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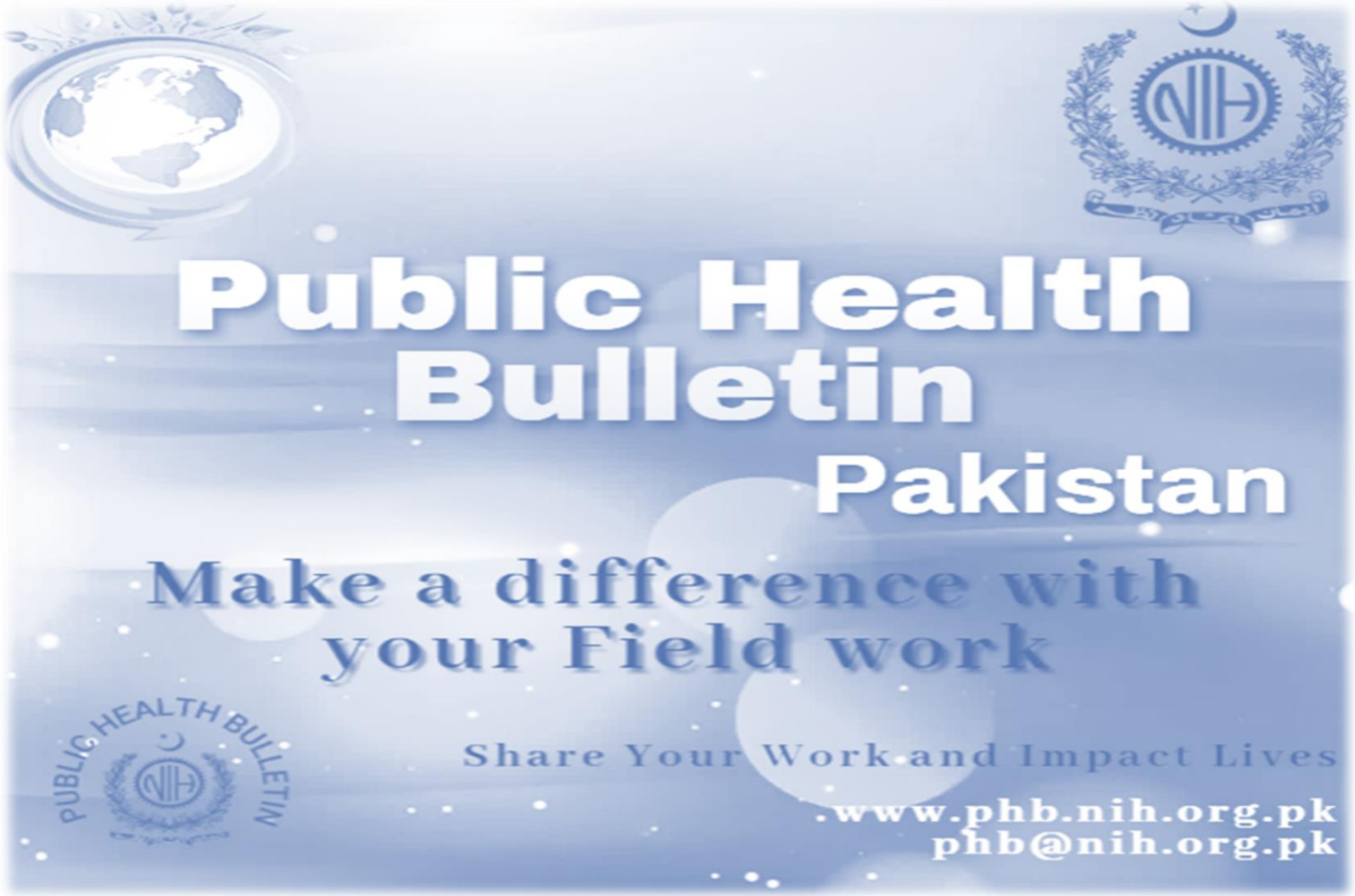
Integrated Disease Surveillance & Response (IDSR) Report

Center of Disease Control
National Institute of Health, Islamabad

http:/www.phb.nih.org.pk/

Integrated Disease Surveillance & Response (IDSR) Weekly Public Health Bulletin is your go-to resource for disease trends, outbreak alerts, and crucial public health information. By reading and sharing this bulletin, you can help increase awareness and promote preventive measures within your community.



Public Health Bulletin - Pakistan, Week 07, 2025

The Public Health Bulletin (PHB) provides timely, reliable, and actionable health information to the public and professionals. It disseminates key IDSR data, outbreak reports, and seasonal trends, along with actionable public health recommendations. Its content is carefully curated for relevance to Pakistan's priorities, excluding misinformation. The PHB also proactively addresses health misinformation on social media and aims to be a trusted resource for informed public health decision-making.

This Weeks Highlights include;

- *Advancing Mortality Surveillance in Pakistan: Expanding Provincial Implementation to Sindh*
- *Investigation of a Suspected Enteric Fever Outbreak in Batkhela KP, Pakistan.*
- *Knowledge hub on Hospital-Acquired Infections: A Persistent Challenge in Healthcare*

By transforming complex health data into actionable intelligence, the Public Health Bulletin continues to be an indispensable tool in our collective journey toward a healthier Pakistan.

Subscribe to the Weekly Bulletin today!

Stay informed. Stay prepared. Stay healthy.

Sincerely,
The Chief Editor

Note: All reported cases in this report are suspected cases

- *During Week 07, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, TB, ALRI <5 years, dog bite, VH (B, C & D), B. Diarrhea, Typhoid and SARI.*
- *25 cases of AFP reported from Punjab, 23 from KP, 21 from Sindh, 2 from AJK and 1 from Balochistan.*
- *11 suspected cases of HIV/ AIDS reported from Punjab, 2 from KP and 1 from Sindh.*
- *6 suspected cases of Brucellosis reported from KP.*
- *Among VPDs, there is an increase in number of cases of Measles, Mumps, Chickenpox, Meningitis and AFP this week.*
- *Among respiratory diseases, there is an increase in number of cases of ILI, TB and ALRI< 5 years this week.*
- *Among food-borne diseases, there is an increase in number of cases of AD (S. Cholera), B. Diarrhea and Typhoid this week.*
- *Among vector-borne diseases, there is an increase in number of cases of Malaria and Dengue this week.*
- *Among STDs, there is an increase in number of cases of HIV/AIDs this week.*
- *Among other diseases, there is an increase in number of cases of dog bite and VH (B, C & D) this week.*
- *Field investigation is required for verification of the alerts and for prevention and control of the outbreaks.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts is 82%*
- *Sindh is the top reporting regions with a compliance rate of 96%, followed by AJK 94%, GB 92% and ICT 80%.*
- *The lowest compliance rate was observed in KP 75% and Balochistan 60%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2245	1690	75
Azad Jammu Kashmir	404	379	94
Islamabad Capital Territory	36	28	80
Balochistan	1308	797	60
Gilgit Baltistan	405	372	92
Sindh	2116	2025	96
National	6474	5292	82

Public Health Actions

Federal, Provincial, Regional Health Departments and relevant programs may consider following public health actions to prevent and control diseases.

Brucellosis

- **Enhance Case Detection and Reporting**: Strengthen brucellosis surveillance within the Integrated Disease Surveillance and Response (IDSR) system by training healthcare workers on case identification and ensuring timely data reporting for outbreak detection and response.
- **Strengthen Laboratory Diagnosis**: Strengthen brucellosis surveillance by improving laboratory diagnostic capacity for the confirmation of suspected cases.
- **Strengthen One Health Collaboration:** Enhance coordination between human, animal, and environmental health sectors to implement joint surveillance, risk assessment, and control measures, including safe livestock handling and biosecurity practices.
- **Expand Community Awareness:** Develop targeted risk communication strategies to educate farmers, butchers, farm and domestic dairy workers on zoonotic transmission, safe animal husbandry practices, and the importance of consuming pasteurized dairy products.

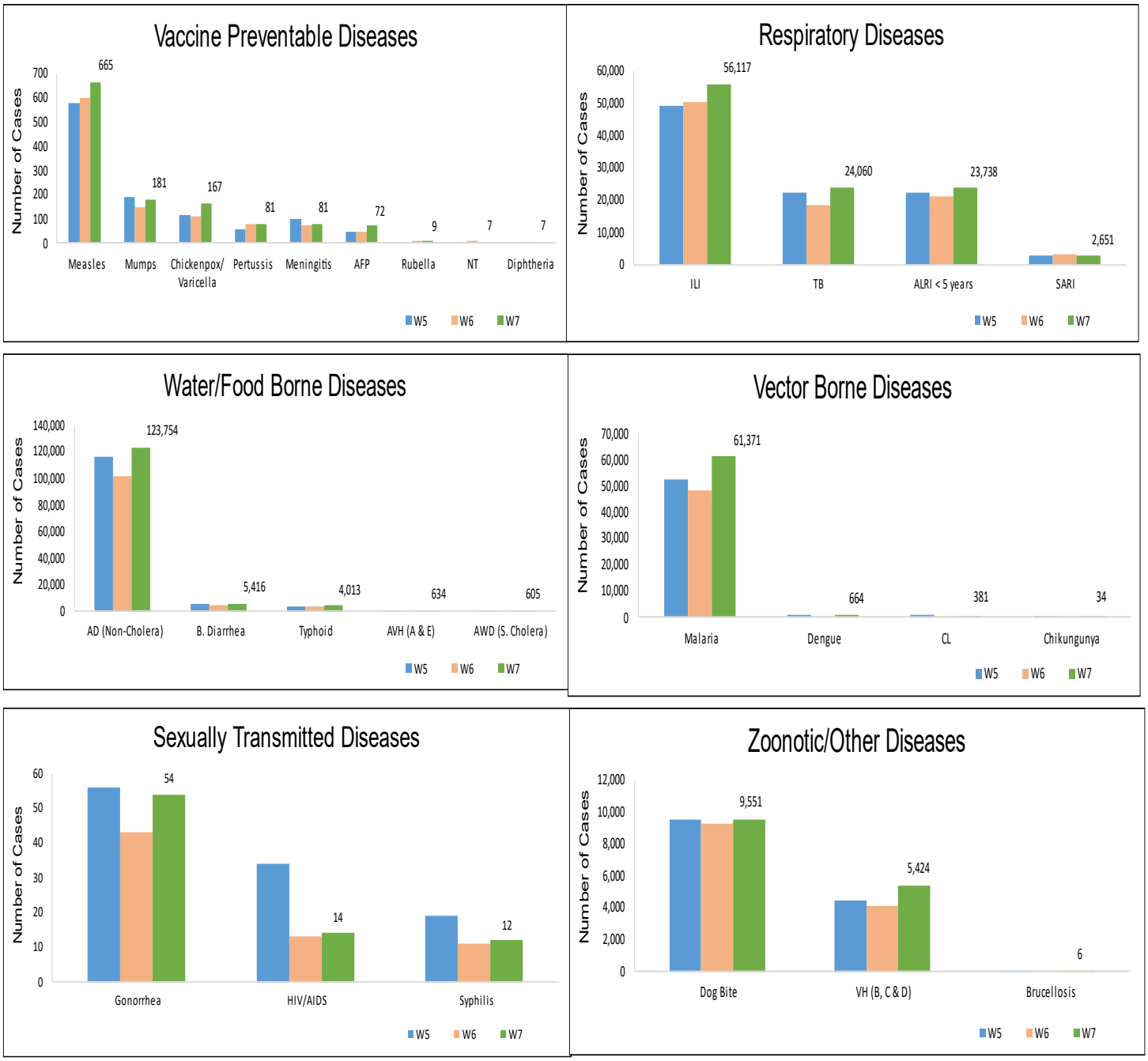
Leprosy

- **Enhance Case Detection and Reporting:** Strengthen leprosy surveillance within the Integrated Disease Surveillance and Response (IDSR) system, ensuring early detection through active case-finding in endemic areas and strengthening reporting mechanisms for timely public health interventions.
- **Strengthen Laboratory Diagnosis**: Strengthen leprosy surveillance by improving laboratory diagnostic capacity for the confirmation of suspected cases.
- **Implement Prevention Strategies:** Promote early screening among household contacts of leprosy patients and integrate leprosy prevention messaging into broader skin health and neglected tropical disease (NTD) programs.
- **Expand Community Awareness:** Conduct public health campaigns to reduce stigma, improve knowledge about leprosy transmission and prevention, and encourage affected individuals to seek care early to prevent long-term disability.

