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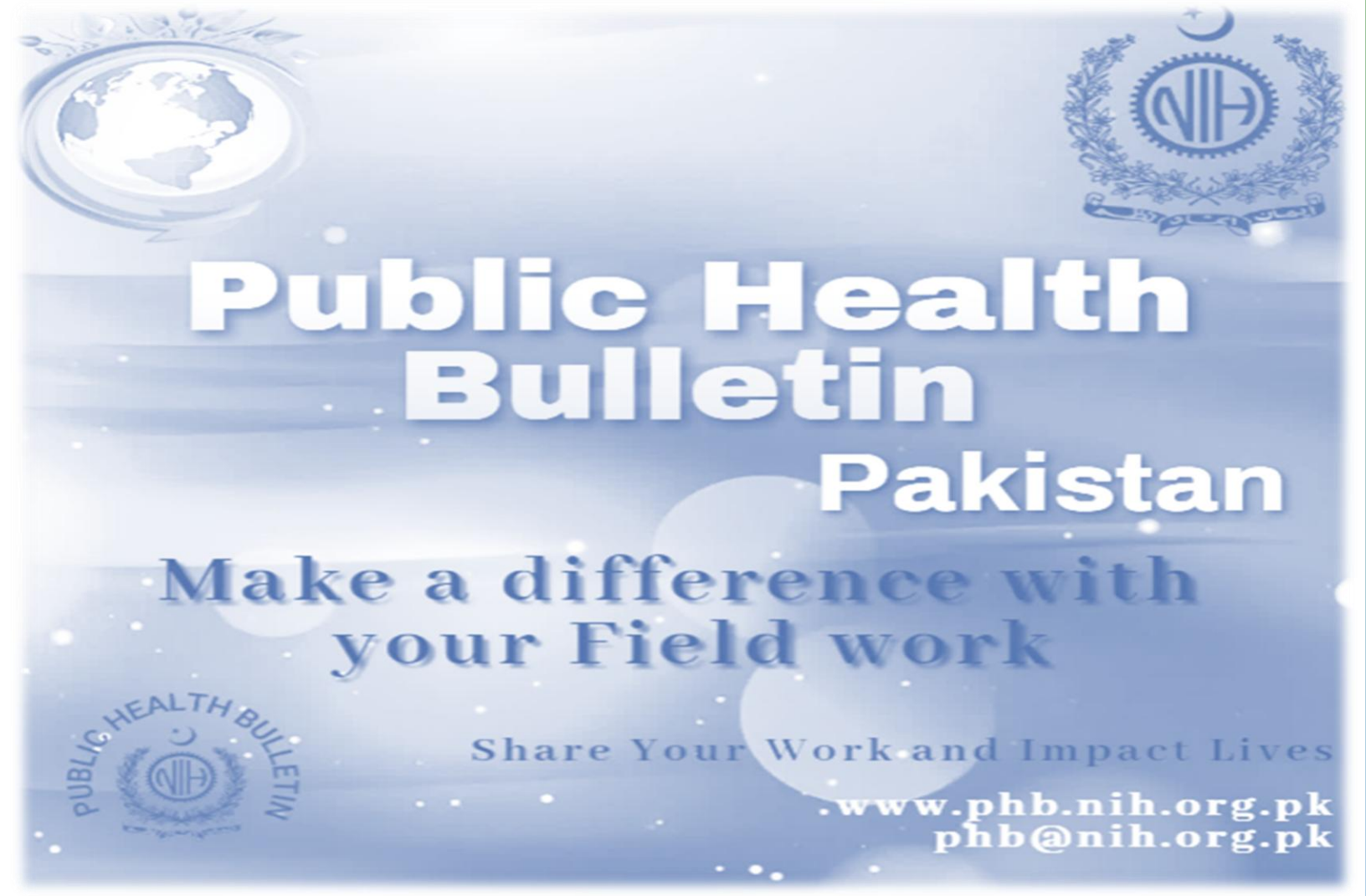
PUBLIC HEALTH BULLETIN-PAKISTAN

Integrated Disease Surveillance & Response (IDSR) Report

Center of Disease Control
National Institute of Health, Islamabad

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

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



Public Health Bulletin - Pakistan, Week 43, 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;

- *Vaccine Hesitancy and Immunization Gaps in Pakistan: Building on Success, Closing the Remaining Divide*
- *Malaria Outbreak Investigation Report: UC Ziarat Kaka Sahib, District Nowshera (July–August 2025)*
- *Knowledge hub on Typhoid: 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 43, 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, SARI and Dengue.*
- *Twenty-Four suspected cases of AFP reported from KP, Nine from Sindh Three from AJK and One from GB.*
- *Seventeen suspected cases of HIV/ AIDS reported from Sindh and Four from KP.*
- *One suspected cases of Brucellosis reported from KP.*
- *Among VPDs, there is an increase in number of cases of Measles, Mumps, Meningitis and AFP this week.*
- *Among Respiratory diseases, there is an increase in number of cases of ALRI <5 this week.*
- *Among Water/food-borne diseases, there is a decrease in number of suspected cases of Acute Diarrhea (Non-Cholera), and B. diarrhea this week.*
- *Among Vector-borne diseases, there is an increase in number of cases of CL, Dengue and Chikengunya this week.*
- *Among STDs, there is an increase in number of cases of HIV/AIDs and syphlis this week.*
- *Among Zoonotic/Other diseases, there is an increase in number of cases of VH (B, C &D) this week.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts is 80%*
- *Sindh is the top reporting regions with a compliance rate of 95%, followed by AJK 94%, GB 92% and ICT 81%.*
- *The lowest compliance rate was observed in KP 75% and Balochistan 57%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2704	1820	67
Azad Jammu Kashmir	454	433	95
Islamabad Capital Territory	38	27	71
Balochistan	1308	716	55
Gilgit Baltistan	410	377	92
Sindh	2111	2068	98
National	6986	5289	78

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.

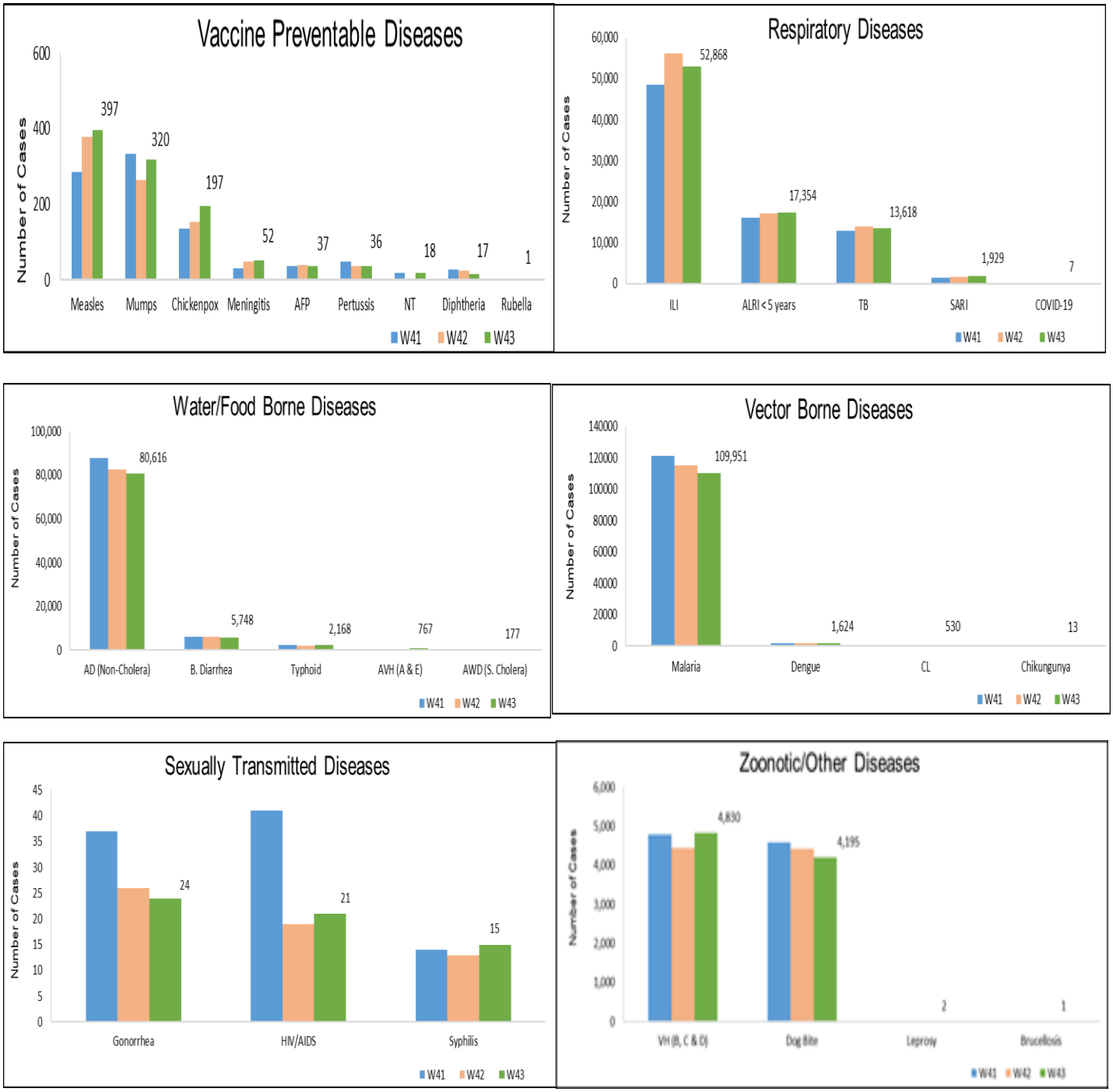
Acute Viral Hepatitis (A & E)

- **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 43, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
Malaria	7	4059	2	3	7877	NR	98003	**109987**
AD (Non-Cholera)	1563	6405	944	389	29135	NR	42180	**80616**
ILI	2211	6445	385	1997	6080	NR	35750	**52868**
ALRI < 5 years	1026	2254	741	10	1336	NR	11987	**17354**
TB	106	79	116	0	315	NR	13002	**13618**
B. Diarrhea	59	1111	71	3	796	NR	3708	**5748**
VH (B, C & D)	39	53	1	2	123	NR	4612	**4830**
Dog Bite	133	148	9	0	820	NR	3085	**4195**
Typhoid	30	414	81	2	675	NR	966	**2168**
SARI	143	697	181	0	824	NR	84	**1929**
Dengue	313	7	60	0	598	NR	646	**1624**
AVH (A & E)	48	19	3	0	208	NR	489	**767**
CL	0	62	0	0	468	NR	0	**530**
Measles	12	12	13	0	271	NR	89	**397**
Mumps	19	66	9	0	187	NR	39	**320**
Chickenpox/ Varicella	25	8	39	4	104	NR	17	**197**
AWD (S.Cholera)	19	126	6	0	16	NR	10	**177**
Meningitis	8	0	2	0	14	NR	28	**52**
AFP	3	0	1	0	24	NR	9	**37**
Pertussis	0	18	4	0	14	NR	0	**36**
Gonorrhea	0	20	0	0	1	NR	3	**24**
HIV/AIDS	0	0	0	0	4	NR	17	**21**
NT	0	0	0	0	18	NR	0	**18**
Diphtheria (Probable)	0	1	0	0	3	NR	13	**17**
Syphilis	0	0	0	0	0	NR	15	**15**
Chikungunya	0	0	0	0	1	NR	12	**13**
COVID-19	2	0	0	0	5	NR	0	**7**
Leprosy	0	1	0	0	1	NR	0	**2**
Brucellosis	0	0	0	0	1	NR	0	**1**
Rubella	0	0	1	0	0	NR	0	**1**

Figure 1: Most frequently reported suspected cases during Week 43, Pakistan.



Sindh

- Malaria remained the leading reported disease this week, followed by AD (Non-Cholera), ILI, TB, ALRI <5 years, and VH (B, C & D).
- Malaria cases were mainly reported from Khairpur, Larkana, and Sanghar, while AD (Non-Cholera) cases were concentrated in Khairpur, Dadu, and Mirpurkhas..
- Nine cases of AFP reported from Sindh. They are suspected cases and need field verification.
- A decline was observed in suspected cases of most diseases including AD (Non-Cholera), Malaria, ILI, ALRI <5 years, TB, Dog bite, VH (B, C & D), and Bloody Diarrhea, while Dengue and Typhoid showed a slight increase.

Table 2: District wise distribution of most frequently reported suspected cases during Week 43, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	Dengue
Badin	5230	2148	2748	877	587	254	304	165	60	9
Dadu	5850	2499	767	602	1243	81	428	372	134	0
Ghotki	5669	1231	40	658	669	647	119	208	0	0
Hyderabad	1795	2410	2309	413	216	139	84	48	2	212
Jacobabad	2028	782	800	284	507	264	102	188	42	0
Jamshoro	5925	1778	108	609	411	101	108	106	63	122
Kamber	6085	1850	0	903	318	72	121	180	21	0
Karachi Central	56	1781	1825	190	183	29	7	30	87	28
Karachi East	72	242	1	21	10	2	3	2	18	45
Karachi Keamari	9	616	320	2	16	0	1	0	3	0
Karachi Korangi	114	399	61	46	5	0	11	0	7	23
Karachi Malir	152	1287	3843	100	311	5	42	43	21	49
Karachi South	12	80	0	0	0	0	0	0	0	7
Karachi West	264	855	1118	75	199	23	14	49	24	0
Kashmore	2083	230	746	153	264	16	26	63	0	0
Khairpur	8402	3018	8421	1300	1189	201	345	229	208	1
Larkana	7841	1596	14	835	247	32	316	45	4	0
Matiari	4645	1400	17	653	333	199	52	74	5	11
Mirpurkhas	4794	2365	4607	768	437	23	183	155	23	6
Naushero Feroze	2194	1438	1223	508	711	60	475	191	34	0
Sanghar	6981	1909	156	1037	461	1300	88	200	45	0
Shaheed Benazirabad	4091	1657	1	332	273	70	95	134	88	0
Shikarpur	3736	1163	5	263	190	148	169	211	7	0
Sujawal	1057	1901	15	151	427	46	124	56	3	0
Sukkur	4820	1219	2090	446	684	55	128	83	2	0
Tando Allahyar	3741	910	1500	522	220	607	74	56	8	1
Tando Muhammad Khan	1425	770	118	622	182	24	80	82	1	0
Tharparkar	3152	1746	1213	365	716	28	90	3	17	129
Thatta	3072	1484	1671	57	581	152	25	112	15	3
Umerkot	2708	1416	13	210	397	34	94	0	24	0
Total	**98003**	**42180**	**35750**	**13002**	**11987**	**4612**	**3708**	**3085**	**966**	**646**

Figure 2: Most frequently reported suspected cases during Week 43 Sindh

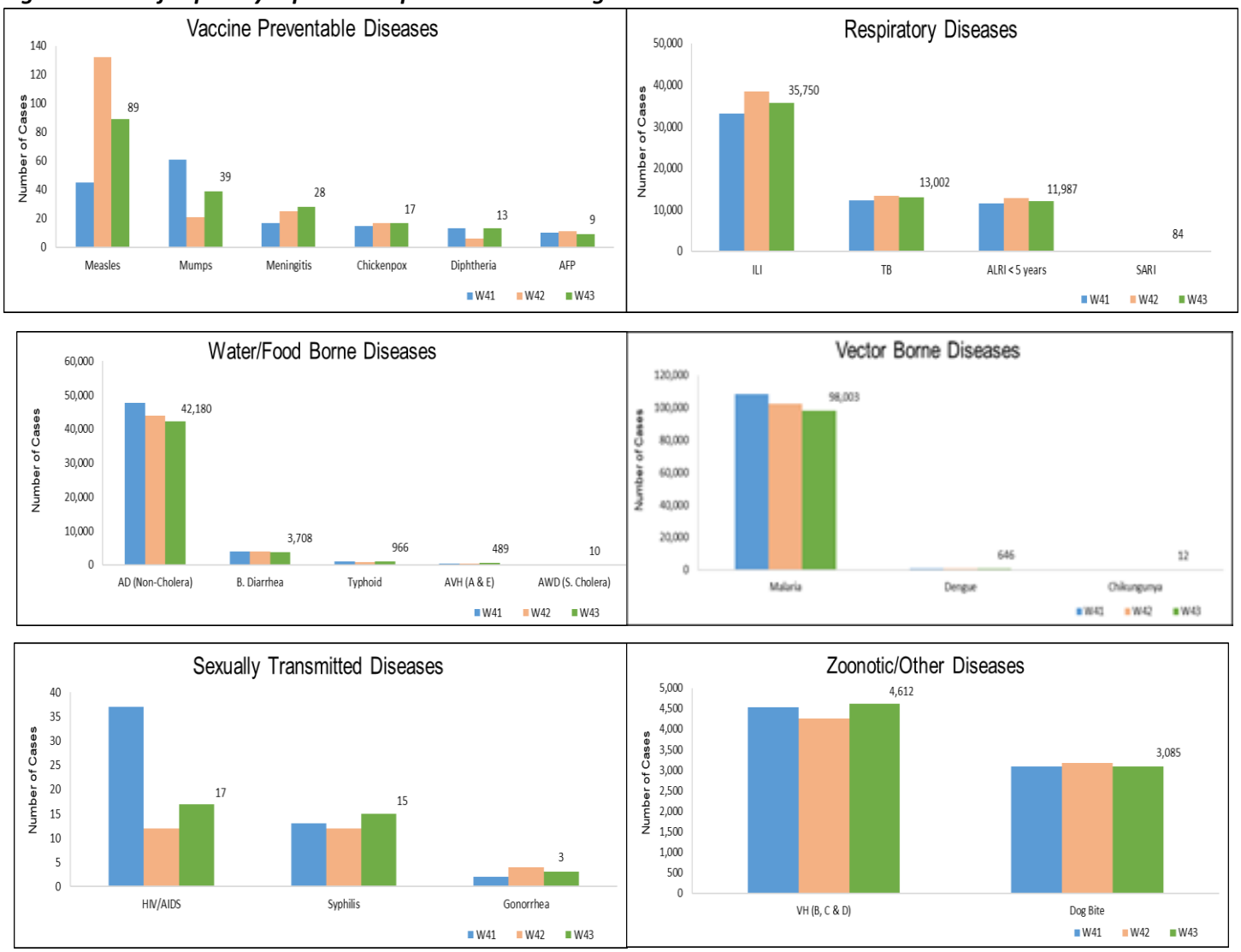
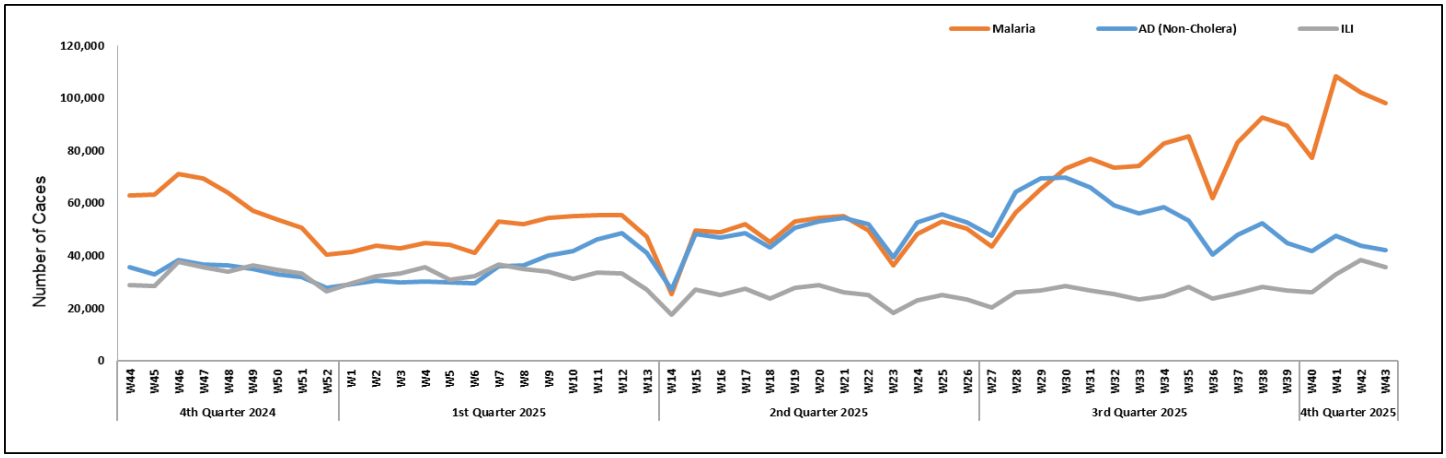


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh



Balochistan

- ILI and AD (Non-Cholera) were the most reported suspected disease this week, followed by Malaria, ALRI <5 years, and Bloody Diarrhea.
- Most numbers of suspected ILI cases were reported from Quetta, Pishin, and Kharan, while AD (Non-Cholera) cases were mainly from Usta Muhammad, Quetta, and Jaffarabad. Malaria cases were concentrated in Lasbella, Usta Muhammad, and Jaffarabad.
- One suspected case of Diphtheria reported from Balochistan. Field investigation is required to confirm the cases.
- A general decline was observed in AD (Non-Cholera), Malaria, and ALRI <5 years compared to previous weeks, while ILI and SARI showed a slight increase.

Table 3: District wise distribution of most frequently reported suspected cases during Week 43, Balochistan

Districts	ILI	AD (Non-Cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dog Bite	AWD (S.Cholera)	TB
Awaran	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barkhan	58	90	79	48	5	0	28	14	7	5
Chagai	334	221	72	0	56	0	15	0	0	0
Chaman	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dera Bugti	0	41	45	39	0	0	0	0	0	0
Duki	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Gwadar	1146	294	207	11	64	1	3	2	2	0
Harnai	0	195	83	225	56	0	0	1	0	0
Hub	60	166	193	7	5	0	1	4	0	1
Jaffarabad	227	379	374	122	61	40	11	10	0	51
Jhal Magsi	141	224	295	109	0	2	14	12	0	7
Kachhi (Bolan)	244	289	253	9	67	53	5	12	31	0
Kalat	8	38	16	12	23	4	10	0	0	0
Kech (Turbat)	514	199	277	2	32	0	0	0	0	0
Kharan	656	196	53	0	72	46	5	0	2	0
Khuzdar	35	289	40	4	20	12	25	0	0	0
Killa Abdullah	245	218	18	5	67	82	25	8	51	0
Killa Saifullah	0	254	235	531	75	54	24	0	4	0
Kohlu	120	40	35	16	28	1	16	0	0	0
Lasbella	124	366	700	156	18	1	4	14	0	1
Loralai	502	263	70	80	37	91	16	0	0	0
Mastung	169	104	42	40	13	94	11	1	0	0
MusaKhel	43	61	142	38	18	13	18	0	3	0
Naseerabad	19	324	159	70	17	23	60	39	0	7
Nushki	0	133	13	9	36	16	0	0	5	1
Panjgur	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Pishin	695	380	49	135	147	65	29	1	12	0
Quetta	752	452	27	189	33	30	21	1	6	0
Sherani	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sibi	118	241	228	20	19	18	16	0	3	0
Sohbat pur	0	180	114	128	31	14	17	2	0	1
Surab	26	6	0	0	0	0	0	0	0	0
Usta Muhammad	171	730	218	226	106	19	37	27	0	0
Washuk	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Zhob	38	32	22	23	5	18	3	0	0	5
Ziarat	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Total	**6445**	**6405**	**4059**	**2254**	**1111**	**697**	**414**	**148**	**126**	**79**

Figure 4: Most frequently reported suspected cases during Week 43, Balochistan

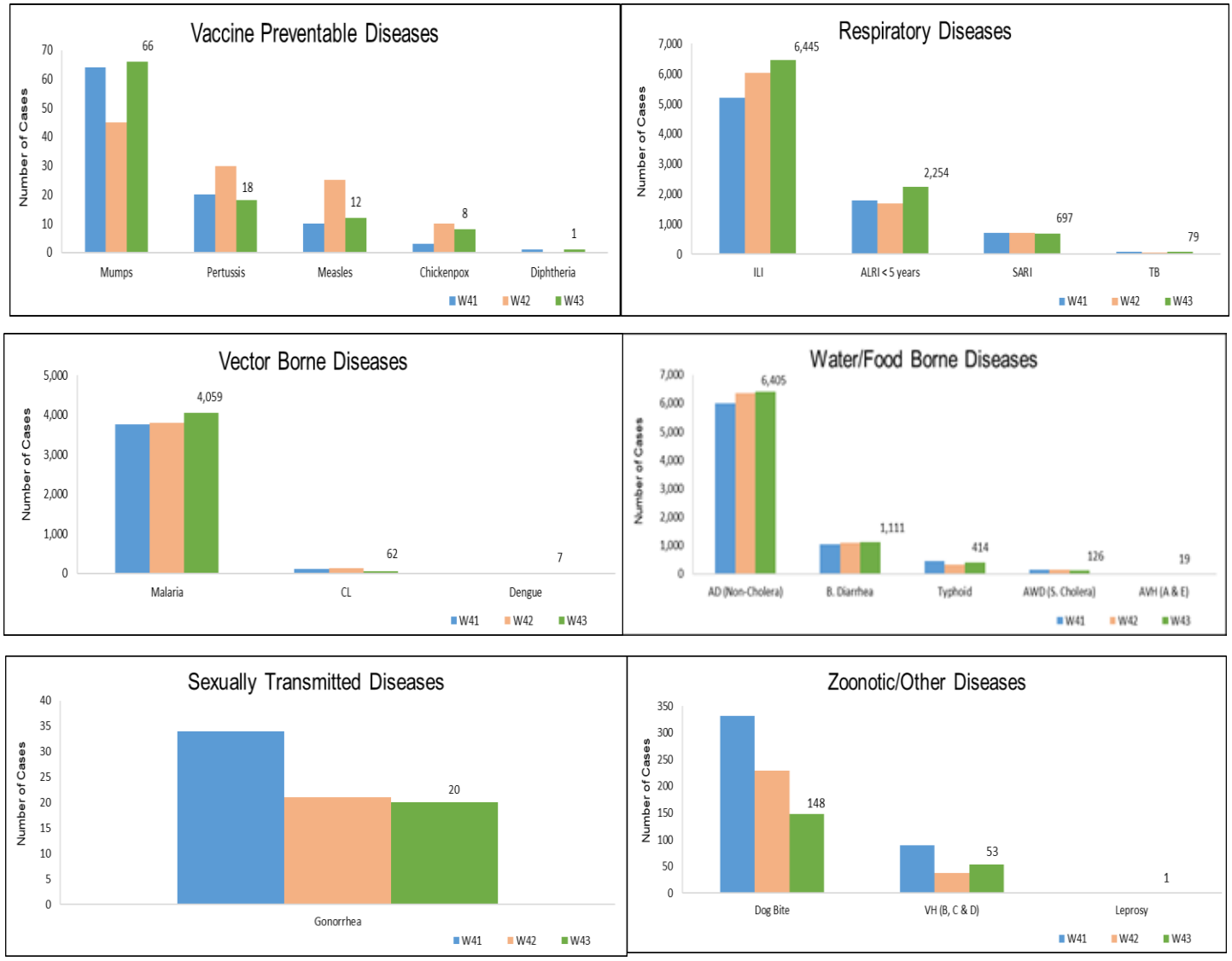
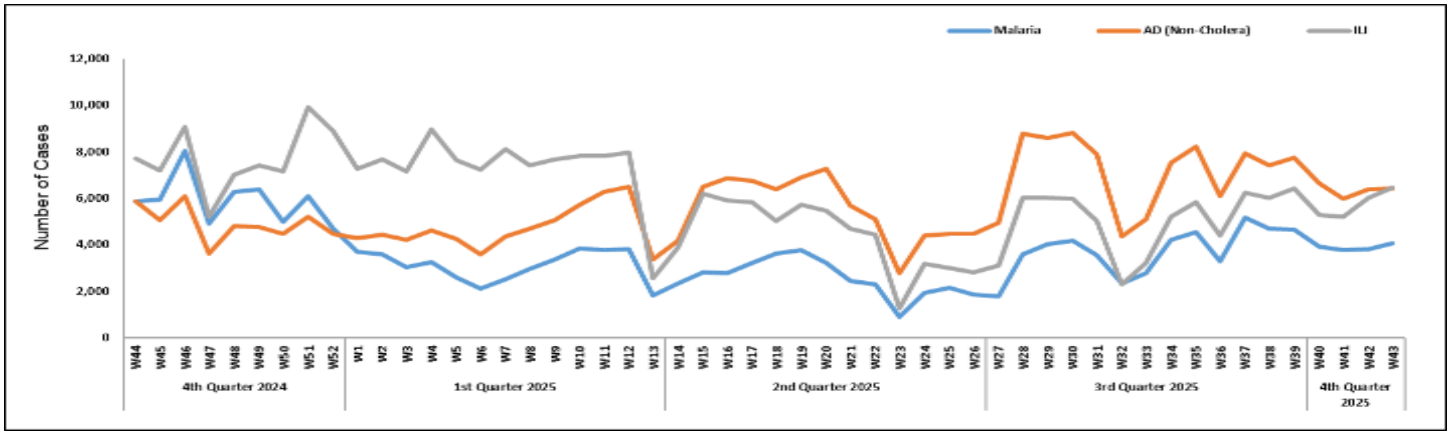


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



- AD (Non-Cholera) remained the most reported condition this week, followed by Malaria, ILI, ALRI <5 years, and SARI. High numbers of AD (Non-Cholera) were reported from Peshawar, Charsadda, D.I. Khan, Swat, and Nowshera, while Malaria cases were concentrated in Bannu, Charsadda, and Lakki Marwat.
- Twenty-four cases of AFP reported from KP. All are suspected cases and need field verification.
- A decline was observed in AD (Non-Cholera), Malaria, and ILI cases compared to the previous week, while Dengue and Dog bite cases showed a slight increase, mainly in Karak, Khyber, and Swat.

Table 4: District wise distribution of most frequently reported suspected cases during Week 43, KP

Districts	AD (Non-Cholera)	Malaria	ILI	ALRI < 5 years	SARI	Dog Bite	B. Diarrhea	Typhoid	Dengue	CL
Abbottabad	822	0	263	62	6	82	4	10	41	0
Bajaur	762	258	89	9	80	80	48	8	11	17
Bannu	948	1471	2	11	0	3	11	89	6	0
Battagram	60	30	0	2	3	0	2	19	10	0
Buner	158	157	0	0	0	0	0	7	0	0
Charsadda	1930	529	2383	475	193	20	122	60	76	0
Chitral Lower	563	18	44	15	12	14	11	9	6	4
Chitral Upper	116	6	84	7	15	2	12	18	0	1
D.I. Khan	2061	881	0	12	0	15	26	0	0	1
Dir Lower	1800	157	1	6	0	52	63	25	5	0
Dir Upper	937	21	29	122	137	16	19	5	3	1
Hangu	297	135	243	0	0	3	0	4	5	95
Haripur	875	21	453	42	8	6	7	38	58	0
Karak	616	297	32	51	0	24	16	11	8	166
Khyber	698	540	42	57	7	32	99	82	0	92
Kohat	411	282	0	0	0	32	5	7	1	9
Kohistan Lower	136	2	5	0	0	1	1	0	1	0
Kohistan Upper	299	96	1	0	0	1	23	1	0	0
Kolai Palas	72	7	12	1	0	0	6	2	3	0
L & C Kurram	7	0	0	0	0	0	10	0	0	0
Lakki Marwat	689	638	2	0	0	64	2	16	7	0
Malakand	611	41	61	0	0	0	0	4	0	5
Mansehra	918	6	272	12	0	55	0	0	15	0
Mardan	1231	175	54	57	2	19	39	48	64	1
Mohmand	97	241	59	1	97	8	7	2	15	39
North Waziristan	57	131	13	27	20	0	4	24	11	1
Nowshera	2250	356	114	37	37	3	15	12	19	8
Orakzai	73	13	7	0	0	0	1	0	0	0
Peshawar	4299	59	477	91	8	5	124	42	96	0
Shangla	1001	442	0	11	0	42	4	13	3	0
South Waziristan (Lower)	85	72	150	31	79	17	2	18	1	18
South Waziristan (Upper)	47	31	32	6	20	0	0	0	0	9
Swabi	1094	148	653	61	52	100	7	53	55	0
Swat	2242	131	342	116	0	110	37	31	76	0
Tank	652	372	42	5	0	0	13	1	0	0
Tor Ghar	74	99	0	3	10	10	19	4	2	1
Upper Kurram	147	14	119	6	38	4	37	12	0	0
Total	**29135**	**7877**	**6080**	**1336**	**824**	**820**	**796**	**675**	**598**	**468**

Figure 6: Most frequently reported suspected cases during Week 43, KP

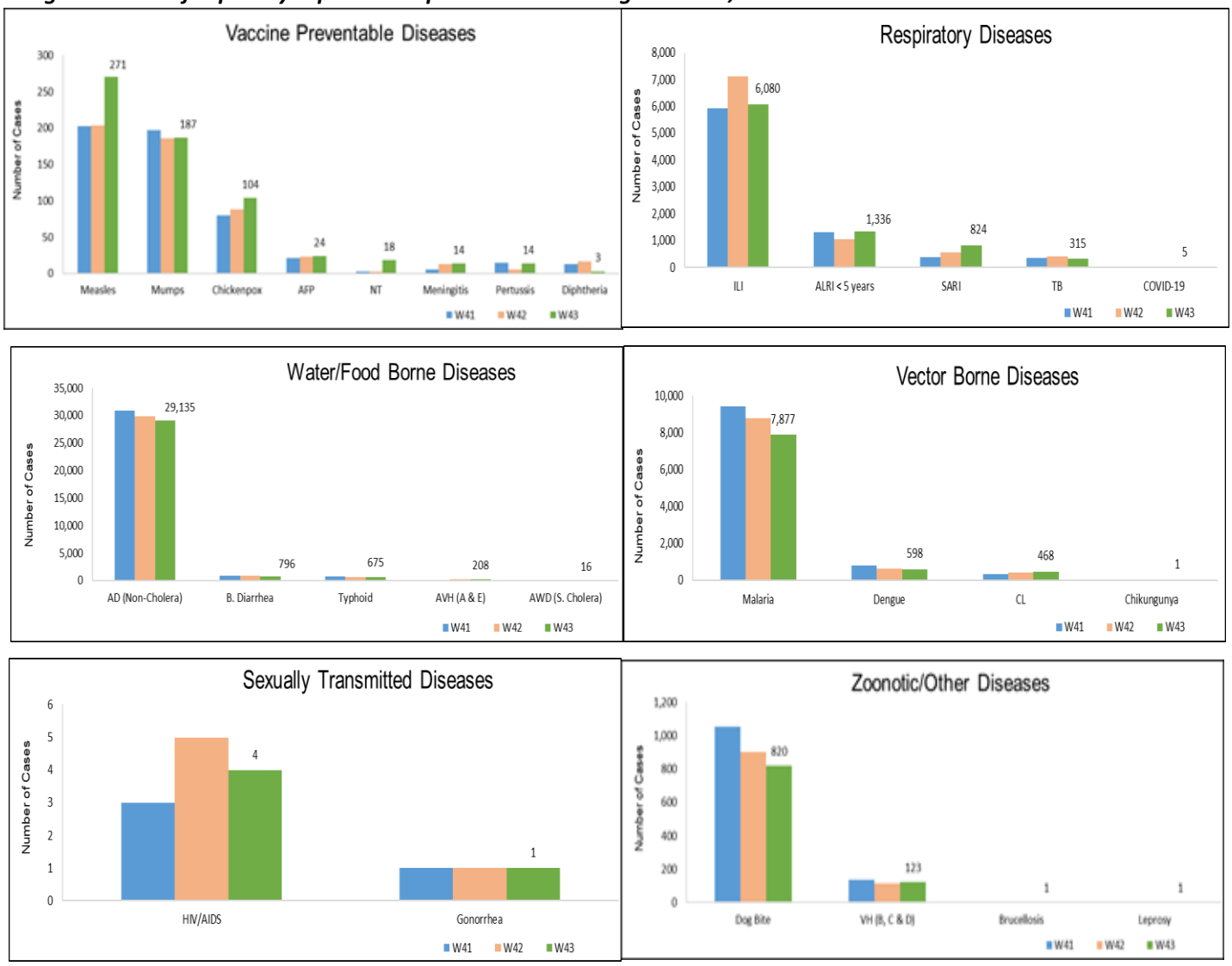
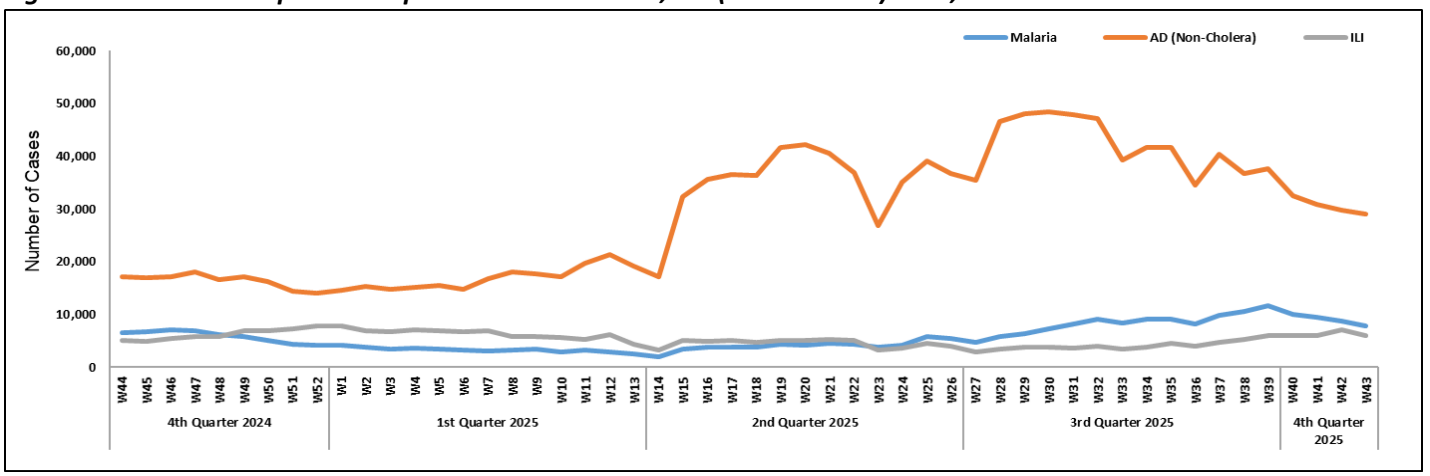


Figure 7: Week wise reported suspected cases Malaria, AD (Non-Cholera) & ILI, KP



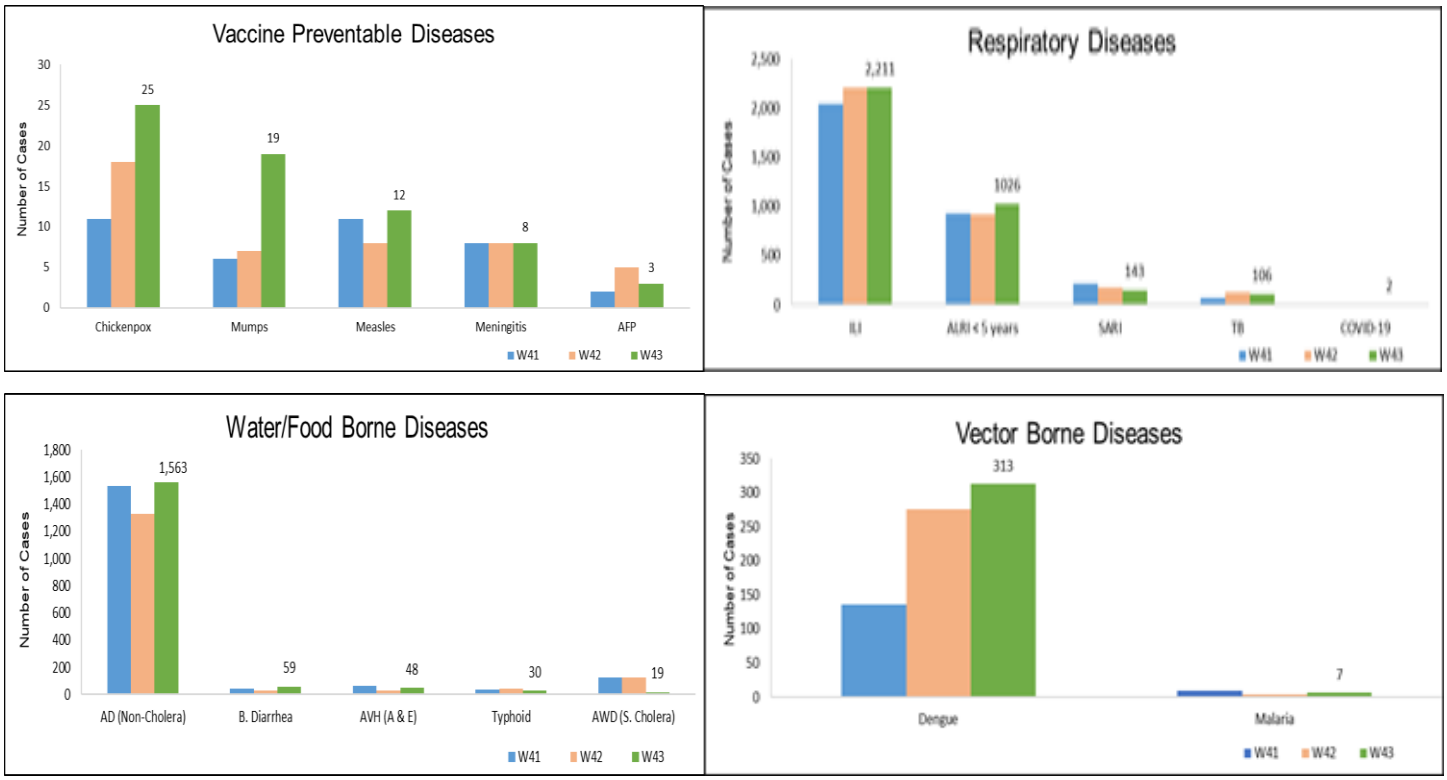
ICT, AJK & GB

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

AJK: ILI cases were maximum followed by AD (Non-Cholera), ALRI < 5years, SARI, dog bite, TB, B. Diarrhea, VH (B, C & D), Typhoid and AWD (S. Cholera) cases. An increase in number of suspected cases was observed for AD (Non-Cholera), ALRI < 5years, SARI, Dengue, dog bite, VH (B, C & D), Typhoid, Measles, Pertussis and Meningitis while a decline in cases observed for ILI and AWD (S. Cholera) this week.

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

Figure 10: Most frequently reported suspected cases during Week 43, AJK



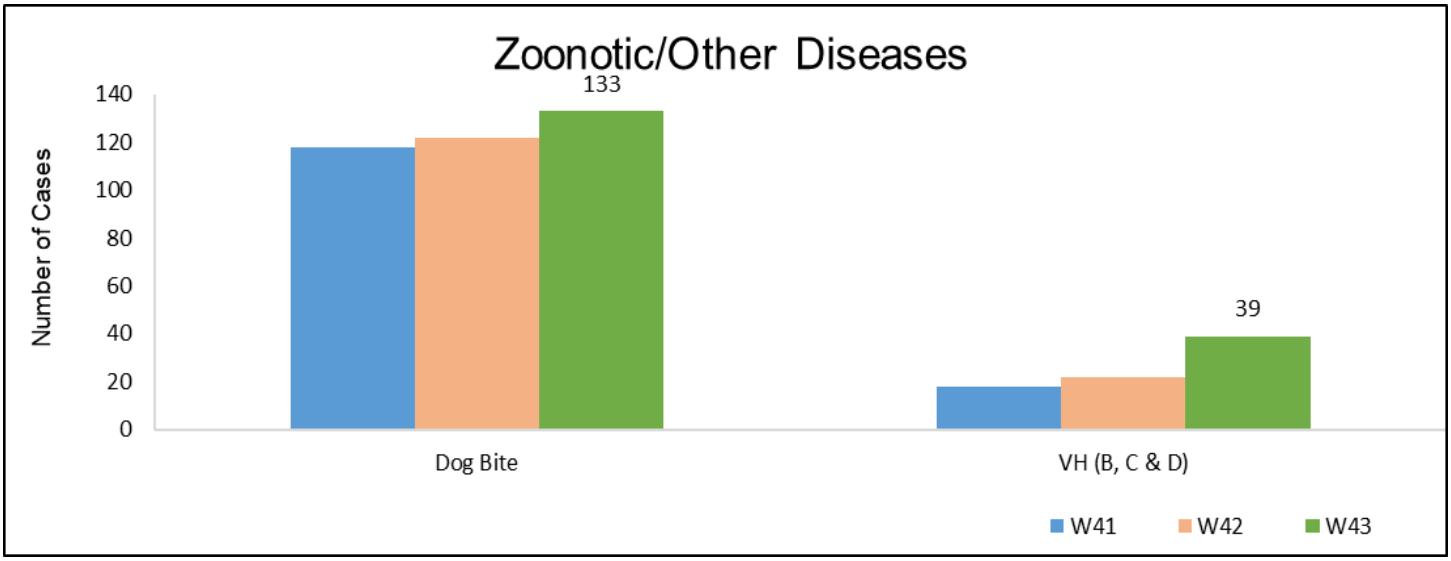


Figure 11: Week wise reported suspected cases of ILI and AD (Non-Cholera)

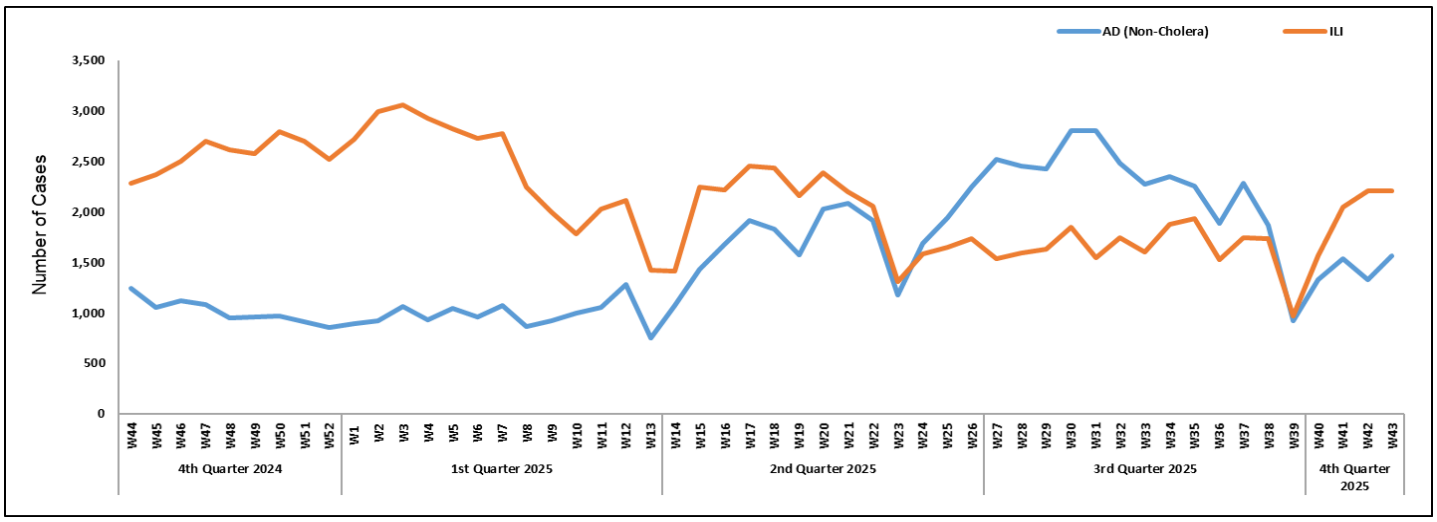


Figure 12: Most frequently reported suspected cases during Week 43, ICT

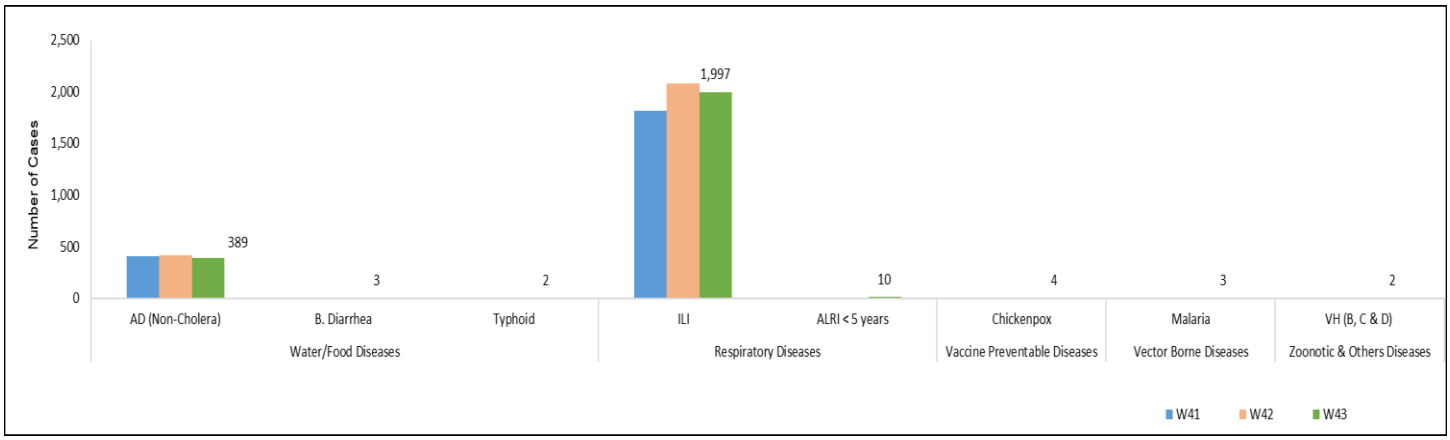


Figure 13: Week wise reported suspected cases of ILI, ICT

Figure 14: ***Most frequently reported suspected during Week 43, GB***

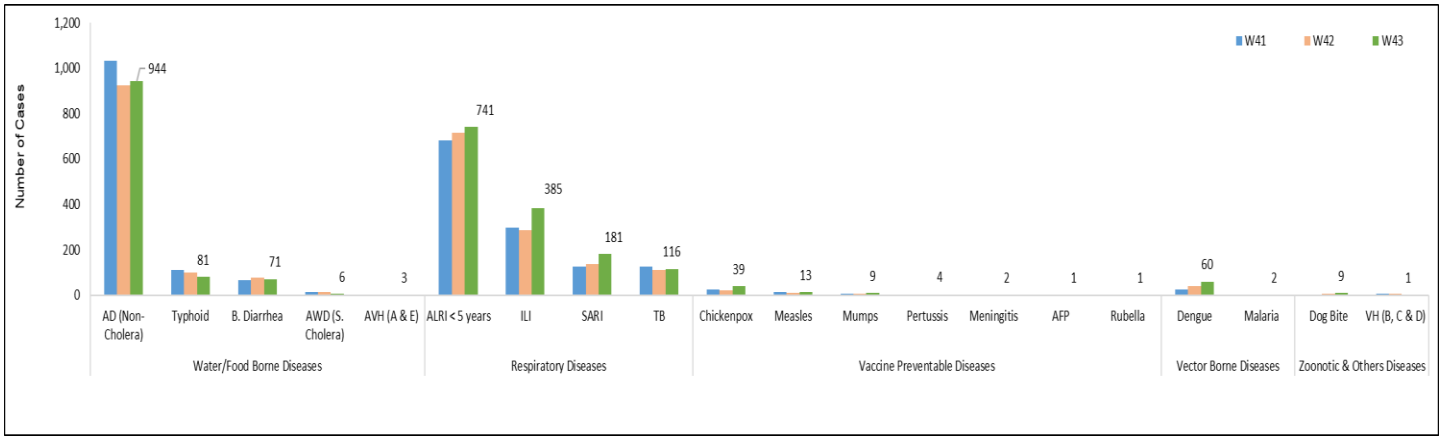


Figure 15: Week wise reported suspected cases of AD (Non-Cholera), GB

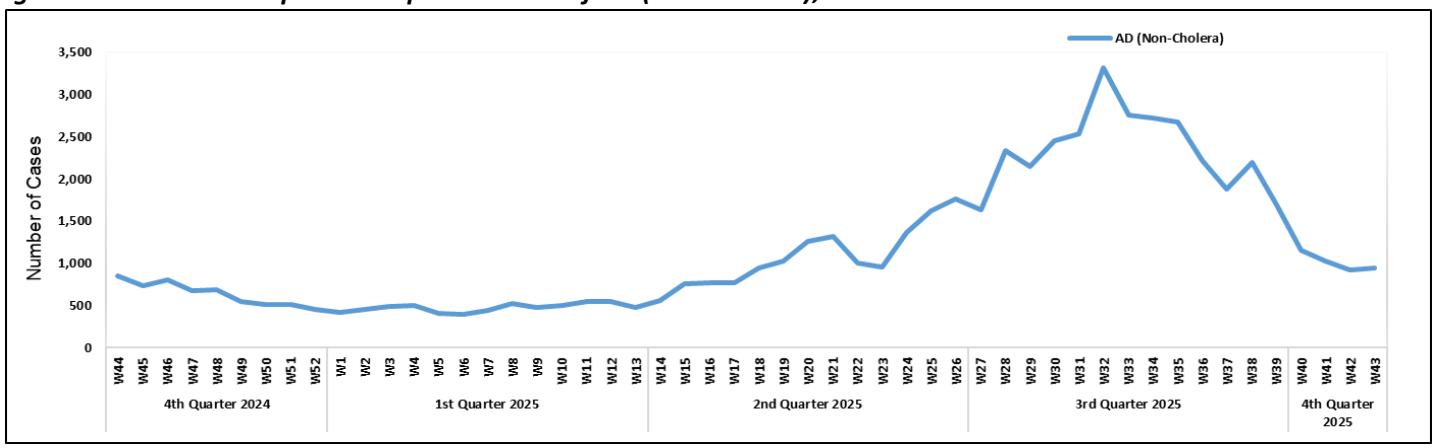


Table 5: Public Health Laboratories con0firmed cases of IDSR Priority Diseases during Epi Week 43

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)	43	2	0	0	0	0	-	-	0	0	-	-	0	0
Stool culture & Sensitivity	260	2	0	0	0	0	-	-	0	0	-	-	0	0
Malaria	19,365	759	0	0	7,321	7	-	-	145	0	-	-	29	0
CCHF	0	0	4	2	0	0	-	-	0	0	-	-	0	0
Dengue	12,569	3,074	0	0	9,362	124	-	-	42	2	-	-	374	49
VH (B)	10,520	359	42	29	30	9	-	-	1,168	23	-	-	397	8
VH (C)	11,119	925	65	26	49	10	-	-	1,232	8	-	-	394	20
VH (D)	237	47	25	3	0	0	-	-	0	0	-	-	0	0
VH (A)	718	64	0	0	0	0	-	-	4	0	-	-	0	0
VH (E)	147	14	0	0	0	0	-	-	0	0	-	-	0	0
Covid-19	44	1	2	0	51	0	-	-	0	0	-	-	9	0
TB	413	37	0	0	0	0	-	-	117	0	-	-	34	7
HIV/ AIDS	4,184	42	0	0	263	1	-	-	139	0	-	-	442	1
Syphilis	1,031	13	0	0	0	0	-	-	123	0	-	-	0	0
Typhoid	2,610	52	0	0	0	0	-	-	202	41	-	-	0	0
Diphtheria	3	0	0	0	0	0	2	1	0	0	-	-	0	0
ILI	18	1	2	1	48	1	-	-	0	0	-	-	0	0
Pneumonia (ALRI)	456	73	2	1	0	0	-	-	0	0	-	-	0	0
Meningitis	47	4	0	0	0	0	-	-	0	0	-	-	0	0
Measles	125	51	50	23	183	102	12	7	3	0	381	76	15	6
Rubella (CRS)	15	7	0	0	0	0	-	-	0	0	-	-	0	0
Leishmaniansis (cutaneous)	1	0	0	0	4	2	-	-	0	0	-	-	0	0
Chikungunya	7	2	0	0	0	0	-	-	0	0	-	-	0	0
Gonorrhea	138	0	0	0	0	0	-	-	0	0	-	-	0	0
Mpox	0	0	0	0	1	1	-	-	0	0	-	-	0	0

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

Table 6: IDSR reporting districts Week 43, 2025

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	105	95%
	Bannu	238	131	55%
	Battagram	59	41	69%
	Buner	34	34	100%
	Bajaur	44	37	84%
	Charsadda	59	59	100%
	Chitral Upper	34	30	88%
	Chitral Lower	35	35	100%
	D.I. Khan	114	113	99%
	Dir Lower	74	63	85%
	Dir Upper	37	34	92%
	Hangu	22	13	59%
	Haripur	72	69	96%
	Karak	36	36	100%
	Khyber	53	48	91%
	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	6	14%
	Upper Kurram	41	28	68%
	Malakand	42	27	64%
	Mansehra	133	92	69%
	Mardan	80	53	66%
	Nowshera	56	53	95%
	North Waziristan	13	8	62%
	Peshawar	156	135	87%
	Shangla	37	35	95%
	Swabi	64	63	98%
	Swat	77	72	94%
	South Waziristan (Upper)	93	91	98%
	South Waziristan (Lower)	42	25	60%
	Tank	34	31	91%
	Torghar	14	14	100%
	Mohmand	68	61	90%
	SD Peshawar	5	0	0%
	SD Tank	58	5	9%
	Orakzai	69	9	13%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	71	71	100%

	Kotli	60	60	100%
	Muzaffarabad	45	45	100%
	Poonch	46	46	100%
	Haveli	39	39	100%
	Bagh	40	40	100%
	Neelum	39	39	100%
	Jhelum Velley	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	23	21	91%
	CDA	15	6	40%
Balochistan	Gwadar	26	13	50%
	Kech	44	35	80%
	Khuzdar	74	20	27%
	Killa Abdullah	26	14	54%
	Lasbella	55	55	100%
	Pishin	69	36	52%
	Quetta	55	39	71%
	Sibi	36	36	100%
	Zhob	39	7	18%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	0	0%
	Kohlu	75	6	8%
	Chagi	36	18	50%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	2	6%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	7	22%
	Mastung	45	45	100%
	Loralai	33	13	39%
	Killa Saifullah	28	26	93%
	Ziarat	29	0	0%
	Duki	31	0	0%
	Nushki	32	25	78%
	Dera Bugti	45	37	82%
	Washuk	46	0	0%
	Panjgur	38	0	0%
	Awaran	23	0	0%
	Chaman	24	0	0%
	Barkhan	20	19	95%
	Hub	33	15	45%
	Musakhel	41	8	20%
	Usta Muhammad	34	33	97%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	38	100%

	Gilgit	42	41	98%
	Diamer	62	59	95%
	Astore	55	55	100%
	Shigar	27	25	93%
	Skardu	53	53	100%
	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	260	94%
	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	33	94%
	Karachi-Kemari	22	22	100%
	Karachi-Central	12	10	83%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	55	100%
	Mirpur Khas	106	106	100%
	Badin	124	124	100%
	Sukkur	64	63	98%
	Dadu	90	89	99%
	Sanghar	100	99	99%
	Jacobabad	44	44	100%
	Khairpur	170	168	99%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	53	98%
	Tando Muhammad Khan	41	40	98%
	Shaheed Benazirabad	122	122	100%

Table 7: IDSR reporting Tertiary care hospital Week 43, 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	0	0%
	Jhelum Vellay	1	0	0%
	Sudhnooti	1	1	100%
Sindh	Karachi-South	3	1	33%
	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%

Letter to Editor

Vaccine Hesitancy and Immunization Gaps in Pakistan: Building on Success, Closing the Remaining Divide

Dear Editor,

In recent years, Pakistan has made visible strides in protecting its children from vaccine-preventable diseases. Routine immunization efforts, coupled with National and Sub-National Immunization Days (NIDs/SNIDs), mass catch-up campaigns, and renewed focus on surveillance, have produced improvements that deserve recognition. Yet as we celebrate progress, we must also sharpen our attention on where gaps remain and how to close them sustainably.

According to the latest WHO/UNICEF Estimates of National Immunization Coverage (WUENIC) report, Pakistan's DTP1 coverage has risen to approximately 94 percent in 2023, and DTP3 is estimated at 86 percent (1). These numbers reflect a resilient system that has rebounded following disruptions during the COVID-19 era. Moreover, UNICEF reported that the number of "zero-dose" children (those who have never received a basic vaccine) fell by nearly 29 percent between 2021 and 2022, a tangible indication that outreach is reaching more children (2).

Provincially, progress has been strongest in areas with improved planning, monitoring, and accountability. For example, recent reporting shows that in Punjab, routine immunization coverage climbed from about 72 percent to nearly 88.6 percent in a span of months (3). Such gains suggest that well-targeted catch-up rounds, upgraded surveillance units, and commitment at provincial leadership level can translate into real improvement.

Nevertheless, despite these gains, immunization gaps persist, especially in underserved provinces and remote districts. For example, full immunization rates remain lowest in Balochistan; some assessments report it as low as ~38 percent among children aged 12-23 months (4). Similarly, coverage in parts of Sindh, Khyber Pakhtunkhwa, and other rural or geographically difficult areas lags behind national averages (4). These disparities point toward inequities not simply in willingness to vaccinate, but in access, infrastructure, and continuity of services.

At the same time, Pakistan's polio eradication programme demonstrates both resolve and challenge. Expanded immunization days continue to roll out, yet wild poliovirus transmission remains a concern in some regions (5). This underlines the fragile margin between success and setback; every missed child matters.

The presence of vaccine hesitancy in Pakistan is real; in some communities, misinformation, limited trust, or social concerns slow acceptance or delay uptake. But in many cases, hesitancy overlaps with structural barriers: distance to health clinics, irregular outreach, competing priorities of caregivers, and logistical constraints. These are obstacles that can be addressed through programme design as much as through behaviour change.

What gives hope is that the system has shown it can learn and adapt. Catch-up campaigns in Punjab, strengthened monitoring, collaboration with partners (WHO, UNICEF, Gavi), and renewed political-administrative commitment are proof that Pakistan's immunization architecture remains capable of impact. What remains is scaling that success to the places still falling behind, and ensuring the momentum is institutionalized rather than episodic.

To sustain momentum and reduce immunization gaps, the following must guide policy and action:

Focus on sub-national equity: Planning must shift from national averages to performance at district and union-council levels. Provinces with lower coverage require tailored strategies, integrated outreach, and sustained monitoring.

Strengthen routine delivery alongside campaigns: Campaigns cannot substitute for reliable, routine services. Strengthening cold-chain, defaulter tracing, and real-time monitoring will reduce the number of children who miss regular doses.

Community-centred engagement: Working with local health workers, faith/community leaders, schools, and civic institutions to build trust while aligning that with visible improvements in access (for example outreach clinics, extended service hours, mobile teams).

Institutionalize catch-up mechanisms: Periodic "big push" rounds (like the catch-ups recently seen in Punjab) should be supplemented by systems that detect and follow-up defaulters continuously, not just during emergency pushes.

Integrate risk-readiness and resilience: Natural disasters (floods, displacement) and security-challenges must be factored into immunization planning so that outreach can flex and respond quickly without losing continuity.

Sustain investment and partner collaboration: Donors, government, and local stakeholders should continue to support capacity building in data systems, monitoring, and workforce, ensuring that gains are preserved even during crises.

If Pakistan continues to leverage its demonstrated institutional capacity, embrace data-driven local strategies, and commit to equitable service delivery, then vaccine hesitancy and immunization gaps can be narrowed considerably over the next decade. Far from an impossible goal, closing these gaps is within reach and doing so will save lives, strengthen public health security, and bring us closer to universal protection for every child.

References:

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2. UNICEF Pakistan. UNICEF reports 29% drop in zero-dose children in Pakistan between 2021 and 2022. Karachi: UNICEF Pakistan; 2023 Jul 25. https://www.dawn.com/news/1766615
3. Business Recorder. Punjab records remarkable increase in routine immunisation coverage. Lahore: Business Recorder; 2024 Oct 9. https://www.brecorder.com/news/40363425
4. Javed SA, Qureshi MA, Mushtaq A, et al. Routine immunization coverage and immunization timeliness among children aged 12–23 months in Pakistan: findings from a national survey. Pediatr Infect Dis J. 2023;42(3):e97–e103.
5. National Emergency Operations Center, Pakistan Polio Eradication Programme. Pakistan reports 69th WPV1 case of 2024. Islamabad: End Polio Pakistan; 2024 Nov 2. https://www.endpolio.com.pk/media-room/media-releases/2588-pakistan-reports-69th-wpv1-case-of-2024

Notes from the field:

Malaria Outbreak Investigation Report: UC Ziarat Kaka Sahib, District Nowshera (July–August 2025)

Introduction

Malaria remains one of the most significant vector-borne diseases globally, affecting approximately 249 million people and causing over 600,000 deaths annually, predominantly in sub-Saharan Africa (WHO, 2024). In the Eastern Mediterranean region, Pakistan remains a moderate-endemic country with Plasmodium vivax as the predominant species. Malaria

transmission peaks during the Monsoon season due to favorable breeding conditions for the Anopheles mosquito vector. Within Khyber Pakhtunkhwa, recurrent seasonal outbreaks are reported, particularly in areas with poor sanitation and inadequate vector control. An unusual increase in fever-like illnesses was reported by residents of UC Ziarat Kaka Sahib on 28 July 2025, prompting local health authorities to suspect a possible malaria or dengue outbreak. An investigation team, notified by the DHO Nowshera, was deployed to confirm, verify, and contain the outbreak and to identify any unreported cases.

Objectives

- To determine the magnitude and extent of the malaria outbreak in UC Ziarat Kaka Sahib.
- To identify the most affected age groups, gender and areas.
- To assess risk factors associated with malaria transmission.
- To provide evidence-based recommendations for outbreak control and prevention.

Methods

This descriptive cross-sectional study was conducted among residents of Union Council Ziarat Kaka Sahib (total population: 31,328). The investigation period spanned from 28 July to 12 August 2025.

A case definition was developed according to national Malaria control guidelines. Suspected case was defined as “any person residing in or visiting UC ZKKS between 28 July and 12 August 2025 with fever (≥38°C) with or without chills, rigors, sweating, headache, or muscle pain, without another confirmed diagnosis”.

Probable case was any suspected case epidemiologically linked to a confirmed case or outbreak area, or showing clinical response to antimalarial therapy.

While confirmed case was laboratory-confirmed Plasmodium infection (via microscopy or RDT). Data were collected via active case searches, door to door visits, interviews, line listing of suspected cases, and health facility record reviews. The investigation team included public health officers, FETP trainees, a Medical Entomologist, LHWs, and laboratory personnel. Laboratory testing was performed using rapid diagnostic tests (RDTs) and microscopy to identify Plasmodium vivax or P. falciparum. Data were analyzed descriptively using frequencies and proportions. Attack rates were calculated by age group, gender, and affected area. Entomological indices such as the Annual Parasite Incidence (API), Slide Positivity Rate (SPR), and Annual Blood Examination Rate (ABER) were used to assess transmission intensity.

Results

A total of 296 malaria cases were identified between 28 July and 12 August 2025. The mean age of cases fell between 10–45 years, and the male-to-female ratio was 172:124 (1.4:1), indicating slightly higher infection among males. The most affected areas included Shahab Khel, Walli, Gul Dheri, and Spinki Khel. The overall attack rate was approximately 9.4 per 1,000 population, with the highest age-specific attack rate observed among individuals aged 10–45 years.

Clinical manifestations included fever, chills, rigors, sweating, headache, and muscle pain. Laboratory findings showed that all 296 confirmed cases were positive for Plasmodium vivax.

Entomological data showed a Slide Positivity Rate (SPR) of 29.2% and Annual Parasite Incidence (API) of 9.4 per 1,000 population in 2025, markedly higher than in previous years (API: 0.19–13.8 from 2021–2024). Risk factors identified included poor drainage, stagnant water near households, and inadequate vector control measures. Thirty-seven cases had a recent travel history, further supporting the potential for local transmission amplification.

Discussion

The investigation confirmed a Malaria outbreak in UC Ziarat Kaka Sahib, primarily due to Plasmodium vivax. The outbreak coincided with the Monsoon season, during which mosquito breeding increases due to standing water. The increase in SPR and API compared with previous years indicates heightened transmission intensity.

Males and individuals in the productive age group (10–45 years) were more affected, likely due to increased outdoor exposure during evening and nighttime hours when Anopheles mosquitoes are most active. The clustering of cases in Shahab Khel and surrounding villages suggests focal transmission linked to environmental and sanitation factors. Similar outbreaks have been reported in northern Pakistan during heavy rainfall periods, consistent with findings from studies conducted in Swat and Balochistan (Kakar et al., 2023; WHO EMRO, 2022). Immediate response measures such as indoor residual spraying, larvicidal activities, and prompt treatment were initiated and proved effective in containing further spread.

However, persistent challenges such as underreporting, difficult terrain, and resource constraints limited the comprehensiveness of surveillance. Strengthening integrated vector management, improving drainage, and enhancing community engagement remain critical to sustaining malaria control.

Conclusion

The Malaria outbreak in UC Ziarat Kaka Sahib was confirmed and primarily attributed to Plasmodium vivax transmission facilitated by poor sanitation, stagnant water, and inadequate

vector control. Males aged 10–45 years and residents of Shahab Khel, Walli, Gul Dheri, and Spinki Khel were most affected. Effective case management and vector control activities successfully curtailed transmission.

Recommendations

- Implement active case search and strengthen passive surveillance at all facilities; ensure timely laboratory confirmation.
- Conduct regular indoor residual spraying (IRS) and larvicidal operations; improve drainage and eliminate mosquito breeding sites.
- Ensure continuous supply of RDTs, microscopy equipment, and antimalarial drugs; train healthcare workers on malaria management.
- Conduct IEC campaigns promoting use of insecticide-treated nets (ITNs) and early care-seeking behavior.
- Coordinate with sanitation, education, and local government sectors for integrated vector management.
- Regularly monitor entomological indices (API, SPR, ABER) to identify high-risk areas early.

References

1. World Health Organization. World Malaria Report 2024. Geneva: WHO; 2024.
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Knowledge Hub

Typhoid Fever: What You Need to Know

Typhoid fever is a serious bacterial infection caused by ***Salmonella Typhi***. It is primarily spread through **contaminated food or water** and is common in areas with poor sanitation. Typhoid fever can lead to high fever, fatigue, and abdominal pain. If left untreated, it can be fatal.

What is Typhoid Fever?

Typhoid fever is an illness caused by a specific type of bacteria, ***Salmonella Typhi***. It is different from the more common types of *Salmonella* that cause typical food poisoning. Typhoid fever is a systemic infection, meaning it spreads throughout the body, and is generally more severe.

How Typhoid Fever Spreads

Typhoid fever is spread through the **fecal-oral route**. The bacteria are passed in the feces (poop) of infected people and then contaminate food or water, which is then ingested by others.

Transmission occurs through:

- **Contaminated Food or Water:** This is the most common way, often when water supplies are exposed to sewage or when food is handled by an infected person who did not wash their hands thoroughly.
- **Chronic Carriers:** Some people can continue to shed the bacteria in their feces for years after recovering, unknowingly spreading the infection.

Signs & Symptoms

Symptoms typically appear **6 to 30 days after exposure**. The illness is characterized by a gradual onset of severe symptoms.

Common symptoms include:

- **Sustained High Fever:** The fever often gradually increases over several days.
- Weakness and fatigue.
- Headache.
- Abdominal pain.
- Loss of appetite.
- **Constipation** or, less commonly, diarrhea.
- Rash (small, rose-colored spots on the chest and abdomen, appearing in some cases).

Complications

Without prompt treatment, typhoid fever can lead to severe, life-threatening complications:

- **Intestinal Perforation:** A hole in the intestine that allows contents to leak into the abdominal cavity, causing peritonitis (a severe infection). This requires emergency surgery.
- **Intestinal Hemorrhage:** Severe bleeding in the intestines.
- **Neuropsychiatric symptoms:** Including delirium and confusion.
- **Death:** About 10-30% of untreated cases can be fatal.

Prevention

Prevention of typhoid fever focuses on vaccination, safe food/water practices, and good hygiene.

- **Vaccination:** Typhoid vaccines are recommended for **travelers** to areas where typhoid fever is common, and for people with known exposure risk. Both injectable and oral vaccines are available.
- **Safe Food and Water Practices:** When traveling or in high-risk areas, drink only boiled or bottled water. Eat only thoroughly cooked food that is served hot, and avoid raw fruits and vegetables you cannot peel yourself.
- **Good Hygiene: Wash hands thoroughly with soap and water** before eating, preparing food, and after using the toilet.

Diagnosis and Treatment

- **Diagnosis:** Typhoid fever is usually confirmed by a **blood culture** to isolate the *Salmonella Typhi* bacteria. Stool and urine cultures may also be used.
- **Treatment:** Typhoid fever is treated with **antibiotics**. Early diagnosis is crucial.
    - The choice of antibiotic depends on the region where the infection was acquired due to rising rates of **antibiotic resistance**.
    - It is vital to complete the full course of prescribed antibiotics to eliminate the bacteria and prevent relapse or becoming a chronic carrier.
    - Severe cases require hospitalization and intravenous fluids/antibiotics.

More Information

For additional authoritative information on typhoid fever, please visit:

- **Centers for Disease Control and Prevention (CDC):** https://www.cdc.gov/typhoid-fever/index.html
- **World Health Organization (WHO):** https://www.who.int/news-room/fact-sheets/detail/typhoid
- **Public Health Agency of Canada (PHAC):** https://www.canada.ca/en/public-health/services/diseases/typhoid.html
- **UK Health Security Agency (UKHSA) / National Health Service (NHS):** https://www.nhs.uk/conditions/typhoid-fever/

قومی ادارہ صحت، پاکستان

ٹائیفائیڈ بخار کیا ہے

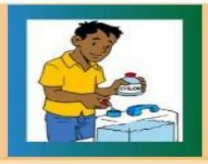
ٹائیفائیڈ بخار ایک وبائی مرض ہے جو ایک مخصوص جرثومے سے لاحق ہوتا ہے۔ یہ مرض زیادہ تر آلودہ خوراک یا آلودہ پانی کے استعمال اور حفظان صحت کے اصولوں پر عمل نہ کرنے سے پھیلتا ہے۔ خاص طور پر قوت مدافعت کی کمی کے شکار افراد کو اس مرض سے جلد متاثر ہونے کا خدشہ ہوتا ہے۔

اس مرض کی اہم علامات میں تیز بخار (103 ڈگری فارن ہائیٹ سے زیادہ)، بھوک کا نہ لگنا، پیٹ میں درد، متلی، قبض یا دست اور کمزوری محسوس ہونا شامل ہیں جبکہ مرض کی شدت میں آنتڑیوں میں سوراخ بھی ہو سکتے ہیں۔ ان علامات کی موجودگی کی صورت میں فوراً مستند ڈاکٹر سے رجوع کریں تاکہ ٹائیفائیڈ بخار کی بروقت تشخیص کی جا سکے۔

ٹائیفائیڈ بخار سے بچاؤ

ہاتھوں کی صفائی کا خیال رکھیں خاص طور پر کھانا کھانے سے پہلے اور بیت الخلاء استعمال کرنے کے بعد ہاتھوں کو اچھی طرح صابن اور صاف پانی سے دھوئیں۔

پانی ہمیشہ ابال کر پئیں۔



پانی کو صاف کرنے کیلئے کلورین (مجوزہ مقدار) کا استعمال کریں۔

ہمیشہ تازہ اور صاف ستھری غذا کا استعمال کریں۔

باہر کے کھلے (غیر معیاری) کھانے اور مشروبات سے گریز کریں۔

سبزی اور پھل کو دھو کر استعمال کریں۔

ٹائیفائیڈ بخار سے پیشگی بچاؤ کے لئے ڈاکٹر کے مشورے سے ٹائیفائیڈ ویکسین لگوائیں۔

اہم ہدایات

یاد رہے کہ پاکستان میں ٹائیفائیڈ بخار کے علاج کے لئے استعمال ہونے والی بیشتر اینٹی بائیوٹک ادویات غیر موثر ہو چکی ہیں۔ اس لیے ضروری ہے کہ مستند ڈاکٹر کے مشورے سے اینٹی بائیوٹک ادویات استعمال کریں تاکہ ادویات مزاحم ٹائیفائیڈ سے بچا جا سکے۔

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