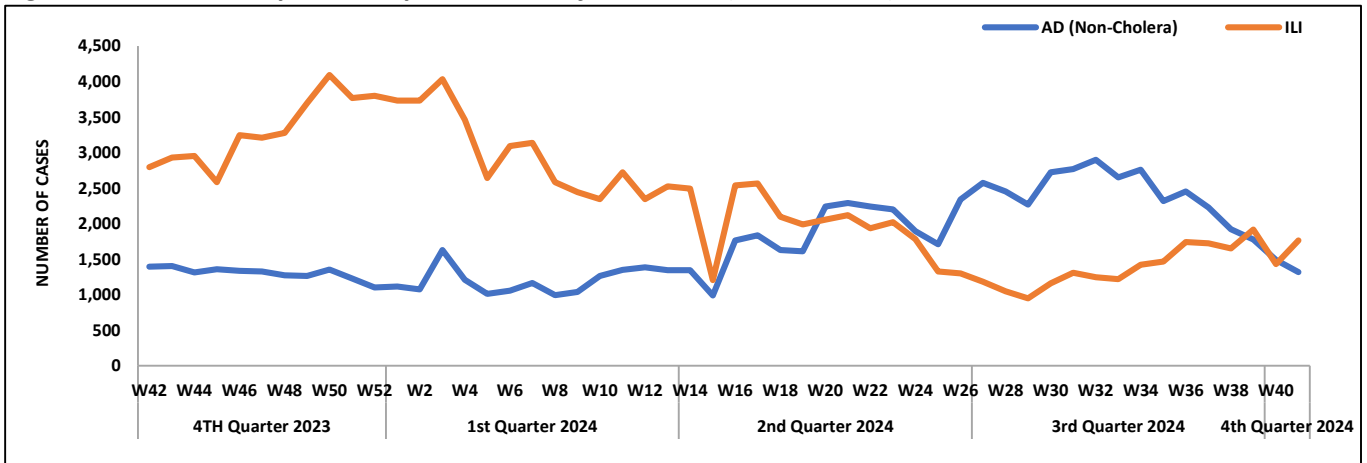*Figure 6: Week wise reported suspected cases of ILI, ICT*
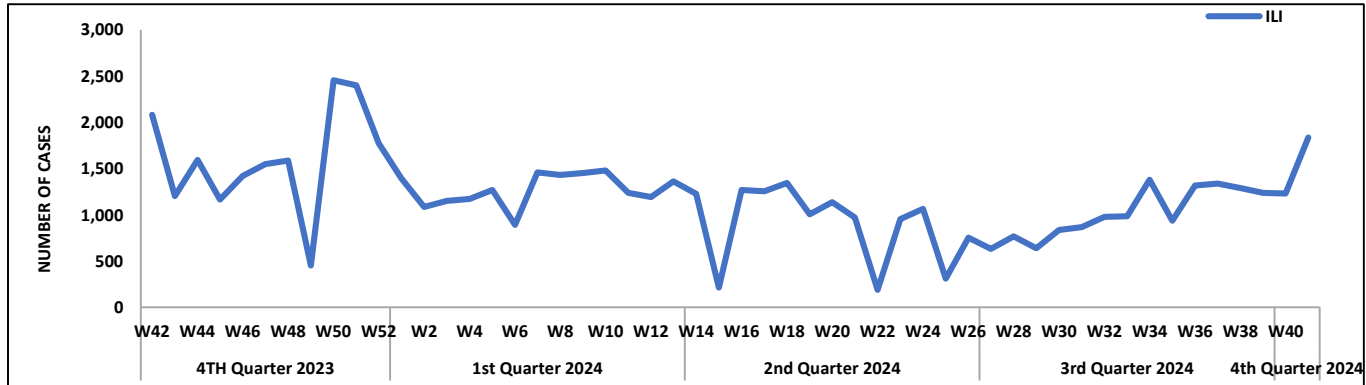
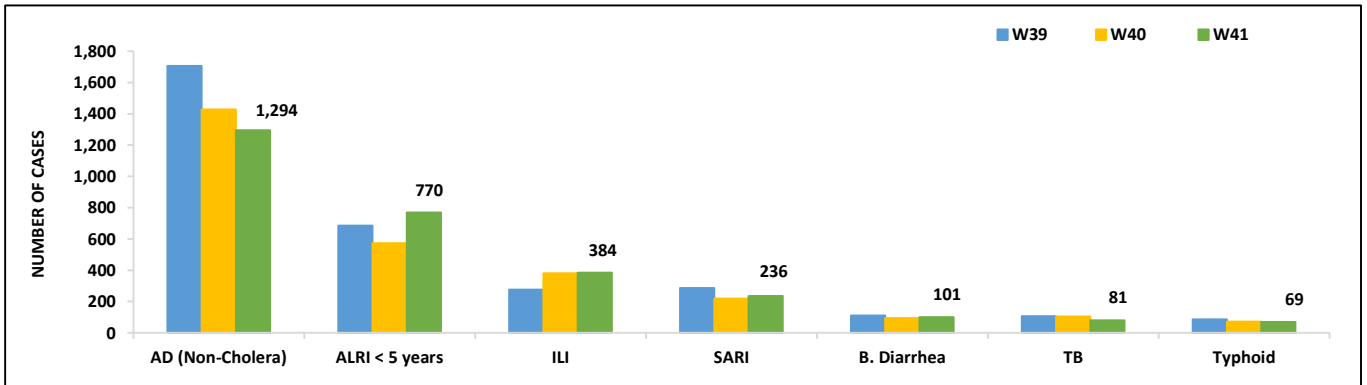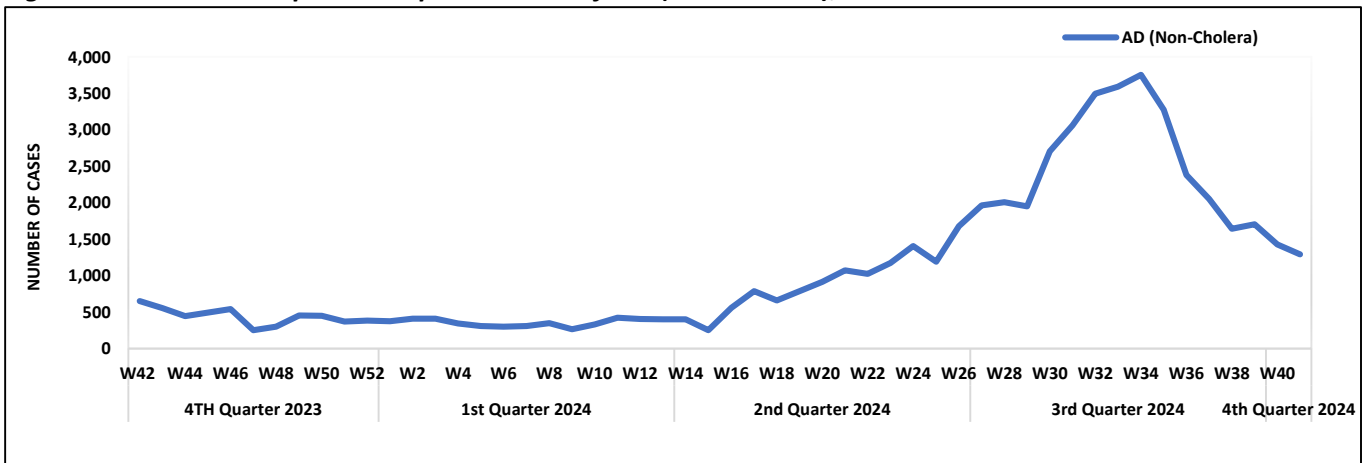*Figure 7: Most frequently reported suspected cases during Week 41, AJK*