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 07, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (non-cholera)	1,076	4,343	424	199	16,856	64,969	35,887	123,754
Malaria	0	2,496	0	0	3,136	2,668	53,071	61,371
ILI	2,773	8,073	443	1,544	6,929	5	36,350	56,117
TB	47	99	47	13	387	11,416	12,051	24,060
ALRI < 5 years	1,758	2,204	963	18	1,804	2,589	14,402	23,738
Dog Bite	67	101	4	0	896	5,314	3,169	9,551
VH (B, C & D)	28	82	0	2	100	0	5,212	5,424
B. Diarrhea	34	1,025	50	1	780	483	3,043	5,416
Typhoid	18	364	45	1	625	2,027	933	4,013
SARI	466	741	259	2	956	0	227	2,651
Measles	19	25	2	0	321	205	93	665
Dengue	0	0	0	0	1	609	54	664
AVH (A & E)	32	16	3	0	299	0	284	634
AWD (S. Cholera)	8	46	11	0	33	498	9	605
CL	2	68	0	0	305	5	1	381
Mumps	4	15	5	1	81	0	75	181
Chickenpox/ Varicella	4	5	8	0	52	23	75	167
Pertussis	0	52	6	0	15	1	7	81
Meningitis	6	0	4	0	2	65	4	81
AFP	2	1	0	0	23	25	21	72
Gonorrhea	0	33	0	0	11	0	10	54
Chikungunya	0	0	0	0	1	0	33	34
HIV/AIDS	0	0	0	0	2	11	1	14
Syphilis	0	0	0	0	0	0	12	12
Rubella	0	0	0	0	0	9	0	9
NT	0	0	0	0	7	0	0	7
Diphtheria	0	0	1	0	1	5	0	7
Brucellosis	0	0	0	0	6	0	0	6

Figure 1: Most frequently reported suspected cases during Week 07, Pakistan.



Sindh

- Malaria cases were maximum followed by ILI, AD (Non-Cholera), ALRI<5 Years, TB, VH (B, C, D), dog bite, B. Diarrhea, Typhoid and AVH (A & E).
- Malaria cases are mostly from Larkana, Khairpur and Sanghar whereas ILI cases are from Khairpur, Mirpurkhas and Karachi Malir.
- Twenty-one cases of AFP reported from Sindh. All are suspected cases and need field verification.
- One suspected case of HIV/ AIDS reported from Sindh. Field investigation required to verify the case.
- There is an increase in number of cases of Malaria, ILI, AD (Non-Cholera), ALRI<5 Years, TB, VH (B, C, D) and B. Diarrhea this week.

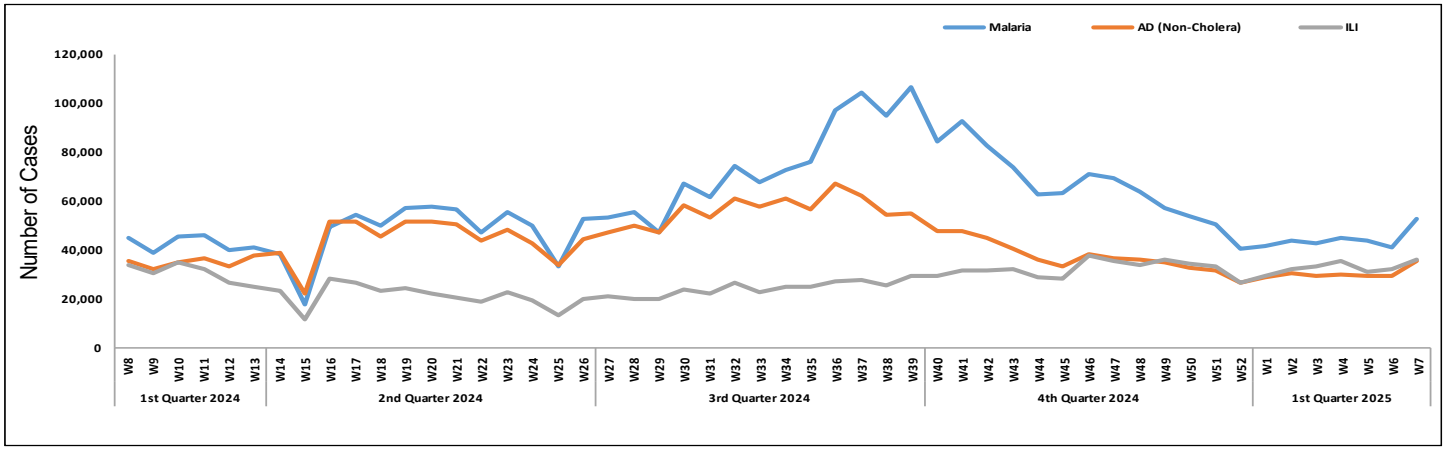
Table 2: District wise distribution of most frequently reported suspected cases during Week 07, Sindh

Districts	Malaria	ILI	AD (non-cholera)	ALRI < 5 years	TB	VH (B, C & D)	Dog Bite	B. Diarrhea	Typhoid	AVH (A & E)
Badin	2,357	1,330	2,156	571	911	339	159	121	59	5
Dadu	3,983	685	2,499	1,687	536	99	392	472	150	76
Ghotki	932	0	543	611	220	168	206	65	0	0
Hyderabad	481	1,790	2,182	169	98	34	1	2	18	2
Jacobabad	912	891	592	473	115	350	222	114	30	0
Jamshoro	2,042	123	1,012	294	605	228	74	110	50	10
Kamber	3,586	0	1,482	386	829	134	284	94	18	0
Karachi Central	13	1,890	675	70	23	6	0	7	92	7
Karachi East	43	691	416	71	16	4	31	9	1	0
Karachi Keamari	1	447	487	44	1	0	0	4	2	1
Karachi Korangi	70	0	384	1	27	1	2	12	2	0
Karachi Malir	218	3,626	2,125	242	82	16	25	20	15	0
Karachi South	0	3	89	0	0	0	0	0	0	0
Karachi West	321	1,184	824	175	76	36	34	17	26	1
Kashmore	2,149	835	389	262	302	56	83	47	6	0
Khairpur	4,858	9,332	2,268	1,331	1,079	106	225	281	136	3
Larkana	5,386	138	1,444	567	939	71	50	293	10	5
Matiari	2,774	2	1,171	551	607	619	48	46	3	0
Mirpurkhas	2,329	3,863	2,094	850	810	232	87	177	12	5
Naushero Feroze	1,138	1,134	933	386	192	74	255	174	55	0
Sanghar	4,801	45	1,827	946	1,295	1,355	184	118	61	2
Shaheed Benazirabad	1,804	4	1,347	277	316	100	159	44	92	0
Shikarpur	2,726	7	1,016	264	314	414	231	175	2	0
Sujawal	794	0	900	415	153	63	70	90	3	0
Sukkur	1,957	2,246	1,075	682	528	90	97	112	4	0
Tando Allahyar	1,477	1,758	947	375	563	351	109	123	21	1
Tando Muhammad Khan	673	36	779	256	562	0	27	68	0	0
Tharparkar	2,228	2,077	1,983	1,131	463	84	3	114	24	32
Thatta	1,533	2,185	998	667	59	112	111	68	11	131
Umerkot	1,485	28	1,250	648	330	70	0	66	30	3
Total	53,071	36,350	35,887	14,402	12,051	5,212	3,169	3,043	933	284

UK Health Security Agency
World Health Organization
CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

Figure 2: Most frequently reported suspected cases during Week 07 Sindh

Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh



Balochistan

- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, dog bite, TB and VH (B, C & D) cases were the most frequently reported diseases from Balochistan province.
- ILI cases are mostly reported from Gwadar, Quetta and Jhal Magsi while AD (Non-Cholera) cases are mostly reported from Usta Muhammad, Quetta and Gwadar.
- One suspected case of AFP reported from Balochistan. It requires field verification.
- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, Pertussis, VH (B, C & D) and mumps showed an increase in cases in this week.

Table 3: District wise distribution of most frequently reported suspected cases during Week 07, Balochistan

Districts	ILI	AD (non-cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dog Bite	TB	VH (B, C & D)
Barkhan	68	47	19	22	1	11	25	15	13	19
Chagai	258	98	20	0	29	0	13	0	0	1
Dera Bugti	65	58	49	73	13	0	2	0	0	0
Gwadar	1,504	414	119	14	76	NR	7	NR	NR	NR
Harnai	17	91	57	147	54	0	0	4	0	0
Hub	71	143	133	42	9	0	3	3	2	0
Jaffarabad	196	200	233	7	31	8	2	2	39	0
Jhal Magsi	675	162	242	26	0	1	5	8	5	0
Kalat	3	17	5	5	9	1	12	0	0	0
Kharan	581	111	26	0	60	8	2	0	0	0
Khuzdar	386	269	98	8	132	26	6	NR	NR	NR
Killa Saifullah	4	115	143	258	87	38	11	5	0	1
Kohlu	481	175	83	25	71	104	44	NR	NR	5
Lasbella	112	312	308	83	27	4	9	12	3	2
Loralai	358	104	19	39	23	79	11	0	0	0
Mastung	97	57	11	86	14	10	7	0	0	0
Naseerabad	16	270	234	22	11	52	64	21	28	30
Panjgur	61	59	47	81	13	0	0	0	0	0
Pishin	542	196	11	81	90	59	13	1	0	0
Quetta	977	422	7	248	34	60	23	1	0	0
Sherani	23	5	0	0	0	26	0	0	0	0
Sibi	358	77	22	32	11	59	8	1	2	0
Sohbat pur	70	166	246	139	58	26	21	4	6	4
Surab	171	50	7	0	0	0	0	0	0	0
Usta Muhammad	218	439	232	248	57	19	10	24	0	20
Washuk	353	129	85	4	48	14	9	0	1	0
Zhob	271	89	18	459	35	134	53	0	0	0
Ziarat	137	68	22	55	32	2	4	0	0	0
Total	8,073	4,343	2,496	2,204	1,025	741	364	101	99	82

