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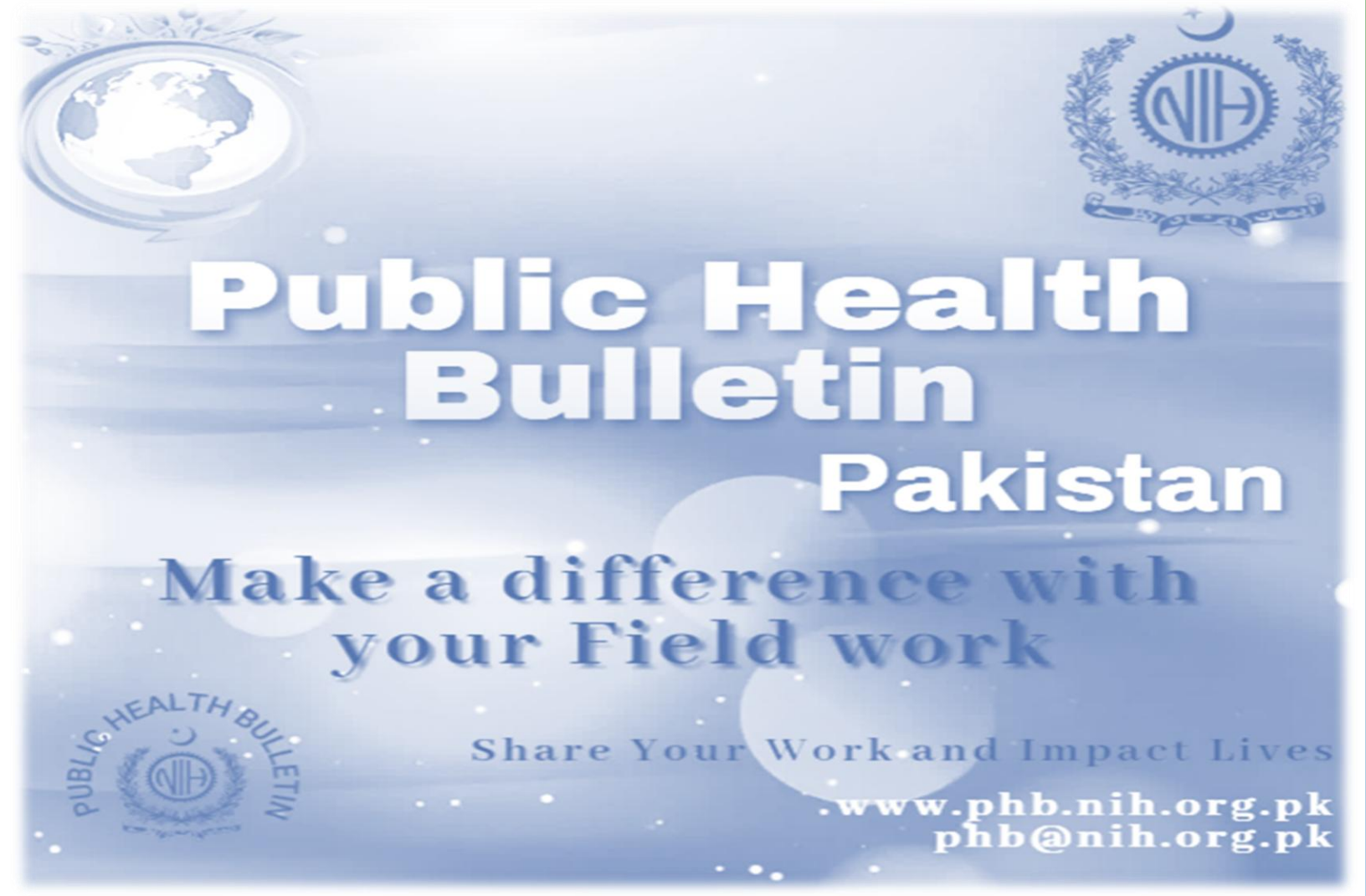
Integrated Disease Surveillance & Response (IDSR) Report

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 35, 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;

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

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

Note: All reported cases in this report are suspected cases

- *During Week 35, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, TB, ALRI <5 years, B. Diarrhea, VH (B, C & D), Dog bite, Typhoid and SARI.*
- *Twenty-three cases of AFP reported from KP, thirteen cases from Sindh and three from AJK and GB each.*
- *Twenty-three suspected cases of HIV/ AIDS reported from Sindh, two from KP and one from AJK.*
- *One suspected case of CCHF is reported from Sindh.*
- *Among VPDs, there is an increase in number of cases of Measles, AFP, Pertussis, NT and Diphtheria this week.*
- *Among Respiratory diseases, there is an increase in number of cases of ILI, TB and ALRI <5 years this week.*
- *Among Water/food-borne diseases, there is an increase in number of cases of AWD (S. Cholera) this week.*
- *Among Vector-borne diseases, there is an increase in number of cases of Malaria 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 78%*
- *AJK is the top reporting region with a compliance rate of 98%, followed by Sindh 97%, GB 91% and ICT 79%.*
- *The lowest compliance rate was observed in KP 65% and Balochistan 61%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2704	1753	65
Azad Jammu Kashmir	454	445	98
Islamabad Capital Territory	38	30	79
Balochistan	1308	799	61
Gilgit Baltistan	410	372	91
Sindh	2111	2049	97
National	7025	5448	78

Public Health Actions

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

Meningitis

- **Strengthen Surveillance and Outbreak Detection:** Enhance meningitis case reporting under IDSR by training healthcare providers on syndromic case definitions and ensuring rapid notification of suspected cases and clusters.
- **Improve Laboratory Confirmation:** Expand diagnostic capacity for cerebrospinal fluid (CSF) analysis, including culture, Gram stain, latex agglutination, and PCR to identify causative organisms (*Neisseria meningitidis, Streptococcus pneumoniae, Haemophilus influenzae*).
- **Ensure Prompt Case Management:** Train healthcare workers to recognize early signs of meningitis and provide immediate treatment with appropriate antibiotics; ensure availability of essential medicines at all levels.
- **Support Preventive Vaccination:** Promote meningococcal, pneumococcal, and Hib vaccines through routine immunization and outbreak response vaccination campaigns in high-risk populations.
- **Raise Public Awareness and Risk Communication:** Conduct community education on early symptoms (sudden fever, stiff neck, altered consciousness), importance of early care-seeking, and preventive practices during outbreaks (avoiding overcrowding).

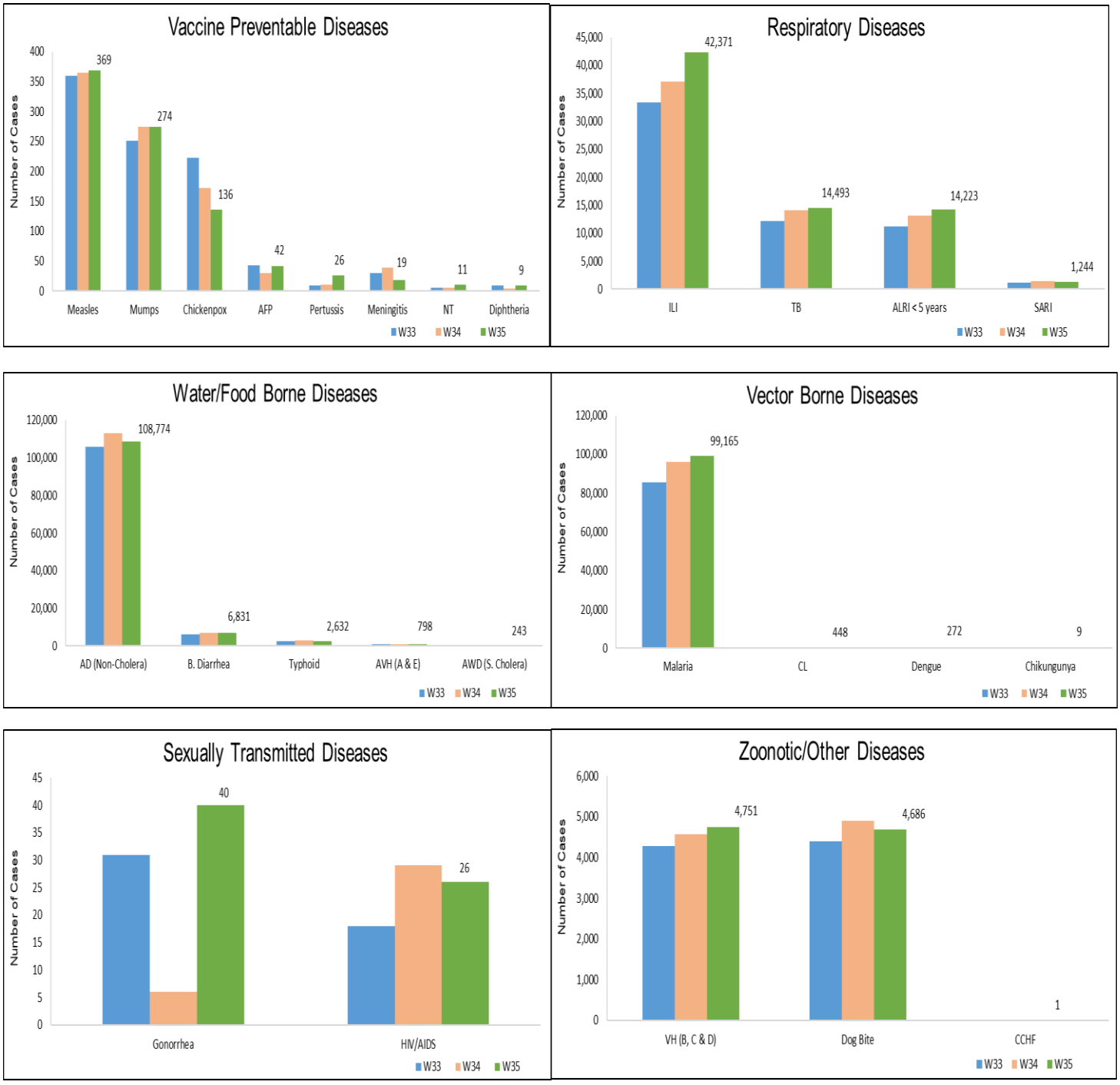
Neonatal Tetanus (NNT)