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

Legend: AD (Non-Cholera), ILI

Y-axis: NUMBER OF CASES (0 – 4,500)

X-axis weeks: W42 W44 W46 W48 W50 W52 W2 W4 W6 W8 W10 W12 W14 W16 W18 W20 W22 W24 W26 W28 W30 W32 W34 W36 W38 W40

Quarters: 4TH Quarter 2023 | 1st Quarter 2024 | 2nd Quarter 2024 | 3rd Quarter 2024 | 4th Quarter 2024

Figure 9: Most frequent cases reported during Week 41, GB

Legend: W39, W40, W41

Y-axis: NUMBER OF CASES (0 – 1,800)

Category	W41 value
AD (Non-Cholera)	1,294
ALRI < 5 years	770
ILI	384
SARI	236
B. Diarrhea	101
TB	81
Typhoid	69

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

Legend: AD (Non-Cholera)

Y-axis: NUMBER OF CASES (0 – 4,000)

X-axis weeks: W42 W44 W46 W48 W50 W52 W2 W4 W6 W8 W10 W12 W14 W16 W18 W20 W22 W24 W26 W28 W30 W32 W34 W36 W38 W40

Quarters: 4TH Quarter 2023 | 1st Quarter 2024 | 2nd Quarter 2024 | 3rd Quarter 2024 | 4th Quarter 2024

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.