Figure 4: Most frequently reported suspected cases during Week 07, Balochistan

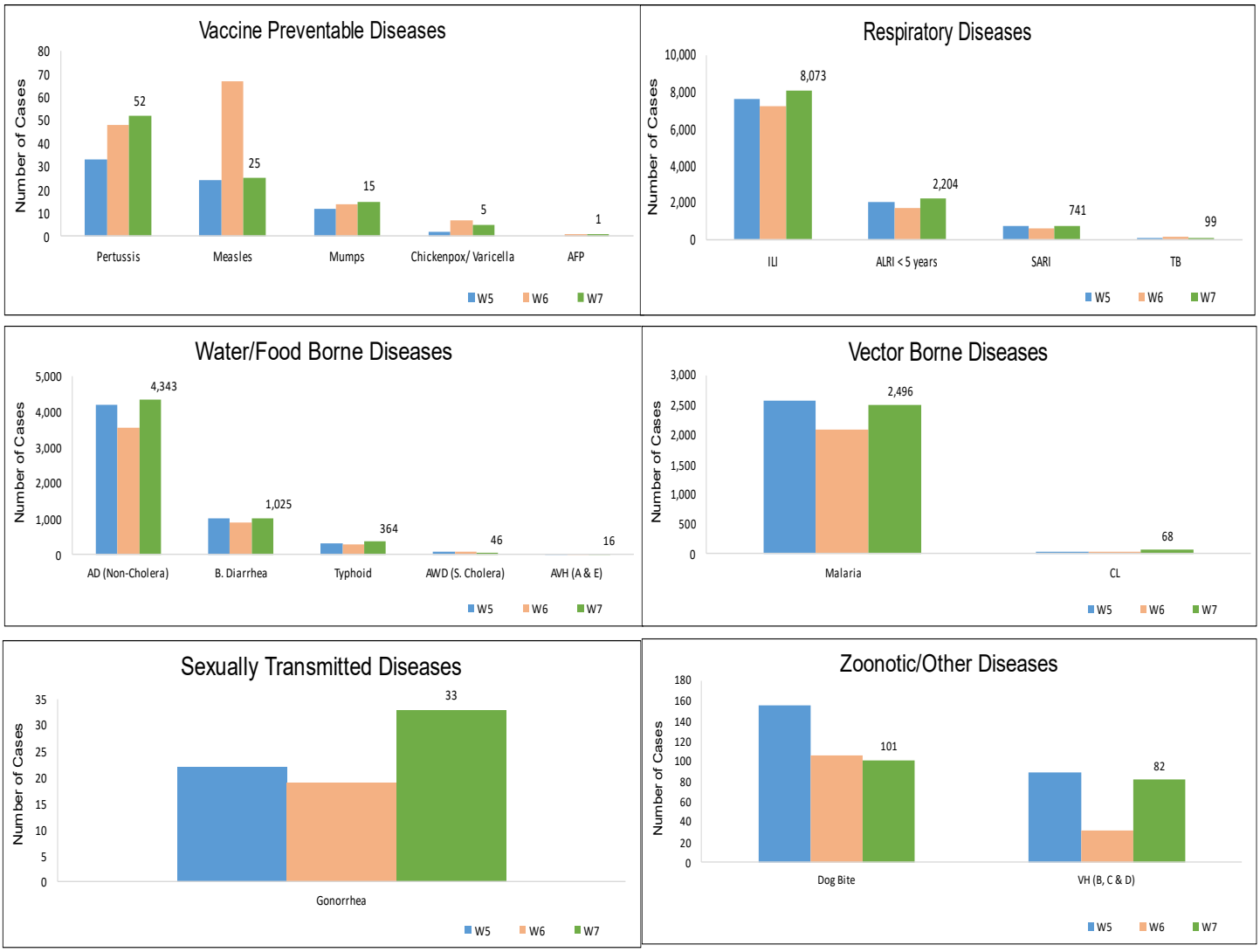
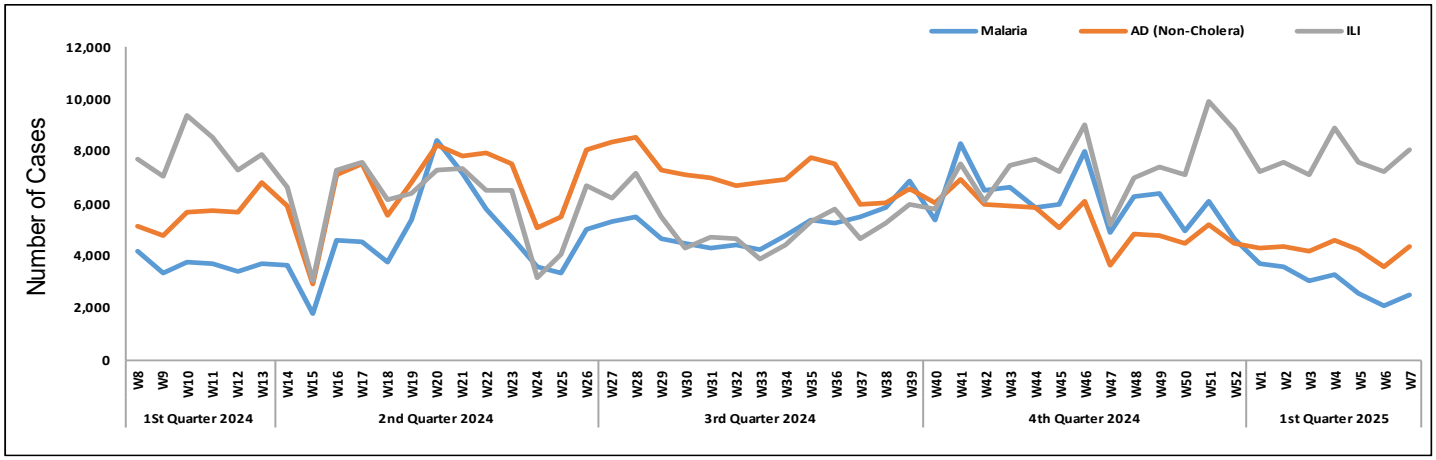


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, SARI, dog bite, B. Diarrhea, Typhoid, TB and Measles cases.
- AD (Non-Cholera), ILI, Typhoid and TB cases showed an increase in number while Malaria, ALRI<5 Years, SARI, dog bite and Measles cases showed a decline in number this week.
- Twenty-three cases of AFP reported from KP. All are suspected cases and need field verification.
- Two cases of HIV/AIDs reported from KP. Field investigation is required.
- Six suspected cases of Brucellosis reported from KP. They require field verification.

Table 4: District wise distribution of most frequently reported suspected cases during Week 07, KP

Districts	AD (non-cholera)	ILI	Malaria	ALRI < 5 years	SARI	Dog Bite	B. Diarrhea	Typhoid	TB	Measles
Abbottabad	712	88	0	52	2	66	9	7	9	3
Bajaur	310	97	111	28	129	49	78	14	21	24
Bannu	727	7	1,275	24	3	0	18	76	22	41
Battagram	161	598	8	NR	1	12	1	NR	43	3
Buner	149	0	210	0	0	15	0	5	0	1
Charsadda	1,600	1,715	320	643	12	2	157	87	18	22
Chitral Lower	239	147	5	29	35	13	18	0	0	0
Chitral Upper	56	8	2	6	4	0	1	5	2	0
D.I. Khan	1,171	0	127	42	0	7	20	0	40	69
Dir Lower	784	0	164	16	0	54	54	33	9	16
Dir Upper	337	121	5	2	0	49	1	0	20	1
Hangu	109	303	81	0	0	3	5	4	2	0
Haripur	520	465	0	62	10	18	13	7	0	2
Karak	252	116	63	68	95	13	14	3	5	20
Khyber	427	91	52	92	18	54	84	111	19	4
Kohat	396	64	29	4	22	28	21	3	0	0
Kohistan Lower	7	0	0	0	0	0	1	0	0	0
Kohistan Upper	80	0	5	0	0	1	6	0	0	3
Kolai Palas	41	7	2	6	6	0	6	1	1	1
L & C Kurram	14	7	10	0	0	0	11	1	0	0
Lakki Marwat	587	30	122	11	1	43	11	10	8	4
Malakand	140	12	6	15	21	0	22	4	0	1
Mansehra	497	260	0	1	10	0	2	4	2	0
Mardan	84	0	0	0	0	1	0	0	0	0
Mohmand	113	181	153	8	172	16	20	6	3	5
North Waziristan	38	0	28	8	17	0	3	5	5	17
Nowshera	1,097	58	21	131	12	78	29	29	19	8
Orakzai	63	20	11	0	0	9	3	5	0	5
Peshawar	2,597	804	37	139	106	8	72	60	28	33
SD Tank	21	2	18	1	1	0	7	0	0	0
Shangla	669	2	114	26	0	75	3	36	47	2
South Waziristan (Lower)	16	133	12	5	47	8	3	6	1	1
SWU	27	36	7	0	16	0	1	1	0	0
Swabi	867	933	38	160	76	221	8	45	39	22
Swat	1,222	168	4	160	0	29	27	26	13	8
Tank	560	115	79	28	0	0	3	23	7	3
Tor Ghar	45	0	10	25	13	19	15	6	2	2
Upper Kurram	121	341	7	12	127	5	33	2	2	0
Total	16,856	6,929	3,136	1,804	956	896	780	625	387	321

