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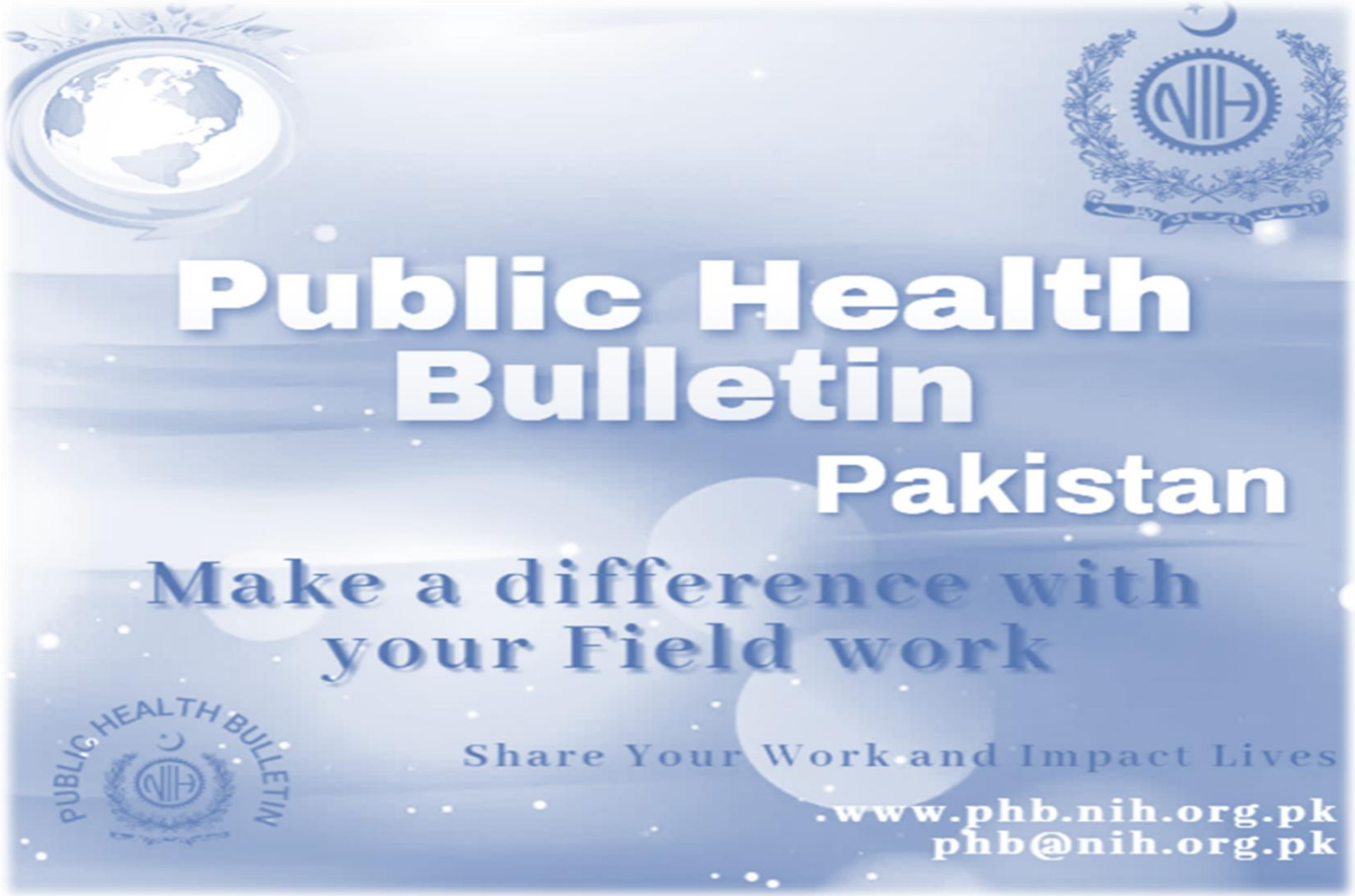
PUBLIC HEALTH BULLETIN-PAKISTAN

Integrated Disease Surveillance & Response (IDSR) Report

Center of Disease Control
National Institute of Health, Islamabad

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.



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 Pakistan's commitment to combat Antimicrobial resistance.*
- *Malaria Outbreak Investigation Report, UC Ekka Gund, District Mohmand, August 2025.*
- *Knowledge hub on Understanding Mumps: A Public Health Priority*

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

Overview

Note: All reported cases in this report are suspected cases

- *During Week 46, the most frequently reported cases were of Malaria, followed by Acute Diarrhea (Non-Cholera), ILI, ALRI <5 years, TB, B. Diarrhea, Dog Bite, VH (B, C & D), Typhoid, SARI and Dengue.*
- *Eleven cases of AFP reported from KP, eleven from Sindh and one from AJK, GB and Balochistan each.*
- *Eight suspected cases of HIV/ AIDS reported from Sindh and three from KP.*
- *One suspected case of Brucellosis reported from KP.*
- *Among VPDs, there is an increase in number of cases of Measles this week.*
- *Among Respiratory diseases, there is an increase in number of cases of ILI, ALRI <5 years, TB and COVID-19 this week.*
- *Among Water/food-borne diseases, there is an increase in number of cases of B. Diarrhea and AVH (A & E) this week.*
- *Among Vector-borne diseases, there is an increase in number of cases of Malaria and CL this week.*
- *Among STDs, there is a decrease in number of cases of Gonorrhea and HIV/AIDs this week.*
- *Among Zoonotic/Other diseases, there is a decrease in number of cases of Dog Bite and VH (B, C & D) this week.*
- *Field investigation is required for verification of the alerts and for prevention and control of the outbreaks.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts is 74%.*
- *Sindh is the top reporting region with a compliance rate of 98%, followed by GB 89%, AJK 86% and ICT 63%.*
- *The lowest compliance rate was observed in KP 62% and Balochistan 50%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2704	1686	62
Azad Jammu Kashmir	469	402	86
Islamabad Capital Territory	38	24	63
Balochistan	1308	657	50
Gilgit Baltistan	417	372	89
Sindh	2111	2061	98
National	7047	5202	74

Public Health Actions

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

Typhoid

- **Enhance Case Detection and Reporting:** Strengthen typhoid surveillance within the Integrated Disease Surveillance and Response (IDSR) system by training healthcare providers on standard case definitions, timely notification, and outbreak detection, particularly in high-burden and underserved areas.
- **Improve Laboratory Diagnosis:** Expand laboratory diagnostic capacity for typhoid by supporting culture and sensitivity testing for MDR and XDR detection at district and provincial levels to confirm cases and guide antimicrobial stewardship.
- **Promote Water, Sanitation, and Hygiene (WASH):** Collaborate with relevant sectors to ensure access to safe drinking water, improve sanitation infrastructure, and promote hygiene practices, especially handwashing with soap.
- **Implement Vaccination Strategies:** Support the scale-up of Typhoid Conjugate Vaccine (TCV) through routine immunization and targeted campaigns in high-risk populations.
- **Raise Community Awareness:** Develop culturally appropriate health education campaigns to inform communities about transmission routes, preventive behaviors (e.g., safe food handling and hygiene), and the importance of early care-seeking.

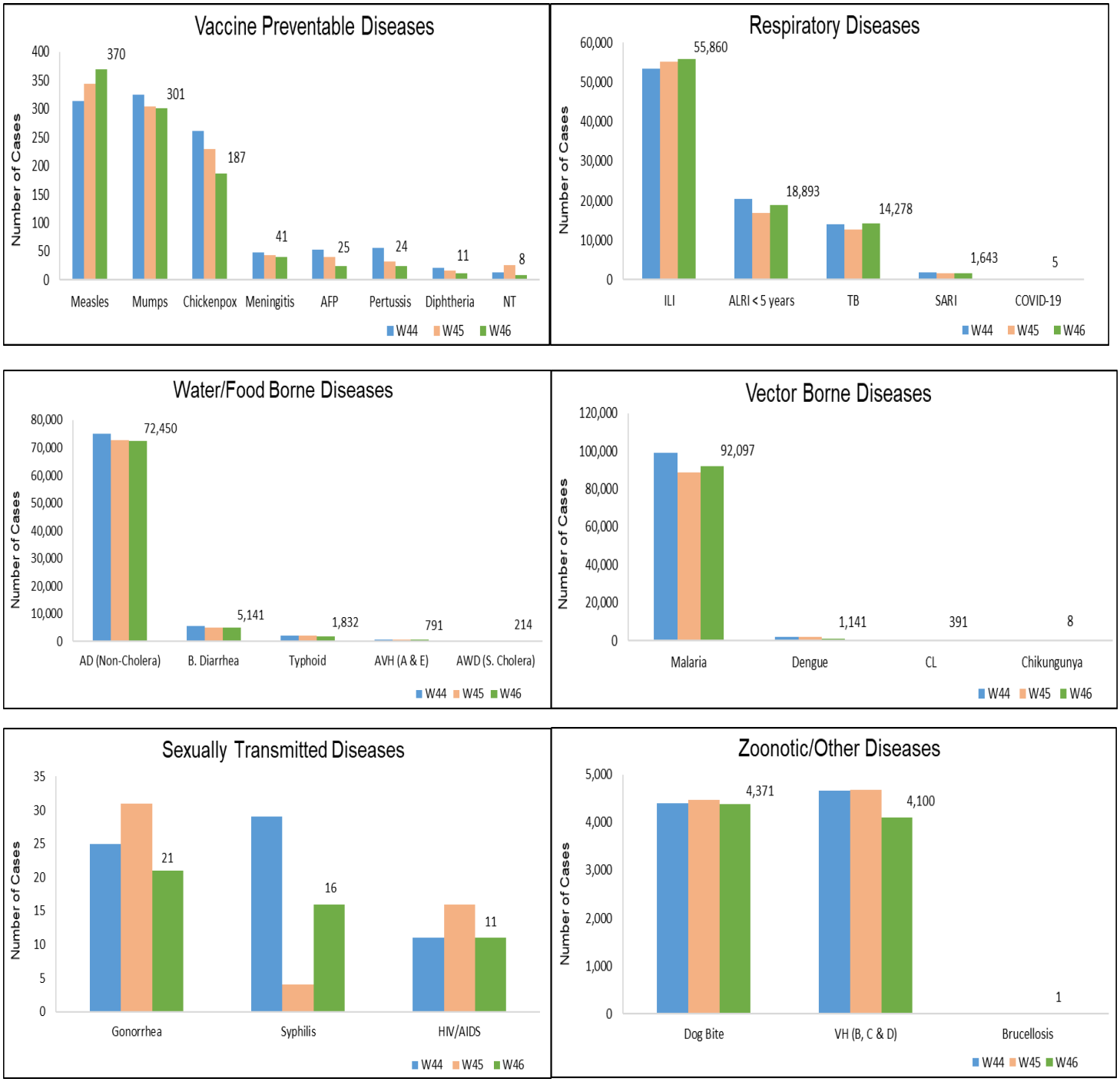
Acute Viral Hepatitis (A & E)