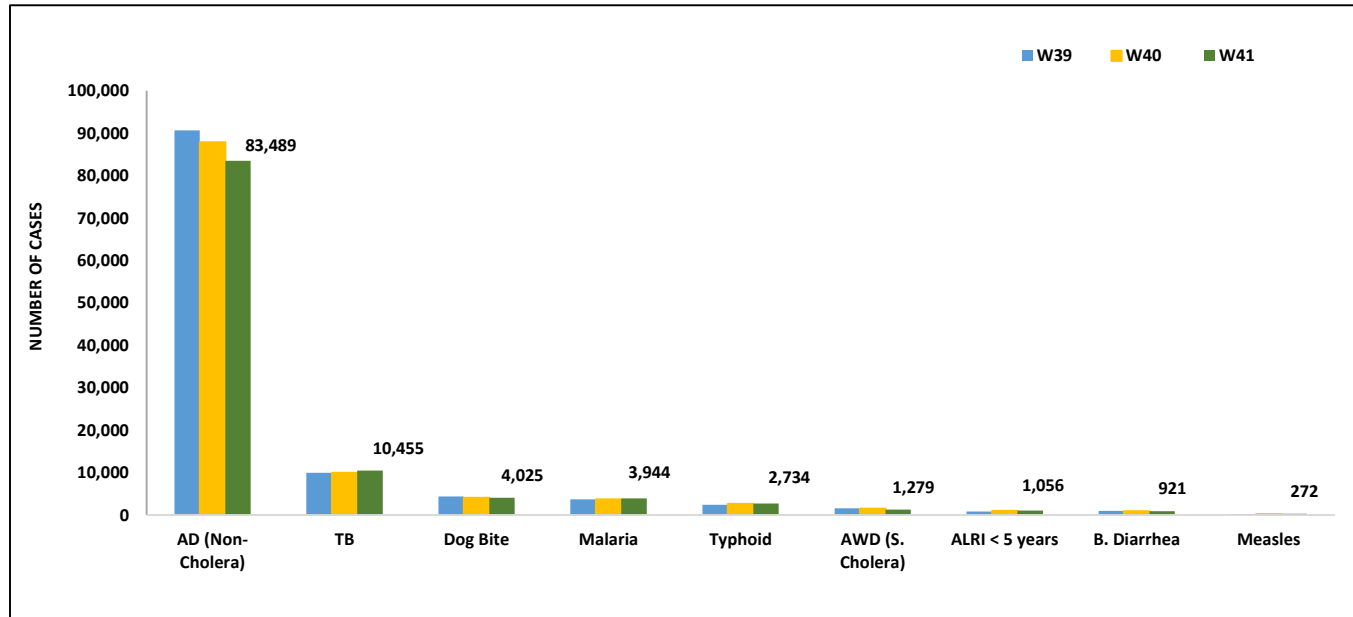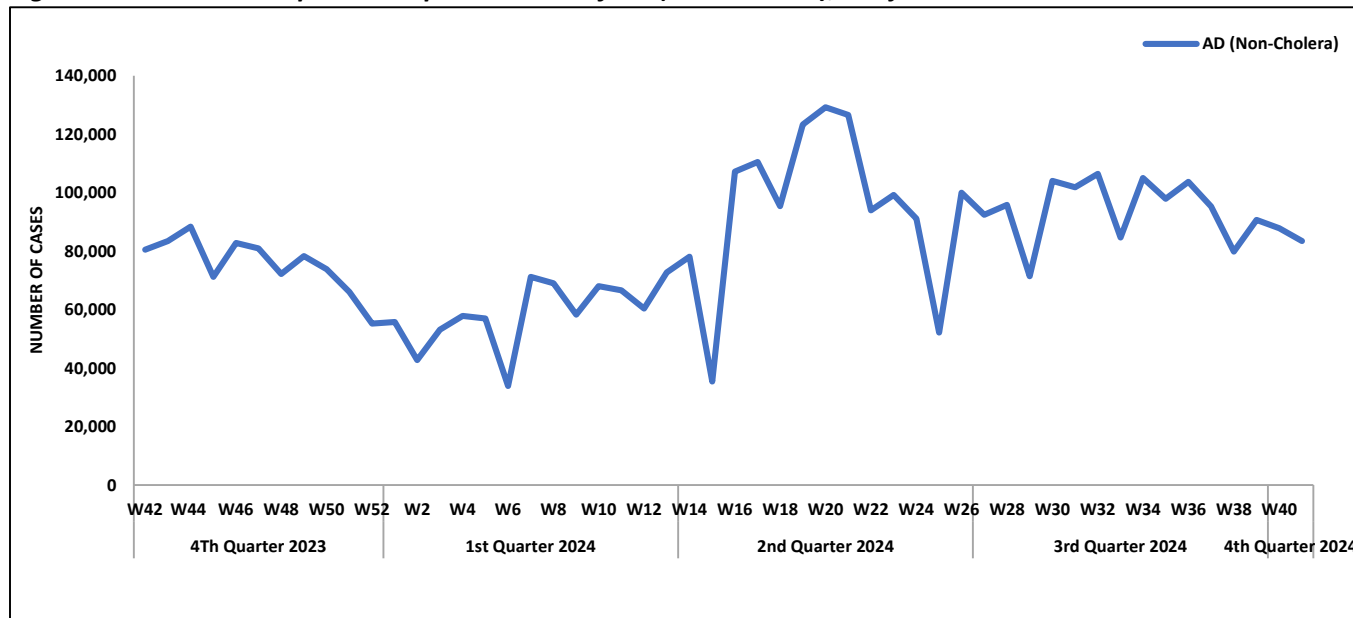**Figure 11: Most frequently reported suspected cases during Week 41, Punjab.**