- **Strengthen Surveillance and Case Detection:** Integrate neonatal tetanus surveillance into IDSR, with active case finding in high-risk areas and immediate notification of suspected cases.
- **Ensure Maternal Immunization:** Scale up coverage of tetanus toxoid (TT) vaccination among pregnant women and women of childbearing age through routine immunization and supplemental campaigns.
- **Promote Clean Delivery and Cord Care:** Train skilled birth attendants and community health workers in clean delivery practices and hygienic cord care; discourage harmful traditional practices.
- **Ensure Prompt Case Management:** Strengthen referral systems and availability of tetanus antitoxin (TAT), antibiotics, and supportive care for suspected cases.
- **Conduct Community Awareness Campaigns:** Educate families and communities on the importance of maternal immunization, safe delivery, and hygienic newborn care to prevent tetanus.
- **Strengthen Partnerships:** Collaborate with maternal and child health programs, traditional birth attendants, and community leaders to reach underserved populations with immunization and safe birth interventions.

Table 1: Province/Area wise distribution of most frequently reported suspected cases during week 35, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (non-cholera)	2254	8231	2672	582	41750	NR	53285	108774
Malaria	4	4516	1	0	9072	NR	85572	99165
ILI	1932	5809	352	1551	4470	NR	28257	42371
TB	106	111	157	19	331	NR	13769	14493
ALRI < 5 years	822	1729	614	1	893	NR	10164	14223
B. Diarrhea	84	1379	165	14	1195	NR	3994	6831
VH (B, C & D)	11	99	4	1	122	NR	4514	4751
Dog Bite	129	379	4	0	998	NR	3176	4686
Typhoid	15	446	191	2	777	NR	1201	2632
SARI	82	537	167	0	392	NR	66	1244
AVH (A & E)	10	10	7	0	237	NR	534	798
CL	1	139	0	0	298	NR	10	448
Measles	8	29	39	0	241	NR	52	369
Mumps	2	57	5	0	155	NR	55	274
Dengue	40	4	0	0	173	NR	55	272
AWD (S.Cholera)	10	110	67	0	55	NR	1	243
Chickenpox/ Varicella	12	8	27	1	78	NR	10	136
AFP	3	0	3	0	23	NR	13	42
Gonorrhea	0	30	0	0	6	NR	4	40
HIV/AIDS	1	0	0	0	2	NR	23	26
Pertussis	0	17	1	0	7	NR	1	26
Meningitis	5	0	3	0	10	NR	1	19
NT	0	0	0	0	2	NR	9	11
Chikungunya	0	0	0	0	0	NR	9	9
Diphtheria (Probable)	0	0	0	0	4	NR	5	9
CCHF	0	0	0	0	0	NR	1	1

Figure 1: Most frequently reported suspected cases during week 35, Pakistan.



Sindh

- Malaria cases were maximum followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, Dog Bite, Typhoid and AVH (A & E).
- Malaria cases are mostly from Larkana, Badin and Khairpur whereas AD (Non-Cholera) cases are from Sujawal, Badin and Mirpurkhas.
- Thirteen cases of AFP reported from Sindh. They are suspected cases and need field verification.
- There is a decline in number of cases of AD (Non-Cholera), B. Diarrhea, Dog Bite, Typhoid, SARI, Dengue, Chickenpox, Chikungunya, Gonorrhea, Meningitis and Pertussis while an increase in number of cases of Malaria, ILI, TB, ALRI<5 Years, VH (B, C & D), AVH (A & E) Mumps, Measles, HIV/ AIDS, AFP, CL, NT and Diphtheria this week.

Table 2: District wise distribution of most frequently reported suspected cases during week 35, Sindh

Districts	Malaria	AD (non-cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A & E)
Badin	6555	3648	2585	991	495	129	351	189	67	4
Dadu	4070	2733	550	614	918	71	427	475	116	204
Ghotki	5169	1442	51	618	538	527	121	233	0	0
Hyderabad	1267	2763	1434	416	178	97	67	51	6	9
Jacobabad	1438	841	607	196	665	97	133	175	33	0
Jamshoro	3618	1800	94	711	386	155	91	88	45	7
Kamber	4191	2273	1	836	274	95	110	163	23	0
Karachi Central	41	1216	1416	218	3	19	15	10	163	5
Karachi East	69	352	197	27	13	0	1	1	21	0
Karachi Keamari	26	735	357	5	13	0	1	0	3	0
Karachi Korangi	94	382	52	27	4	1	1	0	0	0
Karachi Malir	244	1770	3098	196	324	7	87	49	29	14
Karachi South	1	111	3	0	0	0	0	0	0	0
Karachi West	301	764	1052	66	200	14	19	51	22	5
Kashmore	1984	385	288	217	114	11	73	74	0	1
Khairpur	6153	2748	6030	1132	889	252	327	229	183	7
Larkana	6583	1868	0	875	205	39	291	41	8	2
Matiari	4922	1920	0	706	169	416	67	75	5	5
Mirpurkhas	5148	3102	3076	951	389	61	122	180	108	77
Naushero Feroze	2829	1716	803	504	641	38	400	226	164	1
Sanghar	5773	2159	127	1176	358	1228	76	130	30	6
Shaheed Benazirabad	3230	2050	5	345	192	139	115	122	105	1
Shikarpur	2330	1277	3	234	152	282	191	206	3	0
Sujawal	2115	4468	8	96	308	44	224	67	9	6
Sukkur	2285	1527	1946	384	809	118	122	104	3	0
Tando Allahyar	3554	1655	847	485	179	372	89	85	4	4
Tando Muhammad Khan	3156	1676	75	737	204	68	134	52	4	1
Tharparkar	3364	2620	1284	632	623	38	163	1	26	31
Thatta	1905	1597	2268	84	616	138	76	99	1	137
Umerkot	3157	1687	0	290	305	58	100	0	20	7
Total	85572	53285	28257	13769	10164	4514	3994	3176	1201	534