- **Enhance Case Detection and Reporting:** Strengthen AHV (A & E) surveillance in the IDSR system by training health personnel to recognize symptoms and ensure timely reporting, especially during seasonal peaks or in outbreak-prone areas.
- **Strengthen Laboratory Confirmation:** Improve diagnostic capacity by ensuring availability of rapid and confirmatory tests (e.g., IgM for HAV/HEV) at regional laboratories to facilitate timely outbreak response.
- **Improve WASH Infrastructure:** Coordinate with municipal and rural development authorities to upgrade water supply systems, prevent sewage contamination, and promote latrine use to interrupt fecal-oral transmission.
- **Engage in Risk Communication:** Design and disseminate targeted messages through community channels to raise awareness about safe drinking water, personal hygiene, food safety, and the risks of consuming contaminated water or raw produce.

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 46, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
Malaria	6	3,728	1	0	5,999	NR	82,363	92,097
AD (Non-Cholera)	1,102	4,852	765	260	26,087	NR	39,384	72,450
ILI	2,833	6,542	443	1,828	7,576	NR	36,638	55,860
ALRI < 5 years	1,265	1,837	1,229	16	1,550	NR	12,996	18,893
TB	114	79	66	5	295	NR	13,719	14,278
B. Diarrhea	43	781	68	3	796	NR	3,450	5,141
Dog Bite	120	175	2	1	848	NR	3,225	4,371
VH (B, C & D)	23	37	3	0	146	NR	3,891	4,100
Typhoid	22	278	102	0	601	NR	829	1,832
SARI	167	670	164	0	570	NR	72	1,643
Dengue	7	9	3	1	315	NR	806	1,141
AVH (A & E)	21	5	7	0	207	NR	551	791
CL	0	75	0	0	314	NR	2	391
Measles	3	11	4	0	302	NR	50	370
Mumps	14	47	4	0	193	NR	43	301
AWD (S. Cholera)	27	148	0	0	39	NR	0	214
Chickenpox/ Varicella	11	7	40	1	117	NR	11	187
Meningitis	1	1	2	0	8	NR	29	41
AFP	1	1	1	0	11	NR	11	25
Pertussis	1	15	1	0	6	NR	1	24
Gonorrhea	1	15	0	0	1	NR	4	21
Syphilis	0	1	0	0	0	NR	15	16
Diphtheria (Probable)	0	0	0	0	10	NR	1	11
HIV/AIDS	0	0	0	0	3	NR	8	11
NT	0	0	0	0	8	NR	0	8
Chikungunya	0	0	0	0	0	NR	8	8
Brucellosis	0	0	0	0	1	NR	0	1

Figure 1: Most frequently reported suspected cases during Week 46, 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 Dengue.
- Malaria cases are mostly from Larkana, Khairpur and Sanghar whereas AD (Non-Cholera) cases are from Khairpur, Dadu 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 VH (B, C, D), Typhoid, Dengue, SARI, Measles, Chickenpox, Chikungunya, Gonorrhea and Diphtheria while an increase in number of cases Malaria, AD (Non-Cholera), ILI, TB, ALRI<5 Years, B. Diarrhea, Dog Bite, AVH (A & E), Mumps, Meningitis, CL and Pertussis this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 46, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	Dengue
Badin	3,258	2,115	2,631	802	563	262	232	124	37	3
Dadu	5,724	2,548	939	613	1,498	66	392	578	144	0
Ghotki	4,252	882	53	637	769	362	103	175	0	1
Hyderabad	1,625	2,131	2,348	436	189	100	65	67	1	236
Jacobabad	2,231	694	1,289	296	363	186	117	196	32	0
Jamshoro	5,047	1,637	123	678	479	177	88	101	49	153
Kamber	4,770	1,667	0	959	382	90	115	184	27	0
Karachi Central	36	1,610	2,174	168	109	18	4	21	67	30
Karachi East	54	198	0	2	0	0	2	2	0	2
Karachi Keamari	11	467	473	4	15	0	0	0	0	0
Karachi Korangi	152	341	43	36	2	0	15	9	1	52
Karachi Malir	88	879	2,669	102	172	2	31	27	8	31
Karachi South	22	66	0	8	0	0	0	0	0	11
Karachi West	253	813	1,179	77	185	16	19	48	28	0
Kashmore	2,251	275	996	158	156	11	39	85	0	0
Khairpur	6,754	2,921	7,694	1,261	1,392	178	327	210	195	7
Larkana	7,948	1,408	0	872	352	31	327	61	4	0
Matiari	3,928	1,458	24	790	299	177	52	66	3	52
Mirpurkhas	3,426	2,323	5,656	870	613	35	190	145	9	5
Naushero Feroze	2,062	1,387	1,034	538	907	151	421	180	39	0
Sanghar	5,567	1,863	162	1,332	667	1,108	63	228	25	9
Shaheed Benazirabad	3,295	1,569	4	377	430	64	87	110	84	0
Shikarpur	3,643	1,064	10	266	207	210	183	211	7	0
Sujawal	1,062	1,420	7	105	506	0	69	50	2	0
Sukkur	3,478	1,228	2,167	506	556	32	137	93	4	0
Tando Allahyar	2,742	796	1,933	487	255	269	84	51	7	17
Tando Muhammad Khan	992	828	146	497	183	106	71	95	0	4
Tharparkar	3,344	1,923	1,379	462	787	43	112	1	26	189
Thatta	2,016	1,431	1,502	75	479	188	16	107	2	0
Umerkot	2,332	1,442	3	305	481	9	89	0	28	4
Total	82,363	39,384	36,638	13,719	12,996	3,891	3,450	3,225	829	806