Figure 6: Most frequently reported suspected cases during Week 07, KP

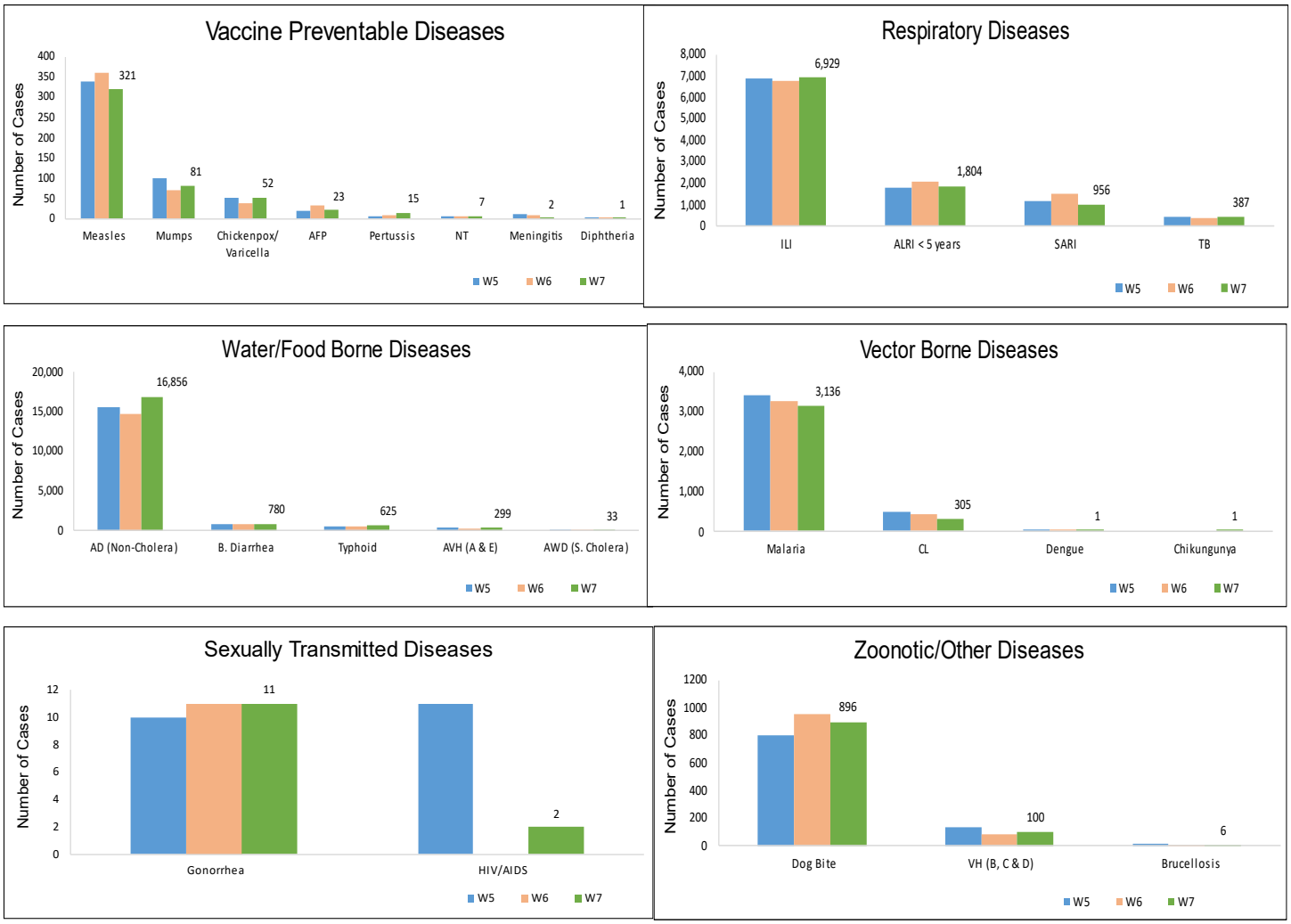
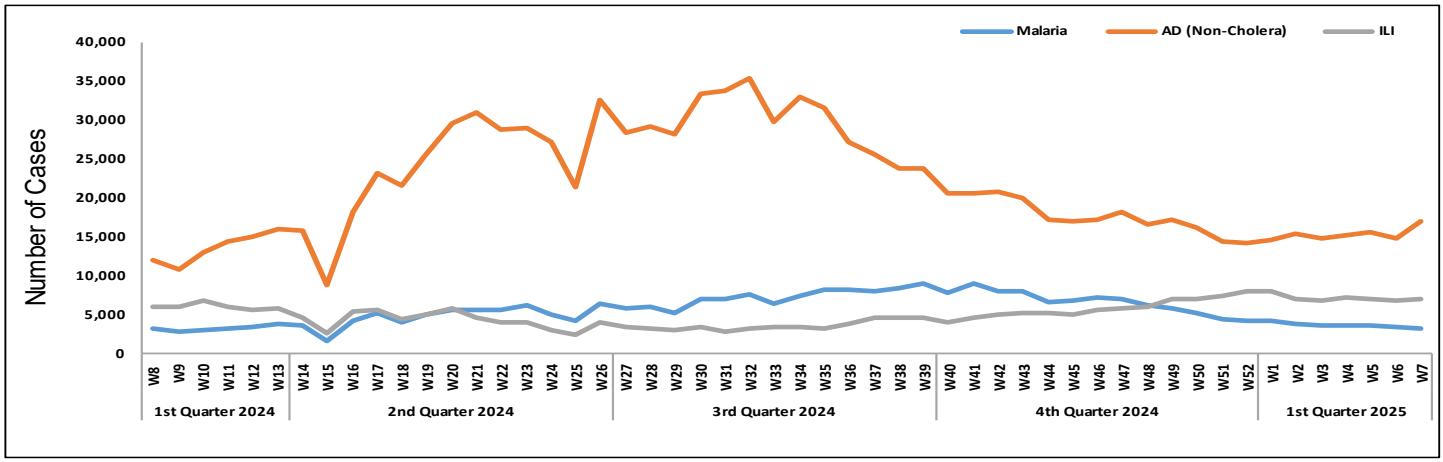


Figure 7: Week wise reported suspected cases Malaria, AD (Non-Cholera) & ILI, KP



PUNJAB

- AD (Non-Cholera) cases were maximum followed by TB, dog bite, Malaria, ALRI<5 Years, Typhoid, Dengue, AWD (S. Cholera) and B. Diarrhea cases.
- AD (Non-Cholera), TB, dog bite, Malaria, ALRI<5 Years, typhoid, measles, diphtheria and Dengue showed an increase in number of cases this week.
- Twenty-five suspected cases of AFP reported from Punjab. They require field verification.
- Eleven cases of HIV/AIDs reported from Punjab. All are suspected cases and need field verification.

Figure 8: Most frequently reported suspected cases during Week 07, Punjab

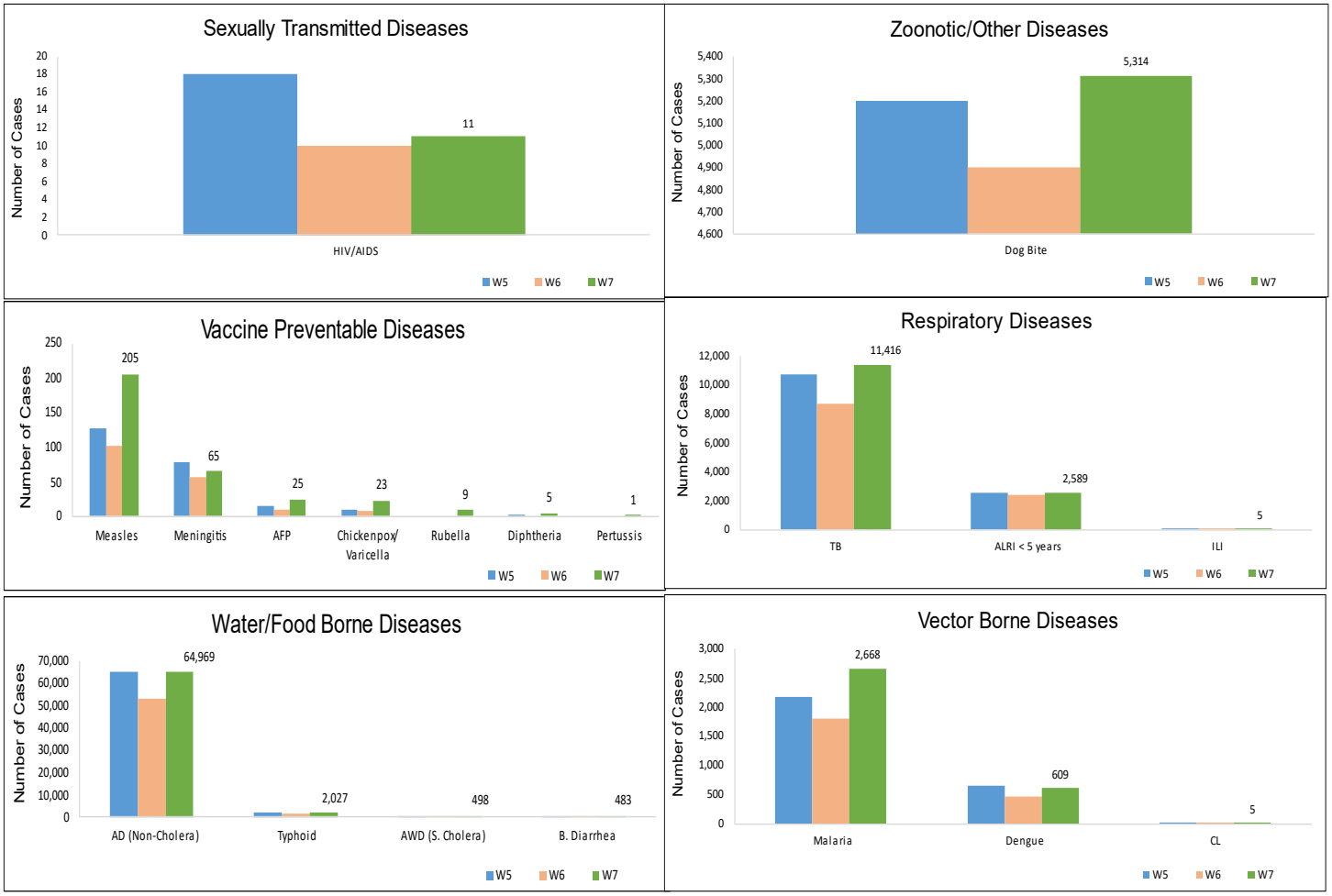
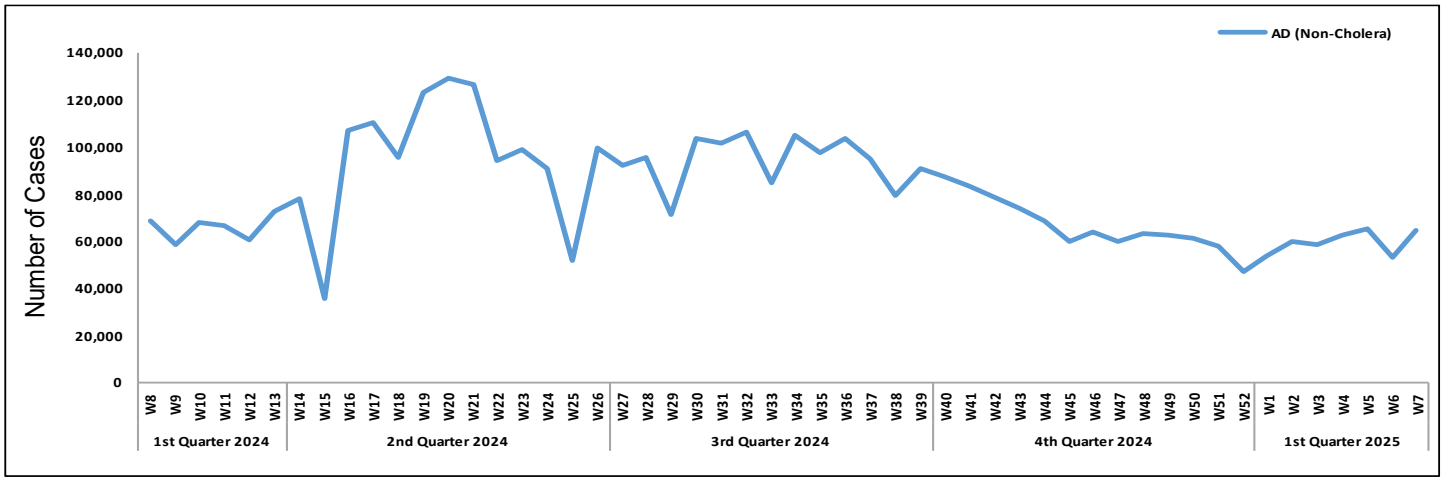


Figure 9: Week wise reported suspected cases of AD (Non-Cholera), Punjab



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and ALRI <5 years. ILI cases showed an increase in number while AD (Non-Cholera) cases showed a decline in number this week.

AJK: ILI cases were maximum followed by ALRI < 5years, AD (Non-Cholera), SARI, dog bite, TB, B. Diarrhea, AVH (A & E), VH (B, C & D) and Measles cases. An increase in cases observed for ILI, ALRI < 5years, AD (Non-Cholera), SARI, AVH (A & E), VH (B, C & D) and Measles this week. Two cases of AFP reported from AJK. All are suspected cases and need field verification.

GB: ALRI <5 Years cases were the most frequently reported diseases followed by ILI, AD (Non-Cholera), SARI, Typhoid, TB, B. Diarrhea and Pertussis cases. A decline in cases observed for ALRI <5 years, ILI, AD (Non-Cholera), SARI and TB this week.

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Figure 10: Most frequently reported suspected cases during Week 07, AJK

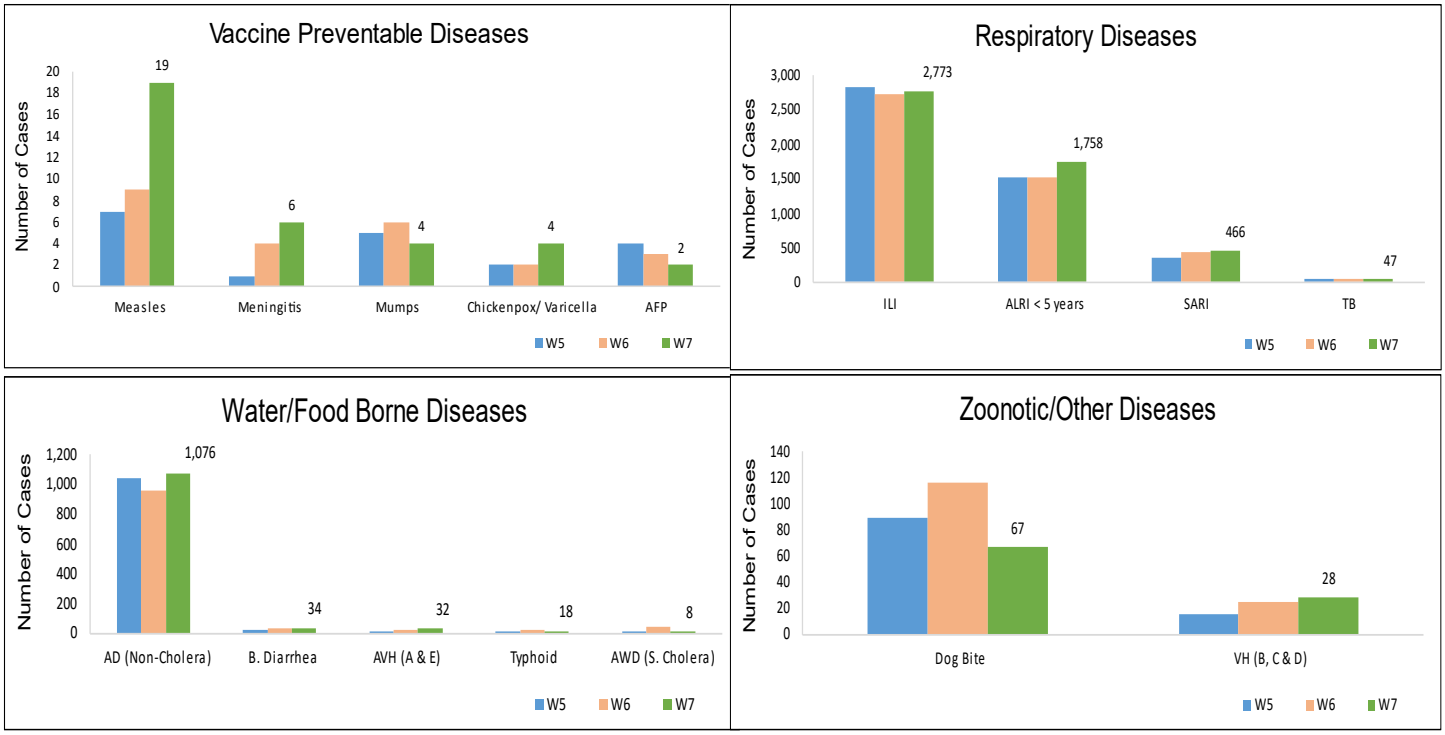

Figure 11: Week wise reported suspected cases of ILI and ARI <5 years, AJK

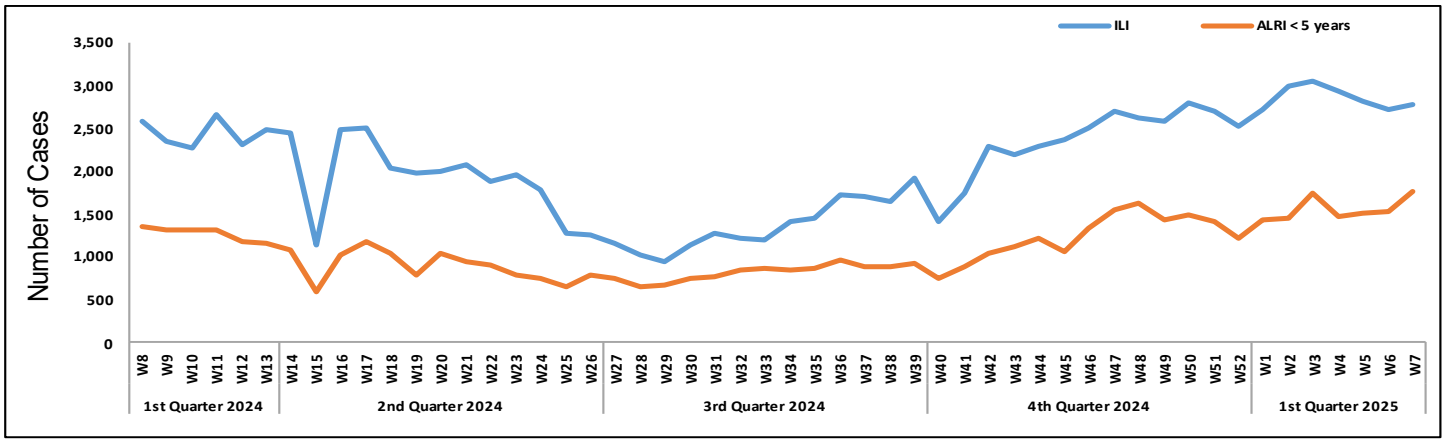

Figure 12: Most frequently reported suspected cases during Week 07, ICT

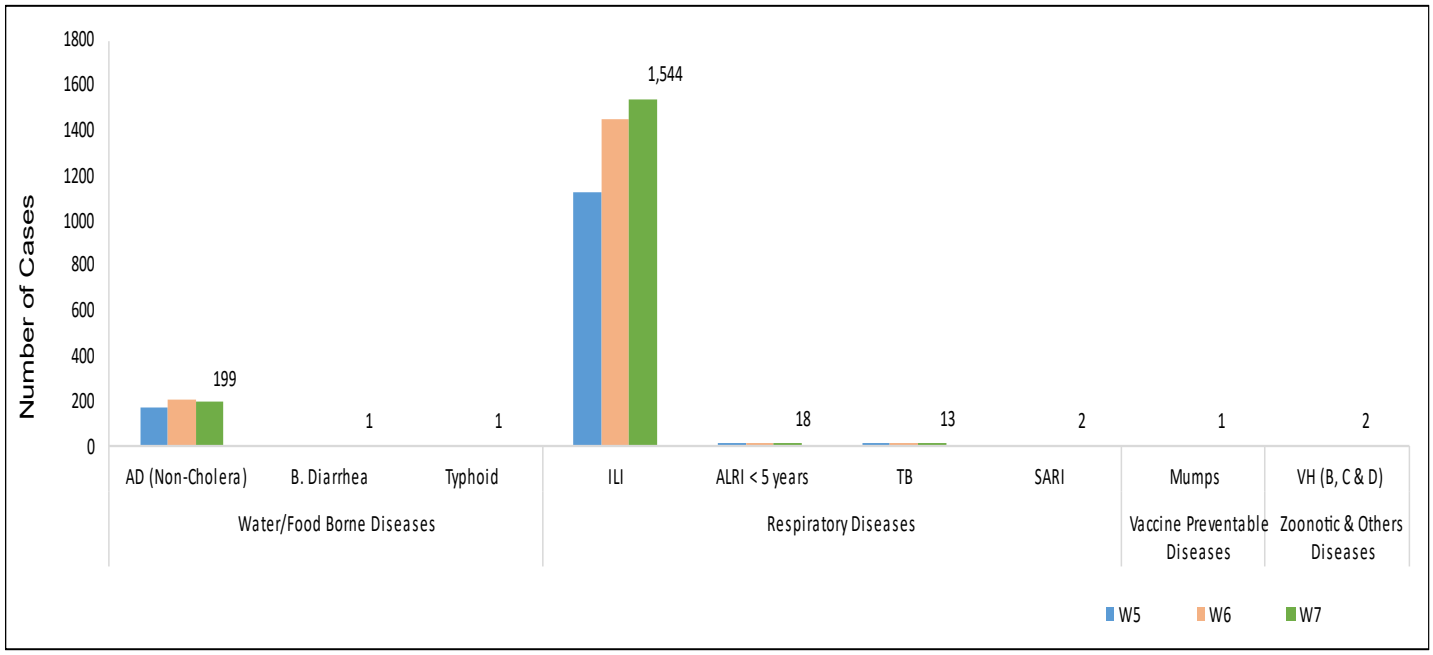

Figure 13: Week wise reported suspected cases of ILI, ICT

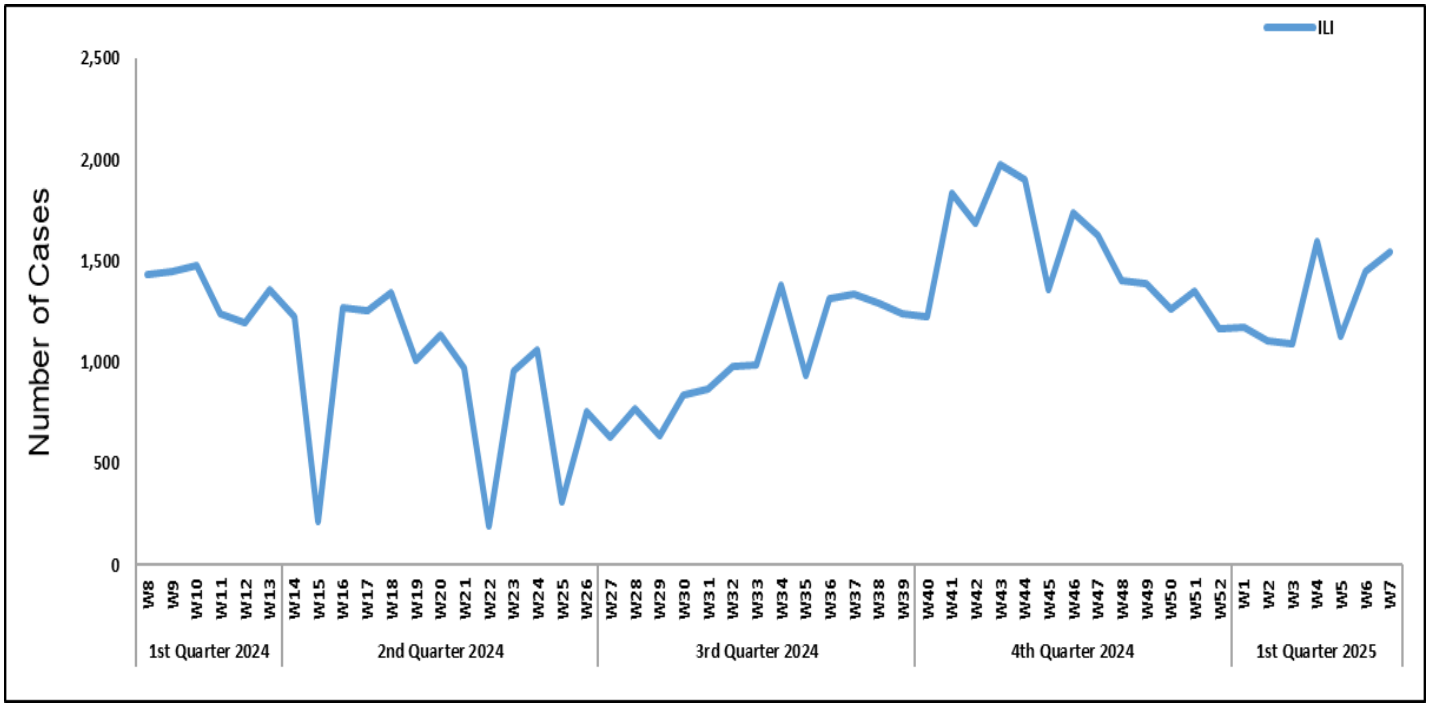

Figure 14: Most frequent cases reported during Week 07, GB

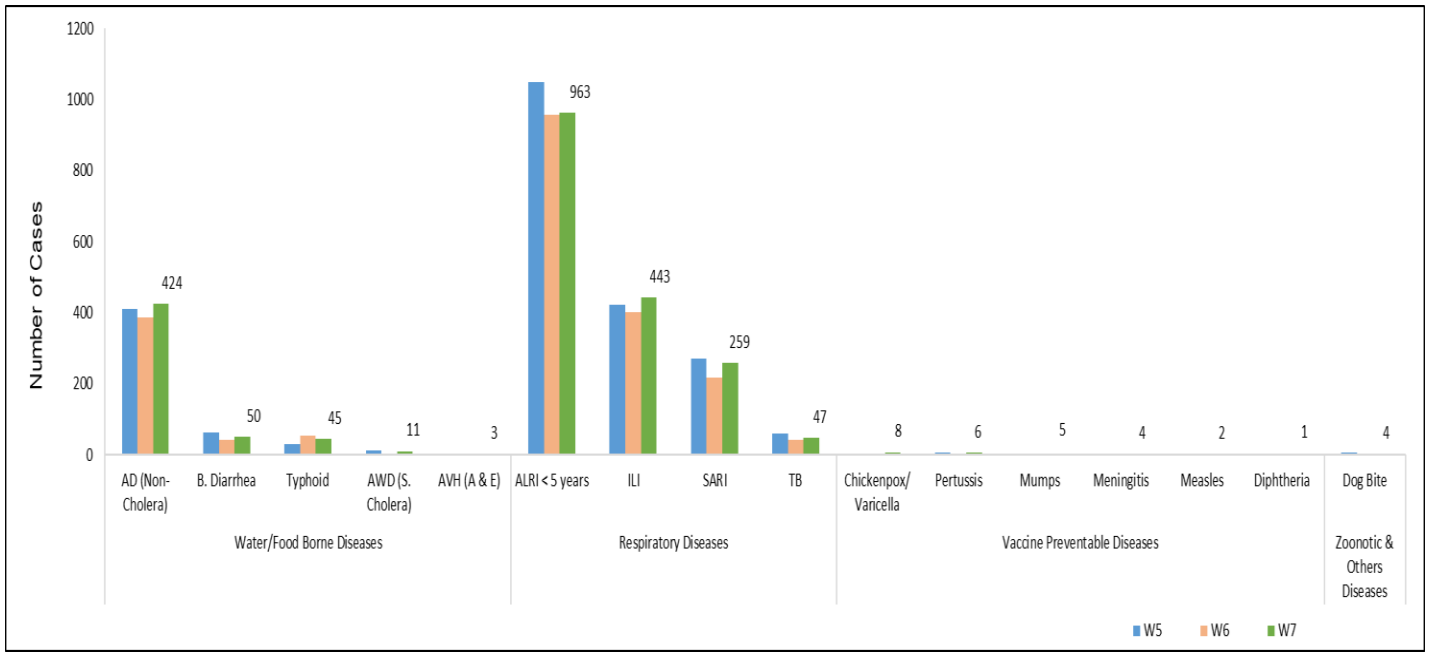

Figure 15: Week wise reported suspected cases of ALRI <5 years, GB

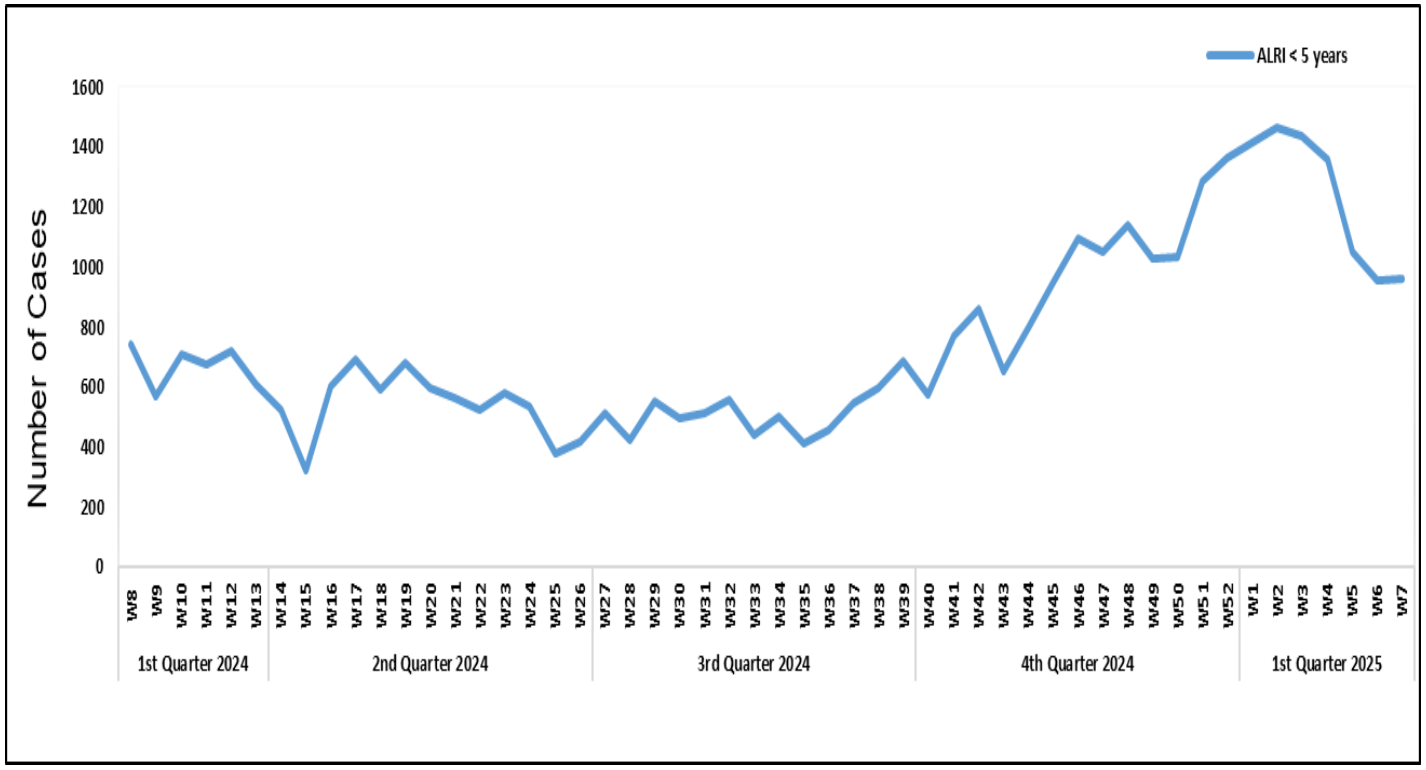

Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 07

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	Tota l Pos	Total Test	Total Pos	Total Test	Total Pos
AWD (S. Cholera)		135	0	-	-		-	-	-	-	-	-	-	0	0
AD (non-cholera)		237	2	-	-	-	-	-	-	-	-	-	-	0	0
Malaria		9,715	400	-	-	-	-	-	-	-	-	-	-	9	0
CCHF		0	0	-	-	-	-	-	-	-	-	-	-	0	0
Dengue		2,295	144	-	-	-		2	0	-	-	-	-	0	0
VH (B)		13,483	514	-	-	-	-	-	-	-	-	-	-	802	2
VH (C)		11,964	1,278	-	-	-	-	-	-	-	-	-	-	802	2
VH (D)		153	36	-	-	-	-	-	-	-	-	-	-	0	0
VH (A)		166	71	-	-	-	-	-	-	-	-	-	-	16	5
VH (E)		106	18	-	-	-	-	-	-	-	-	-	-	0	0
Covid-19		53	1	-	-	-	-	2	0	-	-	-	-	28	0
Chikungunya		20	5	-	-	-	-	-	-	-	-	-	-	0	0
TB		499	71	-	-	-	-	-	-	-	-	-	-	60	4
HIV/ AIDS		4,155	12	-	-	-	-	-	-	-	-	-	-	452	0
Syphilis		1,378	20	-	-	-	-	-	-	-	-	-	-	2	0
B. Diarrhea		147	0	-	-	-	-	-	-	-	-	-	-	0	0
Typhoid		1,002	16	-	-	-	-	-	-	-	-	-	-	0	0
Diphtheria		10	1	-	-	-	-	-	-	-	-	-	-	0	0
ILI		27	9	-	-	-	-	-	-	-	-	-	-	0	0
Pneumonia (ALRI)		203	43	-	-	-	-	-	-	-	-	-	-	0	0
Measles		281	145	68	44	391	206	11	7	13	7	203	40	29	12
Rubella		281	1	68	1	391	4	11	0	13	0	203	8	29	1
Covid-19	Out of SARI	8	0	0	0	26	0	36	0	20	0	295	0	0	0
	Out of ILI	8	0	0	0	11	0	14	0	12	0	168	2	0	0
Influenza A	Out of SARI	8	3	0	0	26	2	36	1	20	0	295	23	0	0
	Out of ILI	8	0	0	0	11	0	14	1	12	2	168	20	0	0
Influenza B	Out of SARI	8	0	0	0	26	0	36	1	20	0	295	29	0	0
	Out of ILI	8	1	0	0	11	0	14	2	12	0	168	45	0	0
RSV	Out of SARI	8	0	0	0	26	0	36	0	20	0	295	1	0	0
	Out of ILI	8	0	0	0	11	0	14	0	12	0	168	0	0	0

- 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 07, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	105	95%
	Bannu	238	138	58%
	Battagram	59	37	63%
	Buner	34	33	97%
	Bajaur	44	42	95%
	Charsadda	59	59	100%
	Chitral Upper	34	30	88%
	Chitral Lower	35	35	100%
	D.I. Khan	113	113	100%
	Dir Lower	74	74	100%
	Dir Upper	37	28	76%
	Hangu	22	18	82%
	Haripur	72	69	96%
	Karak	36	36	100%
	Khyber	53	41	77%
	Kohat	61	61	100%
	Kohistan Lower	11	3	27%
	Kohistan Upper	20	3	15%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	8	19%
	Upper Kurram	41	30	73%
	Malakand	42	1	2%
	Mansehra	133	103	77%
	Mardan	80	2	3%
	Nowshera	55	53	96%
	North Waziristan	13	6	46%
	Peshawar	154	132	86%
	Shangla	37	28	76%
	Swabi	64	60	94%
	Swat	77	76	99%
	South Waziristan (Upper)	93	37	40%
	South Waziristan (Lower)	42	20	48%
	Tank	34	31	91%
	Torghar	14	14	100%
	Mohmand	68	64	94%
	SD Peshawar	5	0	0%
	SD Tank	58	9	16%
	Orakzai	69	12	17%
	Mirpur	37	37	100%
	Bhimber	42	20	48%

Azad Jammu Kashmir	Kotli	60	60	100%
	Muzaffarabad	45	44	98%
	Poonch	46	46	100%
	Haveli	39	39	100%
	Bagh	40	40	100%
	Neelum	39	37	95%
	Jhelum Velley	29	29	100%
Islamabad Capital Territory	Sudhnooti	27	27	100%
	ICT	21	20	95%
Balochistan	CDA	15	8	53%
	Gwadar	25	21	84%
	Kech	44	0	0%
	Khuzdar	74	46	62%
	Killa Abdullah	26	0	0%
	Lasbella	55	55	100%
	Pishin	69	42	61%
	Quetta	55	38	69%
	Sibi	36	20	56%
	Zhob	39	33	85%
	Jaffarabad	16	15	94%
	Naserabad	32	31	97%
	Kharan	30	30	100%
	Sherani	15	9	60%
	Kohlu	75	42	56%
	Chagi	36	22	61%
	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	26	81%
	Mastung	45	45	100%
	Loralai	33	19	58%
	Killa Saifullah	28	26	93%
	Ziarat	29	14	48%
	Duki	31	0	0%
	Nushki	32	0	0%
	Dera Bugti	45	28	62%
	Washuk	46	31	67%
	Panjgur	38	10	26%
	Awaran	23	0	0%
	Chaman	24	0	0%
	Barkhan	20	19	95%
	Hub	33	31	94%
	Musakhel	41	0	0%
Gilgit Baltistan	Usta Muhammad	34	34	100%
	Hunza	32	32	100%
	Nagar	25	19	76%
	Ghizer	38	38	100%

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	Gilgit	40	40	100%
	Diamer	62	61	98%
	Astore	54	54	100%
	Shigar	27	25	93%
	Skardu	52	51	98%
	Ganche	29	28	97%
Sindh	Kharmang	46	24	52%
	Hyderabad	74	69	93%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	107	95	89%
	Tharparkar	276	258	93%
	Shikarpur	61	60	98%
	Thatta	52	52	100%
	Larkana	67	64	96%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	19	83%
	Karachi-West	20	20	100%
	Karachi-Malir	37	36	97%
	Karachi-Kemari	18	16	89%
	Karachi-Central	12	6	50%
	Karachi-Korangi	18	18	100%
	Karachi-South	4	4	100%
	Sujawal	55	53	96%
	Mirpur Khas	106	102	96%
	Badin	124	124	100%
	Sukkur	64	63	98%
	Dadu	90	85	94%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	170	167	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	122	98%

Table 7: IDSR reporting Tertiary care hospital Week 07, 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	0	0%
	Shaheed Benazirabad	1	1	100%
	Karachi-East	1	1	100%
	Karachi-Central	1	1	100%

Advancing Mortality Surveillance in Pakistan: Expanding Provincial Implementation to Sindh

The National Mortality Surveillance System (MSS) is steadily progressing across Pakistan, moving from national policy discussions to on-the-ground implementation in multiple provinces. Following successful advocacy efforts in Khyber Pakhtunkhwa (KP) and Punjab, the momentum has now extended to Sindh.

Building on the previous successes, the Center for Disease Control (CDC) at the National Institutes of Health (NIH), in collaboration with the Sindh Health Department, conducted a high-level consultative workshop focused on implementing mortality surveillance in the province. The workshop brought together 43 key stakeholders from diverse institutions, including Medical Teaching Institutions (MTIs) such as Aga Khan Hospital, the Sindh Healthcare Commission, the National Database and Registration Authority (NADRA), and other relevant organizations. The primary objective was to ensure a coordinated approach in establishing a robust and standardized mortality surveillance system that enables accurate and timely mortality data collection, reporting, and utilization.

This workshop served as a pivotal moment for developing collaboration and building consensus among stakeholders, ensuring that all relevant actors are aligned in their roles and responsibilities. By leveraging multi-sectoral coordination and digital health solutions, Sindh aims to develop a comprehensive mortality surveillance system that will support timely interventions, effective resource allocation, and informed policy decisions.

The expansion of MSS to Sindh marks another milestone in Pakistan's journey toward strengthening mortality data collection and utilization. With three provinces now actively engaged in implementation, the foundation has been laid for a unified national approach to mortality surveillance. As the initiative continues

to scale, it highlights the growing recognition of the role of reliable health data in shaping effective public health interventions.

Moving forward, sustained advocacy, continued capacity-building, and strengthened inter-sectoral collaboration will be essential in ensuring the long-term success of the MSS. As Pakistan enhances its public health infrastructure, initiatives like these reaffirm the importance of data-driven decision-making in reducing preventable deaths and improving population health outcomes.

Notes from the field:

Investigation of a Suspected Enteric Fever Outbreak in Batkhela KP, Pakistan.

District Health Officer (DHO) Malakand

Team at DHQ Batkhela

Introduction

Enteric fever, primarily caused by *Salmonella Typhi* and *Salmonella Paratyphi*, is a major global public health problem, with an estimated 9 to 27 million cases annually, resulting in approximately 200,000 deaths worldwide (WHO, 2018). Low- and middle-income countries, particularly those in South Asia and sub-Saharan Africa, bear the highest burden due to inadequate water, sanitation, and hygiene infrastructure (WHO, 2023). In Pakistan, the estimated annual incidence of enteric fever is 493 cases per 100,000 individuals, with outbreaks frequently linked to contaminated water supplies and poor sanitation practices (WHO, 2022).

On Friday, 7th March 2025, the Public Health Coordinator was contacted by a doctor from the Pediatric Unit of DHQ Batkhela regarding an alarming situation. Seven children from Amandara, Batkhela, had been exhibiting symptoms consistent with suspected enteric fever for the past two weeks. Simultaneously, additional cases were reported from Gharibabad, Batkhela, prompting a broader investigation by the DHO Office. Given the potential risk of a localized outbreak, a Rapid Response Team (RRT) was immediately formed to assess and control the situation.

Methods

The outbreak investigation employed a mixed-method approach, combining hospital-based and community-based assessments:

Hospital-Based Investigation: A team visited DHQ Batkhela, where affected patients were admitted. Suspected cases were identified based on the case definition “A person residing in or visiting Batkhela, who presents with Fever (temperature ≥38°C or 100.4°F) lasting for 3 or more days and at least one of the following symptoms Headache, Abdominal pain or discomfort, Nausea or vomiting, Constipation or diarrhea”. Medical records, treatment protocols, including prescribed antibiotics, hydration therapy, and supportive care, ensuring adherence to standard guidelines for enteric fever management were reviewed. Detailed case histories were recorded for each patient, focusing on symptom onset, possible sources of exposure, dietary habits, and water consumption.

Community Investigation: Field visits in coordination with local Lady Health Workers (LHWs) to affected areas (Amandara and Gharibabad) were conducted. Structured interviews were held with affected families, and environmental and water source assessments were performed.

Results

A total of 12 suspected cases were identified, with 60% of the patients being female. Fever duration ranged from 4 to 20 days. The majority of cases were clustered in Amandara and Gharibabad, Batkhela. In hospital patients received appropriate antibiotic therapy, hydration support, and were isolated to prevent nosocomial transmission. Community-based investigations revealed a lack of awareness regarding WASH practices, including hand

hygiene, safe drinking water, and sanitation. The community had limited access to safe drinking water, with no established practices for boiling water or maintaining proper hand hygiene. The hilly terrain and inadequate sanitation infrastructure posed significant challenges. Open drains were observed contaminating water pipelines due to poor waste disposal practices. Two primary water sources were identified, a gravity-fed scheme managed by the Public Health Engineering Department and a water supply tank maintained by the Tehsil Municipal Administration. Both sources were suspected of contamination due to poor drainage and open waste disposal practices.

Public Health Actions and Response

- The team, in coordination with local Lady Health Workers (LHWs), conducted door-to-door awareness sessions on enteric fever prevention.
- Residents were educated on handwashing, safe water consumption, and proper food handling.
- Aqua tabs were distributed to ensure safe drinking water.
- Community members were advised on proper sanitation measures to reduce the risk of further contamination.
- A separate isolation ward was arranged to prevent cross-infection among patients from the same locality.

Discussion

Enteric fever remains a significant public health concern, particularly in regions with inadequate water, sanitation, and hygiene (WASH) infrastructure. The outbreak investigation highlighted critical gaps in community awareness and access to safe drinking water, which are well-established risk factors for enteric fever transmission. According to the World Health Organization (WHO), contaminated water and poor sanitation contribute to the spread of *Salmonella Typhi* and *Salmonella Paratyphi*, the causative agents of enteric fever (1). Ensuring access to clean water and promoting hygiene practices are fundamental to outbreak prevention and control. Similar studies have shown that inadequate sanitation and poor handwashing behaviors are directly linked to the persistence of enteric fever in endemic regions (2,3).

The clustering of cases in specific localities suggests a common source of exposure, likely related to contaminated drinking water. WHO emphasizes that outbreaks of enteric fever are often linked to unsafe water supplies and poor sanitation, particularly in densely populated or underserved areas (4). A study conducted in South Asia found that water supply systems in urban slums are frequently contaminated, leading to an increased burden of typhoid fever (5). The presence of two primary water sources in the affected communities, both suspected of contamination, further supports the need for urgent water quality assessment and remediation efforts. Routine water quality monitoring and implementation of community-based interventions have been recommended as effective strategies for reducing enteric fever outbreaks (6).

Hospital-based findings indicated that patients received appropriate treatment, including antibiotic therapy and hydration support, which align with WHO guidelines for enteric fever management (7). However, preventing recurrence requires a multifaceted approach, including strengthening community awareness regarding WASH practices. WHO recommends community engagement and education to ensure the adoption of preventive behaviors, such as boiling drinking water and maintaining proper hand hygiene (8). The lack of such practices in the affected communities underscores the necessity for targeted public health interventions. A systematic review on typhoid control strategies emphasized the importance of integrating WASH interventions with vaccination campaigns to achieve long-term disease reduction (9).

The risk of continued transmission remains high without improvements in water supply infrastructure and waste disposal practices. WHO highlights that sustainable access to safe

water, improved sanitation, and routine public health surveillance are essential to reducing the burden of enteric fever (10). Addressing the identified gaps through coordinated efforts by public health authorities and local government agencies is crucial to preventing future outbreaks. Policymakers must prioritize investments in infrastructure to ensure equitable access to clean water and sanitation, particularly in vulnerable communities (11).

Conclusion:

The enteric fever cases reported in Amandara and Gharibabad, Batkhela, are linked to potential water contamination and poor sanitation facilities in the affected areas. The hospital response at DHQ Batkhela was found to be appropriate, with patients receiving proper treatment and isolation measures in place. Immediate public health interventions were initiated, including community awareness, water safety measures, and coordination with local authorities.

Recommendations

1. Enhanced Surveillance & Case Monitoring

- Maintain active case surveillance in affected areas.

2. Strengthening Health System Response

- Ensure adequate stock of antibiotics and hydration therapy at DHQ Batkhela.
- Continue isolation measures for suspected cases to prevent further transmission.

3.Water Safety Measures

- Chlorination of water sources to eliminate potential bacterial contamination.
- Strengthen coordination with PHE and TMA Batkhela for long-term water quality improvements.

4. Sanitation & Hygiene Promotion

- Conduct community hygiene education campaigns in collaboration with LHWs.
- Advocate for improved drainage systems to prevent waste contamination.

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Knowledge Hub

Hospital-Acquired Infections: A Persistent Challenge in Healthcare

Hospital-acquired infections (HAIs), also known as nosocomial infections, are infections that patients acquire while receiving treatment for other conditions within a healthcare setting.

These infections can occur in hospitals, nursing homes, rehabilitation centers, outpatient clinics, and other healthcare facilities. HAIs represent a significant concern for patient safety worldwide, leading to increased morbidity, mortality, and healthcare costs.

Global Burden of HAIs

The World Health Organization (WHO) highlights that HAIs are the most frequent adverse events in healthcare delivery globally. Each year, hundreds of millions of patients are affected by HAIs, underscoring the critical need for effective infection prevention and control measures. (1)

In the United States, the Centers for Disease Control and Prevention (CDC) estimates that approximately one in 31 hospital patients contracts at least one HAI daily. This statistic emphasizes the ongoing necessity for improvements in patient care practices across healthcare facilities. (3)

Pakistan's Context and Burden of HAIs

Hospital-acquired infections (HAIs) present a significant public health challenge in Pakistan, with prevalence rates higher than those observed in developed countries. A multicenter point prevalence survey conducted across various hospitals in Pakistan revealed an overall HAI prevalence of 10.3%. The most common HAIs identified were urinary tract infections (26.7%), surgical site infections (21.5%), and bloodstream infections (19.2%). (4)

In neonatal and pediatric populations, the burden of HAIs is particularly concerning. A study focusing on healthcare-associated infections among neonates and children in Pakistan highlighted a higher prevalence of HAIs in these groups compared to adults, emphasizing the need for targeted infection prevention and control (IPC) strategies in pediatric care settings. (5)

The emergence of multidrug-resistant organisms further exacerbates the HAI burden in Pakistan. For instance, extensively drug-resistant (XDR) typhoid fever has been reported, posing significant treatment challenges and public health concerns. (6)

Common Types of HAIs

The CDC identifies several prevalent types of HAIs, including:

- **Catheter-Associated Urinary Tract Infections (CAUTI):** Infections linked to the use of urinary catheters.
- **Central Line-Associated Bloodstream Infections (CLABSI):** Infections associated with central venous catheters.
- **Surgical Site Infections (SSI):** Infections occurring at or near surgical incisions within 30 days of a procedure.
- **Ventilator-Associated Pneumonia (VAP):** Pneumonia developing in patients on mechanical ventilation.
- **Clostridioides difficile Infections (CDI):** Infections causing severe diarrhea and colitis, often after antibiotic use.

Sources of HAIs

HAIs can originate from various sources, categorized into endogenous and exogenous sources:

- **Endogenous Sources:** These infections result from the patient's own microbiota. Normal flora present on the skin, mucous membranes, or gastrointestinal tract can become pathogenic when a patient's immune system is compromised or when invasive procedures introduce bacteria into normally sterile areas. Examples include infections caused by **Staphylococcus aureus**, **Escherichia coli**, and **Klebsiella species**.
- **Exogenous Sources:** These infections are acquired from external sources within the healthcare environment. Contaminated medical instruments, healthcare workers' hands, hospital surfaces, and air droplets can all serve as reservoirs for HAIs. Notable

exogenous pathogens include **Pseudomonas aeruginosa**, **Acinetobacter baumannii**, and **Clostridioides difficile**, which can spread through contaminated equipment, inadequate hand hygiene, or improper sterilization practices. (1, 2)

Prevention and Control Measures

Preventing HAIs requires a multifaceted approach, including:

- **Hand Hygiene:** Consistent and proper handwashing by healthcare personnel is fundamental in preventing the spread of infections.
- **Use of Personal Protective Equipment (PPE):** Appropriate use of gloves, gowns, masks, and eye protection to reduce transmission risks.
- **Environmental Cleaning and Disinfection:** Regular cleaning of healthcare environments to eliminate potential pathogens.
- **Antimicrobial Stewardship:** Prudent use of antibiotics to minimize the development of resistant strains.
- **Surveillance and Reporting:** Monitoring infection rates and implementing corrective actions as necessary.

Key Takeways

Hospital-acquired infections remain a significant challenge in healthcare settings worldwide, including in Pakistan. While progress has been made in reducing certain types of HAIs, sustained vigilance and implementation of comprehensive infection prevention strategies are essential to protect patients and improve healthcare outcomes.

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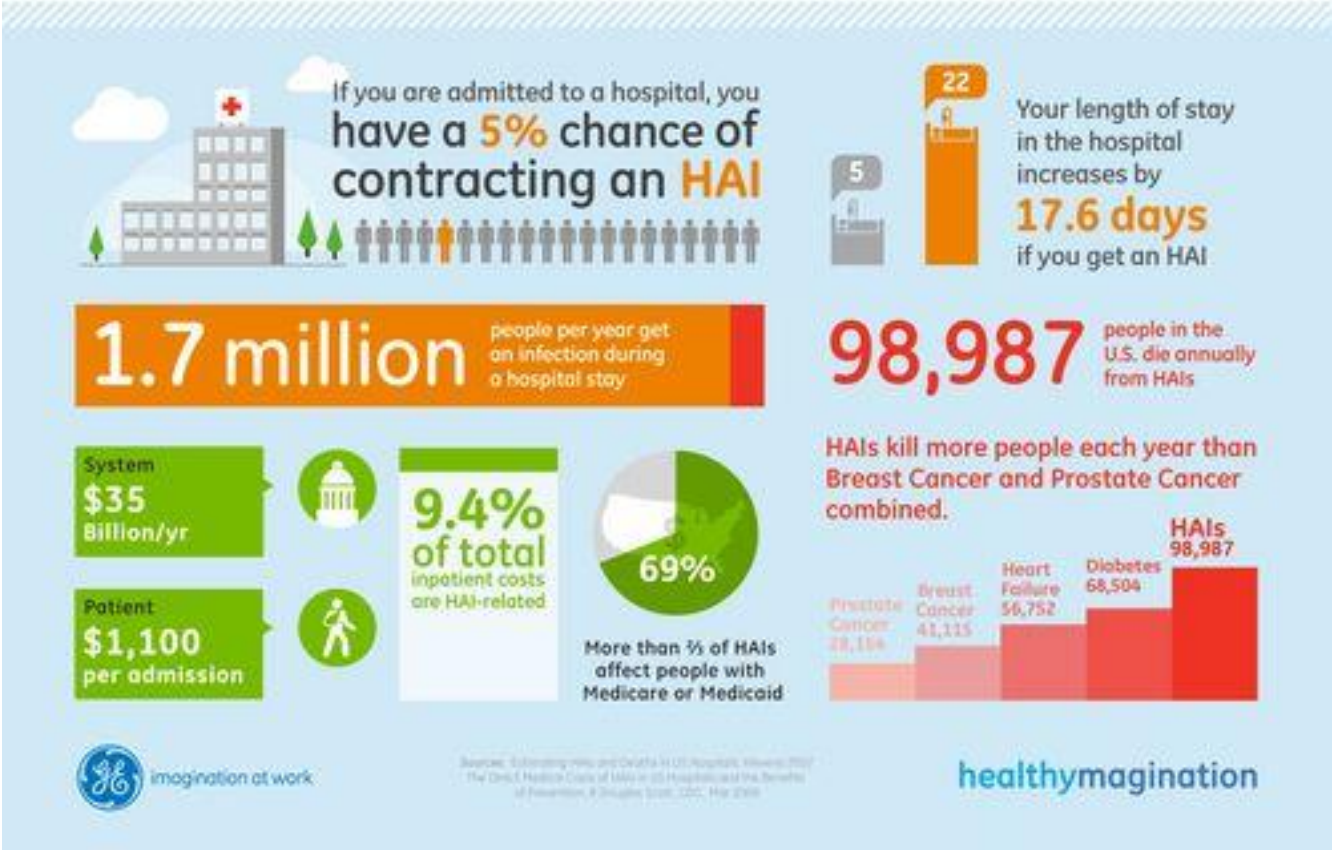
Healthcare Associated Infections: The Unknown Killer

Healthcare Associated Infections (HAIs) affect millions of people and add billions of dollars to healthcare costs in the U.S. annually. HAIs are an unintended consequence of care delivered by healthcare organizations. Scientific evidence suggests that most HAIs are preventable.



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