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 41

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)	11	0	-	-	5	1	-	-	-	-	-	-	0	0
AD (Non-Cholera)	87	1	-	-	-	-	-	-	-	-	-	-	0	0
Malaria	1,534	166	-	-	-	-	-	-	-	-	-	-	149	3
CCHF	-	-	11	1	2	0	-	-	-	-	-	-	0	0
Dengue	1,588	37	-	-	11	0	-	-	-	-	-	-	135	10
VH (B)	3,056	96	90	82	-	-	-	-	229	2	-	-	1,013	12
VH (C)	3,071	260	0	0	-	-	-	-	204	0	-	-	1,014	20
VH (A&E)	-	-	-	-	2	0	-	-	-	-	-	-	0	0
Covid-19	-	-	26	0	-	-	-	-	35	0	-	-	0	0
HIV	-	-	-	-	-	-	-	-	-	-	-	-	0	0
TB	-	-	-	-	-	-	-	-	-	-	-	-	43	3
Syphilis	-	-	-	-	-	-	-	-	-	-	-	-	29	0
Typhoid	638	7	-	-	-	-	-	-	-	-	-	-	0	0
Diptheria (Probabale)	-	-	-	-	1	0	-	-	-	-	-	-	0	0
Pertussis	-	-	-	-	-	-	-	-	-	-	-	-	0	0
M-POX	-	-	-	-	1	0	-	-	-	-	-	-	0	0
Measles	15	7	1	0	90	26	2	2	1	0	88	28	4	2
Rubella	15	0	1	0	90	2	2	0	1	0	88	1	4	0
B.Diarrhea	-	-	-	-	-	-	-	-	-	-	-	-	0	0
SARI-Covid-19	2	0	0	0	0	0	8	0	0	0	80	2	-	-
SARI-Influenza A	2	0	0	0	0	0	8	1	0	0	80	4	-	-
SARI-Influenza B	2	0	0	0	0	0	8	0	0	0	80	2	-	-
SARI-RSV	2	0	0	0	0	0	8	0	0	0	80	0	-	-
ILI-Covid-19	0	0	0	0	0	0	62	1	0	0	62	3	-	-
ILI-Influenza A	0	0	0	0	0	0	62	3	0	0	62	8	-	-
ILI-Influenza B	0	0	0	0	0	0	62	1	0	0	62	4	-	-
ILI-RSV	0	0	0	0	0	0	62	0	0	0	62	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 41, 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	239	129	54%
	Battagram	63	0	0%
	Buner	34	31	91%
	Bajaur	44	36	82%
	Charsadda	59	53	90%
	Chitral Upper	34	28	82%
	Chitral Lower	35	34	97%
	D.I. Khan	114	113	99%
	Dir Lower	74	74	100%
	Dir Upper	53	44	83%
	Hangu	22	14	64%
	Haripur	72	67	93%
	Karak	35	35	100%
	Khyber	52	17	33%
	Kohat	61	59	97%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	17	40%
	Upper Kurram	41	33	80%
	Malakand	42	34	81%
	Mansehra	136	0	0%
	Mardan	80	73	91%
	Nowshera	55	49	89%
	North Waziristan	12	2	17%
	Peshawar	151	117	77%
	Shangla	37	29	78%
	Swabi	63	63	100%
	Swat	77	72	94%
	South Waziristan	134	54	40%
	Tank	34	29	85%
	Torghar	14	13	93%
	Mohmand	68	60	88%
	SD Peshawar	5	1	20%
	SD Tank	58	5	9%
	Orakzai	68	8	12%
	Mirpur	37	37	100%
	Bhimber	20	20	100%
	Kotli	60	60	100%

	Muzaffarabad	45	43	96%
	Poonch	46	46	100%
	Haveli	39	39	100%
Azad Jammu Kashmir	Bagh	40	39	98%
	Neelum	39	39	100%
	Jhelum Vellay	29	28	97%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	21	21	100%
	CDA	15	8	53%
	Gwadar	25	2	8%
	Kech	44	30	68%
	Khuzdar	74	61	82%
	Killa Abdullah	26	14	54%
	Lasbella	55	55	100%
	Pishin	69	28	41%
	Quetta	56	30	54%
	Sibi	36	34	94%
	Zhob	39	27	69%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	14	100%
	Kohlu	75	62	83%
	Chagi	35	30	86%
	Kalat	41	40	98%
	Harnai	17	17	100%
Balochistan	Kachhi (Bolan)	35	35	100%
	Jhal Magsi	28	27	96%
	Sohbat pur	25	25	100%
	Surab	32	25	78%
	Mastung	45	44	98%
	Loralai	33	29	88%
	Killa Saifullah	28	27	96%
	Ziarat	29	0	0%
	Duki	31	28	90%
	Nushki	32	29	91%
	Dera Bugti	45	37	82%
	Washuk	46	32	70%
	Panjgur	38	26	68%
	Awaran	23	0	0%
	Chaman	25	24	96%
	Barkhan	20	20	100%
	Hub	33	13	39%
	Musakhel	41	26	63%
	Usta Muhammad	34	34	100%
	Hunza	32	32	100%
	Nagar	20	20	100%
Gilgit Baltistan	Ghizer	40	40	100%
	Gilgit	40	40	100%

	Diamer	62	61	98%
	Astore	54	54	100%
	Shigar	27	27	100%
	Skardu	52	52	100%
	Ganche	29	29	100%
	Kharmang	18	18	100%
Sindh	Hyderabad	73	65	89%
	Ghotki	64	63	98%
	Umerkot	43	43	100%
	Naushahro Feroze	107	93	87%
	Tharparkar	282	241	85%
	Shikarpur	59	59	100%
	Thatta	52	49	94%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	20	87%
	Karachi-West	20	20	100%
	Karachi-Malir	37	33	89%
	Karachi-Kemari	18	14	78%
	Karachi-Central	11	10	91%
	Karachi-Korangi	18	18	100%
	Karachi-South	4	4	100%
	Sujawal	54	54	100%
	Mirpur Khas	106	105	99%
	Badin	124	120	97%
	Sukkur	63	57	90%
	Dadu	88	88	100%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	169	164	97%
	Kashmore	59	59	100%
	Matiari	42	40	95%
	Jamshoro	72	72	100%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	40	40	100%
	Shaheed Benazirabad	122	119	98%

Table 7: IDSR reporting Tertiary care hospital Week 41, 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%

NIH conducted Multi-Sectorial Workshop on Multi Hazard Public Health Risk Assessment & Profiling - Karachi, Sindh

The National Institute of Health (NIH) and the Sindh Health Department, in collaboration with the John Snow Institute (JSI)-USAID, convened a multi-sectorial workshop in Karachi from October 15-18, 2024. The workshop's primary objective was to conduct a comprehensive strategic risk assessment and profiling of public health hazards and threats of concern in context of Sindh, leveraging the Threat Hazard Identification and Risk Assessment (THIRA) Tool.

By identifying and prioritizing key risks, the workshop aimed to establish a solid foundation for future public health preparedness and response planning at both national and provincial levels. This initiative aligned with the principles outlined in the International Health Regulations (IHR) 2005, addressing the gaps in public health emergency management (PHEM) identified in the Joint External Evaluation (JEE, 2023). This demonstrates Pakistan's commitment to strengthening its public health infrastructure and building a more resilient nation.

The workshop brought together a diverse group of stakeholders, including diverse representatives from government departments, healthcare providers, academic institutions, and non-governmental organizations. Through a series of interactive sessions, participants engaged in discussions on various public health hazards, such as natural disasters, infectious diseases, and environmental contaminants. By applying the THIRA methodology, they were able to assess the likelihood and impact of these risks and identify potential vulnerabilities in the province of Sindh.

The outcomes of the workshop will inform the development of targeted public health interventions and strategies to handle future crisis situations. These interventions may include early warning systems, emergency response plans, and community-based programs to enhance public health resilience. By addressing the identified risks proactively, Pakistan can better protect its citizens from the adverse effects of public health emergencies and ensure a safer and healthier future for all.

Notes from the field:

Outbreak of Acute Diarrhea at Village Wahori Dora, Tharparkar Sindh, Sept 2024

Dr Sunil Chohan
MO HQ PPHI District Tharparkar

Introduction

Acute diarrhea, characterized by frequent loose or watery stools lasting less than two weeks, is a common health problem worldwide, and is the third leading cause of death in children. Globally, there are nearly 1.7 billion cases of childhood diarrheal disease annually, making it a leading cause of death among children. The primary transmission routes are fecal-oral, through contaminated water or person-to-person contact.

From a village at Wahori Dora with a population of 3700, an outbreak of acute diarrhea was reported, resulting in the deaths of three children. The affected neighborhood, with 115 households and a population of 494, experienced an unusually high number of cases. The village has various water sources, including a community storage tank, household bore wells, and community open wells, which may be potential contributors to the outbreak

Objectives

1. To determine the extent and magnitude of the acute diarrhea outbreak.
2. To describe the outbreak with time, place and person.
3. To identify possible risk factors associated with the outbreak.
4. To recommend preventive and control measures to prevent future outbreaks.

Methods:

A cross-sectional study was conducted in Village Wahori Dora, Taluka Chachro, Sindh to investigate the outbreak of acute diarrhea. The study population comprised 494 individuals residing within the affected village. Data collection was carried out from August 26 to 31, 2024, through a door-to-door survey utilizing a standardized line list and interview questionnaire. The questionnaire was designed to capture demographic information, symptoms, exposure history, and medical history of study participants. The case definition was defined as any person having 3 or more loose or watery stools a day lasting 14 days or less living in Village Wahori Dora.

Data analysis involved the calculation of descriptive statistics, including frequencies, attack rates, and case fatality rates. Additionally, exploratory data analysis was conducted to identify potential risk factors and patterns within the data.

Results

The diarrhea outbreak in Wahori Dora affected a total of 213 individuals out of a population of 494, with a slightly higher prevalence among males (54%) compared to females (46%). Most cases occurred in children aged 0 to 5 (100 cases), followed by the 6 to 10 age group (23 cases). While the majority of cases were concentrated in younger age groups, the outbreak also impacted individuals across various age categories, including adults and the elderly

The overall attack rate of diarrhea was 43%, with higher rates among males (54%) compared to females (46%). The case fatality rate was 1.4%, observed more among females (2.1%) compared to males (0.9%). The primary risk factor for the diarrhea outbreak was the consumption of contaminated water from the community storage tank. 78% of the cases reported a history of drinking from this source. Travel and consumption of food from local hotels were less common risk factors, accounting for 5% and 4% of cases, respectively. Among children under two years old, a high proportion (79%) had received two doses of the Rotavirus vaccine, suggesting that vaccination may have played a role in mitigating the outbreak's impact in this age group..

Discussion

The outbreak of acute diarrhea in Wahori Dora, Tharparkar Sindh, was primarily attributed to the consumption of contaminated water from the community storage tank. This finding aligns with previous studies highlighting the critical role of contaminated water in the transmission of diarrheal diseases [WHO 2023, Black et al 2013]. The high prevalence of cases among children under five years

old is consistent with the vulnerability of this age group to diarrheal illnesses [Nanthavong et al 2010].

The observed case fatality rate of 1.4% is relatively low compared to some reported outbreaks in developing countries [UNICEF 2023]. This could be attributed to factors such as improved access to healthcare, early diagnosis, and the availability of effective treatment options. However, further investigation is needed to identify specific factors that contributed to the lower mortality rate in this outbreak.

The consumption of contaminated water from the community storage tank was identified as the primary risk factor for the outbreak. This highlights the importance of ensuring the safety of drinking water supplies in rural areas. Proper water treatment and storage practices are essential to prevent the transmission of waterborne diseases [WHO 2023].

The high proportion of children under two years old who had received two doses of the Rotavirus vaccine suggests that vaccination may have played a role in mitigating the outbreak's impact in this age group. Rotavirus vaccination has been shown to significantly reduce the incidence and severity of diarrheal disease among young children [WHO 2023].

Conclusion

The outbreak in Wahori Dora highlights the urgent need for improved water sanitation and healthcare access in rural areas. Contaminated water from the community storage tank was the primary driver, and malnutrition and poor health-seeking behavior exacerbated the impact. Addressing these underlying issues requires investing in water infrastructure, promoting sanitation, and improving healthcare access to prevent future outbreaks and protect vulnerable populations.

Recommendations

Focused Surveillance: Establishment of a robust and active sentinel surveillance system at healthcare facilities to monitor disease incidence and identify outbreaks early. Strengthening laboratory capacity for pathogen identification and antimicrobial susceptibility testing.

Case Management: Early diagnosis and treatment with implementation of effective oral rehydration therapy (ORT) protocols. Judicious use of antimicrobials based on clinical assessment and laboratory findings.

Community Awareness: Comprehensive health education campaigns, promotion of proper hygiene practices, including handwashing and safe food handling. Awareness raising activities on the importance of water, sanitation, and hygiene (WASH).

Safe Water Sources: Implementation of appropriate water treatment technologies at the community level additionally exploration of alternative water sources, such as deep wells or rainwater harvesting and development of a sustainable water distribution system

Disinfection of Drinking Water: Provision of household water treatment kits with regular disinfection of water storage tanks and distribution systems

References

1. World Health Organization. (2023). Diarrhoeal disease. https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease 2. Alam, N. M., Islam, M. N., & Islam, M. R. (2014). Risk factors associated with diarrhea among children in rural Bangladesh. Journal of Health, Population and Nutrition, 32(2), 239-250.
2. Black, R. E., Allen, J. H., Bhutta, Z. A., Caulfield, J. E., de Onis, M., Ezzati, M., ... & Wasserman, D. C. (2013). Child mortality from diarrhea: Global estimates and trends from 1990 to 2013. The Lancet, 382(9902), 1193-1202.
3. Nanthavong, K., Phommachanh, B., Latt, M. M., & Vientiane, L. (2010). Investigation of a diarrhea outbreak in a rural village in Laos. Southeast Asian Journal of Public Health, 40(2), 114-120.
4. United Nations Children's Fund (UNICEF). (2023). Water, sanitation, and hygiene (WASH).
5. https://www.unicef.org/water-sanitation-and-hygiene-wash
6. World Health Organization. (2023). Rotavirus vaccine: WHO recommendations. https://www.who.int/teams/immunization-vaccines-and-biologicals/policies/position-papers/rotavirus

Knowledge hub

Neonatal Tetanus: A Preventable Threat

Overview

Neonatal tetanus (NT) is a severe form of tetanus that affects newborns, typically occurring in the first month of life. It is caused by the bacterium *Clostridium tetani*, which produces a toxin leading to muscle stiffness and spasms. Neonatal tetanus is a preventable disease, primarily linked to unclean birthing practices and lack of maternal immunization.

Causes

- **Infection from Umbilical Cord**: NT often arises when the umbilical cord is cut with non-sterile instruments or when contaminated substances are applied to the stump.
- **Maternal Immunization**: Insufficient or no vaccination of the mother against tetanus increases the risk of NT.

Symptoms

- **Muscle Rigidity**: Stiffness of the jaw (trismus) and neck, progressing to generalized stiffness.
- **Spasms**: Painful muscle contractions that can lead to respiratory difficulties.
- **Feeding Difficulty**: Inability to suck or swallow, leading to poor feeding.
- **Seizures**: In severe cases, seizures may occur.

Diagnosis

Diagnosis is primarily clinical, based on symptoms and the history of the birth process. Laboratory tests may be limited, as NT is often diagnosed when other causes of similar symptoms are ruled out.

Treatment

- **Supportive Care**: Management in a neonatal intensive care unit (NICU) may be necessary, including respiratory support and management of spasms.
- **Antitoxins**: Tetanus immunoglobulin may be administered to neutralize the toxin.
- **Antibiotics**: To control any secondary infections.
- **Nutritional Support**: Ensuring adequate hydration and nutrition.

Prevention

- **Maternal Vaccination**: Pregnant women should receive at least two doses of the tetanus toxoid vaccine during each pregnancy.
- **Clean Delivery Practices**: Ensuring sterile conditions during childbirth and proper care of the umbilical cord.
- **Health Education**: Informing communities about the importance of hygiene in childbirth and vaccination.

Global Impact

Neonatal tetanus remains a significant public health issue in many developing countries, particularly where access to clean birth practices and maternal healthcare is limited. According to the World Health Organization (WHO), NT is a leading cause of neonatal mortality in these regions.
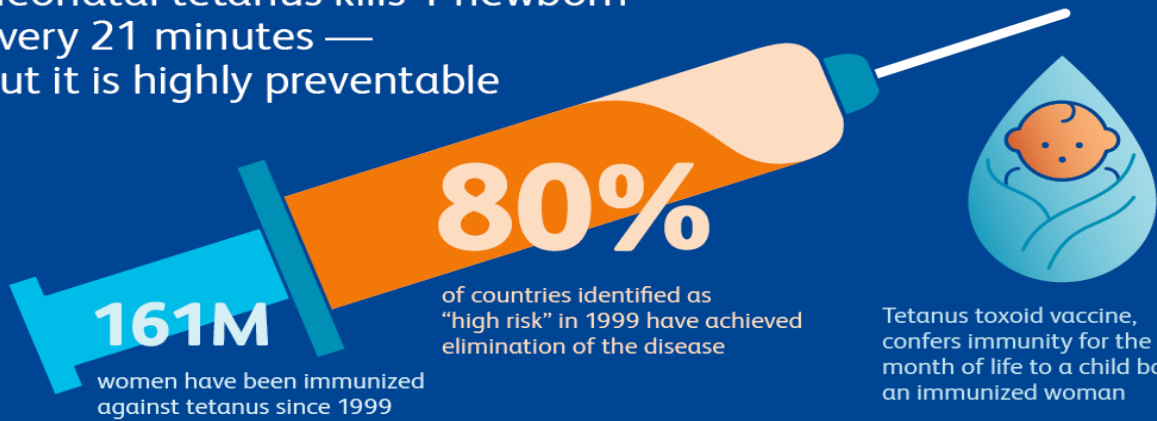
Conclusion

Neonatal tetanus is a preventable yet critical health issue that requires sustained efforts in vaccination, education, and healthcare practices to eliminate. Global initiatives focused on improving maternal health and hygiene during childbirth are vital to reducing the incidence of this disease.

References

1. World Health Organization (WHO). (2023). "Neonatal Tetanus." WHO Website
2. Centers for Disease Control and Prevention (CDC). (2022). "Tetanus." CDC Website
3. UNICEF. (2021). "Preventing Neonatal Tetanus: A Global Challenge." UNICEF Report
4. World Health Organization (WHO). (2021). "Maternal and Neonatal Tetanus Elimination." WHO Publication
5. Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/tetanus/hcp/clinical-signs/index.html
6. Johns Hopkins: https://johnshopkinshealthcare.staywellsolutionsonline.com/BreatheEasy/85,P0065

Neonatal tetanus kills 1 newborn every 21 minutes — but it is highly preventable

80%
of countries identified as "high risk" in 1999 have achieved elimination of the disease

161M
women have been immunized against tetanus since 1999

Tetanus toxoid vaccine, confers immunity for the first month of life to a child born to an immunized woman

Global maternal neonatal tetanus immunizations helped millions of children survive to adolescence today versus 30 years ago

Between 1990–2019, the global mortality rate for children under five declined by almost
60%

In 2019, the neonatal mortality rate fell to 17 deaths per 1,000 live births...

... from
37
deaths in 1990 — a decline of 52%

... and, from
30
deaths in 2000 — a decline of 42%

In 2019, 122 countries reached the Sustainable Development Goal (SDG) target of <25 deaths per 1,000 live births

60+
countries
will miss the SDG target for neonatal mortality by 2030

53
countries
will miss the SDG target for under five mortality by 2030

UK Health Security Agency

World Health Organization

USAID