Figure 2: Most frequently reported suspected cases during Week 46, Sindh

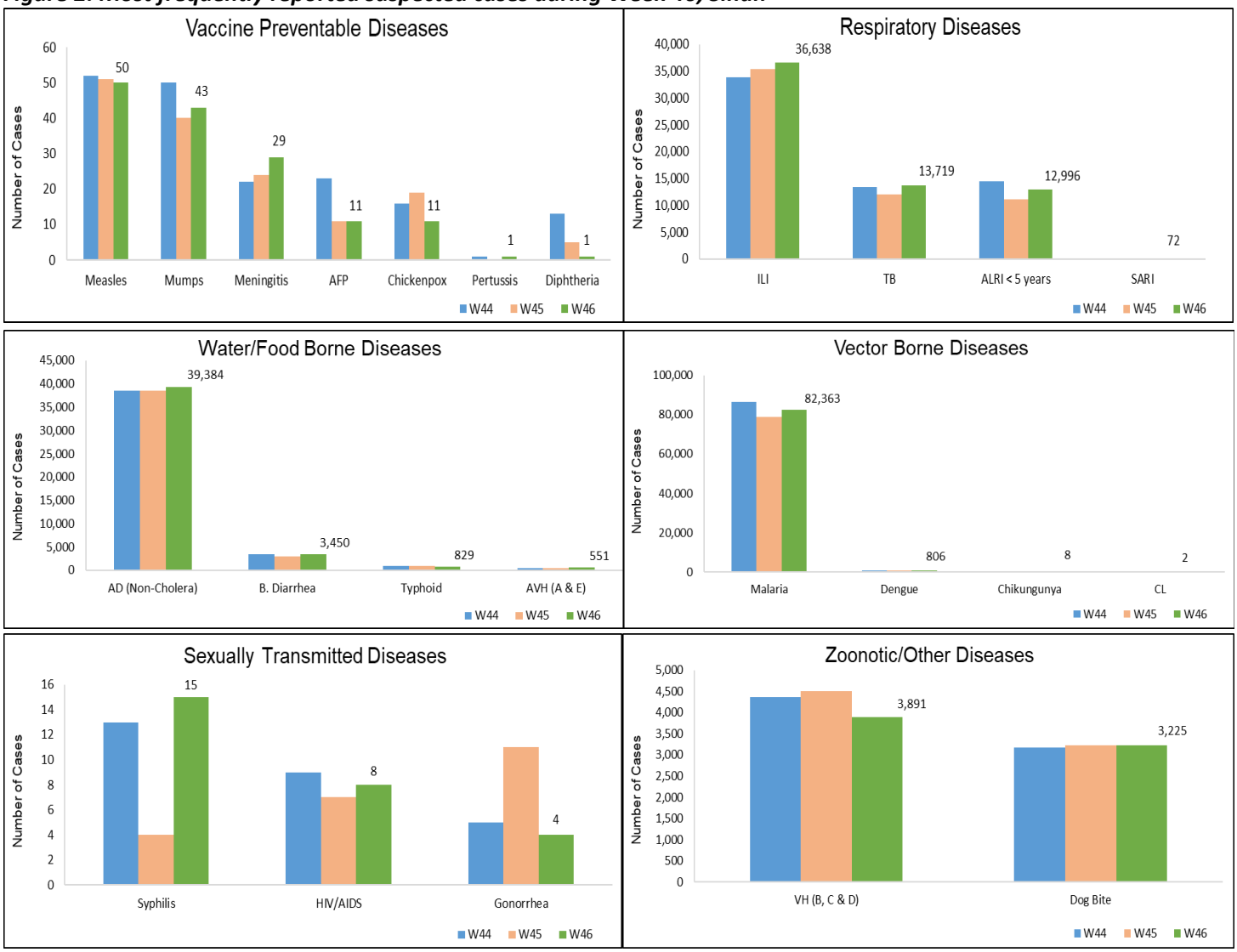
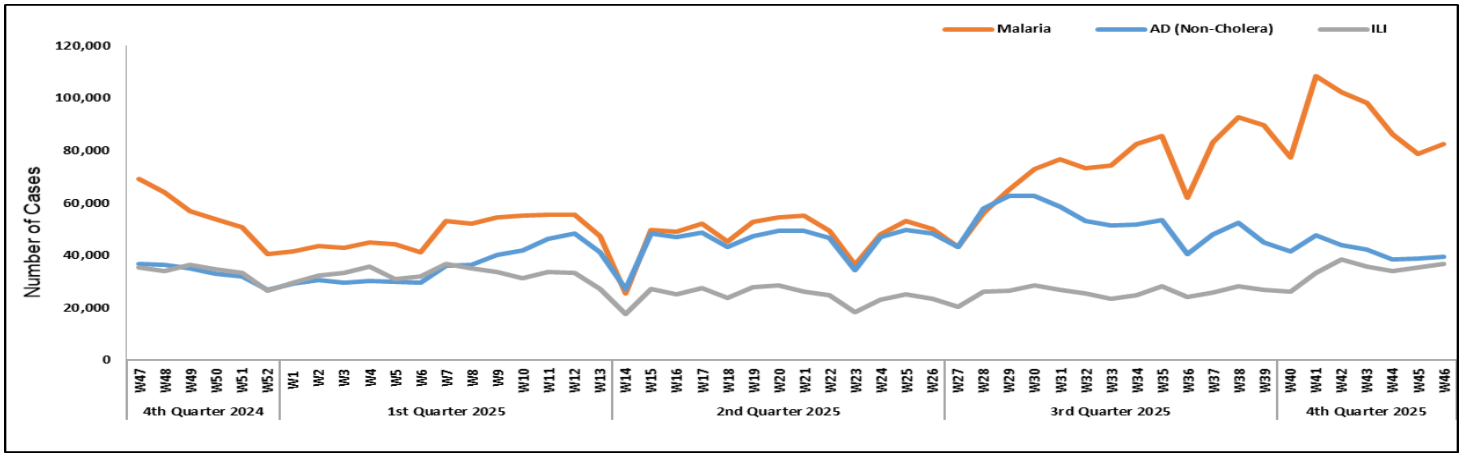


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh



Balochistan

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

Table 3: District wise distribution of most frequently reported suspected cases during Week 46, Balochistan

Districts	ILI	AD (Non-Cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dog Bite	AWD (S. Cholera)	TB
Barkhan	50	68	79	0	8	0	25	24	4	0
Chagai	345	111	52	0	47	0	9	0	0	0
Dera Bugti	0	46	80	72	2	0	11	0	1	0
Gwadar	16	13	8	1	4	0	4	3	2	0
Harnai	6	187	70	179	64	0	0	0	0	0
Hub	152	144	190	9	5	0	0	0	1	2
Jaffarabad	232	273	237	5	37	5	3	14	0	48
Jhal Magsi	152	201	251	116	0	3	2	2	0	6
Kachhi (Bolan)	312	263	219	0	74	68	4	2	68	6
Kalat	1	7	0	15	0	0	3	0	0	0
Kech (Turbat)	1,419	528	824	79	76	NR	8	NR	NR	NR
Kharan	800	181	16	0	47	24	9	0	0	0
Khuzdar	62	37	30	0	10	4	18	0	0	0
Killa Abdullah	232	143	10	8	57	105	25	10	47	0
Kohlu	68	28	28	4	9	NR	2	1	NR	NR
Lasbella	106	333	656	184	19	0	8	3	0	0
Loralai	472	194	38	105	37	113	18	0	0	0
Mastung	211	90	23	45	15	25	7	1	2	1
Naseerabad	18	325	291	43	16	24	55	92	2	8
Nushki	32	53	1	0	13	49	0	0	2	0
Pishin	377	140	8	92	69	64	16	4	4	2
Quetta	396	190	7	170	5	23	2	0	0	0
Sibi	619	444	271	133	30	77	12	0	7	3
Sohbat pur	0	208	144	188	74	21	22	1	0	1
Surab	45	14	0	0	0	0	0	0	0	0
Usta Muhammad	184	540	171	281	39	35	4	18	0	0
Zhob	62	33	11	30	1	26	2	0	0	2
Ziarat	173	58	13	78	23	4	9	0	8	0
Total	6,542	4,852	3,728	1,837	781	670	278	175	148	79

Figure 4: Most frequently reported suspected cases during Week 46, Balochistan

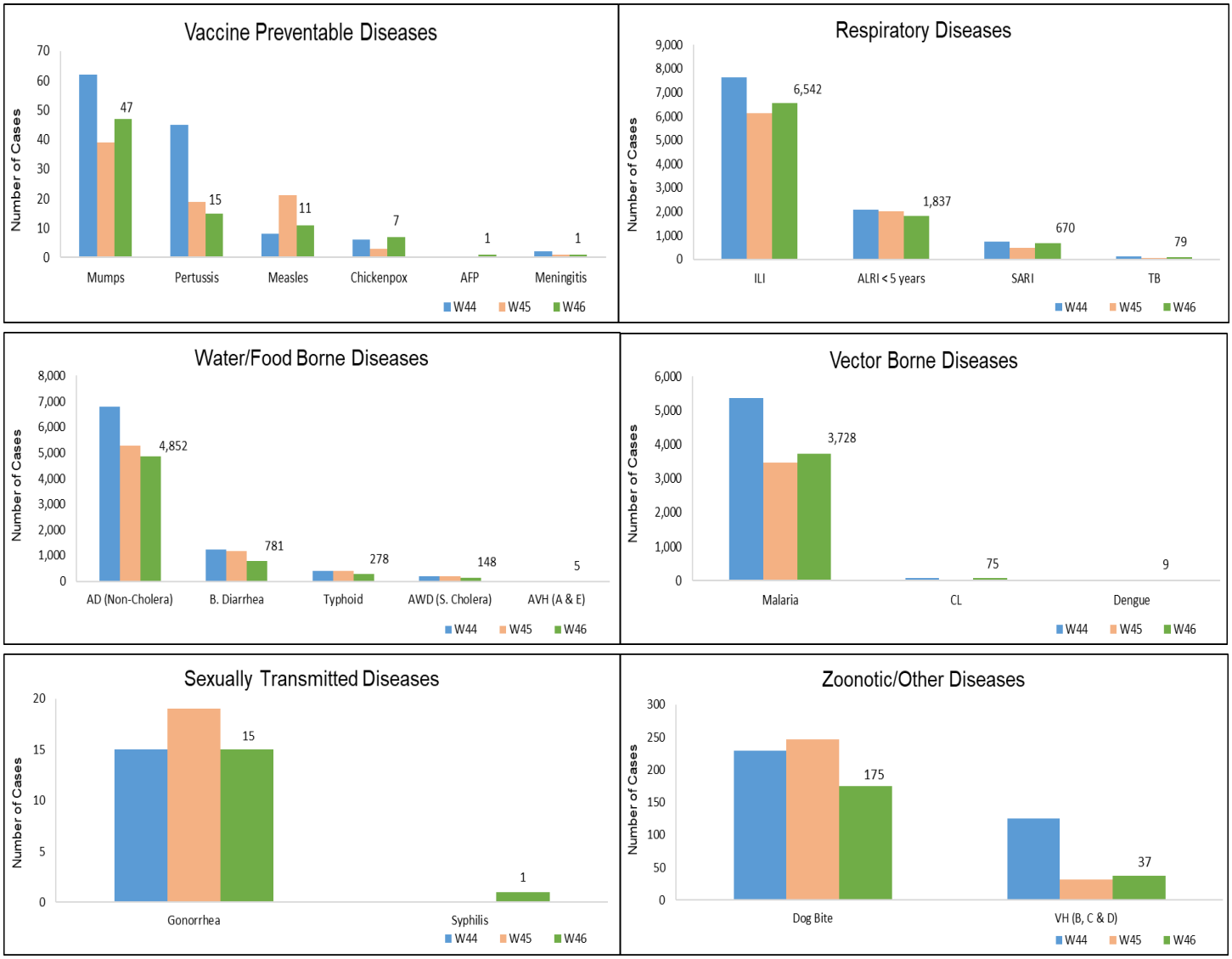
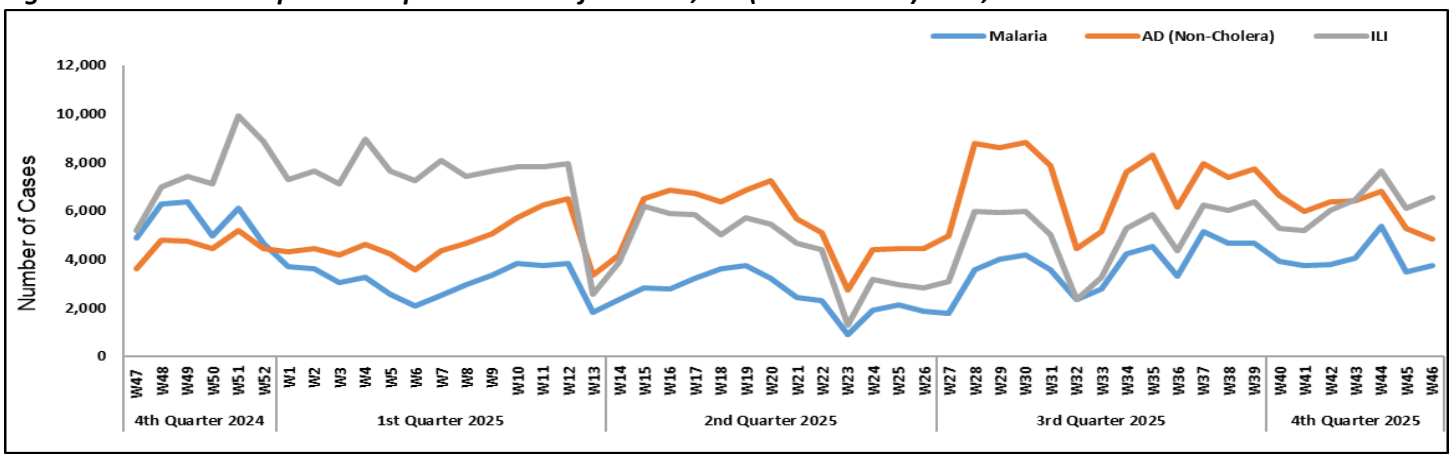


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, Dog Bite, B. Diarrhea, Typhoid, SARI, Dengue and CL.
- ALRI<5 Years, CL, Measles, AVH (A & E), VH (B, C & D) and COVID-19 cases showed an increase in number while AD (Non-Cholera), ILI, Malaria, Dog Bite, B. Diarrhea, Typhoid, SARI, Dengue, TB, Mumps, Chickenpox, AWD (S. Cholera), AFP, Diphtheria, NT, Pertussis and HIV/ AIDS showed a decline in number this week.
- Eleven cases of AFP reported from KP. All are suspected cases and need field verification.
- Three cases 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 46, KP

Districts	AD (Non-Cholera)	ILI	Malaria	ALRI < 5 years	Dog Bite	B. Diarrhea	Typhoid	SARI	Dengue	CL
Abbottabad	643	289	0	8	67	8	28	10	2	0
Bajaur	604	119	218	14	97	71	5	77	2	20
Bannu	838	0	1,384	8	0	6	104	0	3	0
Battagram	263	829	78	2	13	NR	NR	NR	6	NR
Buner	138	0	91	36	13	0	1	0	0	0
Charsadda	1,661	2,831	389	393	10	84	36	13	26	0
Chitral Lower	528	40	11	20	11	17	5	37	1	6
Chitral Upper	69	30	4	9	1	1	8	3	0	0
D.I. Khan	1,839	0	676	13	7	30	0	0	0	0
Dir Lower	1,396	0	114	8	71	72	5	10	2	1
Dir Upper	962	57	14	108	25	8	8	0	0	0
Hangu	231	0	78	1	11	0	3	0	5	65
Haripur	976	536	9	56	18	6	28	15	40	0
Karak	444	115	279	30	19	13	5	0	2	107
Khyber	423	24	417	61	38	87	93	6	22	33
Kohat	468	0	124	0	29	11	2	0	19	6
Kohistan Lower	100	0	0	0	1	4	0	0	0	0
Kohistan Upper	219	5	20	0	2	13	1	0	10	0
Kolai Palas	83	5	0	2	0	6	3	0	0	0
L & C Kurram	46	3	15	4	0	7	5	0	0	0
Lakki Marwat	654	0	529	14	14	10	13	0	15	0
Malakand	677	90	35	25	0	0	4	0	0	6
Mansehra	996	215	NR	NR	NR	4	13	NR	NR	NR
Mardan	1,244	27	80	127	17	27	20	2	30	1
Mohmand	141	90	223	2	9	11	1	208	19	41
North Waziristan	96	4	86	43	1	0	27	11	0	2
Nowshera	1,822	5	334	37	6	6	15	16	15	11
Orakzai	104	20	23	0	2	9	0	0	0	0
Peshawar	3,793	529	62	113	2	116	46	34	70	2
Shangla	756	0	193	21	89	4	18	0	2	0
South Waziristan (Lower)	45	159	44	55	8	3	8	33	4	7
SWU	46	35	35	21	0	0	3	22	0	0
Swabi	1,090	631	109	94	122	22	58	40	13	0
Swat	1,912	676	53	191	118	73	22	0	7	0
Tank	534	53	183	6	0	12	0	0	0	0
Tor Ghar	48	0	76	1	17	11	2	0	0	6
Upper Kurram	198	159	13	27	10	44	11	33	0	0
Total	26,087	7,576	5,999	1,550	848	796	601	570	315	314

Figure 6: Most frequently reported suspected cases during Week 46, KP

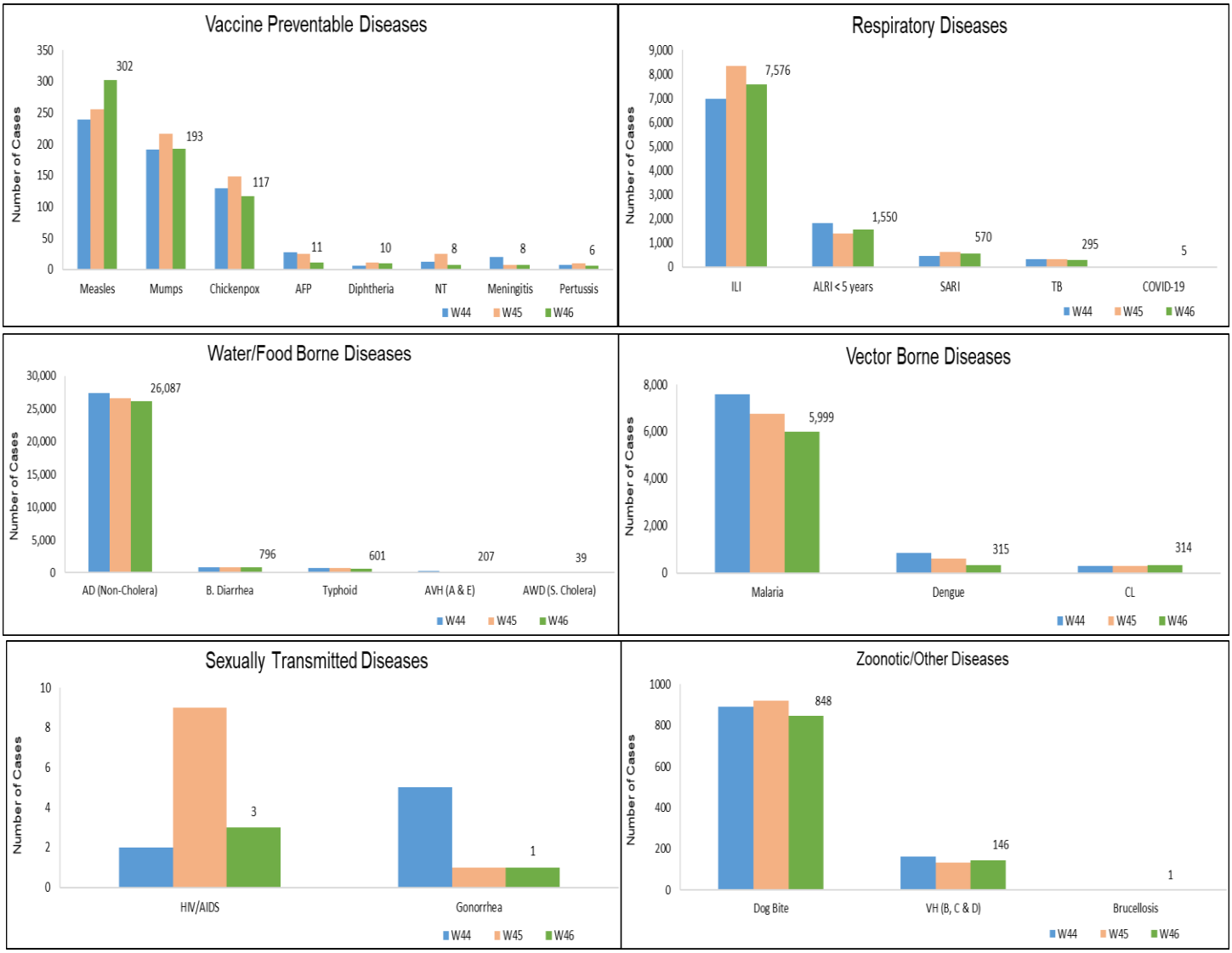
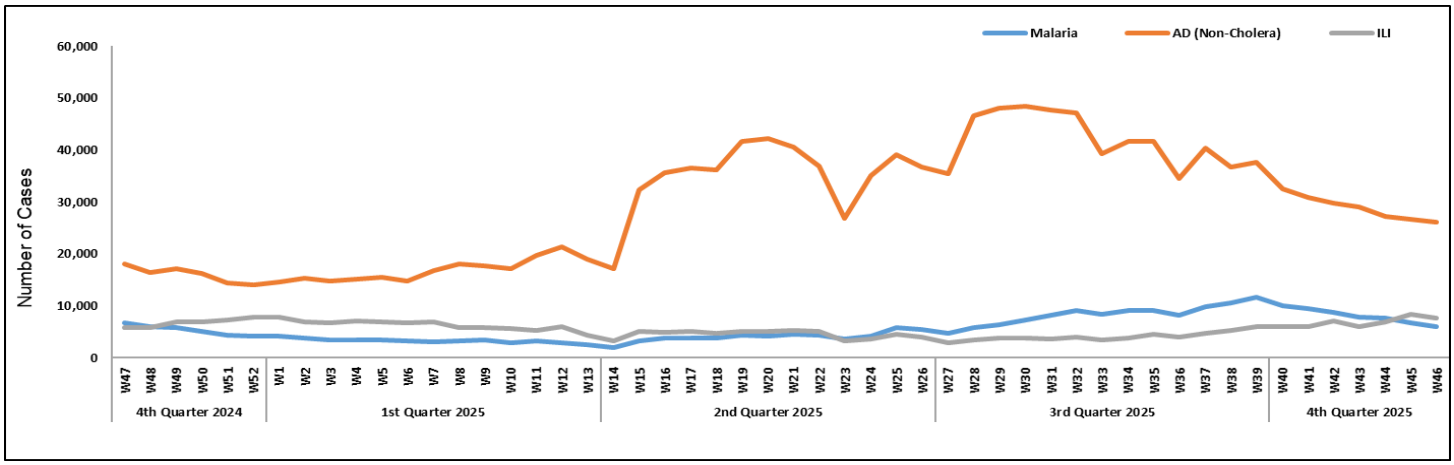


Figure 7: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, KP



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera), ALRI < 5years, TB, B. Diarrhea, Chickenpox, Dengue and Dog Bite. ILI, AD (Non-Cholera), ALRI < 5years, and TB cases showed a decline in number while an increase in number was observed in B. Diarrhea, Chickenpox, Dengue and Dog Bite cases this week.

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

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

Figure 8: Most frequently reported suspected cases during Week 46, AJK

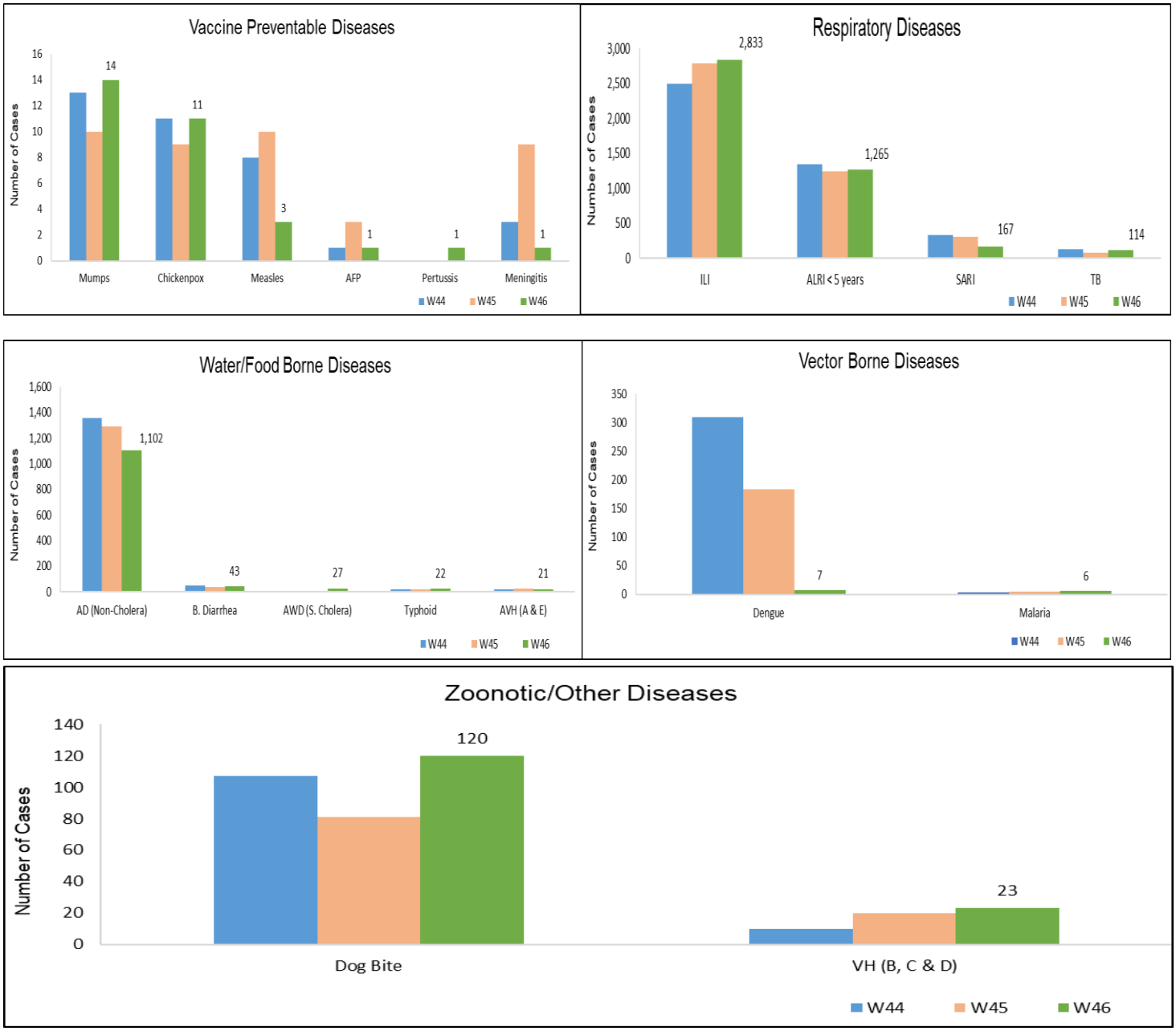


Figure 9: Week wise reported suspected cases of ILI and ALRI < 5 years, AJK

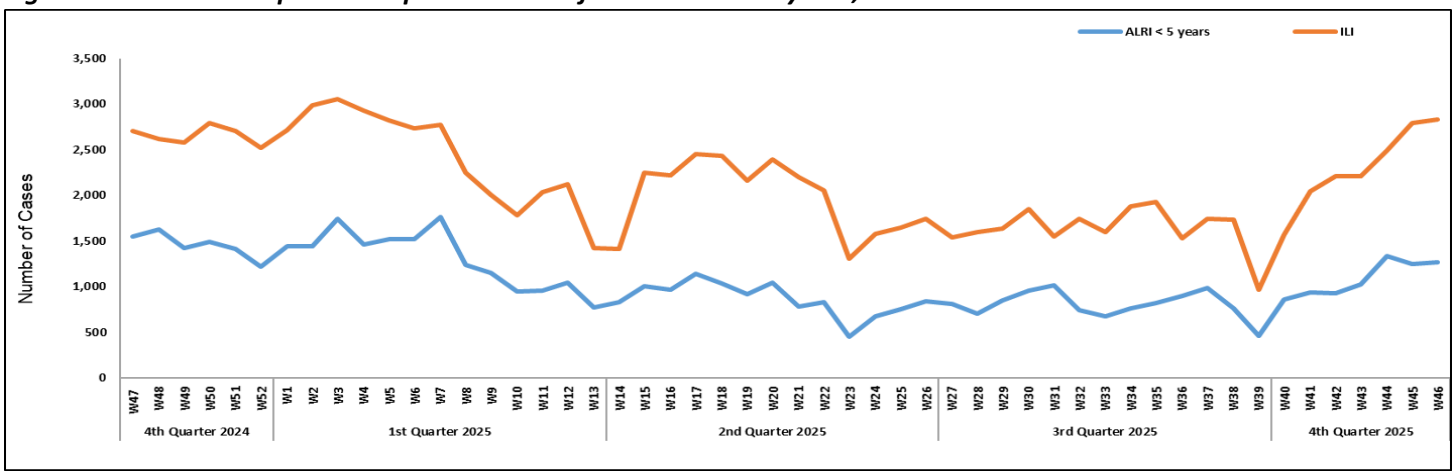


Figure 10: Most frequently reported suspected cases during Week 46, ICT

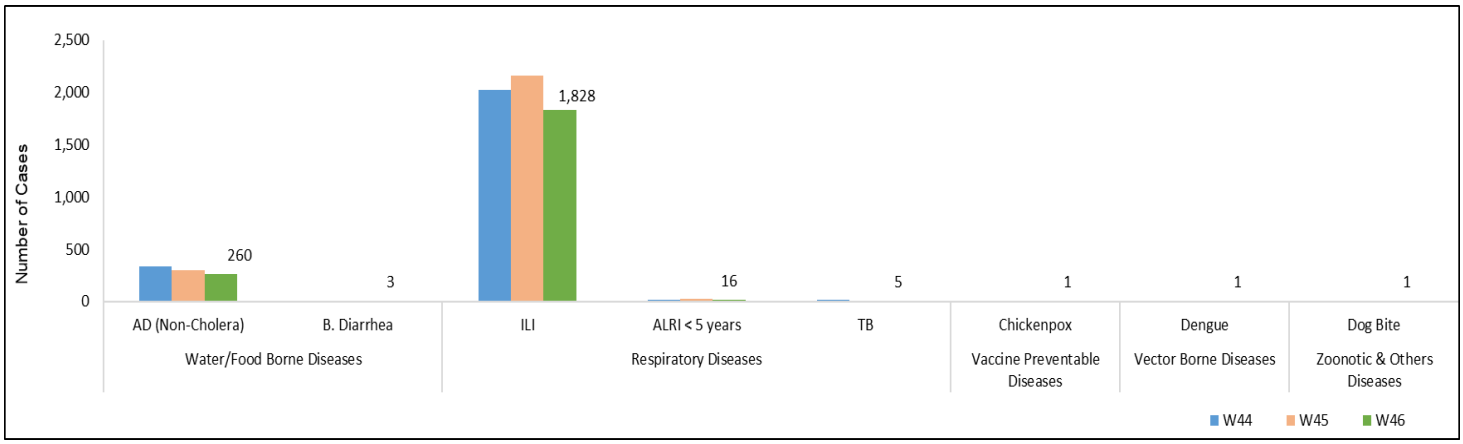


Figure 11: Week wise reported suspected cases of ILI, ICT

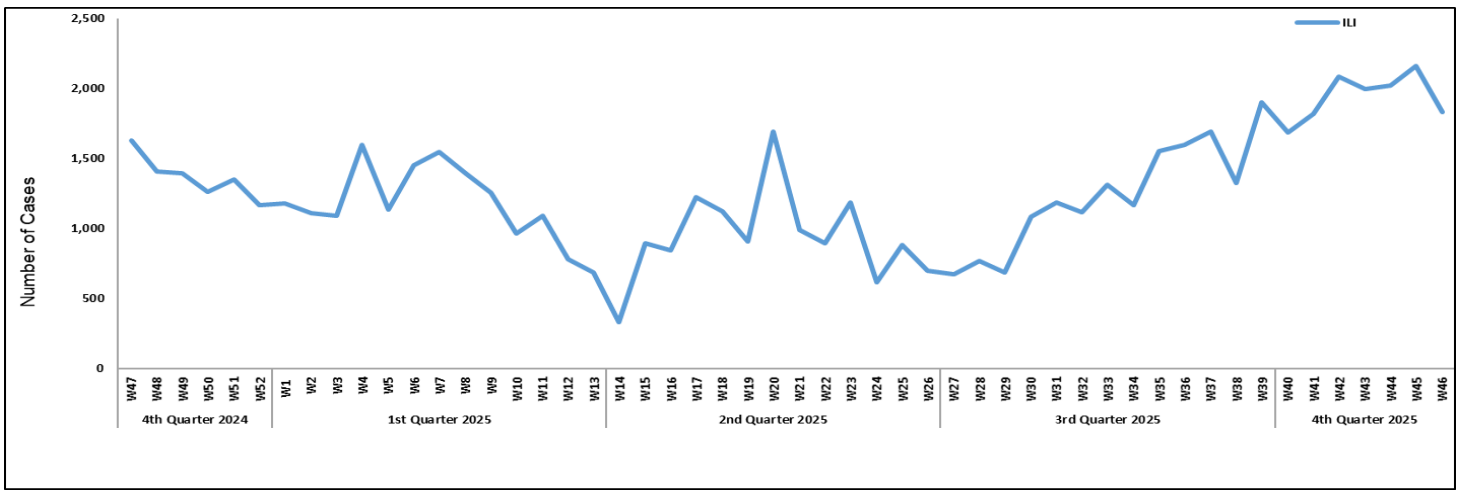


Figure 12: Most frequently reported suspected cases during Week 46, GB

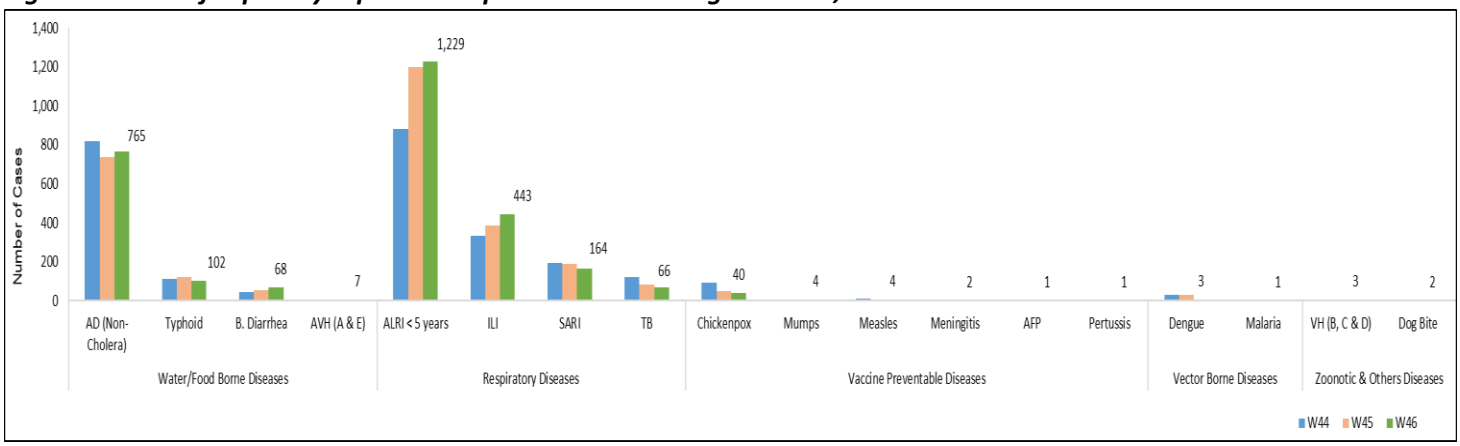


Figure 13: Week wise reported suspected cases of AD (Non-Cholera), GB

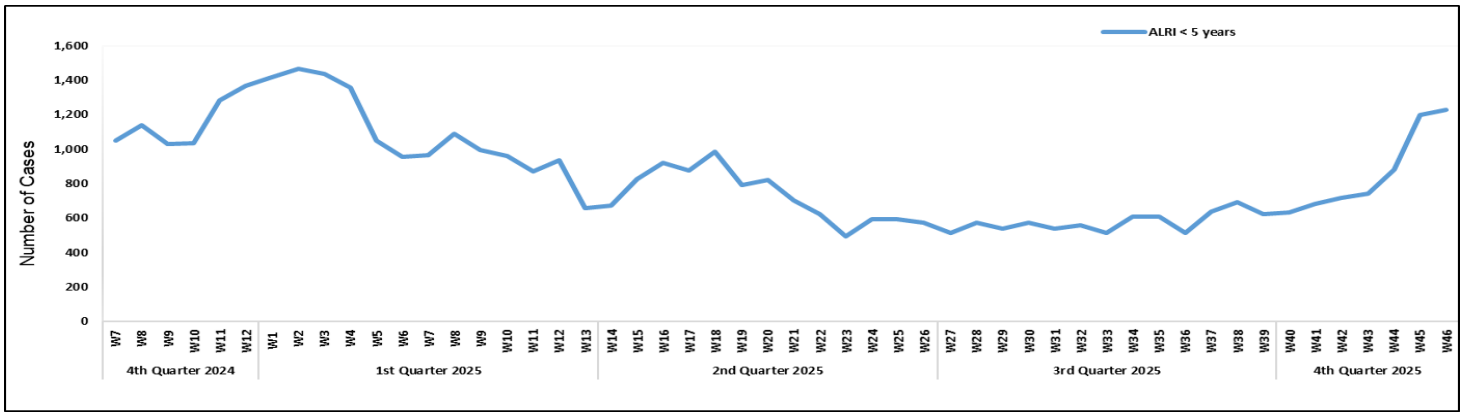


Table 5: Public health laboratories confirmed cases of IDSR priority diseases during Epi Week 46

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)	8	0	-	-	-	-	-	-	-	-	-	-	-	-
Stool culture & Sensitivity	24	0	-	-	-	-	-	-	-	-	-	-	-	-
Malaria	5,385	137	-	-	5,659	50	-	-	88	1	-	-	18	0
CCHF	2	1	-	-			-	-	-	-	-	-	-	-
Dengue	2,904	264	-	-	5,368	69	-	-	-	-	-	-	169	24
VH (B)	-	-	-	-	93	22	-	-	1,384	13	-	-	225	5
VH (C)	-	-	-	-	-	-	-	-	1,473	6	-	-	225	12
VH (D)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VH (A)	-	-	-	-	-	-	-	-	5	2	-	-	-	-
VH (E)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Covid-19	29	0	-	-	22	0	-	-	-	-	-	-	10	0
TB	-	-	-	-			-	-	38	0	-	-	72	5
HIV/ AIDS	2,544	32	-	-	384	1	-	-	227	0	-	-	78	2
Syphilis	-	-	-	-	-	-	-	-	84	0	-	-	-	-
Typhoid	-	-	-	-	-	-	-	-	158	13	-	-	-	-
Diphtheria	7	0	-	-	-	-	-	-	-	-	-	-	-	-
ILI	29	8	-	-	22	2	-	-	-	-	-	-	-	-
Pneumonia (ALRI)	52	6	-	-	-	-	-	-	-	-	-	-	-	-
Meningitis	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Measles	0	0	-	-	-	-	-	-	1	0	-	-	-	-
Rubella (CRS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leishmaniansis (cutaneous)	-	-	-	-	13	5	-	-	-	-	-	-	-	-
Chikungunya	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickenpox	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Gonorrhea	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mpox	1	0												

IDSR Reports Compliance

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

Table 6: IDSR reporting districts Week 46, 2025

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	128	54%
	Battagram	59	34	58%
	Buner	34	15	44%
	Bajaur	44	34	77%
	Charsadda	59	54	92%
	Chitral Upper	34	30	88%
	Chitral Lower	35	34	97%
	D.I. Khan	114	113	99%
	Dir Lower	74	62	84%
	Dir Upper	37	32	86%
	Hangu	22	17	77%
	Haripur	72	68	94%
	Karak	36	36	100%
	Khyber	53	45	85%
	Kohat	61	61	100%
	Kohistan Lower	11	8	73%
	Kohistan Upper	20	12	60%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	68	97%
	Lower & Central Kurram	42	8	19%
	Upper Kurram	41	33	80%
	Malakand	42	19	45%
	Mansehra	133	97	73%
	Mardan	80	64	80%
	Nowshera	56	52	93%
	North Waziristan	13	8	62%
	Peshawar	156	132	85%
	Shangla	37	32	86%
	Swabi	64	62	97%
	Swat	77	76	99%
	South Waziristan (Upper)	93	37	40%
	South Waziristan (Lower)	42	27	64%
	Tank	34	31	91%
	Torghar	14	13	93%
	Mohmand	68	21	31%
	Orakzai	69	13	19%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	92	61	66%
	Kotli	60	60	100%
	Muzaffarabad	45	43	96%
	Poonch	46	46	100%

	Haveli	39	38	97%
	Bagh	54	36	67%
	Neelum	39	25	64%
	Jhelum Velley	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	23	19	83%
	CDA	15	5	33%
Balochistan	Gwadar	26	1	4%
	Kech	44	33	75%
	Khuzdar	74	10	14%
	Killa Abdullah	26	23	88%
	Lasbella	55	55	100%
	Pishin	69	14	20%
	Quetta	55	15	27%
	Sibi	36	35	97%
	Zhob	39	11	28%
	Jaffarabad	16	11	69%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	0	0%
	Kohlu	75	7	9%
	Chagi	36	21	58%
	Kalat	41	40	98%
	Harnai	17	14	82%
	Kachhi (Bolan)	35	18	51%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	7	22%
	Mastung	45	45	100%
	Loralai	33	25	76%
	Killa Saifullah	28	0	0%
	Ziarat	29	14	48%
	Duki	31	0	0%
	Nushki	32	28	88%
	Dera Bugti	45	39	87%
	Washuk	46	0	0%
	Panjgur	38	0	0%
	Awaran	23	0	0%
	Chaman	24	0	0%
	Barkhan	20	20	100%
	Hub	33	24	73%
	Musakhel	41	0	0%
	Usta Muhammad	34	32	94%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	38	100%
	Gilgit	44	44	100%
	Diamer	62	54	87%
	Astore	55	55	100%

	Shigar	27	24	89%
	Skardu	53	52	98%
	Ganche	29	29	100%
	Kharmang	46	24	52%
Sindh	Hyderabad	72	72	100%
	Ghotki	64	64	100%
	Umerkot	62	62	100%
	Naushahro Feroze	107	101	94%
	Tharparkar	276	264	96%
	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	27	77%
	Karachi-Kemari	22	21	95%
	Karachi-Central	12	10	83%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	55	100%
	Mirpur Khas	106	105	99%
	Badin	124	123	99%
	Sukkur	64	63	98%
	Dadu	90	90	100%
	Sanghar	100	98	98%
	Jacobabad	44	44	100%
	Khairpur	170	168	99%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	41	38	93%
	Shaheed Benazirabad	122	122	100%

Table 7: IDSR reporting Tertiary care hospital Week 46, 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	0	0%
	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	33%
	Sukkur	1	0	0%
	Shaheed Benazirabad	1	1	100%
	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%

Strengthening Pakistan's Commitment to Combat Antimicrobial Resistance

World Antimicrobial Resistance Awareness Week (WAAW)

To commemorate World Antimicrobial Resistance (AMR) Awareness Week (WAAW), the National Institutes of Health (NIH), Islamabad, in collaboration with the Ministry of National Health Services, Regulations and Coordination (MoNHSRC) and the Fleming Fund, convened the **National AMR Symposium**, a landmark event reinforcing Pakistan's renewed commitment to tackling drug-resistant infections.

Held under the theme **"Sustainability of AMR Containment in Pakistan,"** the symposium served as a high-level platform for health leaders, policymakers, scientists, and international partners to re-evaluate progress, share experiences, and chart actionable strategies for long-term AMR control. The gathering underscored AMR as one of the most pressing public health challenges of our time, threatening medical advances, food security, and environmental health.

Senior officials from federal and provincial health departments, representatives from global health organizations, laboratory experts, epidemiologists, pharmacists, veterinarians, and One Health partners participated in the dialogue. Their collective engagement highlighted the multisectoral nature of AMR and the critical need for sustained coordination among human health, animal health, agriculture, and environmental sectors.

Throughout the sessions, speakers emphasized the importance of strengthening national surveillance systems, expanding laboratory capacity, ensuring antimicrobial stewardship, and reinforcing infection prevention and control (IPC) at all levels of healthcare delivery. Special focus was also placed on scaling community awareness, optimizing antibiotic use across sectors, and institutionalizing AMR governance frameworks to ensure program continuity beyond donor-dependent cycles.

The symposium also showcased Pakistan's achievements under the National AMR Action Plan, including the expansion of surveillance sites, improved reporting mechanisms, capacity-building programs, and enhanced collaboration through the Fleming Fund Country Grant. Partners commended the proactive leadership of NIH and MoNHSRC in driving a coordinated AMR agenda.

As WAAW serves as an annual reminder of the global solidarity needed to address antimicrobial resistance, this national dialogue re-affirmed Pakistan's determination to safeguard public health through resilient systems, evidence-based policy, and continued cross-sectoral cooperation.

By sustaining momentum and investing in long-term solutions, Pakistan is taking meaningful strides toward preserving the effectiveness of life-saving medicines for future generations.

Notes from the field:

Malaria Outbreak Investigation Report: UC Ekkagund, District Mohmand, August 2025

Introduction

Malaria remains one of the world's most significant vector-borne diseases, responsible for hundreds of thousands of deaths annually especially in tropical and subtropical regions. The WHO Eastern Mediterranean Region continues to experience substantial malaria transmission, driven by environmental conditions favorable for Anopheles mosquitoes. Pakistan has shown fluctuating malaria trends, with increasing cases in recent years due to climate change, surveillance gaps, and insecticide resistance. Khyber Pakhtunkhwa province remains endemic, with periodic surges linked to monsoon rains and inadequate vector control. District Mohmand has demonstrated rising malaria trends from 2023 to 2025, particularly around RHC Ekkagund. On 26 August 2025, an alert from RHC Ekkagund indicated a potential malaria outbreak, prompting immediate investigation.

Objectives

1. To determine the magnitude of the outbreak.

2 To identify major environmental, vector-related, and behavioral risk factors.

3. To recommend appropriate public health control and prevention measures.

Methods

A descriptive study was conducted. The study population included all residents of UC Ekkagund, District Mohmand, with a total population of 52,291. The investigation was performed in UC Ekkagund and the catchment of RHC Ekkagund, where most suspected cases were reported during 27–30 August 2025.

The case definition for suspected malaria included “any individual residing in UC Ekkagund between 5–30 August 2025 presenting with fever ≥37.5°C with or without chills, sweating, headache, or other malaria symptoms without any other confirmed cause for it”. A confirmed case was defined as “a symptomatic individual with a positive microscopy slide for Plasmodium species and residing in UC Ekkagund during the defined period”.

Data were collected using line lists, DHIS-2 registers, and structured field investigation tools. Active case finding was performed in hotspot villages including Aqrab Dag, Afghan refugee settlements, and Ekkagund, through household visits, screening camps, and

interviews. Health facility registers were also reviewed for febrile cases. Laboratory samples including microscopy slides and RDTs were collected; all slides were cross-checked with the Provincial Malaria Reference Laboratory (PMRL) Peshawar to ensure diagnostic accuracy. The analysis plan included descriptive epidemiology using Excel, DHIS-2, and WHO analytical tools to compute frequencies, age distribution, gender ratios, area clustering, and attack rates where possible.

Results

A total of 98 laboratory-confirmed malaria cases were reported during the investigation. The age range of cases was 0–95 years, with the most affected age groups being 5–14 years (45%), followed by >15 years (38%), and 0–4 years (17%). Females accounted for 53% of the affected population.

Cases were distributed across multiple hotspot areas including Aqrab Dag, Afghan refugee camps, Lar Kalay, and Bara Kalay, with a total of four villages showing significant clustering. Gender-specific attack rates showed 0.36% among males and 0.39% among females, based on population denominators of 27,250 males and 25,041 females in the catchment population.

Clinical symptoms included fever (46%), chills (32%), vomiting (8%), and muscle pain (14%), consistent with uncomplicated malaria. Identified risk factors included heavy monsoon rainfall, high humidity, poor drainage, water storage practices, inadequate use of bed nets, and presence of vector breeding sites around homes. Entomological surveillance confirmed

active vectors, with 80 Anopheles mosquitoes, including 59 female Anopheles, collected from households. Vector species detected included Anopheles stephensi and Anopheles culicifacies. Larval surveillance showed 31/43 breeding sites positive for Anopheles larvae.

Laboratory results showed mixed infection patterns, with rapid diagnostic tests detecting both Plasmodium vivax and occasional Plasmodium falciparum, and microscopy confirming Plasmodium vivax as the predominant species, supported by PMRL cross-checking. Attack rate from screening camps showed 1.3% positivity (169 RDTs performed, with 85 positives by RDT and 59 positives confirmed on microscopy).

Discussion

The investigation confirmed a true malaria outbreak in UC Ekkagund, evidenced by a sharp rise in confirmed cases far above expected thresholds, clustering in defined hotspot areas, and supportive entomological and environmental indicators. The age distribution skewed toward children 5–14 years suggests increased exposure around household and outdoor activities. The presence of Anopheles stephensi and A. culicifacies, combined with high rainfall and poor water drainage, favored the conditions for vector proliferation. Behavioral factors such as low bed-net usage and inadequate protective practices further enhanced vulnerability.

Environmental assessments revealed substantial stagnant water bodies and positive larval habitats, explaining sustained transmission. Despite available diagnostic facilities, delayed reporting and limited early response contributed to outbreak amplification. Cross-checking of microscopy slides strengthened diagnostic reliability, confirming P. vivax as the dominant species. This outbreak underscores the critical need for integrated vector management, improved community engagement, and timely outbreak detection to prevent similar events in the future.

Conclusion

This investigation confirmed a malaria outbreak in UC Ekkagund, District Mohmand, driven primarily by favorable environmental conditions, and inadequate vector control measures. The affected population included all age groups, with children and adolescents most affected. Presence of vectors and environmental risk factors facilitated sustained transmission.

Recommendations

1. Enhance surveillance through active case detection, timely reporting, and monitoring during peak transmission seasons.

2. Strengthen vector control through indoor residual spraying in hotspot villages, larval source management, and elimination of stagnant water.

3. Improve diagnostic and treatment capacity by ensuring availability of rapid diagnostic tests, microscopy, and antimalarial medicines.

4. Promote community awareness on prevention methods including mosquito net use, repellent application, and household sanitation.

5. Foster intersectoral collaboration with sanitation, local government, NGOs, and refugee management units for integrated vector management.

6. Maintain environmental monitoring of rainfall, humidity, and temperature to anticipate high-risk periods.

References

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Knowledge Hub

Mumps: What You Need to Know

Mumps is a contagious viral disease. It is best known for causing painful swelling of the salivary glands (parotid glands) located near the ears. While often a mild childhood illness, mumps can lead to serious complications.

What is Mumps?

It is caused by mumps virus, which is a Paramyxovirus, and is a vaccine-preventable disease. The widespread use of the MMR (Measles, Mumps, Rubella) vaccine has made mumps rare in many countries. However, outbreaks can still occur, especially in groups with low vaccination rates.

How Mumps Spreads

Mumps is spread through respiratory droplets from an infected person's nose or throat. For example, when an infected person coughs, sneezes, or talks, shares drinks, food, or eating utensils or is in close contact with others for a long period of time (e.g., in classrooms, dormitories). A person with mumps is most contagious from a few days before their salivary glands swell until about five days after the swelling begins.

Signs & Symptoms:

Symptoms usually appear 16 to 18 days after exposure to the virus, but may range from 12 to 25 days. About one-third of people infected with mumps have very mild symptoms or no symptoms at all. Common symptoms, when they appear may include swollen, tender salivary glands (parotitis) under the ears on one or both sides of the face making the cheeks and jaw look puffy, and; fever, headache, muscle aches, tiredness, loss of appetite and pain while chewing or swallowing

Complications:

Most people recover fully from mumps, but complications may occur, especially in adults. These may include:

Orchitis: Inflammation and swelling of one or both testicles in males who have reached puberty. This is the most common serious complication in males and can, in rare cases, lead to reduced fertility.

Meningitis: Inflammation of the lining of the brain and spinal cord.

Encephalitis: Inflammation of the brain (very rare).

Oophoritis/Mastitis: Inflammation of the ovaries or breasts in females who have reached puberty.

Hearing loss: Temporary or, rarely, permanent hearing loss in one or both ears.

Prevention

The best way to prevent mumps is through vaccination with the MMR vaccine.

Children: Two doses are recommended: the first dose at 12–15 months of age and the second dose at 4–6 years of age.

Adults: Adults who were born after 1957 and do not have evidence of immunity should speak to their doctor about getting one or two doses.

Diagnosis and Treatment:

Mumps is usually diagnosed by a healthcare provider based on symptoms and confirmed with a blood test or by testing a swab from the inside of the cheek.

There is no specific treatment to cure mumps once you have it. Treatment focuses on managing symptoms. Get plenty of rest. Use over-the-counter pain relievers (like acetaminophen or ibuprofen) for fever and aches.

Stay at home, away from work, school, or public places for at least five days after the swelling begins to avoid spreading the virus.

For additional authoritative information on mumps, please visit: Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/mumps/index.html World Health Organization (WHO): https://www.who.int/news-room/factsheets/detail/mumps Public Health Agency of Canada (PHAC) Public Health Agency of Canada (PHAC): https://www.canada.ca/en/publichealth/services/diseases/mumps.html UK Health Security Agency (UKHSA) / National Health Service (NHS - UK): https://www.nhs.uk/conditions/mumps/

PROTECT YOURSELF AGAINST MUMPS

MMR VACCINATION IS THE BEST WAY TO PREVENT MUMPS!

THERE IS NO TREATMENT FOR MUMPS IF YOU GET IT

KEEP FROM SPREADING MUMPS

Don't share things that have saliva on them

Cover your coughs and sneezes

Stay home when you are sick

Wash your hands often with soap and water

Clean and disinfect surfaces

SIGNS AND SYMPTOMS OF MUMPS

Mumps is best known for the puffy cheeks and swollen jaw that it causes.

Fever

Headache

Loss of appetite

Muscle aches

Tiredness

VACCINATION ALSO HELPS PREVENT MUMPS COMPLICATIONS

Complications can include swelling of the:

- testicles
- ovaries
- breasts
- pancreas
- brain
- spinal cord tissue

IF YOU HAVE SYMPTOMS, STAY HOME AND AWAY FROM OTHERS. CONTACT YOUR DOCTOR OR HEALTH SERVICES AT YOUR INSTITUTION.

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