

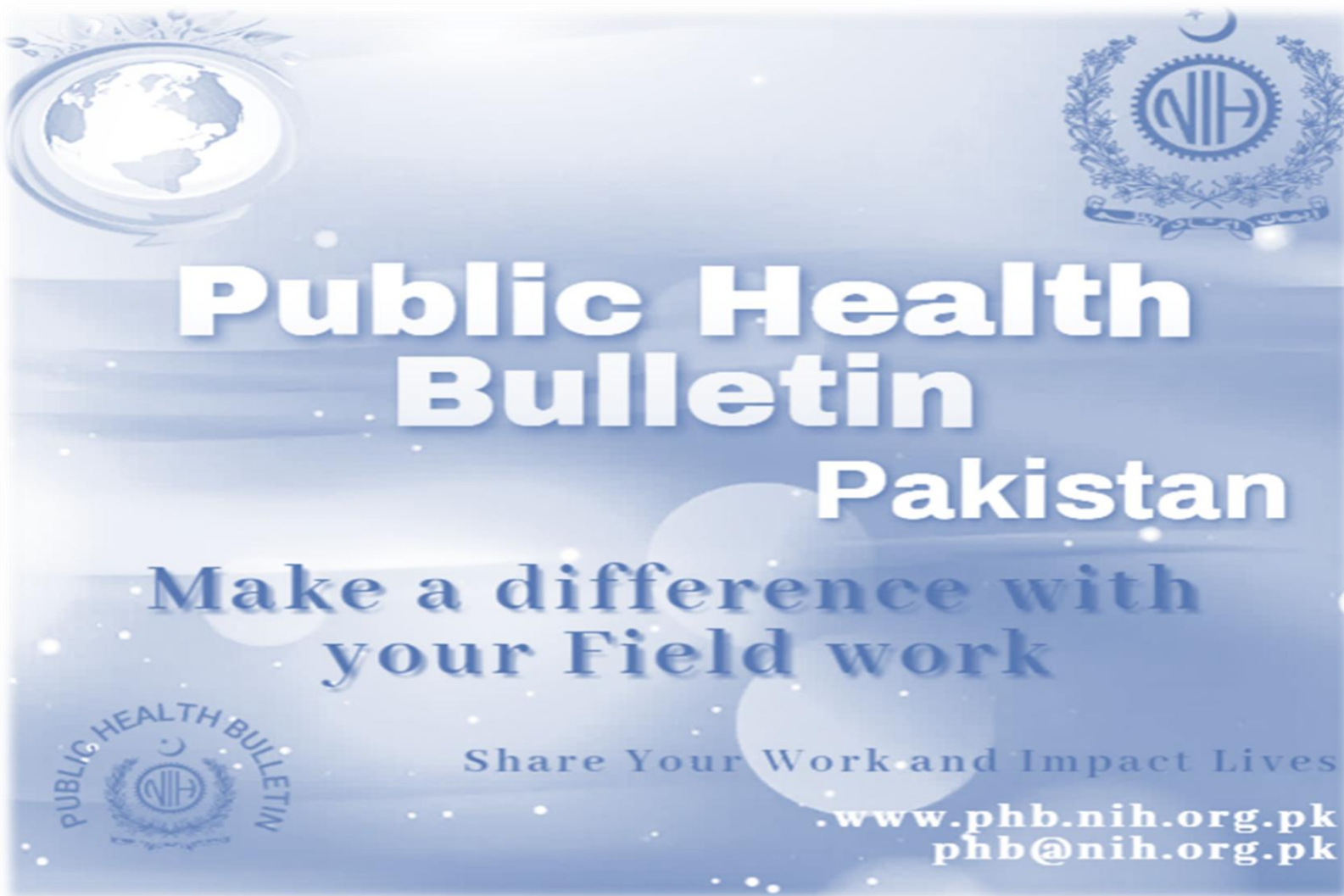
Integrated Disease Surveillance & Response (IDSR) Report

Center of Disease Control
National Institute of Health, Islamabad

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

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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

Public Health Bulletin - Pakistan, Week 38, 2025

IDSR Reports

Ongoing Events

Field Reports

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;

- *Dengue Outbreak Investigation Report Union Council Rajjar-1, Village Council Amir Abad, District Charsadda, Khyber Pakhtunkhwa (July-August 2025)*
- *Knowledge hub on Brucellosis: What you need to know*

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*Sincerely,
The Chief Editor*

- During Week 38, 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, Typhoid and SARI.
- Twenty-five cases of AFP reported from KP, eleven from Sindh, 3 from AJK and 2 from GB.
- Seventeen suspected cases of HIV/ AIDS reported from Sindh, seven from KP and one from AJK.
- Four suspected cases of Brucellosis reported from KP.
- Among VPDs, there is an increase in number of cases of Mumps, Meningitis, Diphtheria and NT AFP this week.
- Among Respiratory diseases, there is an increase in number of cases of ILI, ALRI<5 years, TB and SARI this week.
- Among Water/food-borne diseases, there is no significant increase or decrease in number of cases of Acute Diarrhea (Non-Cholera), Typhoid, AWD (S. Cholera) and AVH (A & E) this week.
- Among Vector-borne diseases, there is an increase in number of cases of Malaria this week.
- Among STDs, there is an increase in number of cases of HIV/AIDs this week.

IDSR compliance attributes

- The national compliance rate for IDSR reporting in 158 implemented districts is 78%
- AJK & Sindh are the top reporting regions with a compliance rate of 98%, followed by GB 91% and ICT 68%.
- The lowest compliance rate was observed in KP 65% and Balochistan 61%.

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2704	1752	65
Azad Jammu Kashmir	469	459	98
Islamabad Capital Territory	38	26	68
Balochistan	1308	793	61
Gilgit Baltistan	417	378	91
Sindh	2111	2065	98
National	7047	5473	78

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.

Leprosy

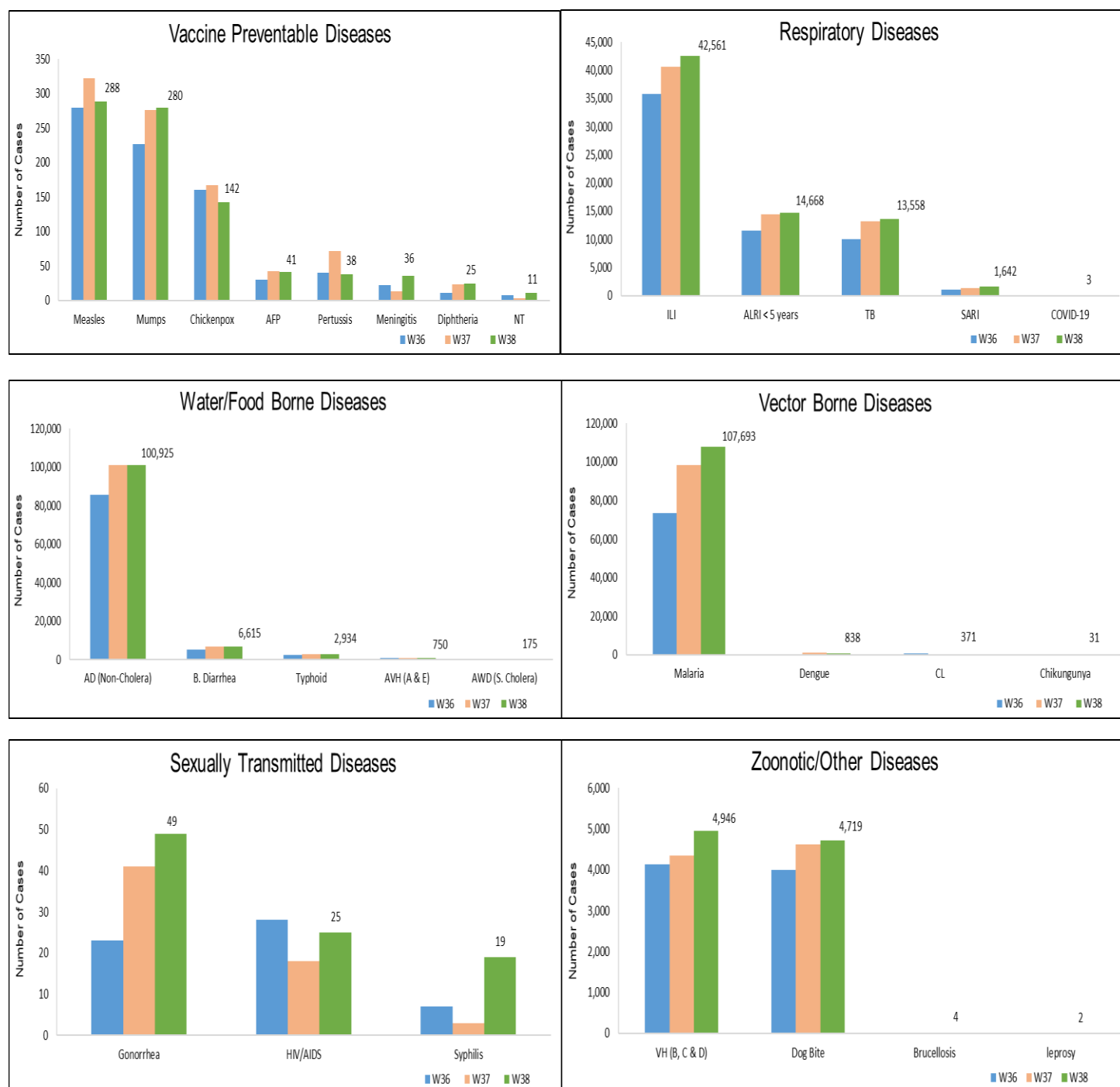
- **Enhance Case Detection and Surveillance:** Strengthen early detection through training of healthcare workers to identify skin lesions and nerve involvement; integrate leprosy reporting into IDSR.
- **Ensure Timely Diagnosis and Treatment:** Provide free and uninterrupted supply of WHO-recommended Multi-Drug Therapy (MDT) at all designated treatment centers to prevent disability and transmission.
- **Promote Contact Tracing and Follow-Up:** Identify and examine household and close contacts of confirmed cases to enable early diagnosis and treatment.
- **Raise Community Awareness:** Conduct health education campaigns to reduce stigma, encourage early reporting of skin or nerve symptoms, and promote inclusion of persons affected by leprosy.



Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 38, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
Malaria	7	4670	2	1	10505	NR	92508	107693
AD (Non-Cholera)	1867	7389	2199	370	36760	NR	52340	100925
ILI	1736	6008	312	1322	5212	NR	27971	42561
ALRI < 5 years	760	1910	692	8	697	NR	10601	14668
TB	101	86	88	5	361	NR	12917	13558
B. Diarrhea	50	1201	107	0	1149	NR	4108	6615
VH (B, C & D)	24	131	1	0	99	NR	4691	4946
Dog Bite	155	219	4	0	947	NR	3394	4719
Typhoid	28	480	126	0	1158	NR	1142	2934
SARI	88	661	118	0	558	NR	217	1642
Dengue	27	6	2	5	641	NR	157	838
AVH (A & E)	27	5	9	0	214	NR	495	750
CL	0	54	25	0	283	NR	9	371
Measles	6	12	30	0	204	NR	36	288
Mumps	13	64	7	1	153	NR	42	280
AWD (S. Cholera)	17	55	21	0	54	NR	28	175
Chickenpox/ Varicella	10	13	26	1	74	NR	18	142
Gonorrhea	0	37	0	0	4	NR	8	49
AFP	3	0	2	0	25	NR	11	41
Pertussis	0	17	5	0	13	NR	3	38
Meningitis	4	8	1	0	7	NR	16	36
Chikungunya	0	0	0	0	0	NR	31	31
Diphtheria (Probable)	0	0	0	0	17	NR	8	25
HIV/AIDS	1	0	0	0	7	NR	17	25
Syphilis	0	0	0	0	0	NR	19	19
NT	0	2	1	0	7	NR	1	11
Brucellosis	0	0	0	0	4	NR	0	4
COVID-19	0	0	0	0	3	NR	0	3
Leprosy	0	0	0	0	0	NR	2	2

Figure 1: Most frequently reported suspected cases during Week 38, 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).
- AD (non-cholera) cases are mostly from Sujawal, Badin, Mirpurkhas and Khairpur whereas Malaria cases are from Sanghar, Larkana, Badin, Khairpur and Mirpurkhas.
- Eleven cases of AFP reported from Sindh. They are suspected cases and need field verification.
- There is a decline in number of cases of Mumps, Pertussis and NT while an increase in number of cases of Measles, Meningitis, AFP, Diphtheria, AD (Non-Cholera), Malaria, ILI, ALRI<5 Years, TB, dog bite and VH (B, C, D) this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 38, Sindh

Districts	Malaria	AD (non-cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A & E)
Badin	6381	3452	1943	931	1064	337	405	164	74	60
Dadu	4024	2624	524	556	839	53	436	509	113	135
Ghotki	5449	1310	50	564	556	435	117	238	0	0
Hyderabad	1425	2635	1783	450	232	84	84	42	4	8
Jacobabad	1507	940	997	222	272	230	173	182	15	0
Jamshoro	3346	1875	46	612	243	180	89	87	53	12
Kamber	4646	2161	0	865	354	67	132	189	19	0
Karachi Central	55	1065	829	152	43	13	1	15	133	14
Karachi East	62	279	2	31	15	0	4	3	13	0
Karachi Keamari	17	675	346	3	15	0	1	1	3	1
Karachi Korangi	63	386	57	26	0	1	7	0	0	0
Karachi Malir	181	1739	2860	164	448	7	60	38	23	3
Karachi South	3	115	0	0	0	0	0	0	1	0
Karachi West	333	834	1125	72	255	21	21	63	25	6
Kashmore	2125	373	476	199	164	17	58	121	0	0
Khairpur	6374	3202	6216	1097	1079	176	383	213	310	24
Larkana	7146	1951	0	828	202	43	345	34	4	3
Matlari	4478	1869	13	652	326	366	58	82	1	2
Mirpurkhas	6278	3346	3726	828	442	61	159	99	23	45
Naushero Feroze	1832	1255	671	304	248	47	224	247	122	1
Sanghar	8070	2346	130	1222	472	1533	87	226	41	11
Shaheed Benazirabad	3467	2112	8	386	185	82	110	143	109	0
Shikarpur	2869	1333	5	243	147	304	213	257	5	0
Sujawal	1916	3704	9	136	450	62	181	75	4	8
Sukkur	2555	1465	1808	371	357	70	188	73	4	0
Tando Allahyar	4640	1588	604	484	203	203	125	38	6	1
Tando Muhammad Khan	2863	1741	107	637	229	112	159	145	4	0
Tharparkar	4077	2476	1532	564	750	42	123	1	14	31
Thatta	3422	1799	2104	42	662	115	81	109	12	130
Umerkot	2904	1690	0	276	349	30	84	0	7	0
Total	92508	52340	27971	12917	10601	4691	4108	3394	1142	495

Figure 2: Most frequently reported suspected cases during Week 38, Sindh

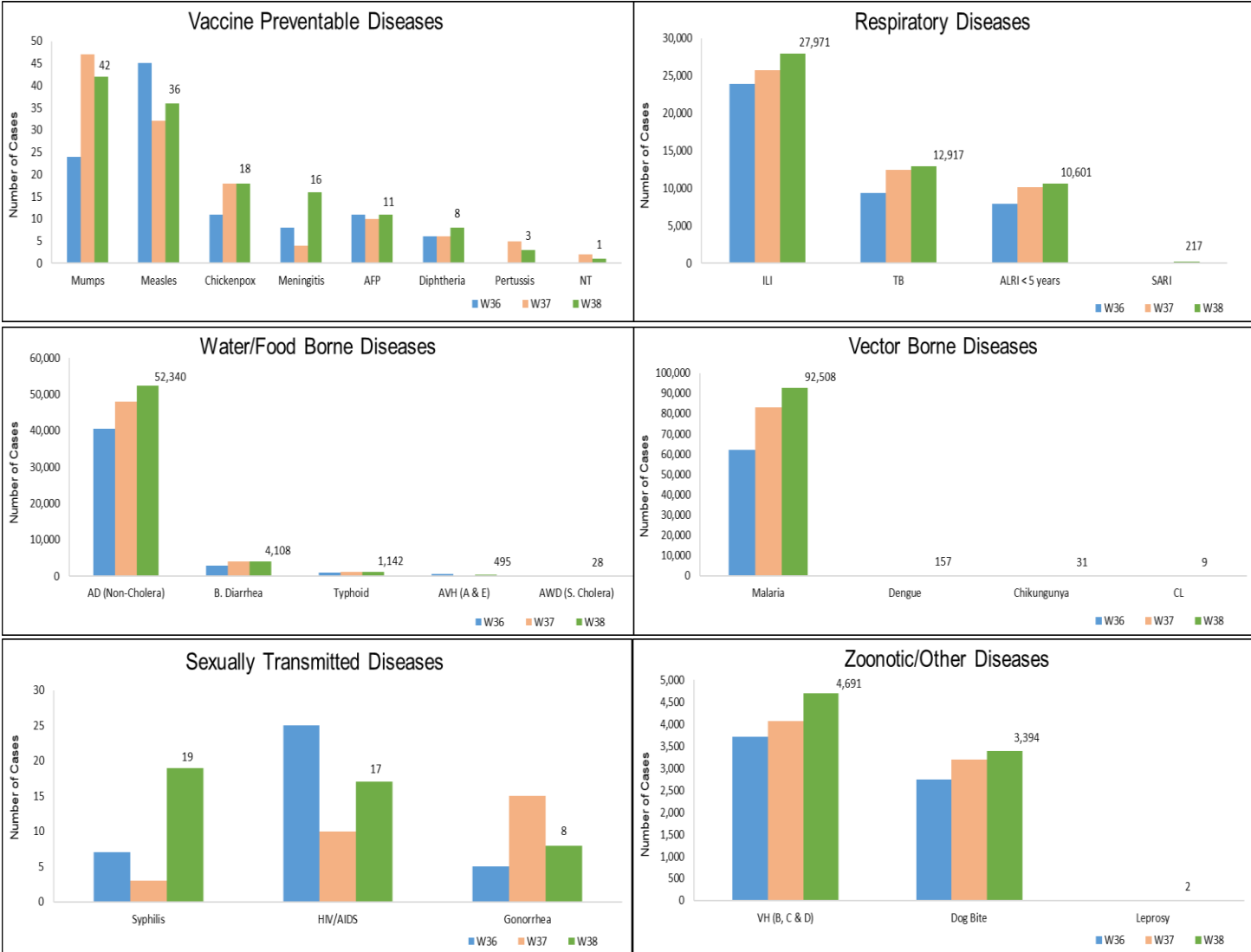
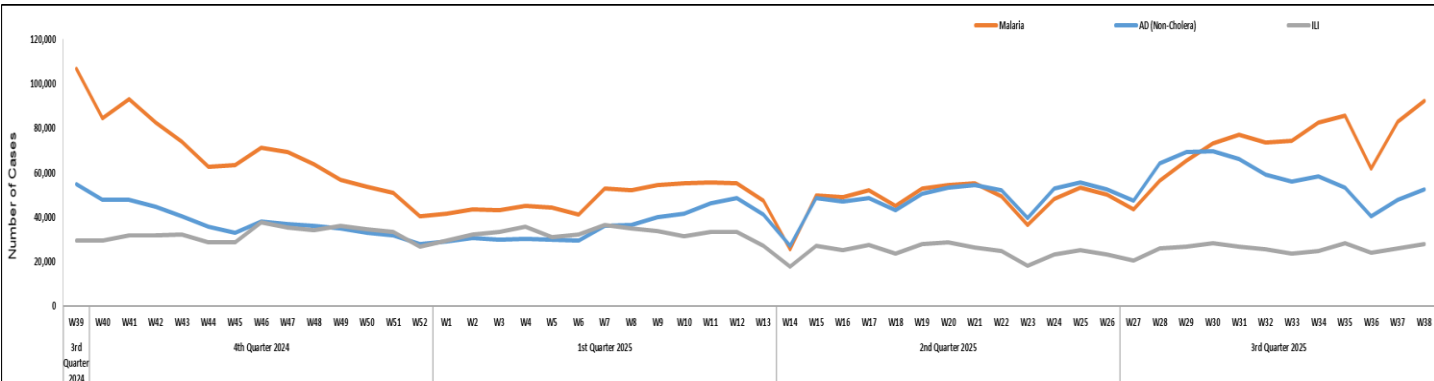


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh



- AD (Non-Cholera), ILI, Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, dog bite, VH (B, C & D) and TB cases were the most frequently reported diseases from Balochistan province.
- AD (non-cholera) cases are mostly reported from Quetta, Usta Muhammad and Kech while ILI cases are mostly reported from Kech (Turbat), Quetta and Sibi.
- Zero cases of HIV/AIDs reported from Balochistan.
- Measles, Chicken pox, Meningitis, NT, ALRI < 5 years, SARI and VH (B, C&D) showed increase in number of cases this week while Mumps, Pertussis, AD (non-cholera), B. Diarrhea, ILI, TB, Malaria and dog bite showed decrease in number of cases

Table 3: District wise distribution of most frequently reported suspected cases during Week 38, Balochistan

Districts	AD (non-cholera)	ILI	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dog Bite	VH (B, C & D)	TB
Awaran	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barkhan	99	73	119	8	6	0	27	28	0	8
Chagai	152	297	62	0	51	0	13	0	1	0
Chaman	0	131	45	0	33	0	27	0	0	0
Dera Bugti	85	0	82	10	9	0	5	0	0	0
Duki	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Gwadar	17	9	3	3	4	0	7	2	0	0
Harnai	254	5	101	177	72	0	0	4	0	0
Hub	152	47	50	11	2	0	0	2	0	1
Jaffarabad	555	147	777	69	101	22	13	36	55	48
Jhal Magsi	310	273	343	65	0	0	15	0	0	5
Kachhi (Bolan)	197	171	122	19	27	36	8	29	0	0
Kalat	2	0	1	0	1	0	0	0	0	0
Kech (Turbat)	574	946	797	54	69	3	0	0	0	0
Kharan	223	550	55	0	74	5	7	0	0	0
Khuzdar	36	22	17	0	10	4	15	0	0	0
Killa Abdullah	233	153	14	1	60	48	28	1	0	1
Killa Saifullah	306	0	324	408	83	33	41	5	0	1
Kohlu	142	254	97	13	52	2	29	2	2	0
Lasbella	545	76	515	207	35	1	21	5	19	4
Loralai	279	433	79	55	38	61	12	1	1	0
Mastung	179	146	76	65	23	119	12	0	0	0
MusaKhel	149	83	306	42	32	10	25	3	3	1
Naseerabad	368	14	130	7	15	27	61	57	30	8
Nushki	151	0	5	0	50	0	0	0	0	0
Panjgur	54	55	18	41	22	0	4	0	0	0
Pishin	531	518	43	67	144	35	24	3	0	1
Quetta	584	704	25	131	46	70	19	0	0	1
Sherani	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sibi	412	566	161	114	36	133	23	2	1	4
Sohbat pur	68	0	19	60	10	5	0	18	0	0
Surab	15	54	3	0	0	0	0	0	0	0
Usta Muhammad	578	157	186	184	69	27	28	21	19	0
Washuk	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Zhob	40	46	54	59	3	14	5	0	0	3
Ziarat	99	78	41	40	24	6	11	0	0	0
Total	7389	6008	4670	1910	1201	661	480	219	131	86

Figure 4: Most frequently reported suspected cases during Week 38, Balochistan

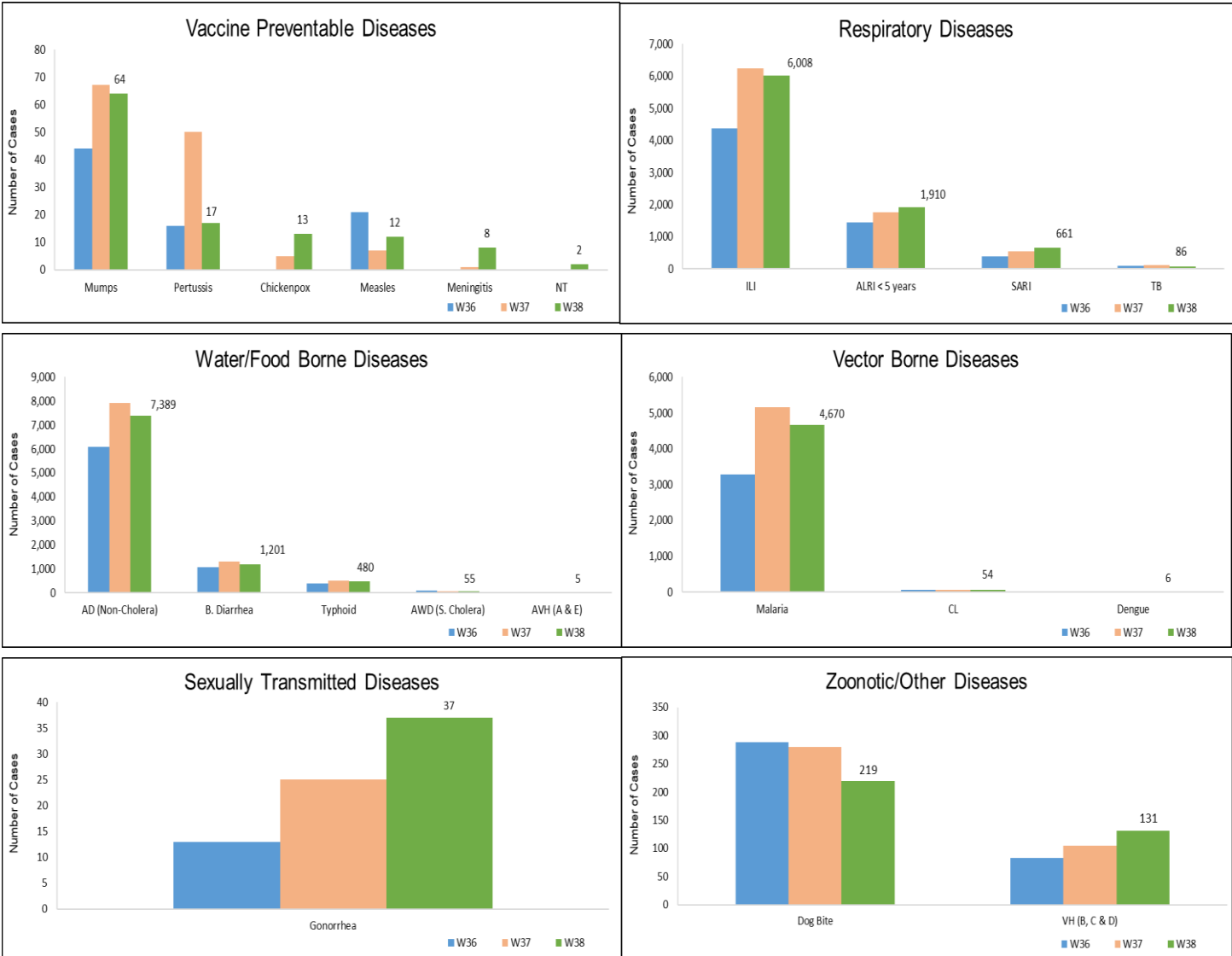
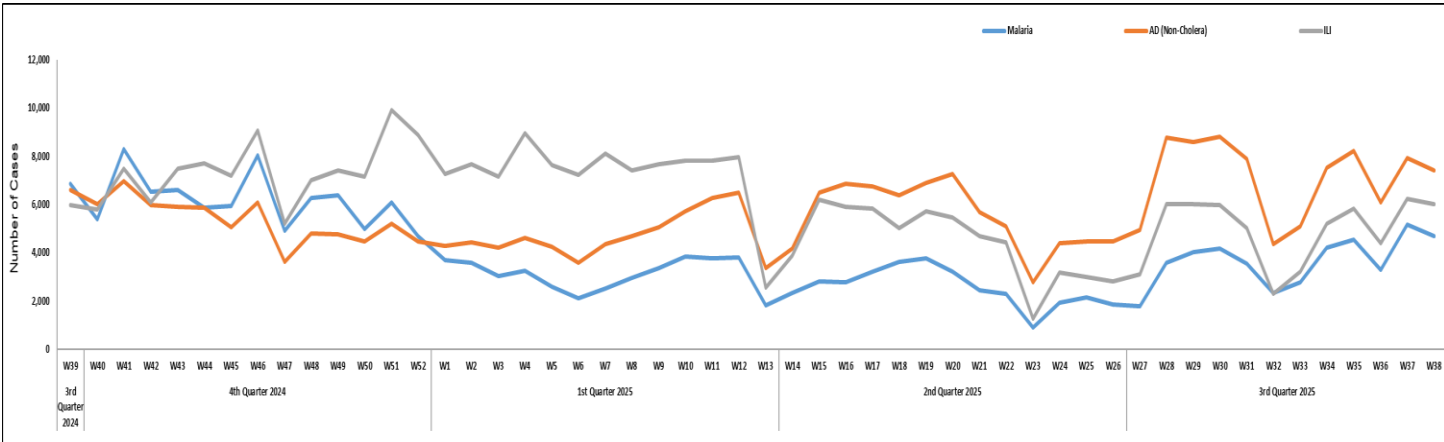


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, Typhoid, B. Diarrhea, dog bite, ALRI < 5 years, Dengue, SARI & TB
- Measles, Chicken pox, AD (Non-Cholera), ALRI < 5 years, Dengue, CL, dog bite & VH (B, C & D) cases showed a decline in number while Mumps, Pertussis, Meningitis, NT, ILI, SARI, Typhoid, Malaria and HIV/AIDs showed an increase in number this week.
- Twenty-five cases of AFP reported from KP. All are suspected cases and need field verification.
- Seven cases of HIV/AIDs reported from KP. Field investigation is required.
- Four suspected cases of Brucellosis reported from KP. They require field verification.

Table 4: District wise distribution of most frequently reported suspected cases during Week 38, KP

Districts	AD (non-cholera)	Malaria	ILI	Typhoid	B. Diarrhea	Dog Bite	ALRI < 5 years	Dengue	SARI	TB
Abbottabad	1234	1	136	22	7	77	9	68	0	14
Bajaur	695	426	49	5	117	81	4	9	29	11
Bannu	943	1342	4	96	12	13	5	8	0	11
Battagram	474	164	581	0	10	0	4	13	3	38
Buner	304	193	0	6	0	0	0	0	0	0
Charsadda	2437	543	1614	153	182	10	244	71	2	8
Chitral Lower	680	69	9	10	20	13	12	2	9	9
Chitral Upper	223	10	33	21	8	3	2	0	10	3
D.I. Khan	2098	997	0	0	34	13	4	0	0	8
Dir Lower	1741	245	1	33	77	29	8	12	0	2
Dir Upper	1636	25	45	17	39	15	52	0	0	3
Hangu	294	289	226	12	11	8	5	21	0	19
Haripur	1441	9	320	3	0	6	7	46	4	3
Karak	716	296	72	9	11	26	18	0	0	6
Khyber	779	720	53	155	211	67	55	0	5	19
Kohat	926	503	0	14	18	36	3	3	0	0
Kohistan Lower	218	2	0	0	12	2	0	1	0	0
Kohistan Upper	327	53	0	2	35	0	0	0	0	2
Kolai Palas	68	6	12	2	12	0	0	16	0	0
L & C Kurram	38	27	0	7	7	1	21	0	4	0
Lakki Marwat	931	859	0	18	13	75	0	1	0	9
Malakand	1068	52	50	9	0	0	0	0	0	3
Mansehra	1105	12	314	24	2	1	11	124	0	13
Mardan	971	346	17	10	16	90	19	29	0	10
Mohmand	161	374	71	6	20	10	4	1	251	3
North Waziristan	34	85	14	34	16	1	27	31	25	4
Nowshera	2700	778	7	13	9	3	7	14	9	28
Orakzai	75	30	8	0	5	0	0	0	0	0
Peshawar	4929	81	477	203	101	9	20	43	2	23
Shangla	1688	1158	0	105	12	80	3	2	0	80
South Waziristan (Lower)	70	71	131	15	2	23	16	2	28	8
South Waziristan (Upper)	83	89	17	0	6	0	8	0	17	0
Swabi	1311	155	375	58	17	142	39	52	51	7
Swat	3523	155	411	73	46	99	79	72	2	11
Tank	585	237	49	2	10	1	6	0	0	4
Tor Ghar	89	80	0	6	18	11	1	0	24	0
Upper Kurram	165	23	116	15	33	2	4	0	83	2
Total	36760	10505	5212	1158	1149	947	697	641	558	361

Figure 6: Most frequently reported suspected cases during Week 38, KP

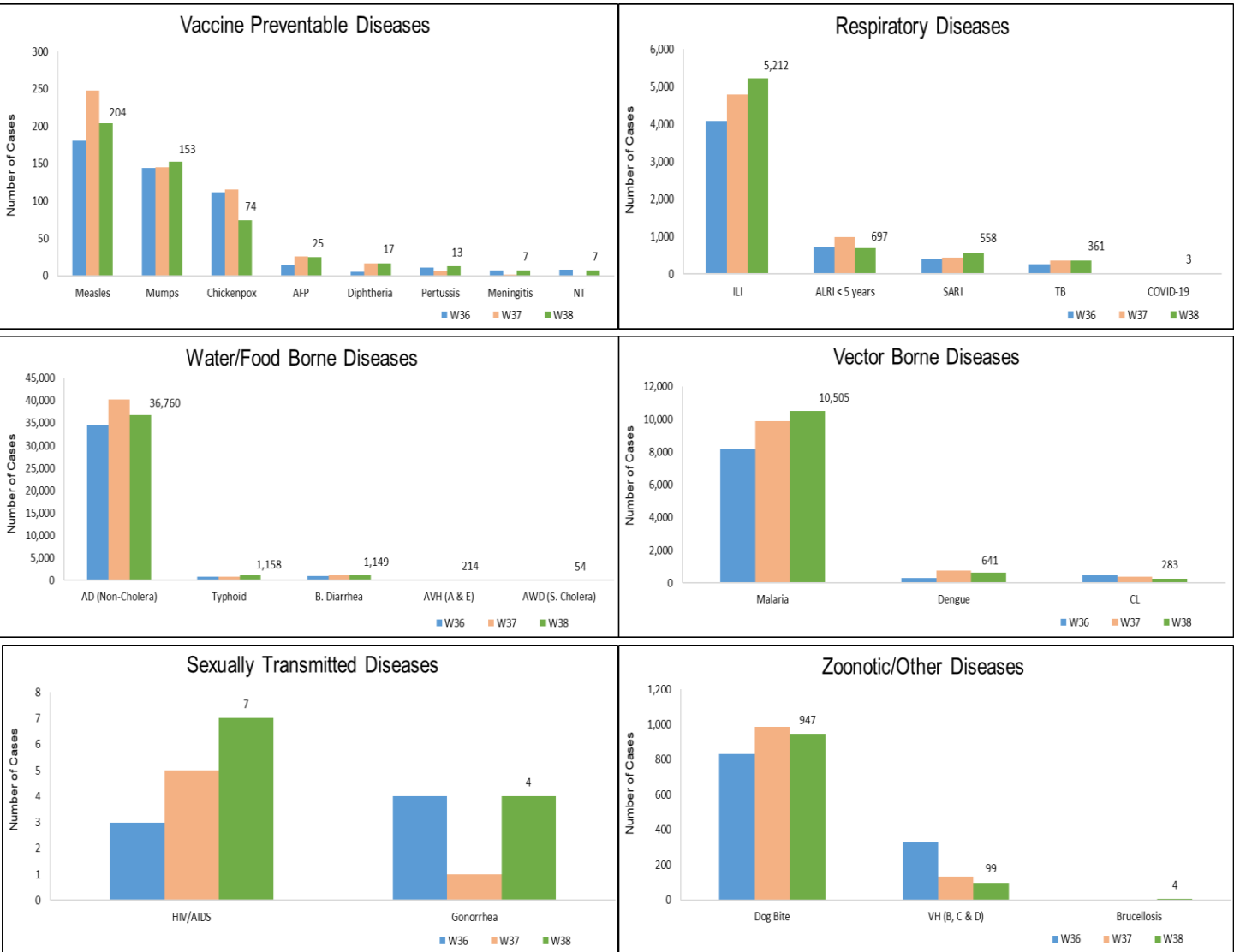
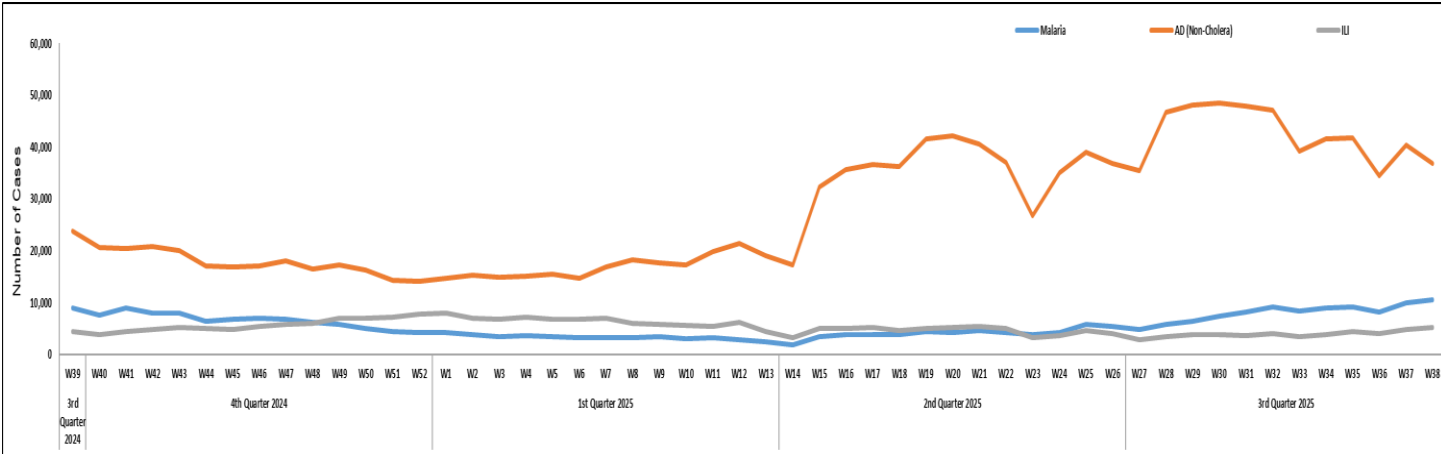


Figure 7: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, KP



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

AJK: AD (non – cholera) were maximum followed by ILI, ALRI < 5years, dog bite, TB, SARI B. Diarrhea, Typhoid, Dengue, AVH (A & E), VH (B, C & D) and AWD (S. Cholera) cases. An increase in number of suspected cases was observed for Mumps, Chickenpox, Measles and Malaria while a decline in cases observed for Meningitis, AFP and ALRI < 5 years, AD (non – cholera), B. Diarrhea, Dengue, dog bite and VH (B, C & D) this week.

GB: AD (non – cholera) and ALRI <5 Years cases were the most frequently reported diseases followed by ILI, Typhoid, SARI, B. Diarrhea. An increase in cases observed for by ALRI <5 Years, AD (Non-Cholera), Typhoid and B. Diarrhea this week.

Figure 8: Most frequently reported suspected cases during Week 38, AJK

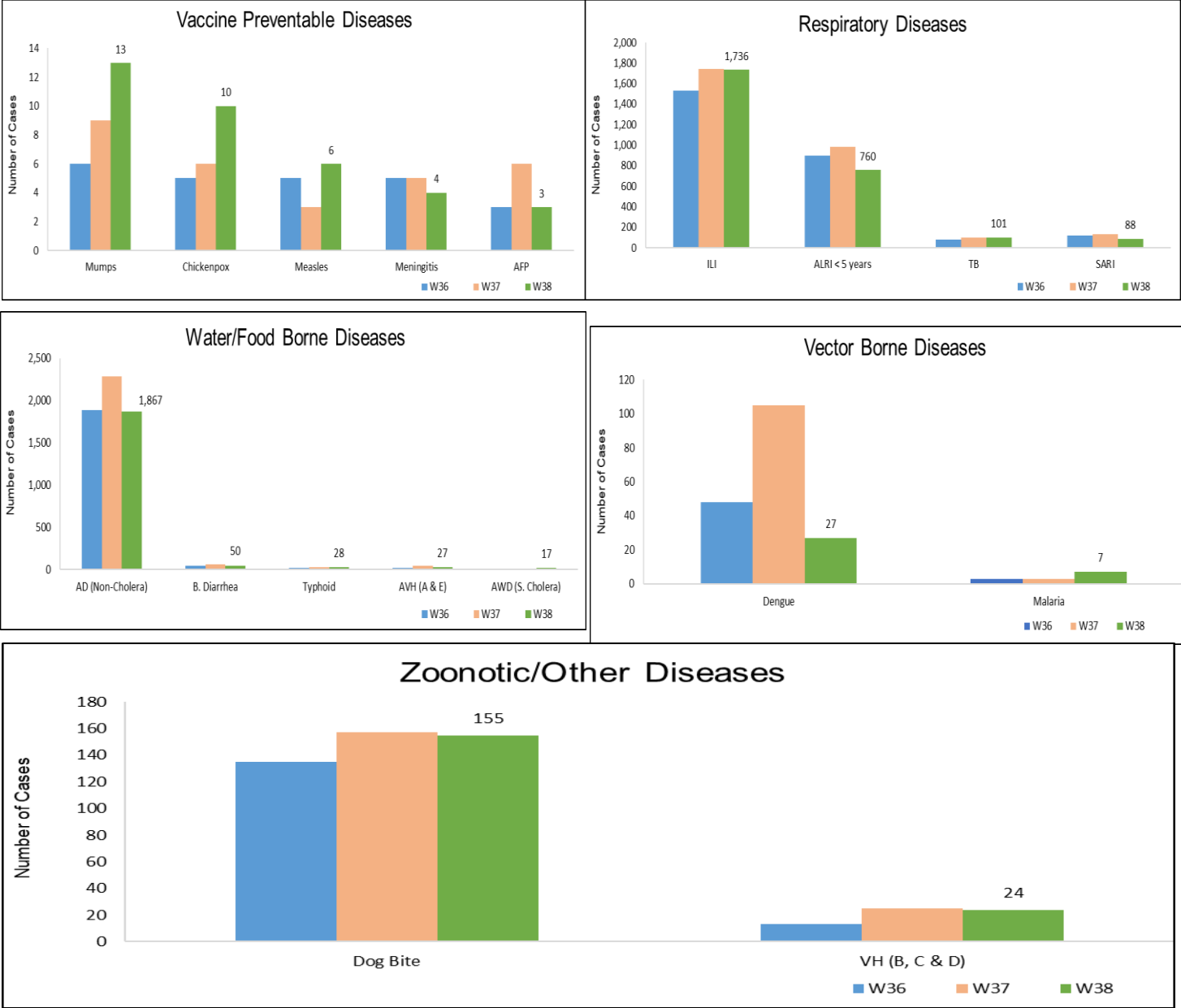


Figure 9: Week wise reported suspected cases of ILI and AD (Non-Cholera), AJK

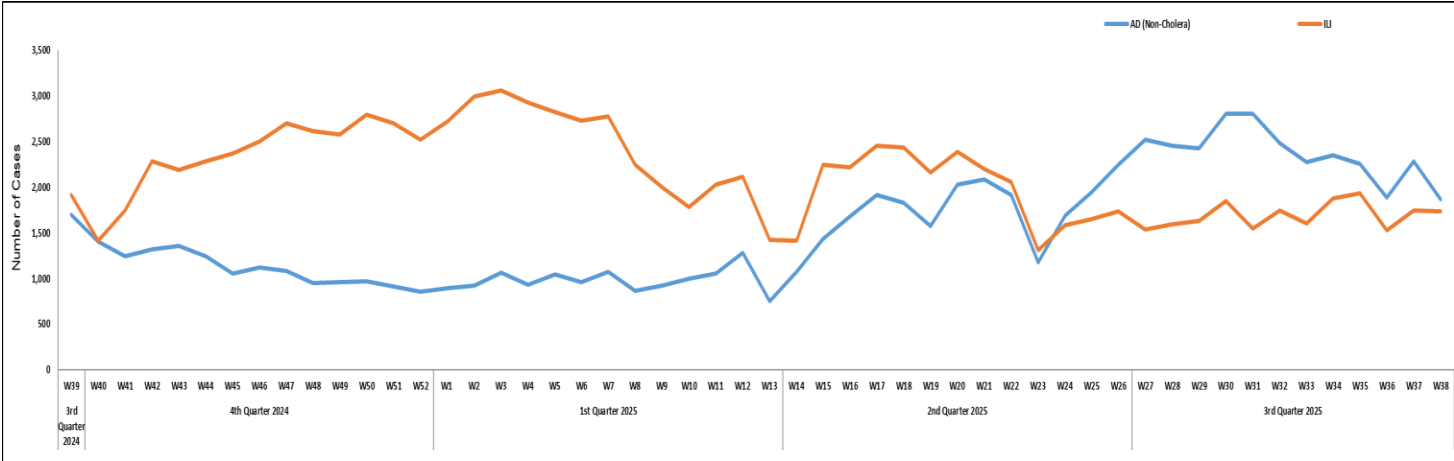


Figure 10: Most frequently reported suspected cases during Week 38, ICT

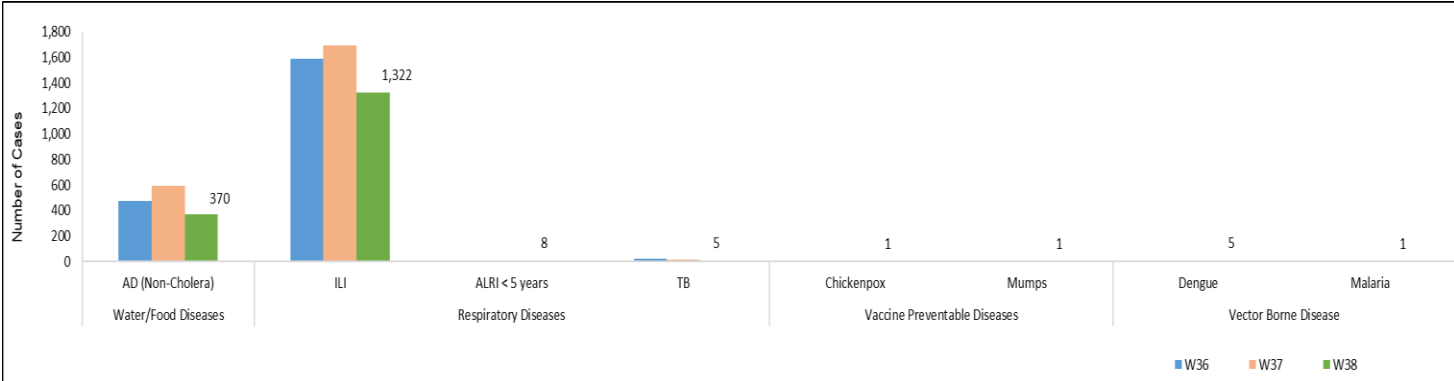


Figure 11: Week wise reported suspected cases of ILI, ICT

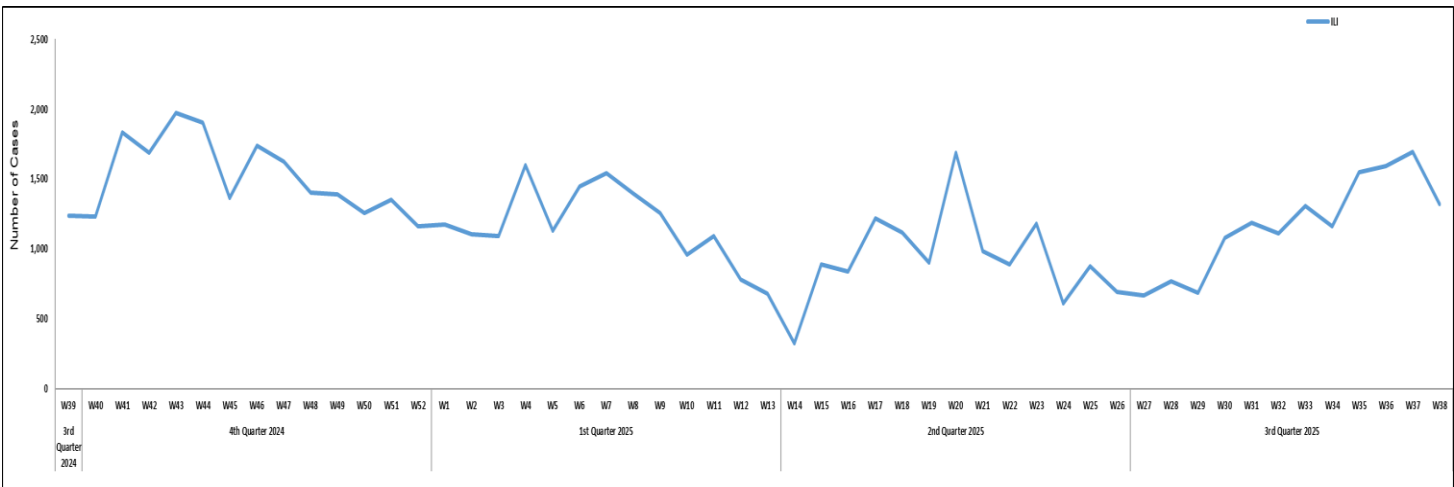


Figure 12: Most frequently reported suspected cases during Week 38, GB

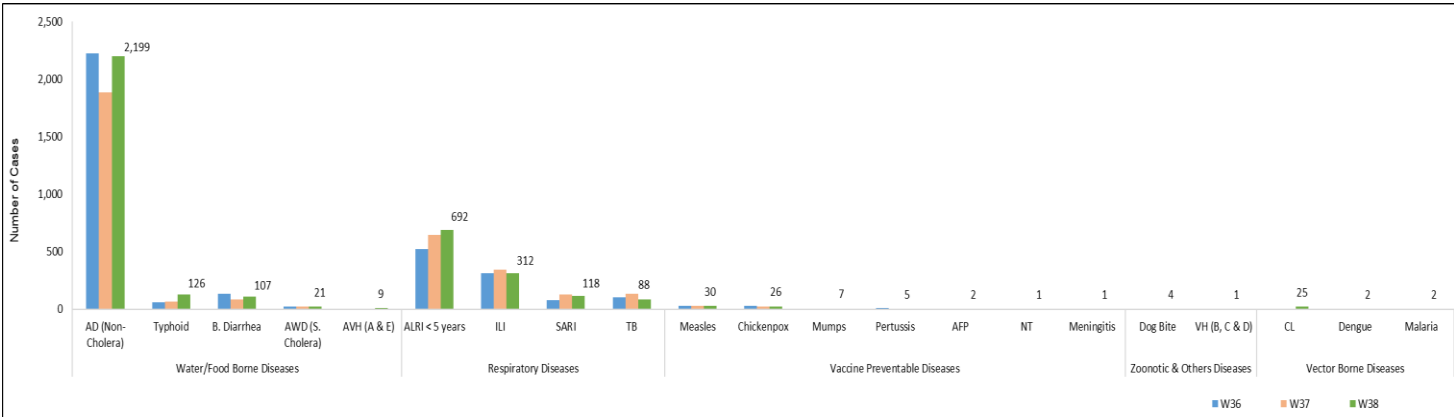


Figure 13: Week wise reported suspected cases of AD (Non-Cholera), GB

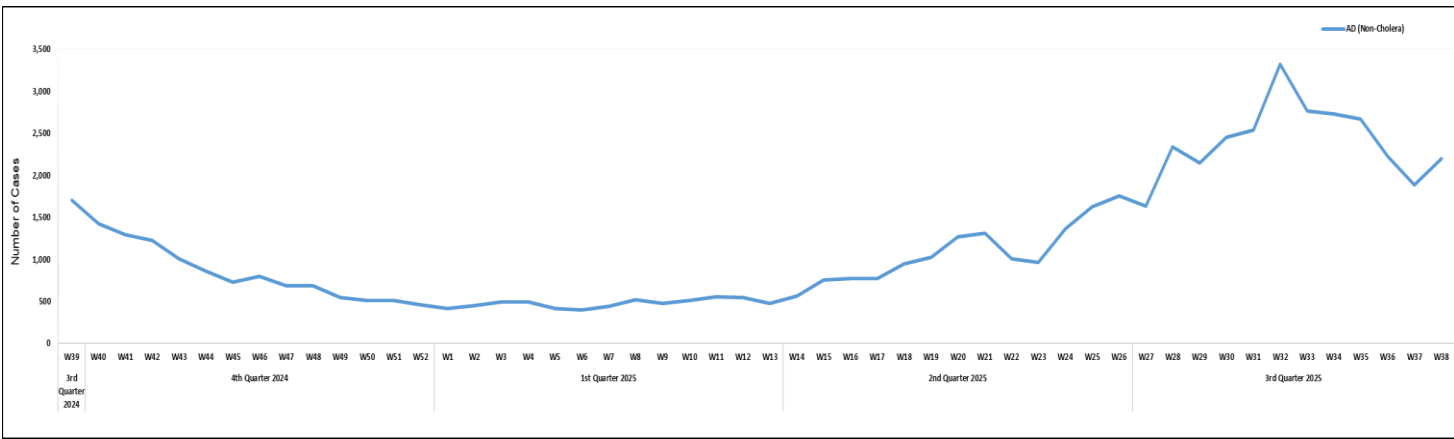


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epi Week 38

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)	59	0	-	-	0	0	-	-	15	3	-	-	-	-
Stool culture & Sensitivity	226	5	-	-	0	0	-	-	-	-	-	-	-	-
Malaria	13,630	1,023	-	-	8,160	35	-	-	98	1	-	-	60	2
CCHF	1	0	4	0	0	0	-	-	-	-	-	-	-	-
Dengue	5,438	1,174	-	-	10,533	81	-	-	-	-	-	-	362	82
VH (B)	14,318	478	10	8	34	14	-	-	1,243	21	-	-	574	10
VH (C)	14,752	1,331	54	21	61	16	-	-	1,313	8	-	-	574	36
VH (D)	224	51	-	-	0	0	-	-	-	-	-	-	-	-
VH (A)	349	67	-	-	0	0	-	-	3	0	-	-	-	-
VH (E)	120	7	-	-	0	0	-	-	-	-	-	-	-	-
Covid-19	23	0	8	2	7	0	-	-	-	-	-	-	10	0
TB	608	52	-	-	0	0	-	-	43	0	-	-	93	8
HIV/ AIDS	5,117	51	-	-	1,633	1	-	-	124	0	-	-	513	0
Syphilis	1,230	16	-	-	0	0	-	-	87	0	-	-	-	-
Typhoid	2,291	60	-	-	0	0	-	-	136	17	-	-	-	-
Diphtheria	11	5	-	-	38	26	3	2	-	-	4	3		
ILI	19	5	-	-	0	0	-	-	-	-	-	-	-	-
Pneumonia (ALRI)	356	69	-	-	0	0	-	-	-	-	-	-	-	-
Meningitis	42	2	-	-	0	0	-	-	-	-	-	-	-	-
Measles	77	24	23	8	261	118	3	1	6	4	198	42	6	3
Rubella (CRS)	21	8	-	-	0	0	-	-	-	-	-	-	-	-
Leishmaniasis (cutaneous)	16	2	-	-	2	0	-	-	-	-	-	-	-	-
Chikungunya	3	0	-	-	0	0	-	-	-	-	-	-	-	-
Gonorrhea	124	0	-	-	0	0	-	-	-	-	-	-	-	-
Brucellosis	2	0	-	-	0	0	-	-	-	-	-	-	-	-

IDSR Reports Compliance

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

Table 6: IDSR reporting districts Week 38, 2025

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	101	91%
	Bannu	238	132	55%
	Battagram	59	36	61%
	Buner	34	17	50%
	Bajaur	44	38	86%
	Charsadda	59	57	97%
	Chitral Upper	34	29	85%
	Chitral Lower	35	34	97%
	D.I. Khan	114	112	98%
	Dir Lower	74	62	84%
	Dir Upper	37	28	76%
	Hangu	22	19	86%
	Haripur	72	69	96%
	Karak	36	36	100%
	Khyber	53	46	87%
	Kohat	61	61	100%
	Kohistan Lower	11	9	82%
	Kohistan Upper	20	16	80%
	Kolai Palas	10	9	90%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	5	12%
	Upper Kurram	41	31	76%
	Malakand	42	23	55%
	Mansehra	133	95	71%
	Mardan	80	42	53%
	Nowshera	56	54	96%
	North Waziristan	13	9	69%
	Peshawar	156	130	83%
	Shangla	37	32	86%
	Swabi	64	60	94%
	Swat	77	74	96%
	South Waziristan (Upper)	93	93	100%
	South Waziristan (Lower)	42	28	67%
	Tank	34	31	91%
	Torghar	14	14	100%
	Mohmand	68	41	60%
	Orakzai	69	10	14%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	92	87	95%
	Kotli	60	60	100%
	Muzaffarabad	45	41	91%
	Poonch	46	46	100%
	Haveli	39	39	100%
	Bagh	54	54	100%
	Neelum	39	39	100%



	Jhelum Velley	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	23	21	91%
	CDA	15	5	33%
Balochistan	Gwadar	26	1	4%
	Kech	44	37	84%
	Khuzdar	74	6	8%
	Killa Abdullah	26	24	92%
	Lasbella	55	55	100%
	Pishin	69	33	48%
	Quetta	55	33	60%
	Sibi	36	36	100%
	Zhob	39	11	28%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	0	0%
	Kohlu	75	32	43%
	Chagi	36	25	69%
	Kalat	41	40	98%
	Harnai	17	16	94%
	Kachhi (Bolan)	35	18	51%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	8	25%
	Mastung	45	45	100%
	Loralai	33	25	76%
	Killa Saifullah	28	26	93%
	Ziarat	29	12	41%
	Duki	31	0	0%
	Nushki	32	29	91%
	Dera Bugti	45	29	64%
	Washuk	46	0	0%
	Panjgur	38	4	11%
	Awaran	23	0	0%
	Chaman	24	24	100%
	Barkhan	20	19	95%
	Hub	33	16	48%
	Musakhel	41	25	61%
	Usta Muhammad	34	33	97%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	38	100%
	Gilgit	44	44	100%
	Diamer	62	58	94%
	Astore	55	55	100%
	Shigar	27	25	93%
	Skardu	53	52	98%
	Ganche	29	29	100%

	Kharmang	46	25	54%
Sindh	Hyderabad	72	72	100%
	Ghotki	64	64	100%
	Umerkot	62	62	100%
	Naushahro Feroze	107	102	95%
	Tharparkar	276	261	95%
	Shikarpur	60	59	98%
	Thatta	52	52	100%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	21	14	67%
	Karachi-West	20	20	100%
	Karachi-Malir	35	31	89%
	Karachi-Kemari	22	22	100%
	Karachi-Central	12	9	75%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	53	96%
	Mirpur Khas	106	105	99%
	Badin	124	124	100%
	Sukkur	64	63	98%
	Dadu	90	90	100%
	Sanghar	100	98	98%
	Jacobabad	44	44	100%
	Khairpur	170	168	99%
	Kashmore	59	59	100%
	Matari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	41	41	100%
	Shaheed Benazirabad	122	122	100%

Table 7: IDSR reporting Tertiary care hospital Week 38, 2025

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	3	2	67%
	Sukkur	1	0	0%
	Shaheed Benazirabad	1	0	0%
	Karachi-East	1	1	100%
	Karachi-Central	1	0	0%
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%

Notes From Field

Dengue Outbreak Investigation Report Union Council Rajjar-1, Village Council Amir Abad, District Charsadda, Khyber Pakhtunkhwa (July-August 2025)

Introduction

Dengue fever is a mosquito-borne viral infection caused by the dengue virus (DENV), primarily transmitted through the bite of infected *Aedes aegypti* mosquitoes. Globally, dengue affects an estimated 390 million people annually, with approximately 96 million developing clinical illness. The disease is endemic in over 120 countries, predominantly in tropical and subtropical regions, and continues to expand due to urbanization, climate change, and inadequate vector control.

In South Asia, Pakistan has experienced recurrent dengue epidemics since 2005, with major outbreaks recorded in Punjab, Sindh, and Khyber Pakhtunkhwa (KP). Notable episodes occurred in Swat (2013), Peshawar (2017 and 2022), and Mardan (2023). In July 2025, an unusual increase in dengue cases was reported from Union Council (UC) Rajjar-1, District Charsadda, KP, prompting a field investigation to determine the magnitude, identify contributing risk factors, and recommend preventive measures.

Objectives:

1. To determine the magnitude of the outbreak by area and gender.
2. To identify risk factors associated with dengue transmission.
3. To recommend evidence-based control and preventive measures.

Methods

A case-control study was conducted in UC Rajjar-1, District Charsadda (population 49,985) from 15 July to 29 August 2025 to investigate the

suspected outbreak. The study population included residents of all ages and both genders living in the affected area.

A suspected case was defined as any person with fever and at least two symptoms among headache, retro-orbital pain, myalgia, arthralgia, rash, or bleeding manifestations. A probable case was defined as a suspected case with thrombocytopenia ($<100,000$ cells/mm³) or leukopenia ($<4,000$ cells/mm³). A confirmed case was a probable case with laboratory confirmation through NS1 antigen or PCR testing.

Active case finding was conducted through house-to-house visits, review of outpatient and inpatient registers at local health facilities, and verification of line-listed cases. A structured questionnaire was used to collect information on demographic, clinical, environmental, and behavioral characteristics. Laboratory testing for dengue NS1 antigen and IgM antibodies was conducted at the Provincial Health Reference Laboratory (PHRL), Peshawar.

For the analytical component, 57 laboratory-confirmed dengue cases were compared with 114 community-based controls matched by age and sex to evaluate exposure to potential risk factors. Descriptive analysis was performed to generate frequencies and attack rates, while odds ratios (OR) with 95% confidence intervals (CI) were calculated to assess associations between exposure variables and disease occurrence.

Results

Between 13 July and 29 August 2025, a total of 409 dengue cases were identified in UC Rajjar-1, confirming a community outbreak. The mean age of affected individuals was 31 years, with males accounting for 54% of the cases. The overall attack rate was 2.27% (409/17,993 population), with slightly higher attack rates among males (2.36%) compared to females (2.18%). Age-specific attack rates were highest among individuals aged 70 years and above (9.4%), followed by 60–69 years (7.6%) and 40–49 years (4.4%), while the lowest rate was among the 10–19-year age group (1.3%).



Clinically, all cases presented with fever (100%), while headache (88%), myalgia (81%), arthralgia (72%), vomiting (65%), retro-orbital pain (54%), and skin rash (38%) were frequently reported. Laboratory confirmation identified dengue virus serotype 2 (DENV-2) as the circulating strain, indicating local transmission sustained by *Aedes aegypti* mosquitoes.

The case-control analysis identified several key risk factors. Non-use of long-lasting insecticidal nets (LLINs) was strongly associated with disease occurrence, showing a protective effect against infection (OR = 0.13; 95% CI: 0.06–0.27; $p < 0.001$). The presence of open water containers (59.6% among cases) and stagnant water near households (49.1%) significantly increased the risk of exposure. Moreover, 75.4% of affected households had not received indoor residual spraying in the previous six months compared with 50% among controls. No statistically significant association was observed with recent travel history, visible larvae, or use of mosquito repellents. The epidemic curve showed that case numbers peaked in early August and declined by late August following the implementation of vector control and community awareness interventions.

Discussion

This investigation confirmed local transmission of dengue virus serotype 2 (DENV-2) in UC Rajjar-1, District Charsadda, during July–August 2025. The overall attack rate (2.27%) was comparable to prior outbreaks in Khyber Pakhtunkhwa but showed a higher burden among older adults, possibly due to increased outdoor exposure and pre-existing health vulnerabilities. The male predominance observed was consistent with regional patterns where occupational and mobility-related factors heighten exposure risk.

Environmental and behavioral conditions particularly stagnant water, uncovered water containers, inadequate waste disposal, and low utilization of insecticidal nets were major contributors to disease transmission. The strong protective association of LLIN use underscores the importance of consistent personal preventive measures. Weaknesses in early

detection, surveillance sensitivity, and pre-monsoon vector control activities delayed response initiation. However, subsequent interventions fogging, larviciding, and intensified community engagement helped curb transmission by late August. These findings reaffirm that sustainable dengue control requires an integrated vector management strategy supported by community participation and routine surveillance strengthening.

Conclusion

The dengue outbreak in UC Rajjar-1, District Charsadda, was confirmed through active case detection and laboratory verification, with DENV-2 identified as the causative serotype. Environmental conditions, insufficient vector control, and low community awareness were key drivers of transmission. Strengthened surveillance, environmental management, and intersectoral collaboration are critical to prevent future dengue outbreaks in the region.

Recommendations

1. Strengthen dengue surveillance at the Union Council level with early warning systems and real-time data reporting.
2. Conduct pre-monsoon vector control operations, including larval source reduction, solid waste management, and targeted fogging.
3. Intensify community engagement through behavior change communication focusing on “Search and Destroy” practices and safe water storage.
4. Promote consistent use of LLINs and mosquito repellents, particularly among high-risk groups.
5. Enhance laboratory diagnostic capacity to facilitate early case confirmation and timely public health response.
6. Foster interdepartmental collaboration among health, municipal, and environmental agencies to ensure integrated vector management.

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Knowledge Hub

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. Transmission occurs through contact with infected animals or consumption of contaminated animal products.
- Eating Contaminated Foods: This is the most common route.

- Consuming unpasteurized (raw) milk, cheese, or ice cream from infected animals (especially goats, sheep, or cows).
- Eating undercooked meat from infected animals.
- Occupational Exposure (Direct Contact): People who work with animals are at high risk.
- Coming into contact with blood, urine, vaginal discharge, or, most dangerously, placentas and fetuses of infected animals (e.g., veterinarians, farmers, slaughterhouse workers).
- The bacteria can enter the body through cuts, abrasions, or the mucous membranes (eyes, nose, mouth).
- Inhalation: Breathing in the bacteria, which can happen in laboratories or slaughterhouses.

Signs & Symptoms

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:

- Fever: The defining feature is the undulating fever rising in the evening and dropping in the morning.
- Sweating: 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.

Complications

Although brucellosis is rarely fatal (less than 2%), it can lead to severe and chronic complications if not properly treated, often affecting the joints and central nervous system.

- 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

- Prevention focuses heavily on controlling the disease in animals and protecting humans from exposure.

Food Safety:

- Avoid consuming unpasteurized milk, cheese, and ice cream. Boiling milk or buying products labeled "pasteurized" kills the bacteria.
- Cook meat thoroughly (well-done).

Occupational Protection:

- 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.

Laboratory Safety

- Proper safety protocols are required when handling *Brucella* bacteria in a laboratory setting.

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: Brucellosis is treatable with antibiotics.

Treatment 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/fact-sheets/detail/brucellosis>
3. Public Health Agency of Canada (PHAC): <https://www.canada.ca/en/public-health/services/diseases/brucellosis.html>
4. UK Health Security Agency (UKHSA): <https://www.gov.uk/guidance/brucellosis-guidance-data-and-analysis>

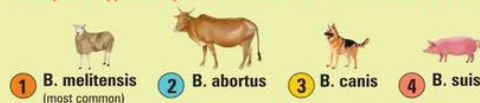


WHAT WE NEED TO KNOW ABOUT BRUCELLOSIS

- 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 coccobacilli
- Humans can get infection from Cattle, Buffalo, Sheep, Goats, Pigs & Dogs

Mainly four types of species in which Brucellosis found in India



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?



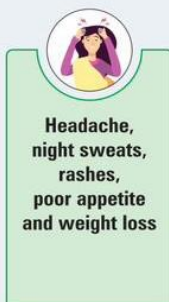
H/O eating raw dairy products



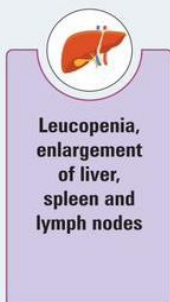
H/O Occupational exposure
(Veterinarians, Dairy Farmers, Abattoir Workers, Livestock Handlers)



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
Doxycycline 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

	https://phb.nih.org.pk/		https://twitter.com/NIH_Pakistan
	idsr-pak@nih.org.pk		https://www.facebook.com/NIH.PK/