Figure 2: Most frequently reported suspected cases during week 35, Sindh

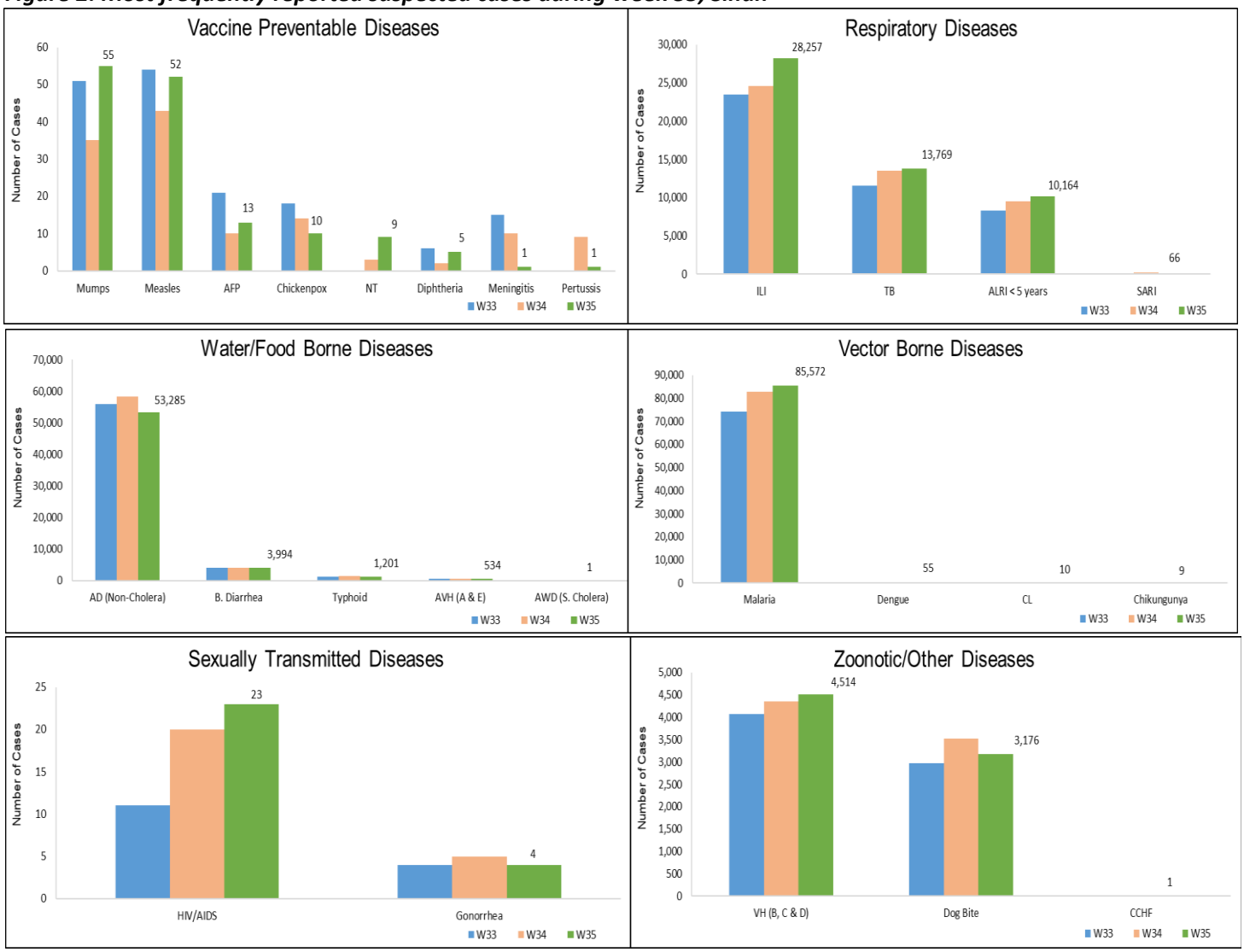
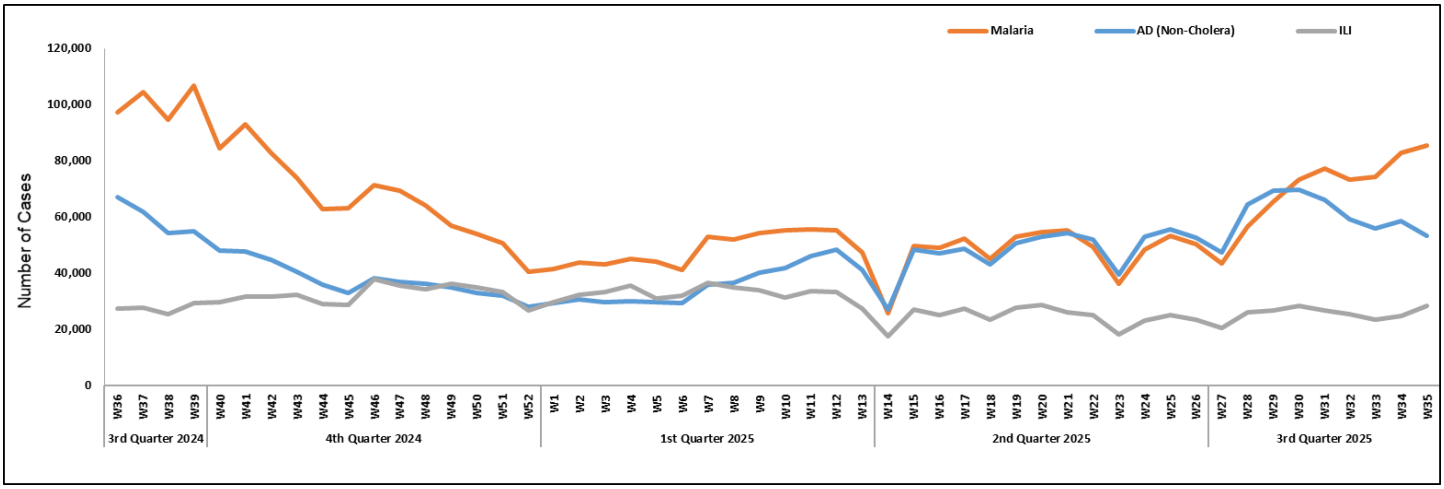


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh



Balochistan

- AD (Non-Cholera), ILI, Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, Dog Bite, CL and TB cases were the most frequently reported diseases from Balochistan province.
- AD (Non-Cholera) cases are mostly reported from Quetta, Kech (Turbat) and Usta Muhammad while ILI cases are mostly reported from Kech (Turbat), Quetta and Kharan.
- No case of HIV/AIDs reported from Balochistan.
- AD (Non-Cholera), ILI, Malaria, ALRI <5 years, B. Diarrhea, SARI, Dog Bite, TB, AWD (S. Cholera), VH (B, C & D), Mumps, Gonorrhea, Measles, Pertussis and AVH (A & E) showed an increase in number of cases while a decline in number of cases of Typhoid, CL, Chickenpox and Dengue was observed this week.

Table 3: District wise distribution of most frequently reported suspected cases during week 35, Balochistan

Districts	AD (non-cholera)	ILI	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dog Bite	CL	TB
Barkhan	98	58	79	17	6	0	36	25	0	9
Chagai	137	251	67	0	43	0	13	0	0	1
Chaman	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dera Bugti	123	0	122	0	10	0	0	0	0	0
Duki	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Gwadar	17	23	4	2	8	0	7	2	0	0
Harnai	238	0	88	182	84	0	0	0	0	0
Hub	273	50	157	0	9	0	1	0	2	1
Jaffarabad	463	144	663	5	66	36	5	108	99	58
Jhal Magsi	324	446	282	2	3	0	10	13	0	1
Kachhi (Bolan)	260	21	133	63	47	72	20	32	13	4
Kalat	33	4	35	10	8	0	12	0	0	0
Kech (Turbat)	770	1028	785	117	115	3	0	0	2	0
Kharan	195	462	35	1	87	10	7	0	0	0
Khuzdar	163	187	108	6	28	29	32	0	0	1
Killa Abdullah	111	56	1	4	28	26	6	2	0	1
Killa Saifullah	354	0	255	351	98	36	51	10	0	0
Kohlu	171	339	124	20	103	7	35	2	0	1
Lasbella	488	72	397	171	26	3	21	12	7	2
Loralai	277	330	68	43	38	72	20	4	0	0
Mastung	192	178	144	37	18	40	18	0	0	3
MusaKhel	42	33	119	23	14	10	21	1	0	0
Naseerabad	328	16	125	6	9	22	31	111	1	7
Nushki	173	7	8	0	40	3	0	0	0	0
Panjgur	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Pishin	485	376	32	67	140	29	28	7	3	2
Quetta	784	821	31	168	78	58	20	1	4	0
Sherani	49	35	8	5	11	0	0	0	0	0
Sibi	352	370	188	52	28	58	16	1	8	2
Sohbat pur	314	12	89	151	82	6	12	2	0	2
Surab	21	65	0	0	0	0	0	0	0	0
Usta Muhammad	636	129	188	122	95	6	19	31	0	0
Washuk	73	115	65	3	17	0	0	0	0	0
Zhob	156	51	61	77	5	7	2	0	0	16
Ziarat	131	130	55	24	35	4	3	15	0	0
Total	8231	5809	4516	1729	1379	537	446	379	139	111

Figure 4: Most frequently reported suspected cases during week 35, Balochistan

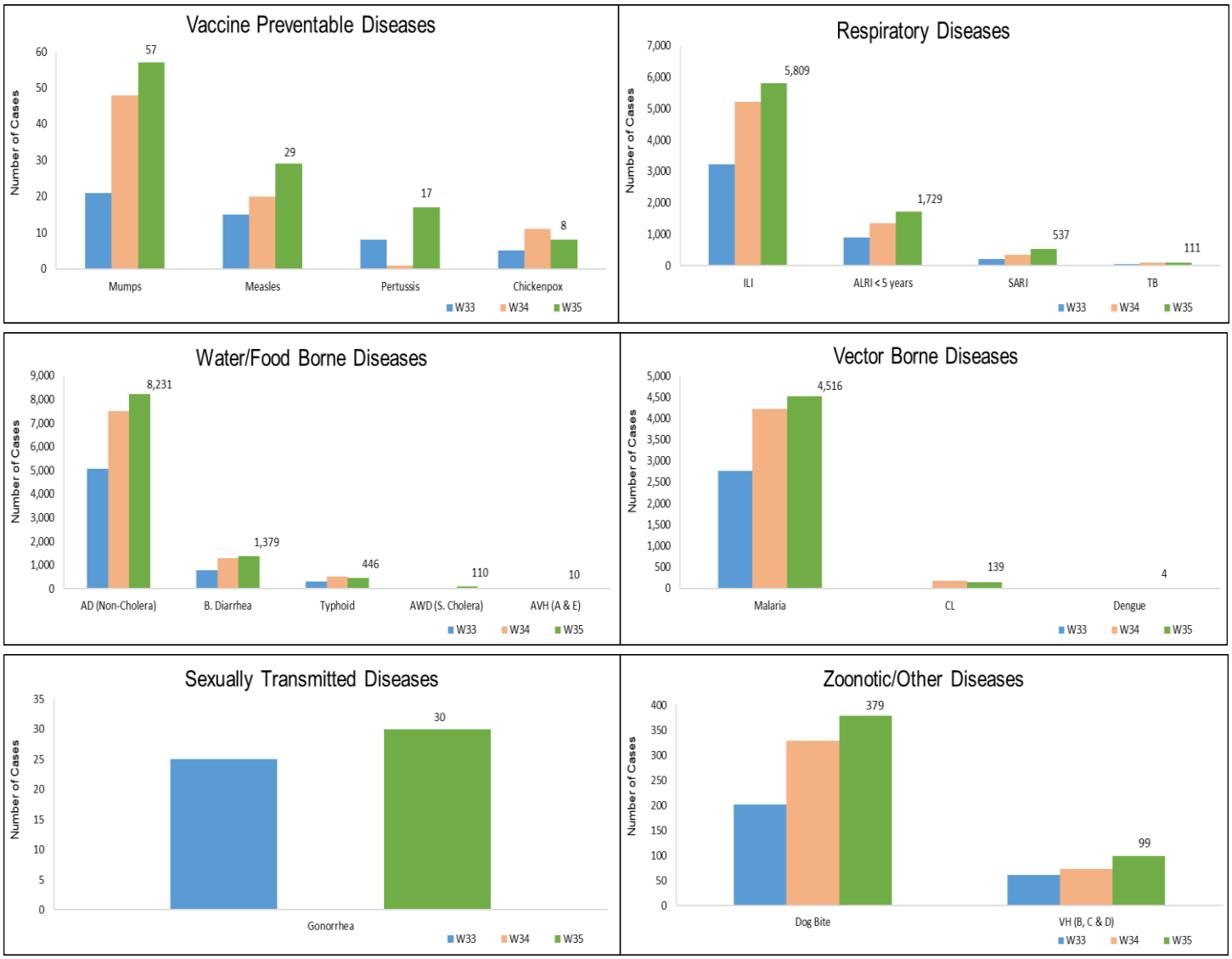
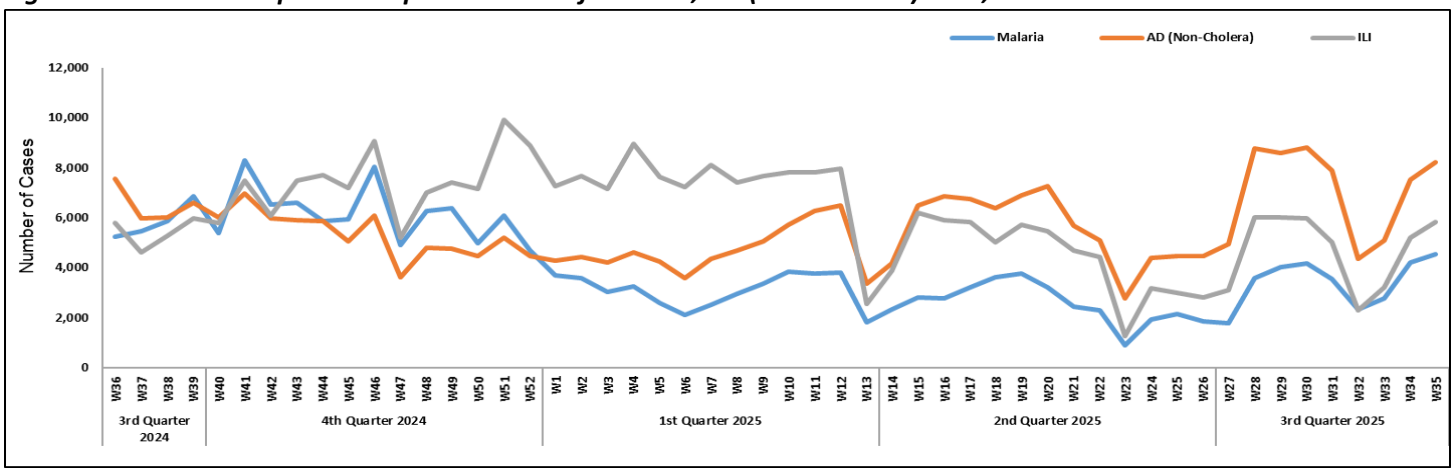


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, B. Diarrhea, Dog Bite, ALRI<5 Years, Typhoid, SARI, TB and CL.
- AD (Non-Cholera), Malaria, ILI, Dog Bite, TB, Dengue, VH (B, C & D), AWD (S. Cholera), AFP, Pertussis, Gonorrhea and Diphtheria cases showed an increase in number while B. Diarrhea, ALRI<5 Years, Typhoid, SARI, CL, Measles, AVH (A & E), Mumps, Chickenpox, Meningitis and HIV/AIDs 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.

Table 4: District wise distribution of most frequently reported suspected cases during week 35, KP

Districts	AD (non-cholera)	Malaria	ILI	B. Diarrhea	Dog Bite	ALRI < 5 years	Typhoid	SARI	TB	CL
Abbottabad	1325	3	58	18	96	9	24	0	9	0
Bajaur	943	369	54	154	86	8	3	38	13	10
Bannu	1055	1515	3	23	4	5	63	3	15	0
Battagram	607	141	714	2	7	0	5	0	32	1
Buner	430	222	0	0	0	0	1	0	0	0
Charsadda	2483	530	1203	109	1	231	47	1	7	1
Chitral Lower	818	42	23	9	14	16	5	15	5	6
Chitral Upper	255	11	29	16	2	11	16	11	2	1
D.I. Khan	1982	642	0	21	21	12	7	0	11	1
Dir Lower	2113	209	0	94	35	7	34	0	2	5
Dir Upper	2046	14	22	38	21	73	15	0	4	2
Hangu	175	109	101	2	1	69	5	0	2	23
Haripur	1740	5	222	0	16	18	6	5	3	0
Karak	722	309	35	15	55	22	12	0	10	156
Khyber	679	631	43	173	41	119	62	4	8	35
Kohat	1031	249	0	46	42	2	12	0	1	8
Kohistan Lower	186	0	3	0	0	0	0	0	0	0
Kohistan Upper	332	39	1	17	0	0	0	0	1	0
Kolai Palas	95	8	8	8	0	1	1	4	1	0
L & C Kurram	36	16	0	9	3	2	2	1	0	0
Lakki Marwat	1037	538	0	13	73	0	18	0	7	0
Malakand	1507	68	30	0	0	0	13	0	3	3
Mansehra	647	0	94	0	0	0	12	0	0	0
Mardan	1433	309	17	35	79	55	21	0	3	0
Mohmand	230	373	88	24	7	1	7	152	4	26
North Waziristan	62	134	0	14	0	22	20	6	2	0
Nowshera	3105	558	12	19	10	1	19	5	26	2
Orakzai	148	72	8	15	4	0	0	0	0	0
Peshawar	5476	119	394	158	8	12	166	0	17	1
Shangla	1852	1195	3	18	51	14	46	0	81	0
South Waziristan (Lower)	72	82	132	0	25	45	11	23	11	13
South Waziristan (Upper)	20	16	5	1	0	0	0	11	0	0
Swabi	1788	126	538	26	148	41	58	17	37	0
Swat	4384	96	444	47	130	81	46	4	6	0
Tank	569	202	44	8	0	8	0	0	5	0
Tor Ghar	153	99	1	21	6	4	6	31	0	4
Upper Kurram	214	21	141	42	12	4	14	61	3	0
Total	41750	9072	4470	1195	998	893	777	392	331	298

Figure 6: Most frequently reported suspected cases during week 35, KP

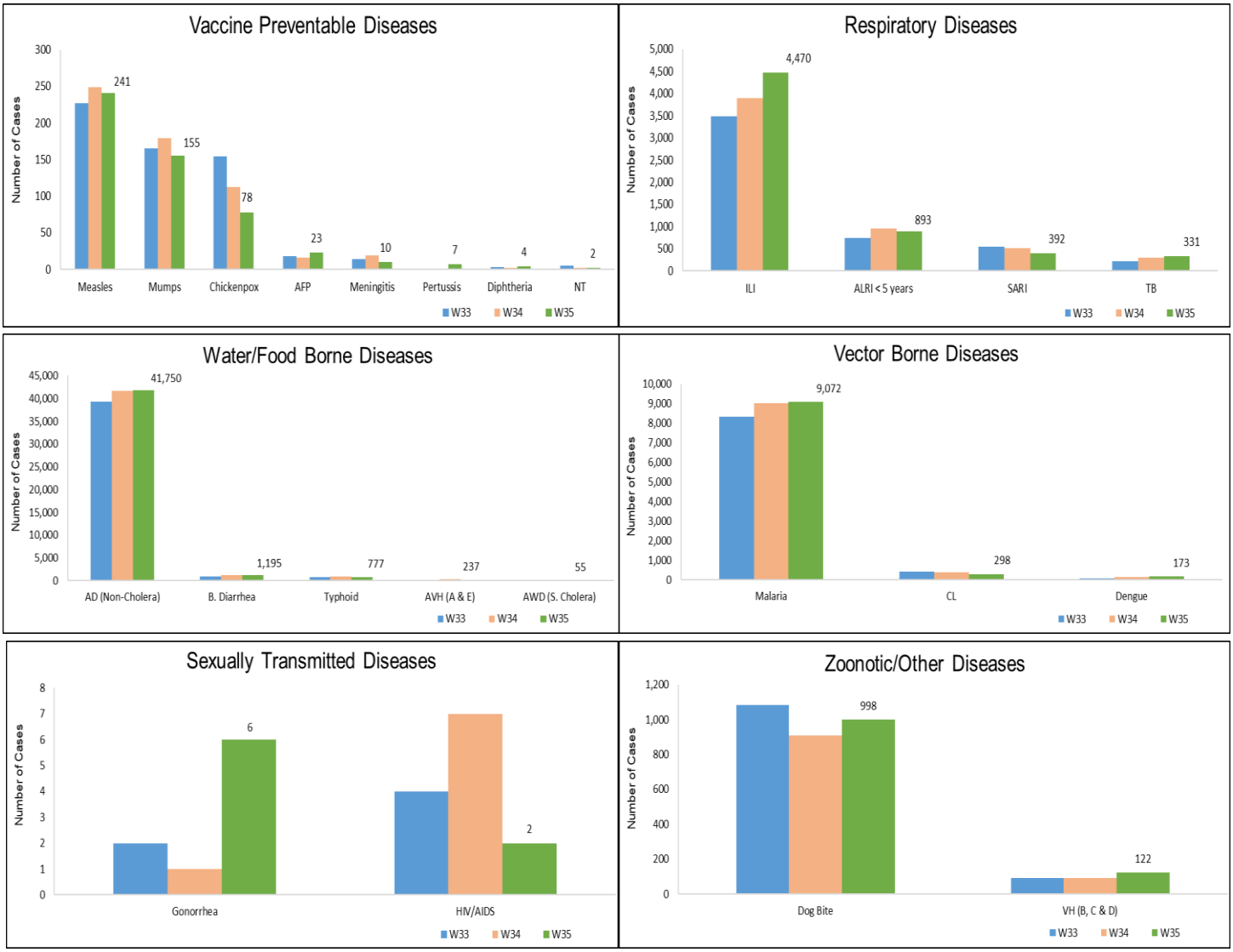
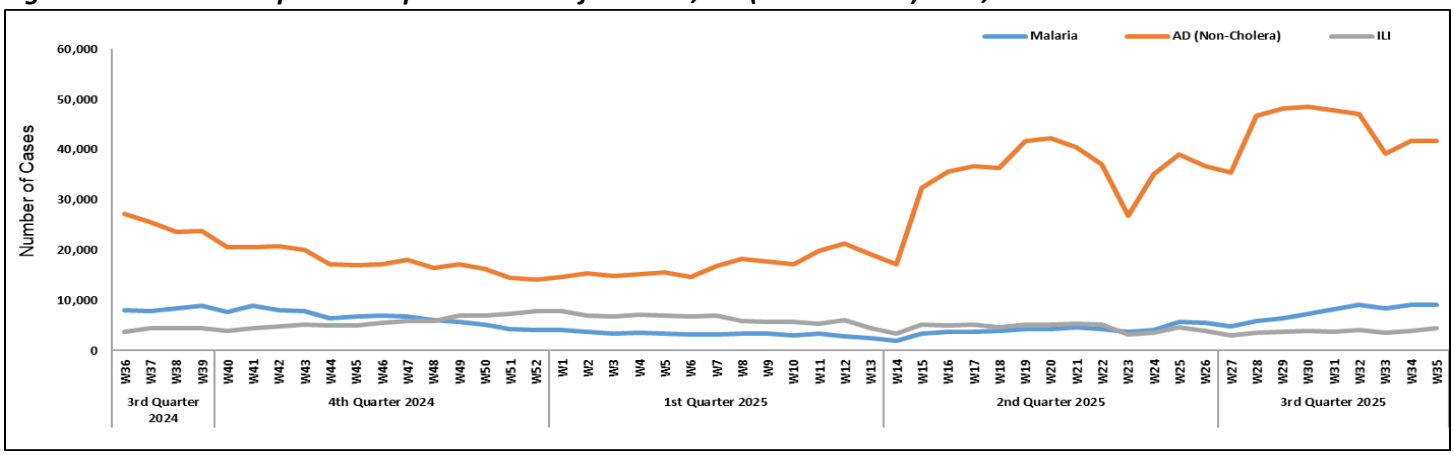


Figure 7: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, KP



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera), TB, B. Diarrhea and Typhoid. ILI and AD (Non-Cholera), TB, B. Diarrhea and Typhoid cases showed an increase in number this week.

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

GB: AD (Non-Cholera) cases were the most frequently reported diseases followed by ALRI <5 Years, ILI, Typhoid, SARI, B. Diarrhea, TB, AWD (S. Cholera), Measles and Chickenpox cases. An increase in cases observed for by ILI, Typhoid, SARI, B. Diarrhea, AWD (S. Cholera) and Chickenpox while a decline is observed for AD (Non-Cholera), TB, Measles and Mumps this week.

Figure 8: Most frequently reported suspected cases during week 35, AJK

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

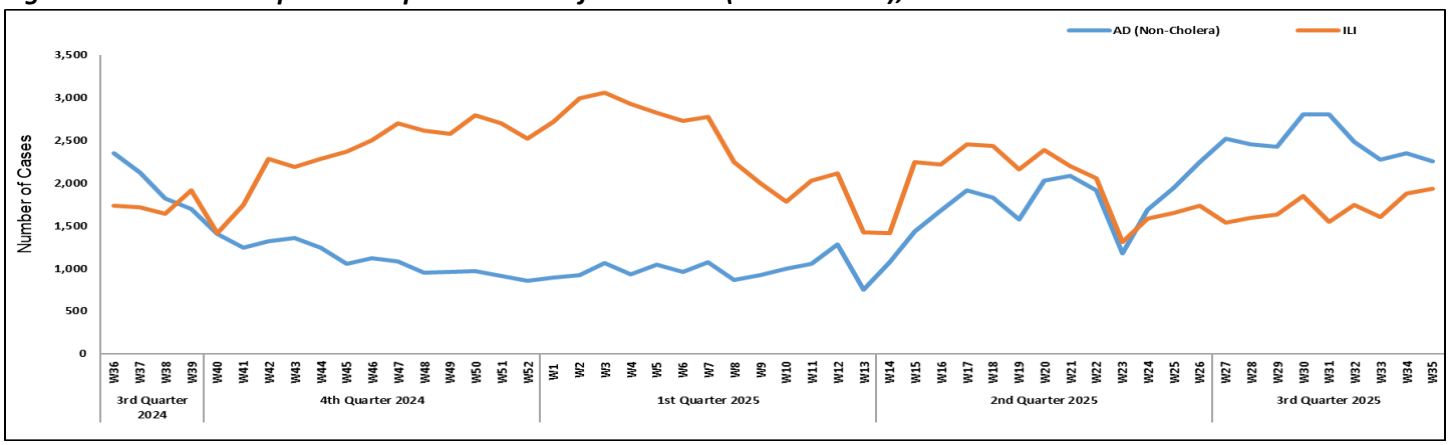


Figure 10: Most frequently reported suspected cases during week 35, ICT

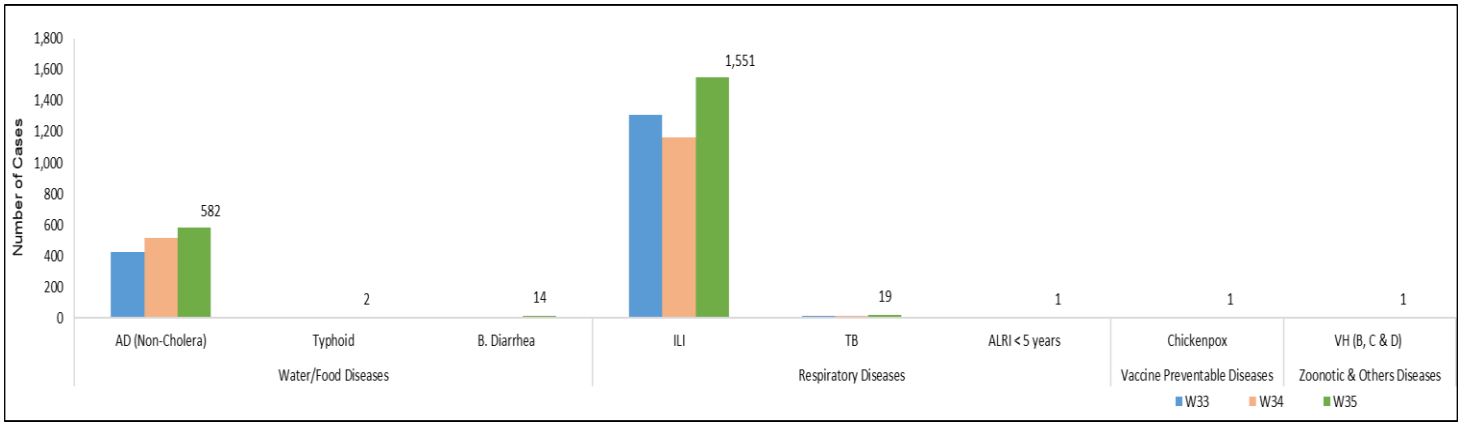


Figure 11: Week wise reported suspected cases of ILI, ICT

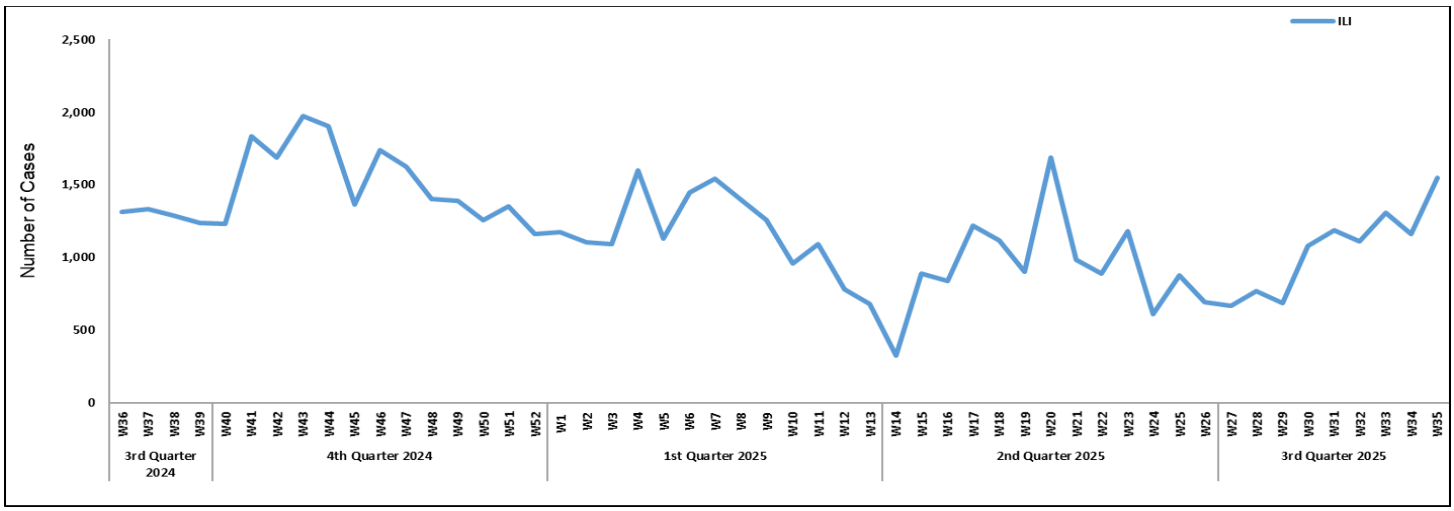


Figure 12: Most frequently reported suspected cases during week 35, GB

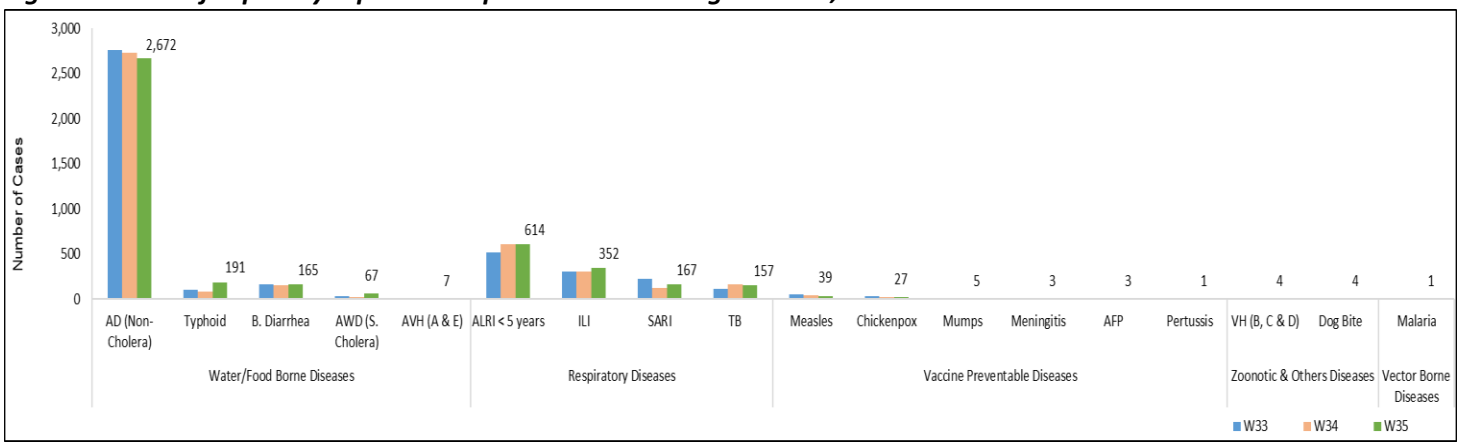


Figure 13: Week wise reported suspected cases of AD (Non-Cholera), GB

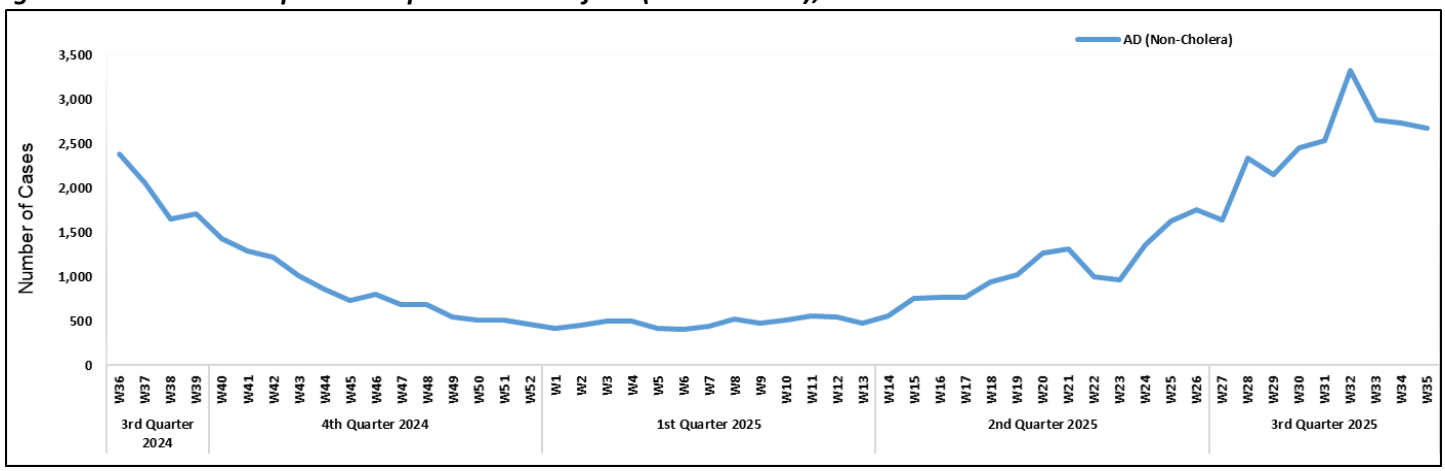


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during epi week 35

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)	43	1	-	-	0	0	0	0	14	9	-	-	0	0
Stool culture & Sensitivity	327	3	-	-	0	0	0	0	0	0	-	-	45	2
Malaria	9,882	1,080	-	-	4,815	55	0	0	117	3	-	-	0	0
CCHF	1	0	3	1	0	0	0	0	0	0	-	-	0	0
Dengue	3,287	541	2	0	4,576	31	0	0	1	1	-	-	0	0
VH (B)	15,970	572	145	111	33	12	0	0	1,016	24	-	-	523	1
VH (C)	16,039	1,297	93	52	101	35	0	0	1,023	2	-	-	519	8
VH (D)	143	40	20	8	0	0	0	0	0	0	-	-	0	0
VH (A)	321	126	-	-	0	0	0	0	7	0	-	-	0	0
VH (E)	142	15	-	-	0	0	0	0	0	0	-	-	0	0
Covid-19	20	0	-	-	0	0	0	0	5	0	-	-	12	0
TB	491	53	-	-	0	0	0	0	46	0	-	-	0	0
HIV/ AIDS	5,586	42	-	-	1,351	1	0	0	194	0	-	-	0	0
Syphilis	1,432	24	-	-	0	0	0	0	104	0	-	-	0	0
Typhoid	1,532	53	-	-	0	0	0	0	58	2	-	-	0	0
Diphtheria	21	7	-	-	12	4	0	0	0	0	4	0	0	0
ILI	18	2	-	-	0	0	0	0	0	0	-	-	0	0
Pneumonia (ALRI)	249	20	-	-	0	0	0	0	0	0	-	-	0	0
Meningitis	6	0	-	-	0	0	0	0	0	0	-	-	0	0
Measles	135	45	22	12	236	126	18	9	17	7	296	44	13	4
Rubella	135	3	22	1	236	4	18	0	17	0	296	1	13	0
Rubella (CRS)	8	5	-	-	0	0	0	0	0	0	-	-	0	0
Leishmaniansis (cutaneous)	15	2	-	-	2	0	0	0	0	0	-	-	0	0
Chikungunya	12	0	2	0	0	0	0	0	8	0	-	-	0	0
Gonorrhea	144	0	-	-	0	0	0	0	0	0	-	-	0	0

Table 6: IDSR reporting districts week 35, 2025

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	102	92%
	Bannu	238	128	54%
	Battagram	59	37	63%
	Buner	34	20	59%
	Bajaur	44	38	86%
	Charsadda	59	58	98%
	Chitral Upper	34	30	88%
	Chitral Lower	35	35	100%
	D.I. Khan	114	114	100%
	Dir Lower	74	63	85%
	Dir Upper	37	31	84%
	Hangu	22	10	45%
	Haripur	72	69	96%
	Karak	36	36	100%
	Khyber	53	48	91%
	Kohat	61	61	100%
	Kohistan Lower	11	8	73%
	Kohistan Upper	20	15	75%
	Kolai Palas	10	9	90%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	8	19%
	Upper Kurram	41	29	71%
	Malakand	42	24	57%
	Mansehra	133	69	52%
	Mardan	80	51	64%
	Nowshera	56	54	96%
	North Waziristan	13	9	69%
	Peshawar	156	134	86%
	Shangla	37	35	95%
	Swabi	64	61	95%
	Swat	77	73	95%
	South Waziristan (Upper)	93	78	84%
	South Waziristan (Lower)	42	26	62%
	Tank	34	31	91%
	Torghar	14	14	100%
	Mohmand	68	60	88%
	SD Peshawar	5	0	0%
	SD Tank	58	4	7%
	Orakzai	69	12	17%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	92	85	92%
	Kotli	60	60	100%
	Muzaffarabad	45	44	98%
	Poonch	46	46	100%

	Haveli	39	39	100%
	Bagh	40	40	100%
	Neelum	39	39	100%
	Jhelum Velley	29	28	97%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	23	23	100%
	CDA	15	7	47%
Balochistan	Gwadar	26	1	4%
	Kech	44	36	82%
	Khuzdar	74	21	28%
	Killa Abdullah	26	15	58%
	Lasbella	55	55	100%
	Pishin	69	27	39%
	Quetta	55	38	69%
	Sibi	36	36	100%
	Zhob	39	15	38%
	Jaffarabad	16	16	100%
	Naserabad	32	31	97%
	Kharan	30	29	97%
	Sherani	15	4	27%
	Kohlu	75	36	48%
	Chagi	36	22	61%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	18	51%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	9	28%
	Mastung	45	45	100%
	Loralai	33	27	82%
	Killa Saifullah	28	24	86%
	Ziarat	29	11	38%
	Duki	31	0	0%
	Nushki	32	29	91%
	Dera Bugti	45	37	82%
	Washuk	46	13	28%
	Panjgur	38	0	0%
	Awaran	23	0	0%
	Chaman	24	0	0%
	Barkhan	20	19	95%
	Hub	33	26	79%
	Musakhel	41	15	37%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	38	100%
	Gilgit	42	40	95%
	Diamer	62	56	90%
	Astore	55	55	100%
	Shigar	27	25	93%

	Skardu	53	53	100%
	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	250	91%
	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	32	91%
	Karachi-Kemari	22	22	100%
	Karachi-Central	12	10	83%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	54	98%
	Mirpur Khas	106	104	98%
	Badin	124	124	100%
	Sukkur	64	63	98%
	Dadu	90	88	98%
	Sanghar	100	99	99%
	Jacobabad	44	44	100%
	Khairpur	170	164	96%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	53	98%
	Tando Muhammad Khan	41	41	100%
	Shaheed Benazirabad	122	122	100%

Table 7: IDSR Reporting Tertiary Care Hospital week 35, 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 the 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:

To determine the magnitude of the outbreak by area and gender.

To identify risk factors associated with dengue transmission.

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/mm^3) or leukopenia (<4,000 cells/mm^3). 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. Data were entered and analyzed using Microsoft Excel. 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, and the male-to-female ratio was 1.17:1 (221 males, 188 females). 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

Strengthen dengue surveillance at the Union Council level with early warning systems and real-time data reporting.

Conduct pre-monsoon vector control operations, including larval source reduction, solid waste management, and targeted fogging.

Intensify community engagement through behavior change communication focusing on "Search and Destroy" practices and safe water storage.

Promote consistent use of LLINs and mosquito repellents, particularly among high-risk groups.

Enhance laboratory diagnostic capacity to facilitate early case confirmation and timely public health response.

Foster interdepartmental collaboration among health, municipal, and environmental agencies to ensure integrated vector management.

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Knowledge Hub

Meningitis: What You Need to Know

Meningitis is a serious inflammation of the protective membranes that surround the brain and spinal cord, called the meninges. It can be caused by various germs, including bacteria, viruses, fungi, and parasites. Meningitis can be life-threatening and requires urgent medical attention.

What is Meningitis?

Meningitis is the swelling (inflammation) of the meninges, the layers of tissue that cover the brain and spinal cord. This inflammation is usually caused by an infection of the fluid surrounding these membranes.

Different types of germs can cause meningitis, and the severity of the illness varies depending on the cause:

Bacterial Meningitis: This is a very serious and potentially fatal form of meningitis. It can develop quickly and lead to severe complications, including brain damage, hearing loss, learning disabilities, or death, even with treatment. Common bacteria include *Streptococcus pneumoniae*, *Neisseria meningitidis* (meningococcus), and *Haemophilus influenzae type b* (Hib).

Viral Meningitis: This is the most common type of meningitis and is usually less severe than bacterial meningitis. Many different viruses can cause it, including enteroviruses, measles, mumps, herpes viruses, and influenza. People with viral meningitis usually recover on their own within 7 to 10 days.

Fungal Meningitis: A rare type of meningitis caused by fungi. It usually occurs in people with weakened immune systems.

Parasitic Meningitis: Also rare, caused by parasites. Some forms, like Primary Amoebic Meningoencephalitis (PAM), are very deadly.

Non-infectious Meningitis: Less common, this can be caused by certain cancers, lupus, head injury, or certain drugs.

How Meningitis Spreads

How meningitis spreads depends on what causes it.

Bacterial and Viral Meningitis (most common types):

Many of the bacteria and viruses that cause meningitis are spread through respiratory droplets from the nose and throat of an infected person. This happens through:

Coughing or sneezing.

Kissing.

Sharing eating utensils, drinks, or cigarettes.

Living in close quarters (e.g., dorms, military barracks).

Some viruses (like enteroviruses) can also spread through the fecal-oral route.

Fungal Meningitis: Generally not spread from person to person. People usually get fungal meningitis by inhaling fungal spores from the environment.

Parasitic Meningitis: Also generally not spread from person to person. For example, PAM (caused by *Naegleria fowleri*) is acquired by swimming in warm freshwater where the amoeba enters the body through the nose.

Signs & Symptoms

Symptoms of meningitis can appear suddenly and typically include:

Sudden onset of fever (often high).

Severe headache (often worse than usual).

Stiff neck (difficulty or pain when trying to touch chin to chest).

Nausea and vomiting.

Confusion or altered mental status.

Sensitivity to light (photophobia).

Lack of appetite.

Lack of energy or irritability (especially in infants).

Skin rash (especially with meningococcal meningitis – often dark red or purple spots that don't fade when pressed).

In newborns and infants, symptoms can be harder to spot and may include:

High fever.

Constant crying.

Excessive sleepiness or irritability.

Poor feeding.

Bulging soft spot (fontanel) on the head.

Stiffness in body and neck.

Anyone experiencing symptoms of meningitis should seek immediate medical attention. Early diagnosis and treatment are critical, especially for bacterial meningitis.

Complications

The complications of meningitis can be severe and long-lasting, especially with bacterial meningitis, and can include:

Brain damage.

Hearing loss (partial or complete).

Vision problems.

Learning disabilities.

Seizures.

Memory problems.

Kidney damage.

Amputations (if blood flow to limbs is severely affected by severe sepsis, particularly from meningococcal disease).

Prevention

Prevention methods vary by the type of meningitis:

Vaccination: This is the most effective way to prevent certain types of bacterial meningitis.

Meningococcal Conjugate Vaccines (MenACWY): Protect against *N. meningitidis* serogroups A, C, W, and Y. Recommended for adolescents and others at increased risk.

Meningococcal B Vaccines (MenB): Protect against *N. meningitidis* serogroup B. Recommended for people 10 years or older with certain risk factors.

Pneumococcal Conjugate Vaccines (PCV13, PCV15, PCV20) and Polysaccharide Vaccine (PPSV23): Protect against *S. pneumoniae*. Recommended for infants, young children, older adults, and people with certain medical conditions.

Hib Vaccine: Protects against *H. influenzae type b*. Recommended for all children.

MMR Vaccine: Protects against measles and mumps, which can sometimes lead to viral meningitis.

Good Hygiene:

Wash hands frequently and thoroughly with soap and water, especially after coughing, sneezing, or using the toilet.

Avoid sharing food, drinks, eating utensils, toothbrushes, or cigarettes.

Cover coughs and sneezes with a tissue or your elbow.

Avoid exposure: For certain rare types (e.g., parasitic), avoid swimming in warm freshwater bodies where amoebas are known to be present.

Diagnosis

Diagnosis of meningitis is a medical emergency. Healthcare providers will perform a physical exam and review symptoms. Tests typically include:

Lumbar Puncture (Spinal Tap): A sample of cerebrospinal fluid (CSF) is collected from the spinal canal and analyzed for signs of infection (e.g., elevated white blood cells, low glucose, high protein) and to identify the specific germ causing the infection. This is the most definitive test.

Blood Tests: To check for signs of infection or to identify bacteria.

Imaging Scans: CT scans or MRIs of the brain may be performed to rule out other conditions or identify complications.

Treatment

Treatment for meningitis depends on the cause:

Bacterial Meningitis: This is a medical emergency. It is treated with antibiotics as soon as possible, often even before the specific bacteria is identified. Early and aggressive antibiotic treatment is crucial to prevent severe outcomes. Depending on the severity, other supportive treatments (e.g., fluids, oxygen) may be necessary.

Viral Meningitis: Most cases are mild and resolve on their own without specific treatment. Treatment typically focuses on supportive care to relieve symptoms (rest, fluids, pain relievers). Antiviral medications may be used if a specific virus (like herpes simplex virus) is identified as the cause.

Fungal Meningitis: Treated with long courses of high-dose antifungal medications, often intravenously.

Parasitic Meningitis: Treatment depends on the specific parasite and can be very difficult.

Close contacts of individuals with certain types of bacterial meningitis (e.g., meningococcal) may be given antibiotics to prevent them from getting sick.

More Information

For additional authoritative information on meningitis, please visit:

Centers for Disease Control and Prevention (CDC):

https://www.cdc.gov/meningitis/index.html

World Health Organization (WHO):

https://www.who.int/news-room/fact-sheets/detail/meningitis

Public Health Agency of Canada (PHAC):

https://www.canada.ca/en/public-health/services/diseases/meningitis.html

UK Health Security Agency (UKHSA) / National Health Service (NHS):

https://www.nhs.uk/conditions/meningitis/

https://www.gov.uk/government/collections/meningococcal-disease-guidance-data-and-analysis

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BACTERIAL MENINGITIS

SCAN ME

WHAT IS BACTERIAL MENINGITIS?

Meningitis is an infection of the membranes that protect the brain and spinal cord. Meningitis is most often caused by a virus (viral meningitis), but can also be caused by bacteria (bacterial meningitis). Bacterial meningitis is rare, but is usually serious. It can be life-threatening, if not treated right away.

HOW DOES IT SPREAD?

Common examples of how people spread these germs include:

- During childbirth,
- Coughing or sneezing while in close contact with others,
- Sharing saliva, or
- Eating contaminated food.

SIGNS AND SYMPTOMS IN ADULTS


Fever


Headache


Stiff Neck


Nausea/Vomiting


Sensitivity to Light

SIGNS AND SYMPTOMS IN BABIES


Being Slow/Inactive


Being Irritable


Vomiting


Feeding Poorly


Bulging Soft Spot

PREVENTION

Vaccines are the best way to prevent certain types of bacterial meningitis. There are vaccines for four types of bacteria that can cause meningitis:

- **Meningococcal vaccines** (MenACWY and MenB) help protect against *N. meningitidis*.
- **Pneumococcal vaccines** (PCV15 or PCV20) help protect against *S. pneumoniae*.
- **Haemophilus influenzae serotype b (Hib) vaccines** help protect against Hib.
- **Bacille Calmette-Guérin (BCG) vaccine** helps protect against tuberculosis disease, but is not widely used in the United States.

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UK Health Security Agency

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CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION