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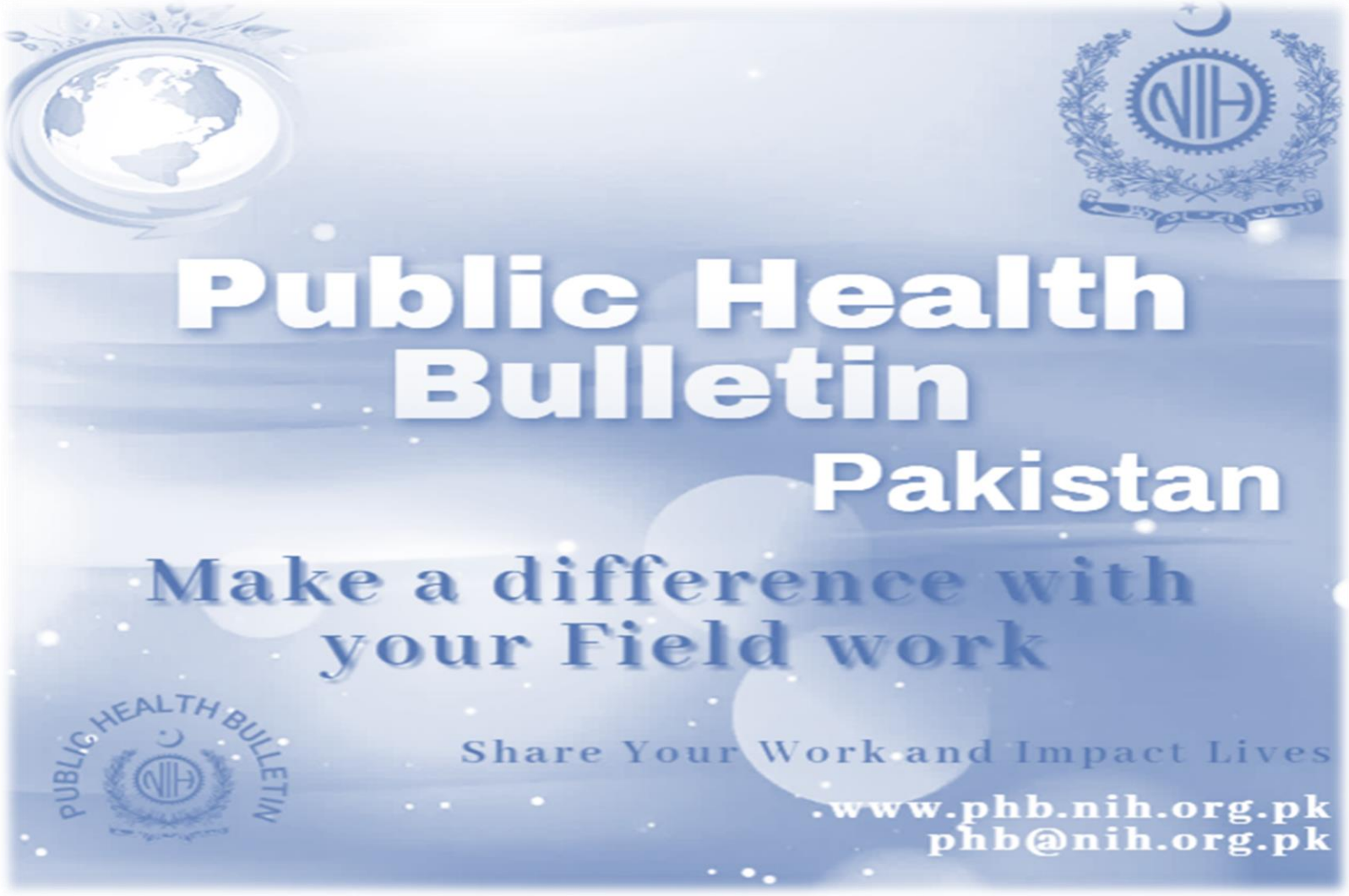
PUBLIC HEALTH BULLETIN-PAKISTAN

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.



Public Health Bulletin - Pakistan, Week 50, 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;

- *Strengthening Integrated Disease Surveillance through frontline Capacity Building in District Nagar – Gilgit Baltistan*
- *Diphtheria Outbreak Investigation Report, Swabi District, Khyber Pakhtunkhwa, Pakistan, July 2025*
- *Knowledge hub on Understanding Brucellosis*

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.

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Stay informed. Stay prepared. Stay healthy.

Sincerely,
The Chief Editor

- *During Week 50, the most frequently reported cases were of Malaria, followed by Acute Diarrhea (Non-Cholera), ILI, ALRI <5 years, TB, B. Diarrhea, VH (B, C & D), Dog Bite, SARI, Typhoid and Dengue.*
- *Twelve cases of AFP reported from KP, seven from Sindh and one from AJK.*
- *Fourteen suspected cases of HIV/ AIDS reported from Sindh, two from Balochistan and one from KP.*
- *One suspected case of Brucellosis reported from KP.*
- *Among VPDs, there is an increase in number of cases of Measles, Chickenpox, Pertussis and NT this week.*
- *Among Respiratory diseases, there is an increase in number of cases of ILI, TB and SARI this week.*
- *Among Water/food-borne diseases, there is an increase in number of cases of AD (Non-Cholera) and B. Diarrhea this week.*
- *Among Vector-borne diseases, there is an increase in number of cases of Malaria, Dengue and CL this week.*
- *Among STDs, there is an increase in number of suspected cases of HIV/AIDs this week.*
- *Among Zoonotic/Other diseases, there is an increase in number of cases of 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 73%*
- *Sindh is the top reporting region with a compliance rate of 97%, followed by GB 90%, AJK 81% and ICT 71%.*
- *The lowest compliance rate was observed in KP 62% and Balochistan 49%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2704	1686	62
Azad Jammu Kashmir	469	379	81
Islamabad Capital Territory	38	27	71
Balochistan	1308	645	49
Gilgit Baltistan	417	374	90
Sindh	2111	2058	97
National	7047	5169	73

Public Health Actions

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

Brucellosis

• Strengthen Surveillance and Reporting: Integrate human and animal brucellosis surveillance within the One Health framework to ensure early detection, reporting, and response to outbreaks.

• Improve Laboratory Diagnosis: Expand laboratory capacity for serological and molecular confirmation at district and provincial levels; ensure biosafety standards in sample handling.

• Enhance Intersectoral Collaboration: Coordinate with livestock and agriculture departments for joint outbreak investigations, animal vaccination campaigns, and control of infection sources.

• Promote Safe Animal Handling Practices: Educate farmers, veterinarians, and abattoir workers on safe handling of livestock, proper disposal of animal products, and use of protective gear.

• Raise Public Awareness: Conduct community education on avoiding consumption of unpasteurized dairy products and promoting early care-seeking for prolonged fever or joint pain.

Diphtheria

• **Strengthen Surveillance and Case-Based Reporting:** Enhance integrated disease surveillance for diphtheria to ensure timely case detection, immediate notification, and monitoring of trends, particularly in high-risk and under-immunized populations.

• **Improve Laboratory Confirmation:** Strengthen laboratory capacity for prompt bacteriological confirmation of *Corynebacterium diphtheriae*, including toxin testing, and ensure proper specimen collection, transport, and biosafety practices.

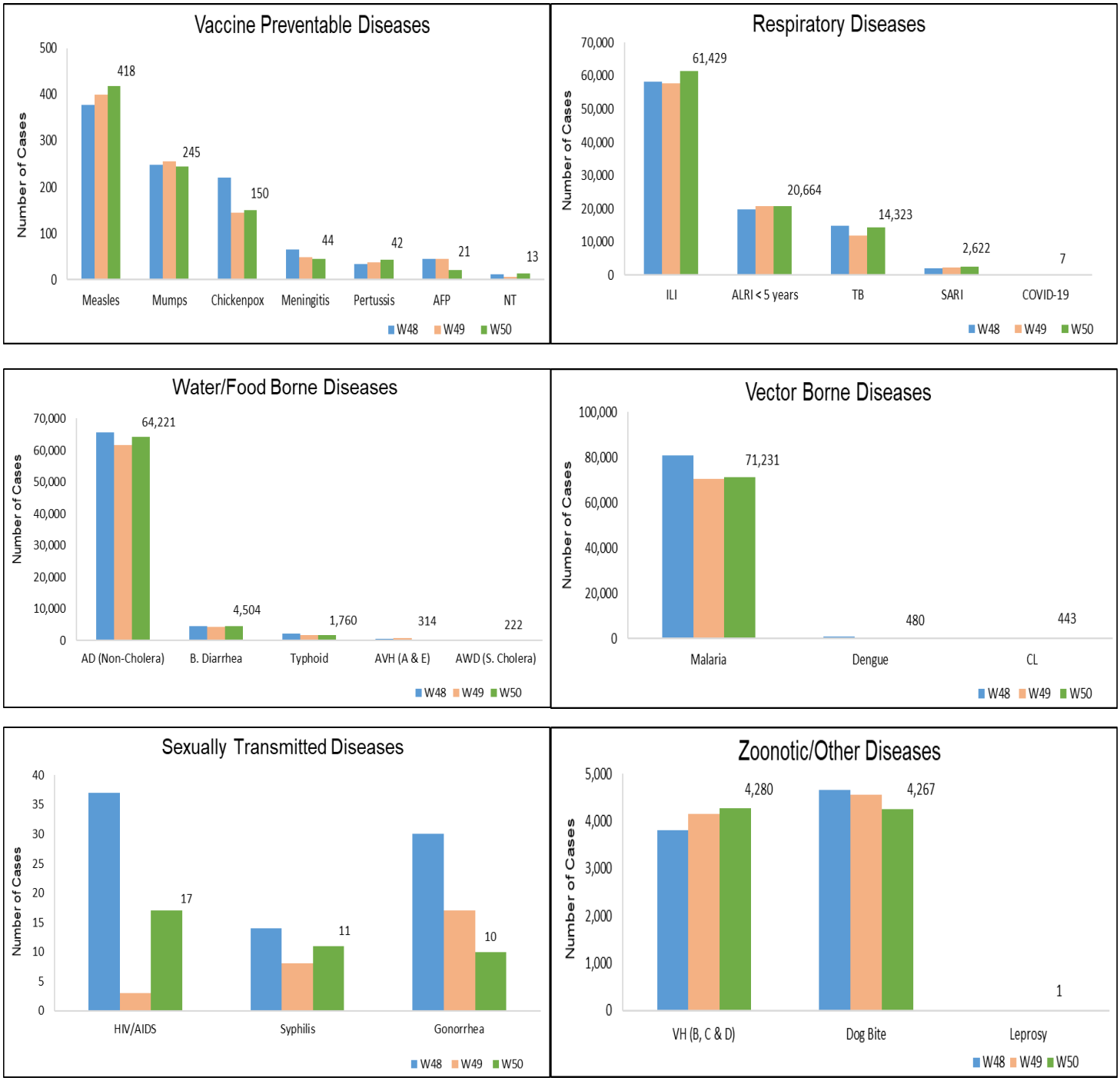
• **Ensure Rapid Case Management and Response:** Ensure availability of diphtheria antitoxin (DAT) and appropriate antibiotics at designated health facilities; implement standard case management protocols and isolation of suspected cases to prevent transmission.

• **Strengthen Immunization Services:** Intensify routine immunization and booster dose coverage (DPT/Td), and conduct targeted catch-up and outbreak response immunization activities in affected and high-risk areas

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 50, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
Malaria	0	3,510	2	0	3,663	NR	64,056	71,231
AD (non-cholera)	1,452	4,710	569	350	19,088	NR	38,052	64,221
ILI	3,416	7,846	625	2,576	6,489	NR	40,477	61,429
ALRI < 5 years	1,547	2,028	1,120	16	1,381	NR	14,572	20,664
TB	127	55	111	8	266	NR	13,756	14,323
B. Diarrhea	26	1,022	50	2	619	NR	2,785	4,504
VH (B, C & D)	15	41	5	3	87	NR	4,129	4,280
Dog Bite	106	245	5	0	741	NR	3,170	4,267
SARI	513	995	160	0	820	NR	134	2,622
Typhoid	30	303	83	3	569	NR	772	1,760
Dengue	1	6	0	0	44	NR	429	480
CL	0	51	0	0	390	NR	2	443
Measles	8	18	2	2	329	NR	59	418
AVH (A & E)	24	36	6	0	109	NR	139	314
AWD (S. Cholera)	18	179	4	0	10	NR	11	222
Mumps	9	61	3	0	122	NR	50	245
Chickenpox/ Varicella	15	9	20	2	91	NR	13	150
Meningitis	9	2	1	0	8	NR	24	44
Pertussis	1	18	12	0	11	NR	0	42
AFP	1	1	0	0	12	NR	7	21
HIV/AIDS	0	2	0	0	1	NR	14	17
NT	0	1	0	0	12	NR	0	13
Syphilis	0	0	0	0	0	NR	11	11
Gonorrhea	0	6	0	0	0	NR	4	10
COVID-19	0	0	0	0	7	NR	0	7
Brucellosis	0	0	0	0	1	NR	0	1
Leprosy	0	0	0	0	1	NR	0	1

Figure 1: Most frequently reported suspected cases during Week 50, 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 Dengue.
- Malaria cases are mostly from Khairpur, Dadu and Sanghar whereas ILI cases are from Khairpur, Mirpurkhas and Badin.
- Seven cases of AFP reported from Sindh. They are suspected cases and need field verification.
- There is a decline in number of cases of Malaria, Dog Bite, Typhoid, AVH (A & E), SARI, Meningitis, AFP and CL while an increase in number of cases ILI, AD (Non-Cholera), ALRI<5 Years, TB, VH (B, C & D), B. Diarrhea, Dengue, Measles, Mumps and AWD (S. Cholera) this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 50, Sindh.

Districts	Malaria	ILI	AD (non-cholera)	ALRI < 5 years	TB	VH (B, C & D)	Dog Bite	B. Diarrhea	Typhoid	Dengue
Badin	3,134	3,185	1,961	624	961	307	117	169	51	1
Dadu	4,902	1,030	2,167	1,432	599	110	385	318	123	0
Ghotki	2,971	12	862	1,002	630	421	185	75	0	0
Hyderabad	999	2,695	2,172	239	472	137	90	64	5	151
Jacobabad	1,376	1,159	636	454	220	265	179	89	24	0
Jamshoro	3,704	148	1,401	590	671	133	104	74	63	124
Kamber	2,890	0	1,572	378	927	63	225	122	19	0
Karachi Central	19	2,447	1,675	19	187	17	22	2	78	31
Karachi East	30	1	184	18	6	0	1	1	0	2
Karachi Keamari	10	184	438	17	5	0	0	0	1	0
Karachi Korangi	108	42	317	1	39	1	8	7	2	18
Karachi Malir	23	3,019	714	142	97	1	37	39	7	6
Karachi South	19	0	70	0	0	0	0	0	0	2
Karachi West	329	1,117	814	279	72	14	59	16	24	0
Kashmore	2,057	721	232	135	130	11	87	13	0	0
Khairpur	6,519	8,887	3,068	1,650	1,212	154	247	306	150	2
Larkana	4,144	0	1,537	392	825	28	48	314	6	0
Matiari	2,855	65	1,221	290	840	143	66	41	3	16
Mirpurkhas	2,557	6,390	2,185	641	763	30	118	105	11	2
Naushero Feroze	1,670	893	1,511	825	479	74	203	191	34	0
Sanghar	4,408	97	1,877	710	1,296	1,095	229	63	31	2
Shaheed Benazirabad	2,865	5	1,336	334	430	205	137	71	86	0
Shikarpur	2,984	18	1,023	240	263	206	232	138	5	0
Sujawal	772	0	1,442	619	101	30	60	92	0	0
Sukkur	3,136	2,246	1,061	522	480	154	89	135	3	0
Tando Allahyar	1,871	2,106	726	253	494	239	56	66	5	0
Tando Muhammad Khan	819	100	799	270	671	103	95	87	0	0
Tharparkar	3,041	2,382	2,447	1,031	569	25	1	90	13	71
Thatta	1,358	1,522	1,177	888	32	146	90	9	3	0
Umerkot	2,486	6	1,427	577	285	17	0	88	25	1
Total	64,056	40,477	38,052	14,572	13,756	4,129	3,170	2,785	772	429

Figure 2: Most frequently reported suspected cases during Week 50, Sindh.

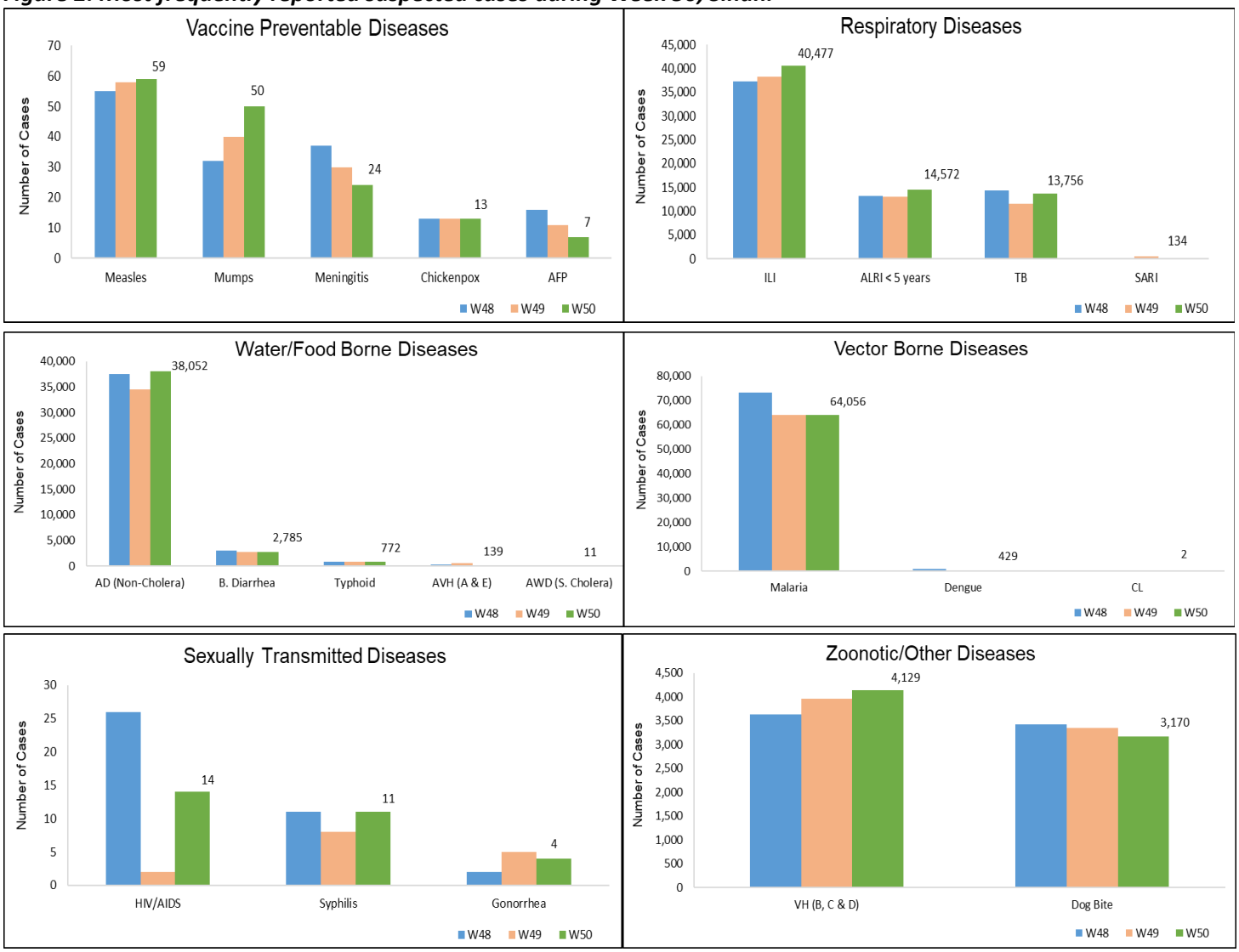
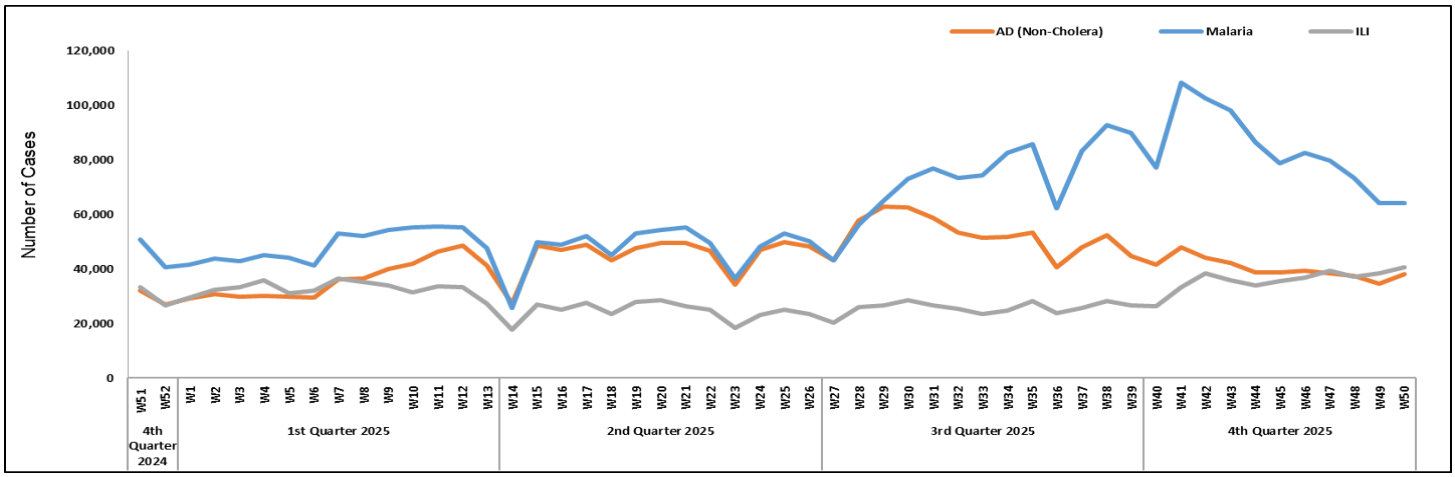


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh.



Balochistan

- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, Dog Bite, AWD (S. Cholera) and Mumps cases were the most frequently reported diseases from Balochistan province.
- ILI cases are mostly reported from Kech (Turbat), Sibi and Kharan while AD (Non-Cholera) cases are mostly reported from Sibi, Kech (Turbat) and Usta Muhammad.
- One case of AFP reported from Balochistan. Field investigation is required to confirm the cases.
- Two suspected cases of HIV/AIDs reported from Balochistan. A field investigation is required.
- ILI, AD (Non-Cholera), Malaria, B. Diarrhea, SARI, Typhoid, AWD (S. Cholera), Mumps, AVH (A & E), Pertussis, Measles, Chickenpox, Dengue and Meningitis showed an increase in the number of cases. At the same time, a decline has been observed in the number of cases of ALRI <5 years, Dog Bite, TB, CL and VH (B, C & D).

Table 3: District wise distribution of most frequently reported suspected cases during Week 50, Balochistan.

Districts	ILI	AD (non-cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dog Bite	AWD (S. Cholera)	Mumps
Awaran	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barkhan	52	39	32	11	9	0	26	7	0	1
Chagai	386	133	46	0	48	0	4	0	0	1
Chaman	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dera Bugti	0	4	4	10	0	0	0	0	0	0
Duki	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Gwadar	17	15	14	3	7	0	10	2	2	2
Harnai	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Hub	214	123	162	10	10	4	0	2	0	0
Jaffarabad	241	197	312	11	35	13	7	0	0	4
Jhal Magsi	140	69	106	21	0	3	0	0	0	0
Kachhi (Bolan)	693	372	444	0	209	116	4	0	109	0
Kalat	2	0	4	0	0	0	0	0	0	0
Kech (Turbat)	1,379	454	589	58	73	NR	9	4	NR	4
Kharan	829	170	24	2	58	59	9	0	0	0
Khuzdar	74	50	33	0	18	17	20	0	3	0
Killa Abdullah	273	158	1	30	43	96	16	11	13	9
Killa Saifullah	0	116	160	220	86	28	28	0	0	0
Kohlu	18	13	7	NR	NR	NR	3	NR	0	NR
Lasbella	129	303	413	167	11	4	11	15	0	2
Loralai	592	209	24	113	36	113	22	0	0	3
Mastung	328	167	31	86	23	52	6	6	0	1
MusaKhel	42	62	62	28	17	6	15	0	1	7
Naseerabad	23	299	290	42	17	13	28	129	38	2
Nushki	20	82	4	1	25	20	1	0	0	0
Panjgur	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Pishin	597	173	8	165	105	87	7	0	2	1
Quetta	374	259	7	167	10	33	8	3	6	1
Sherani	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sibi	913	518	493	334	67	227	50	0	2	18
Sohbat pur	0	152	90	153	31	1	2	4	0	3
Surab	68	20	0	0	0	0	0	0	0	0
Usta Muhammad	268	453	125	238	46	76	7	24	0	0
Washuk	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Zhob	39	38	7	43	4	24	2	0	0	2
Ziarat	135	62	18	115	34	3	8	38	3	0
Total	7,846	4,710	3,510	2,028	1,022	995	303	245	179	61

Figure 4: Most frequently reported suspected cases during Week 50, Balochistan.

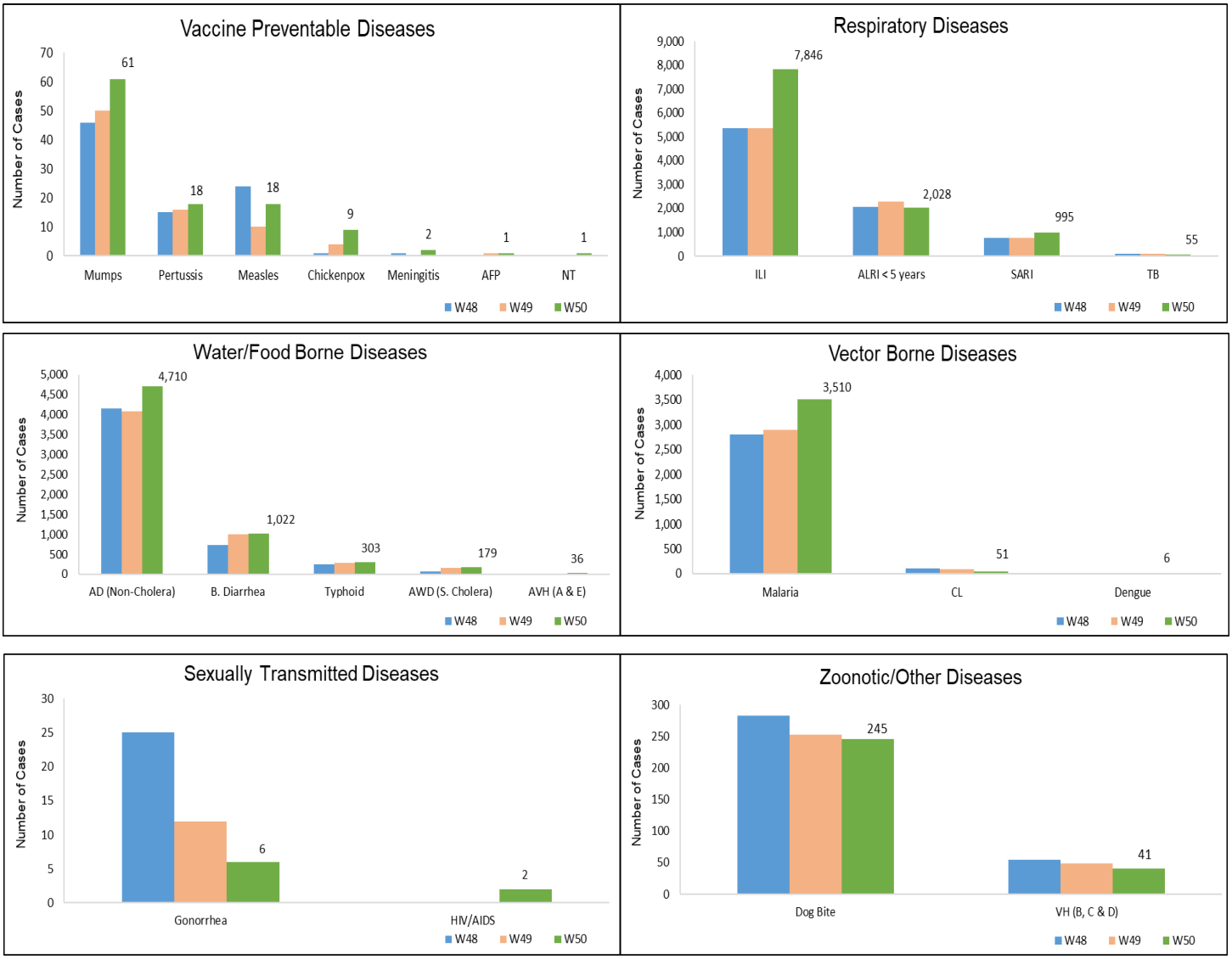
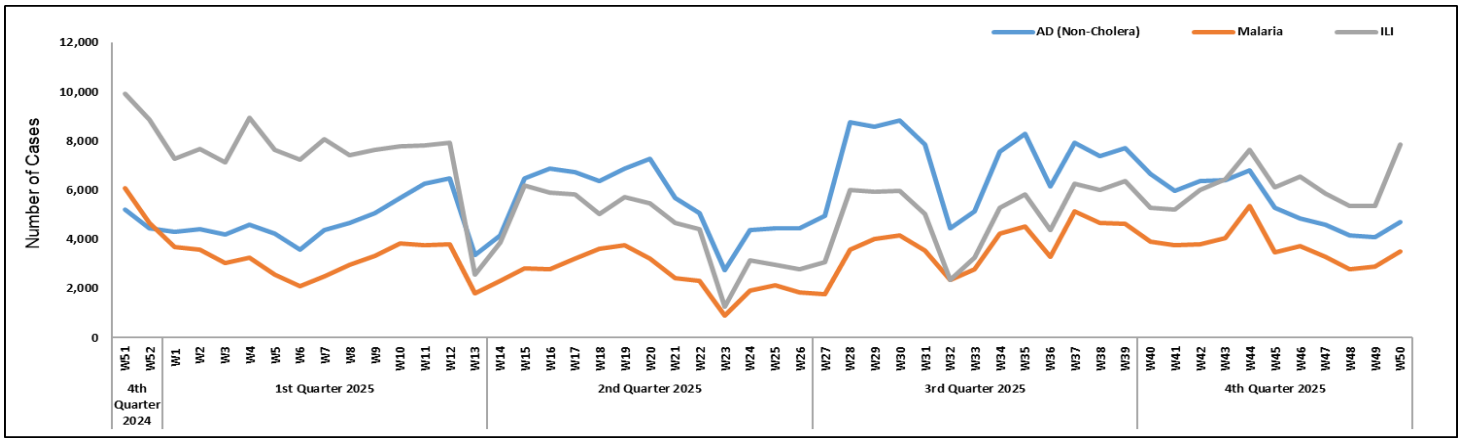


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan.



Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, SARI, Dog Bite, B. Diarrhea, Typhoid, CL and Measles.
- Malaria, SARI, B. Diarrhea, Typhoid, CL, Measles, TB, Chickenpox, NT and Pertussis cases showed an increase in number while AD (Non-Cholera), ILI, ALRI<5 Years, Dog Bite, Mumps, AVH (A & E), VH (B, C & D), AFP and AWD (S. Cholera) cases showed a decline in number this week.
- Twelve cases of AFP reported from KP. All are suspected cases and need field verification.
- One case of HIV/AIDs reported from KP. Field investigation is required.
- One suspected case of Brucellosis reported from KP which requires field verification.

Table 4: District wise distribution of most frequently reported suspected cases during Week 50, KP.

Districts	AD (non-cholera)	ILI	Malaria	ALRI < 5 years	SARI	Dog Bite	B. Diarrhea	Typhoid	CL	Measles
Abbottabad	491	219	0	33	5	70	6	19	0	0
Bajaur	475	95	134	15	59	110	48	2	10	15
Bannu	643	4	1,031	5	0	0	9	90	0	35
Battagram	222	654	20	NR	19	7	10	NR	NR	12
Buner	126	0	90	0	0	0	0	7	0	0
Charsadda	1,150	1,883	301	352	6	0	59	34	0	24
Chitral Lower	295	52	5	23	26	13	14	6	4	0
Chitral Upper	108	19	3	7	7	5	5	11	0	0
D.I. Khan	1,707	0	326	19	0	13	14	0	2	13
Dir Lower	997	0	55	12	0	44	56	19	0	12
Dir Upper	575	81	8	17	0	4	3	4	0	1
Hangu	227	14	75	0	0	11	0	2	44	1
Haripur	723	789	0	98	24	22	8	42	0	0
Karak	340	11	145	45	0	12	4	0	116	43
Khyber	425	55	195	42	19	42	77	42	92	1
Kohat	451	1	72	9	1	44	6	9	36	2
Kohistan Lower	69	0	0	0	0	1	0	0	0	11
Kohistan Upper	203	12	8	0	0	2	16	0	0	3
Kolai Palas	41	0	1	0	0	0	2	19	0	0
L & C Kurram	8	2	6	0	0	0	13	0	0	0
Lakki Marwat	416	7	268	17	0	74	5	8	0	0
Malakand	468	120	27	38	29	0	0	0	7	15
Mansehra	582	149	0	18	0	0	0	29	0	0
Mardan	745	117	31	110	2	22	24	8	1	8
Mohmand	83	169	103	10	223	10	4	3	35	1
North Waziristan	45	26	85	33	19	0	23	36	2	17
Nowshera	1,078	40	139	21	19	1	14	4	19	4
Orakzai	83	4	5	0	0	3	5	0	0	0
Peshawar	2,938	532	16	178	8	4	109	24	0	66
Shangla	583	0	135	23	1	24	2	37	0	8
South Waziristan (Lower)	66	147	37	41	44	12	1	8	19	7
SWU	29	14	4	8	25	0	0	0	0	0
Swabi	741	865	39	103	80	79	7	56	0	22
Swat	1,240	193	55	85	159	85	26	37	0	4
Tank	446	63	193	5	0	2	4	0	0	0
Tor Ghar	64	0	42	4	0	11	7	3	3	2
Upper Kurram	205	152	9	10	45	14	38	10	0	2
Total	19,088	6,489	3,663	1,381	820	741	619	569	390	329

Figure 6: Most frequently reported suspected cases during Week 50, KP.

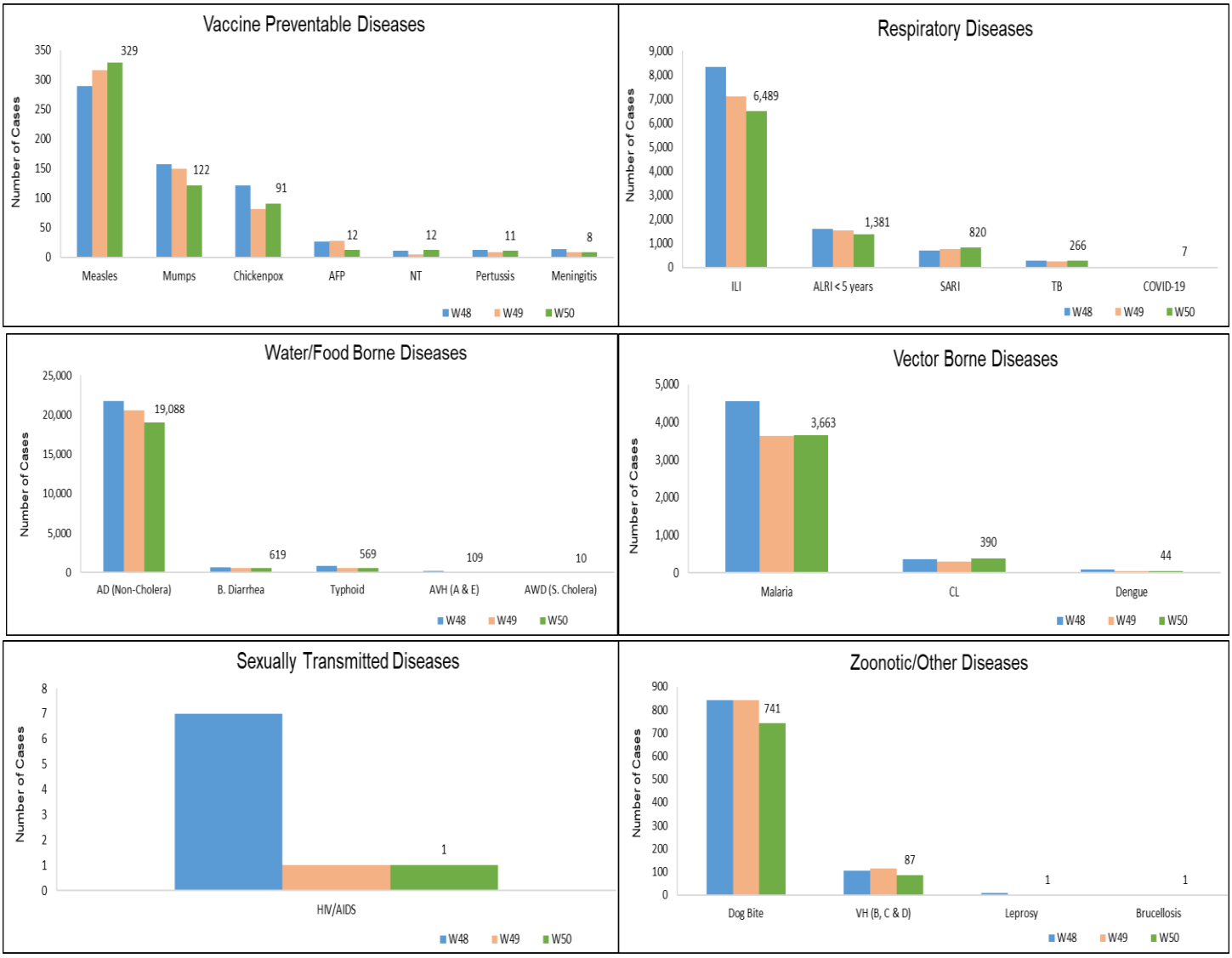
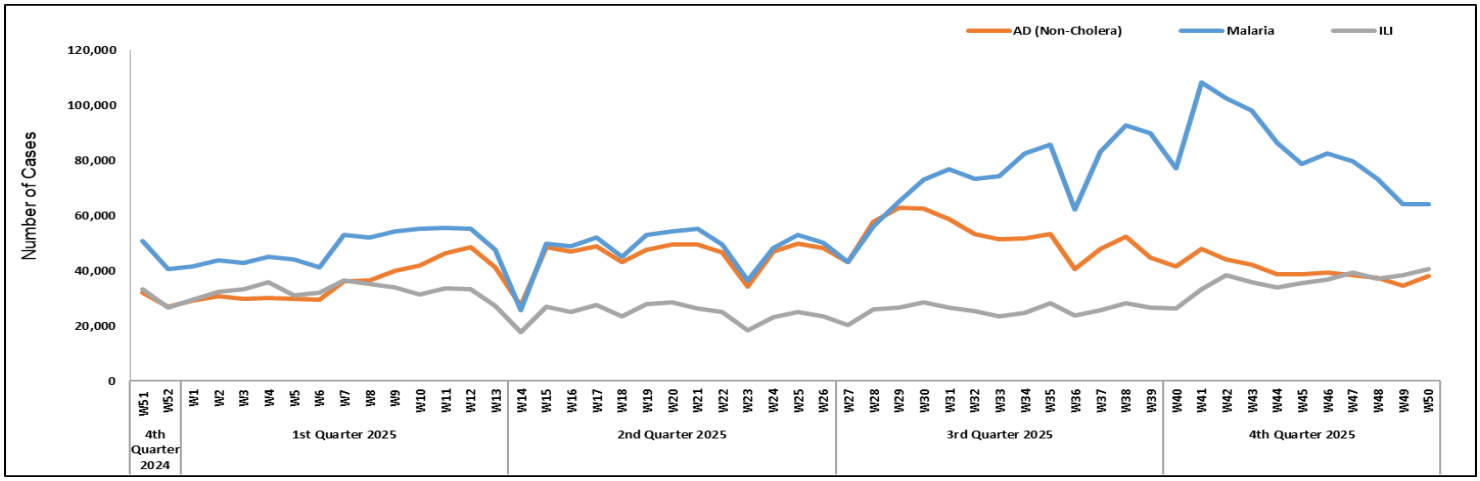


Figure 7: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, KP.



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera), ALRI <5 Years, TB, Typhoid, VH (B, C & D), Chickenpox, Measles and B. Diarrhea. ILI, AD (Non-Cholera) and Chickenpox cases showed a decline in number while an increase in number was observed in ALRI <5 Years, TB, Typhoid, VH (B, C & D), Measles and B. Diarrhea cases this week.

AJK: ILI cases were maximum followed by ALRI < 5years, AD (Non-Cholera), SARI, TB, Dog Bite, Typhoid, B. Diarrhea, AVH (A & E), AWD (S. Cholera), VH (B, C & D) and Chickenpox/ Varicella cases. An increase in number of suspected cases was observed for AD (Non-Cholera), SARI, TB, Typhoid, B. Diarrhea, AVH (A & E), AWD (S. Cholera) and Chickenpox while a decline in cases observed for ILI, ALRI < 5years, Dog Bite, VH (B, C & D), Mumps, AFP, Pertussis and Dengue this week.

GB: ALRI <5 Years cases were the most frequently reported diseases followed by ILI, AD (Non-Cholera), SARI, TB, Typhoid, B. Diarrhea, Chickenpox/ Varicella, Pertussis, AVH (A & E), VH (B, C & D) and Dog Bite cases. An increase in cases is observed for ILI, AD (Non-Cholera), SARI, TB, Typhoid, B. Diarrhea, Pertussis, Dog Bite, Mumps and Malaria while a decline is observed in number of cases of ALRI <5 Years, Chickenpox/ Varicella, AVH (A & E), VH (B, C & D) and Measles this week.

Figure 8: Most frequently reported suspected cases during Week 50, AJK.

Figure 9: Week wise reported suspected cases of ILI and ALRI < 5 years, AJK.

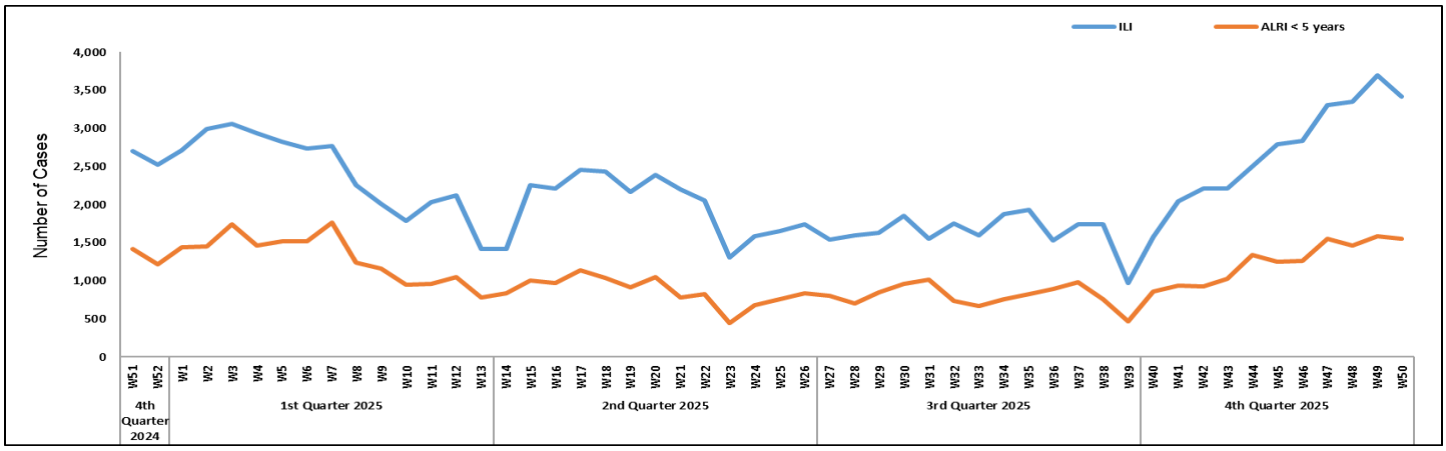


Figure 10: Most frequently reported suspected cases during Week 50, ICT.

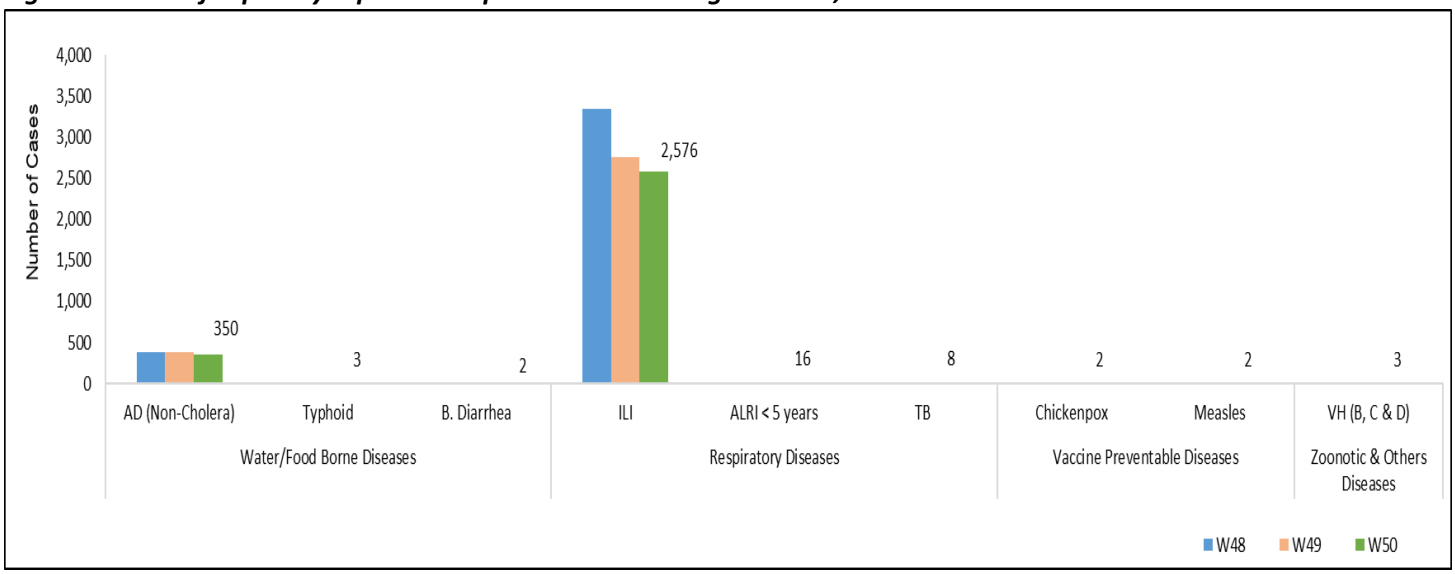


Figure 11: Week wise reported suspected cases of ILI, ICT.

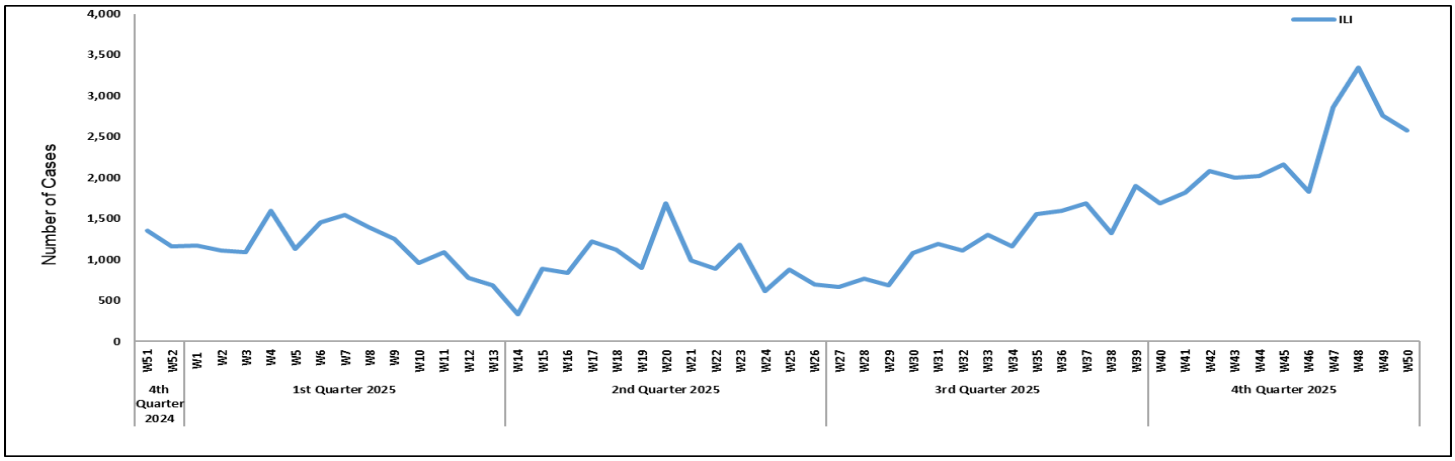


Figure 12: Most frequently reported suspected cases during Week 50, GB.

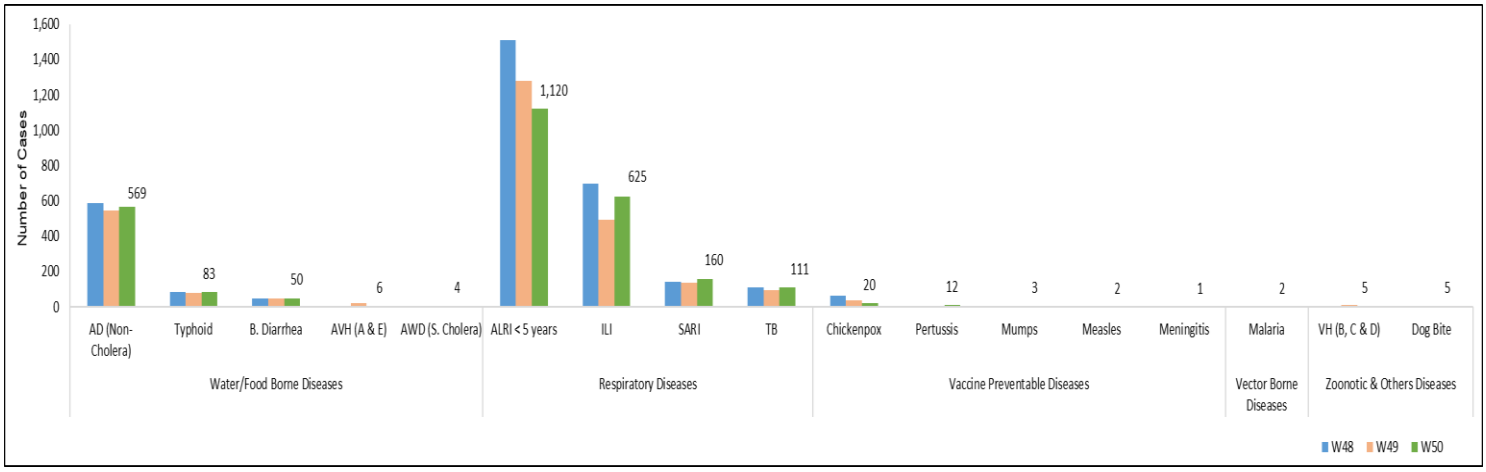


Figure 13: Week wise reported suspected cases of ALRI < 5 years, GB.

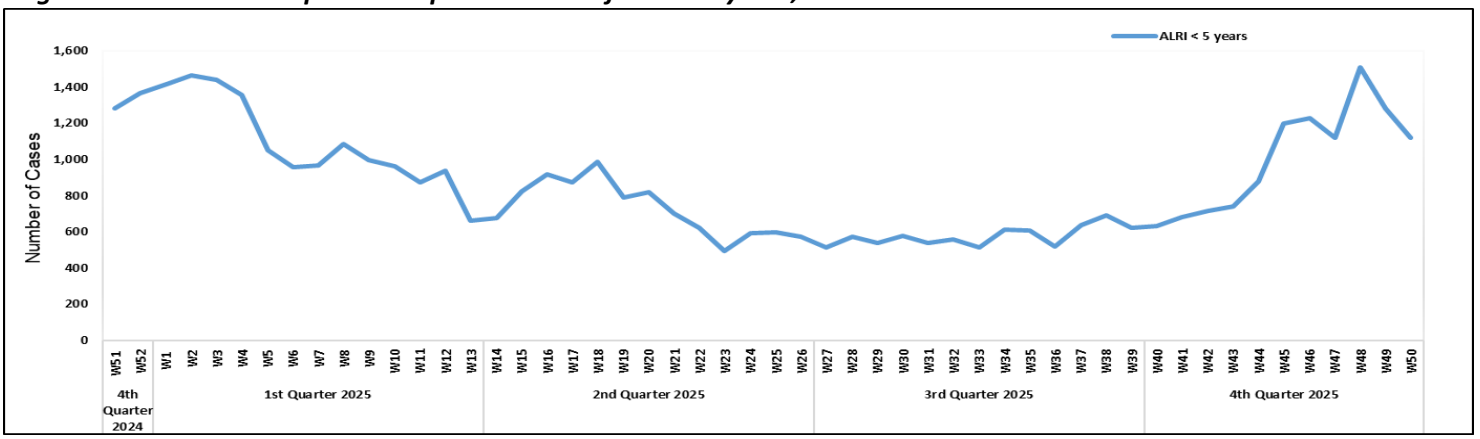


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epi Week 50, Pakistan.

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)		62	0	-	-	-	-	-	-	-	-	-	-	-	-
Stool culture & Sensitivity		278	1	-	-	-	-	-	-	-	-	-	-	-	-
Malaria		14,922	418	4,067	303	1,173	23	-	-	89	0	-	-	3	0
CCHF		-	-	3	0	-	-	-	-	-	-	-	-	-	-
Dengue		7,575	814	2,279	45	126	2	-	-	-	-	-	-	22	1
VH (B)		-	-	1,519	86	99	13	-	-	1,012	22	-	-	290	5
VH (C)		-	-	1,504	47	123	13	-	-	1,095	18	-	-	297	13
VH (D)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
VH (A)		-	-	6	0	-	-	-	-	2	0	-	-	-	-
VH (E)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Covid-19		62	0	8	0	-	-	-	-	-	-	-	-	8	0
TB		-	-	188	19	-	-	-	-	28	0	-	-	67	3
HIV/ AIDS		4,555	45	669	0	356	3	-	-	131	0	-	-	291	0
Syphilis		-	-	48	0	4	0	-	-	93	0	-	-	-	-
Typhoid		-	-	54	8	-	-	-	-	119	4	-	-	-	-
Diphtheria		9	1	-	-	1	0	-	-	-	-	-	-	-	-
ILI		107	18	3	1	-	-	-	-	-	-	-	-	-	-
Pneumonia (ALRI)		458	84	2	1	-	-	-	-	-	-	-	-	-	-
Meningitis		36	5	-	-	-	-	-	-	-	-	-	-	-	-
Measles		185	73	25	4	230	98	34	22	0	0	401	87	21	7
Rubella (CRS)		9	5	-	-	-	-	-	-	-	-	-	-	-	-
Leishmaniosis (cutaneous)		18	1	14	13	14	5	-	-	-	-	-	-	-	-
Chikungunya		6	2	2	0	-	-	-	-	-	-	-	-	-	-
Chickenpox		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gonorrhea		108	0	-	-	-	-	-	-	-	-	-	-	-	-
Covid-19	ILI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SARI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Influenza A	ILI	8	0	0	0	20	3	56	17	3	0	33	6	-	-
	SARI	14	1	0	0	97	19	114	26	24	4	226	24	-	-
Influenza B	ILI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SARI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RSV	ILI	-	-	-	-	20	6	56	6	-	-	-	-	-	-
	SARI	-	-	-	-	97	21	114	42	-	-	226	25	-	-

Table 6: Compliance of IDSR reporting districts Week 50, Pakistan

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	100	90%
	Bannu	238	124	52%
	Battagram	59	33	56%
	Buner	34	18	53%
	Bajaur	44	35	80%
	Charsadda	59	56	95%
	Chitral Upper	34	30	88%
	Chitral Lower	35	34	97%
	D.I. Khan	114	113	99%
	Dir Lower	74	62	84%
	Dir Upper	37	29	78%
	Hangu	22	19	86%
	Haripur	72	69	96%
	Karak	36	36	100%
	Khyber	53	46	87%
	Kohat	61	61	100%
	Kohistan Lower	11	7	64%
	Kohistan Upper	20	10	50%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	68	97%
	Lower & Central Kurram	42	5	12%
	Upper Kurram	41	30	73%
	Malakand	42	22	52%
	Mansehra	133	92	69%
	Mardan	80	67	84%
	Nowshera	56	52	93%
	North Waziristan	13	8	62%
	Peshawar	156	134	86%
	Shangla	37	28	76%
	Swabi	64	57	89%
	Swat	77	69	90%
	South Waziristan (Upper)	93	39	42%
	South Waziristan (Lower)	42	29	69%
	Tank	34	32	94%
	Torghar	14	13	93%
	Mohmand	68	16	24%
	Orakzai	69	9	13%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	92	80	87%
	Kotli	60	60	100%
	Muzaffarabad	45	45	100%
	Poonch	46	46	100%
	Haveli	39	39	100%

	Bagh	54	28	52%
	Neelum	39	23	59%
	Jhelum Velley	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	23	23	100%
	CDA	15	4	27%
Balochistan	Gwadar	26	1	4%
	Kech	44	37	84%
	Khuzdar	74	12	16%
	Killa Abdullah	26	25	96%
	Lasbella	55	54	98%
	Pishin	69	29	42%
	Quetta	55	22	40%
	Sibi	36	35	97%
	Zhob	39	10	26%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	0	0%
	Kohlu	75	3	4%
	Chagi	36	24	67%
	Kalat	41	40	98%
	Harnai	17	9	0%
	Kachhi (Bolan)	35	18	51%
	Jhal Magsi	28	14	50%
	Sohbat pur	25	17	68%
	Surab	32	10	31%
	Mastung	46	45	98%
	Loralai	33	30	91%
	Killa Saifullah	28	21	75%
	Ziarat	29	13	45%
	Duki	31	0	0%
	Nushki	32	29	91%
	Dera Bugti	45	4	9%
	Washuk	46	0	0%
	Panjgur	38	3	0%
	Awaran	23	0	0%
	Chaman	24	5	0%
	Barkhan	20	15	75%
	Hub	33	20	61%
	Musakhel	41	10	24%
	Usta Muhammad	34	33	97%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	37	97%
	Gilgit	44	44	100%
	Diamer	62	55	89%
	Astore	55	50	91%
	Shigar	27	20	74%

	Skardu	53	52	98%
	Ganche	29	28	97%
	Kharmang	46	25	54%
Sindh	Hyderabad	72	72	100%
	Ghotki	64	64	100%
	Umerkot	62	62	100%
	Naushahro Feroze	107	102	95%
	Tharparkar	276	268	97%
	Shikarpur	60	59	98%
	Thatta	52	52	100%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	21	13	62%
	Karachi-West	20	20	100%
	Karachi-Malir	35	24	69%
	Karachi-Kemari	22	21	95%
	Karachi-Central	12	11	92%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	55	100%
	Mirpur Khas	106	106	100%
	Badin	124	123	99%
	Sukkur	64	63	98%
	Dadu	90	90	100%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	170	167	98%
	Kashmore	59	58	98%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	52	96%
	Tando Muhammad Khan	41	41	100%
	Shaheed Benazirabad	122	122	100%

Table 7: Compliance of IDSR reporting tertiary care hospitals Week 50, Pakistan

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	0	0%
	Jhelum Vellay	1	1	100%
	Sudhnooti	1	1	100%
Sindh	Karachi-South	3	1	67%
	Sukkur	1	1	100%
	Shaheed Benazirabad	1	1	100%
	Karachi-East	1	0	0%
	Karachi-Central	1	1	100%
KP	Peshawar	3	0	0%
	Swabi	1	0	0%
	Nowshera	1	1	100%
	Mardan	1	1	100%
	Abbottabad	1	1	100%
	Swat	1	1	100%

Letter to the Editor

Strengthening Integrated Disease Surveillance through Frontline Capacity Building in District Nagar, Gilgit-Baltistan

Dear Editor,

Strengthening the Integrated Disease Surveillance and Response System (IDSRS) at the community level remains critical for timely detection and response to priority public health threats in Pakistan. In this regard, an orientation and health education session was conducted on 9 December 2025 at RHC Chalt, District Nagar, Gilgit-Baltistan, from 12:00 pm to 1:00 pm. The session was attended by 60 healthcare providers and Lady Health Workers (LHWs), who play a pivotal role in surveillance, community engagement, and outbreak response.

The session aimed to enhance participants' understanding of the IDSRS framework and their responsibilities in surveillance activities, including case detection, notification, investigation, sampling, and response. Key areas covered included basic case definitions of priority communicable diseases, surveillance protocols for vaccine-preventable and vector-borne diseases, measles surveillance, and infection prevention and control practices. Preventive public health measures such as safe drinking water, household water treatment, sanitation, personal hygiene, and hand-washing practices were also emphasized to reduce disease transmission at the community level.

Participants were further briefed on the current polio epidemiological situation in Pakistan and Gilgit-Baltistan, with particular emphasis on surveillance activities and preparedness for National Immunization Days (NIDs), December 2025. The importance of essential routine immunization, identification of missed and defaulted children, and community mobilization for improved immunization coverage was highlighted.

The activity contributed to improved coordination between IDSRS and frontline health workers, strengthened commitment toward timely and complete zero reporting, and reinforced adherence to infection prevention and control protocols at health facilities. The orientation supported the successful conduct of NIDs December 2025 in District Nagar, achieving 99.7% coverage. In the long term, such capacity-building initiatives are expected to enhance routine immunization performance, strengthen community-based surveillance, and improve the overall responsiveness and resilience of the national public health surveillance system.

Azher Mehdi

Health Education Officer – IDSRS

Notes from the field:

Diphtheria Outbreak Investigation Report, Swabi District, Khyber Pakhtunkhwa July 2025

Introduction

Diphtheria is an acute, toxin-mediated, vaccine-preventable bacterial disease caused by *Corynebacterium diphtheriae*, transmitted primarily through respiratory droplets. Despite substantial global decline following expanded immunization programs, diphtheria continues to cause outbreaks in low and middle-income countries with gaps in routine vaccination coverage. The World Health Organization continues to report sporadic outbreaks, particularly among under-immunized children in endemic regions.

In South Asia, diphtheria remains a public health concern due to inconsistent immunization coverage, population mobility, and delayed healthcare seeking. In Pakistan, periodic outbreaks have been reported, particularly in rural and peri-urban settings with weak surveillance and reliance on informal healthcare providers.

In July 2025, a laboratory-confirmed case of diphtheria was reported from Swabi District, Khyber Pakhtunkhwa, triggering a field-based outbreak investigation.

Objectives:

- To determine the magnitude of the outbreak
- To identify potential risk factors
- To recommend control measures

Methods

A field-based cross-sectional outbreak investigation was conducted by the Provincial Disease Surveillance & Response Unit (PDSRU) in coordination with the District Health Office, Swabi. The investigation was carried out in Khalabat village and Saleem Khan village of Swabi District. The response activities were conducted in July 2025 following laboratory confirmation of the index case.

A probable case was defined as "any close contact of a laboratory-confirmed diphtheria case presenting with compatible clinical symptoms such as sore throat, fever, neck swelling, or pseudo-membrane formation without laboratory confirmation". Data were collected using structured field investigation forms. Active case search and contact tracing were conducted through door-to-door visits and review of informal healthcare encounters, including consultations with local dispensers.

Clinical assessment of contacts was performed, vaccination status was reviewed where records were available, and health education was provided. Laboratory confirmation of the index case was performed at Pakistan Institute of Medical Sciences (PIMS), Islamabad. Data were compiled and analyzed descriptively to summarize cases by age, gender, location, clinical presentation, risk factors, and laboratory findings.

Results

A total of one laboratory-confirmed case of diphtheria was identified during the investigation. The index case was a 12-year-old male from Khalabat village, Swabi District. He presented with severe sore throat, fever, and neck swelling and initially sought care from a local dispenser before referral to a tertiary care facility, where laboratory confirmation was established.

Following confirmation, outbreak response teams conducted active surveillance in 60 households across two villages. No secondary laboratory-confirmed cases were detected. A small number of individuals reported mild upper respiratory symptoms, including sore throat, without fever, neck swelling but none met the probable case definition.

No clustering of cases was observed beyond the index case in affected areas.

Clinical features of the index case included sore throat, fever, and cervical swelling. Identified risk factors included gaps in routine immunization coverage, particularly noted in Saleem Khan village, delayed referral from a local dispenser, and inter-village travel prior to symptom onset. Laboratory testing confirmed diphtheria in the index case, while no laboratory samples from contacts yielded positive results.

Discussion

This investigation highlights the continued vulnerability of under-immunized communities in Pakistan to diphtheria outbreaks despite the availability of an effective vaccine. Although only a single confirmed case was identified, the presence of vaccination gaps and informal healthcare practices highlights the potential for wider transmission if timely intervention had not occurred. The absence of secondary cases suggests that rapid notification, active case finding, and prompt implementation of control measures was effective in limiting spread.

The geographic linkage between two villages complicated the investigation and emphasizes

the role of population movement in disease transmission. Community hesitancy in sharing vaccination records limited the risk assessment and highlights the need for sustained community engagement. Strengthening routine immunization and improving early case detection through surveillance remains critical to prevent future outbreaks.

Conclusion

The diphtheria outbreak investigation in Swabi District identified a single laboratory-confirmed pediatric case with no secondary transmission. Timely surveillance, field investigation, and response measures successfully contained the outbreak.

Recommendations

1. Reinforce district-level surveillance and rapid response mechanisms to ensure early detection and containment of outbreaks
2. Strengthen routine immunization services, with particular focus on completion of DTP primary series and booster doses.
3. Enhance community awareness regarding diphtheria symptoms, transmission, and prevention.
4. Train informal and frontline healthcare providers for early recognition, referral, and reporting of vaccine-preventable diseases.
5. Promote documentation and verification of vaccination status during community outreach activities.

References

1. World Health Organization. **Diphtheria**. Geneva: WHO; 2023.
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3. Ministry of National Health Services, Regulations and Coordination. **Expanded Programme on Immunization Pakistan: Comprehensive Multi-Year Plan**. Islamabad; 2021.
4. World Health Organization. **Surveillance standards for vaccine-preventable diseases**. Geneva: WHO; 2018.

Knowledge Hub

Understanding Brucellosis: A Public Health Priority

Brucellosis: What You Need to Know

Brucellosis is a bacterial disease caused by various species of the Brucella bacteria. It primarily infects livestock (cattle, goats, sheep, pigs) but can be transmitted to humans. It is often referred to as "undulant fever" because the fever characteristically rises and falls in waves.

What is Brucellosis?

Brucellosis is a zoonotic disease, meaning it spreads from animals to humans. The illness in humans is often chronic and debilitating, affecting multiple organ systems. The bacteria are highly infectious and can survive in the environment for several months under certain conditions.

The most common species of Brucella that infect humans are:

- B. melitensis (primarily from sheep and goats, causing the most severe disease).
- B. abortus (from cattle).
- B. suis (from pigs).
- B. canis (from dogs).

How Brucellosis Spreads to Humans

Brucellosis is not typically spread from person to person. Infection occurs primarily through direct contact with infected animals or by consuming contaminated animal products. The most common route is ingestion of unpasteurized (raw) milk and dairy products such as cheese, or ice cream from or undercooked meat from infected animals.

People who work with animals are at high risk. Transmission may occur through contact with

blood, urine, vaginal discharge, placentas and aborted fetuses of infected animals.

The bacteria can enter via cuts or abrasions in the skin or through the mucous membranes of the eyes, nose or mouth. Inhalation of aerosolized bacteria is another potential route, particularly in laboratory settings.

Clinical Presentation

Symptoms of brucellosis can appear anywhere from 5 days to 6 months after exposure, but usually within 1 to 3 weeks. The illness often starts slowly.

Common symptoms include:

• The defining feature is the undulating fever rising in the evening and dropping in the morning.

• Profuse sweating (often with a foul odor).

• Fatigue and malaise (general feeling of being unwell).

• Muscle and joint pain (arthritis is common).

• Headache.

• Loss of appetite and weight loss.

If the infection is not treated, it can become chronic and cause more serious symptoms that persist for months or years.

• Arthritis: Inflammation of the joints, particularly the hip, knee, or spine.

• Epididymo-orchitis: Swelling and pain in the testicles.

• Endocarditis: Infection of the heart lining, which is the most common cause of death from brucellosis.

• Neurobrucellosis: Infection of the central nervous system (brain and meninges), leading to meningitis or abscesses.

• Chronic Fatigue: Persistent fatigue, joint pain, and fever that can last for years.

Prevention

• It focuses mainly on controlling the disease in animals and protecting humans from exposure.

• Avoid consuming unpasteurized milk, cheese, and ice cream and boiling milk or buying products labeled "pasteurized".

• Cook meat thoroughly

• Use personal protective equipment (PPE), including gloves, goggles, and face shields, when assisting with animal births or handling infected tissues.

• Vaccination programs for livestock (cattle, sheep, and goats) are critical for controlling the disease in animal populations.

Diagnosis and Treatment

Diagnosis:

Brucellosis is often difficult to diagnose because its symptoms are similar to those of many other febrile illnesses.

Diagnosis is confirmed through:

• Blood Culture: Growing the bacteria from a blood sample.

• Serology: Testing the blood for antibodies against the Brucella bacteria.

Treatment:

It typically involves a combination of two antibiotics (most commonly doxycycline plus rifampicin or streptomycin) taken for a period of 6 to 8 weeks to prevent relapse. It is crucial to complete the entire course of antibiotics.

More Information

For additional authoritative information on brucellosis, please visit:

1. Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/brucellosis/index.html

2. World Health Organization (WHO): https://www.who.int/news-room/factsheets/detail/brucellosis

4. UK Health Security Agency (UKHSA): https://www.gov.uk/guidance/brucellosisguidance-data-and-analysis

WHAT WE NEED TO KNOW ABOUT BRUCELLOSIS

- Brucellosis is a Zoonotic Disease that affects both humans and animals
- Also known as **"Undulant fever** or **"Malta fever"**
- Caused by gram-negative intracellular aerobic cocobacilli
- Humans can get infection from Cattle, Buffalo, Sheep , Goats, Pigs & Dogs

Mainly four types of species in which Brucellosis found in India

1. B. melitensis (most common)
2. B. abortus
3. B. canis
4. B. suis

Brucellosis is commonly undiagnosed & needs attention!!!

- Leads to high economic loss to dairy farmers and livestock producers
- Results in chronic debilitating illness in humans often leading to complications

How do humans get infected?

- Ingestion of raw, unpasteurized milk & its products
- Inhalation of Infectious Aerosols
- Direct Contact with infected animal's birth products
- Blood Transfusion

How do animals get infected?

- Through close contact with infected animal
- By breeding/mating with infected animal
- Contact with infected animal's birth products
- Consumption of contaminated fodder
- Nursing of young animals from an infected female animal

When to suspect Brucellosis?

H/O eating raw dairy products

H/O Occupational exposure
(Veterinarians, Dairy Farmers, Abattoir Workers, Livestock Handlers)

- Fever accompanied by anorexia and back pain (undulant fever)
- Headache, night sweats, rashes, poor appetite and weight loss
- Leucopenia, enlargement of liver, spleen and lymph nodes
- Respiratory tract complication
- Joint pains and swelling

Always Rule Out Brucellosis in cases of Pyrexia of Unknown Origin associated with Joint Pains

Diagnosis

1. ELISA
2. PCR
3. Bacterial Culture (Gold standard)

Treatment

Doxycycline 100 mg BD for 6 weeks
or
Doxycyline 100 mg (6 weeks)
+ Streptomycin 1gm Day I.M (3 weeks)
OBSERVE FOR RELAPSE

How to prevent Brucellosis?

In Humans

- Do not eat or consume raw dairy products
- Always wash your hands after handling animals
- Wear protective clothing during disposal of animal waste/ biological waste
- Wear protective clothing when handling reproductive tissues (delivery of animals) and during per rectal examination and Artificial Insemination of animals

In Animals

- Separate sick animals from the healthy animals
- Mandatory Brucella vaccination of female calves
- Avoiding breeding or sick animals

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UK Health Security Agency

World Health Organization

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION