

PUBLIC HEALTH BULLETIN-PAKISTAN

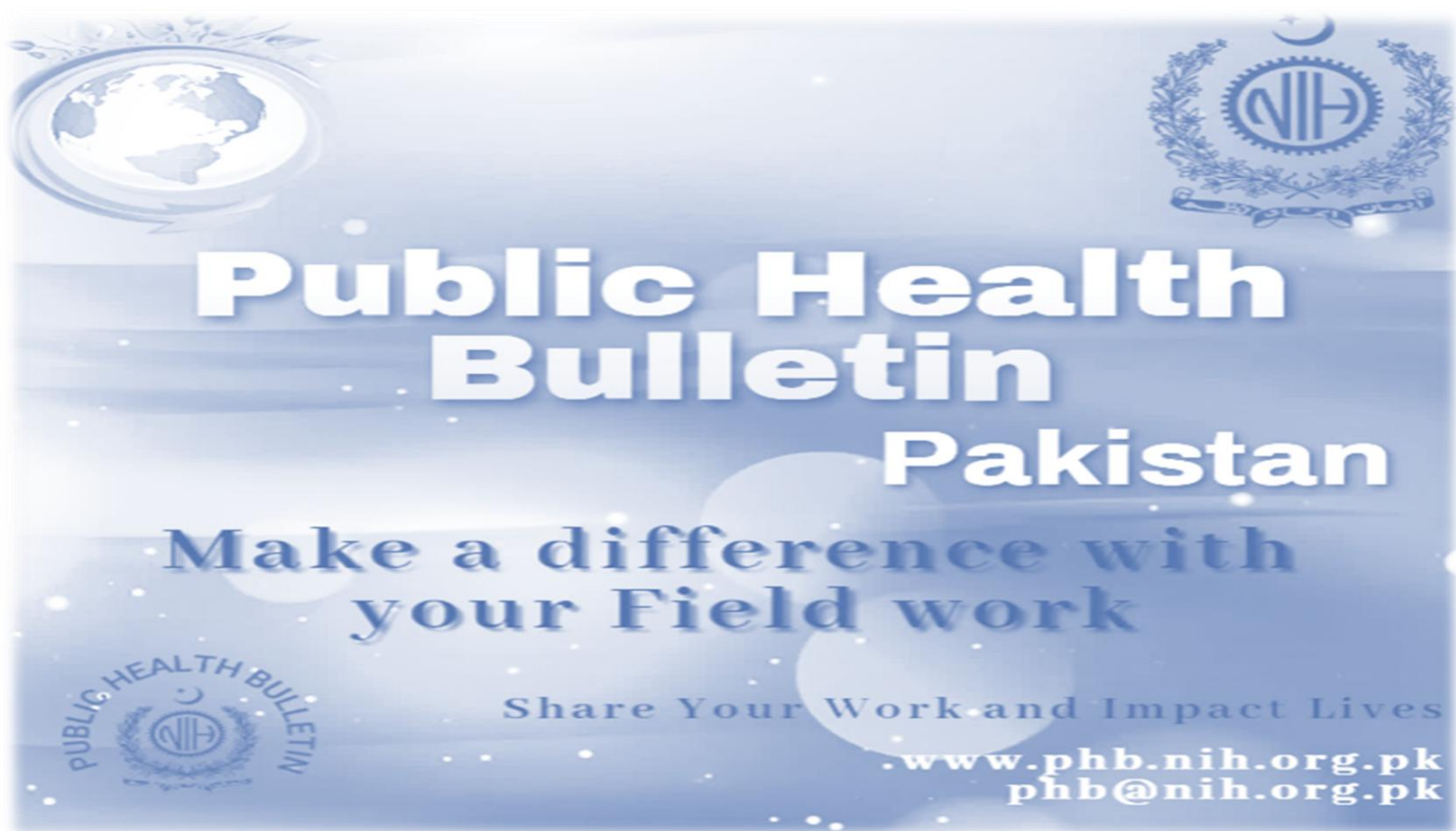
# Integrated Disease Surveillance & Response (IDSR) Report

Center of Disease Control  
National Institute of Health, Islamabad

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

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



The graphic features a blue background with a globe on the left and the NIH logo on the right. The main text is centered and reads: "Public Health Bulletin Pakistan". Below this, it says "Make a difference with your Field work". At the bottom, it includes the slogan "Share Your Work and Impact Lives" and the website "www.phb.nih.org.pk" and email "phb@nih.org.pk". There are also smaller logos for the NIH and WHO.

**Public Health Bulletin**  
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## Overview

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### Public Health Bulletin - Pakistan, Week 47, 2025

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## IDSR Reports

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## Ongoing Events

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## Field Reports

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*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 public health emergency readiness: NIH conducts national functional simulation exercise*
- *Cholera Outbreak Investigation Report, District KP, August 2025*
- *Knowledge hub on Understanding of Smog: 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*



- During Week 47, 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 and SARI.
- Twenty-three cases of AFP reported from KP, nine from Sindh.
- Ten suspected cases of HIV/ AIDS reported from Sindh, four from Balochistan and one from KP.
- Four suspected cases of Brucellosis reported from KP.
- Among VPDs, there is an increase in number of cases of Meningitis, Pertussis, AFP, NT, AFP and Rubella this week.
- Among Respiratory diseases, there is an increase in number of cases of ILI this week.
- Among Water/food-borne diseases, there is an increase in number of cases of Typhoid this week.
- Among Vector-borne diseases, there is decrease in number of cases of Malaria this week.
- Among STDs, there is an increase in number of cases of HIV/AIDs this week.
- Among Zoonotic/Other diseases, there is an increase in number of cases of dog bite this week.
- Field investigation is required for verification of the alerts and for prevention and control of the outbreaks.

## IDSR compliance attributes

- The national compliance rate for IDSR reporting in 158 implemented districts is 73%
- Sindh is the top reporting regions with a compliance rate of 97%, followed by AJK 89%, GB 88% and ICT 74%.
- The lowest compliance rate was observed in KP 60% and Balochistan 51%.

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2704	1630	60
Azad Jammu Kashmir	469	419	89
Islamabad Capital Territory	38	28	74
Balochistan	1308	662	51
Gilgit Baltistan	417	366	88
Sindh	2111	2048	97
National	7047	5202	73



## Public Health Actions

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

### HIV/AIDS

- **Enhance Surveillance and Case Reporting:** Strengthen HIV case-based surveillance within IDSR and through HIV/AIDS control programs.
- **Expand Testing and Linkage to Care:** Scale up community-based testing, and targeted outreach among high-risk populations; ensure immediate linkage to antiretroviral therapy (ART) for all positive cases.
- **Promote Combination Prevention Strategies:** Implement comprehensive HIV prevention, including harm reduction for people who inject drugs, pre-exposure prophylaxis (PrEP), and ensuring safe sex practices.
- **Prevent Mother-to-Child Transmission:** Integrate HIV testing in antenatal care and ensure ART initiation and follow-up for HIV-positive pregnant women.
- **Combat Stigma and Raise Awareness:** Conduct advocacy and public education campaigns to reduce stigma, promote testing, and encourage disclosure and support for people living with HIV/AIDS.

### Syphilis

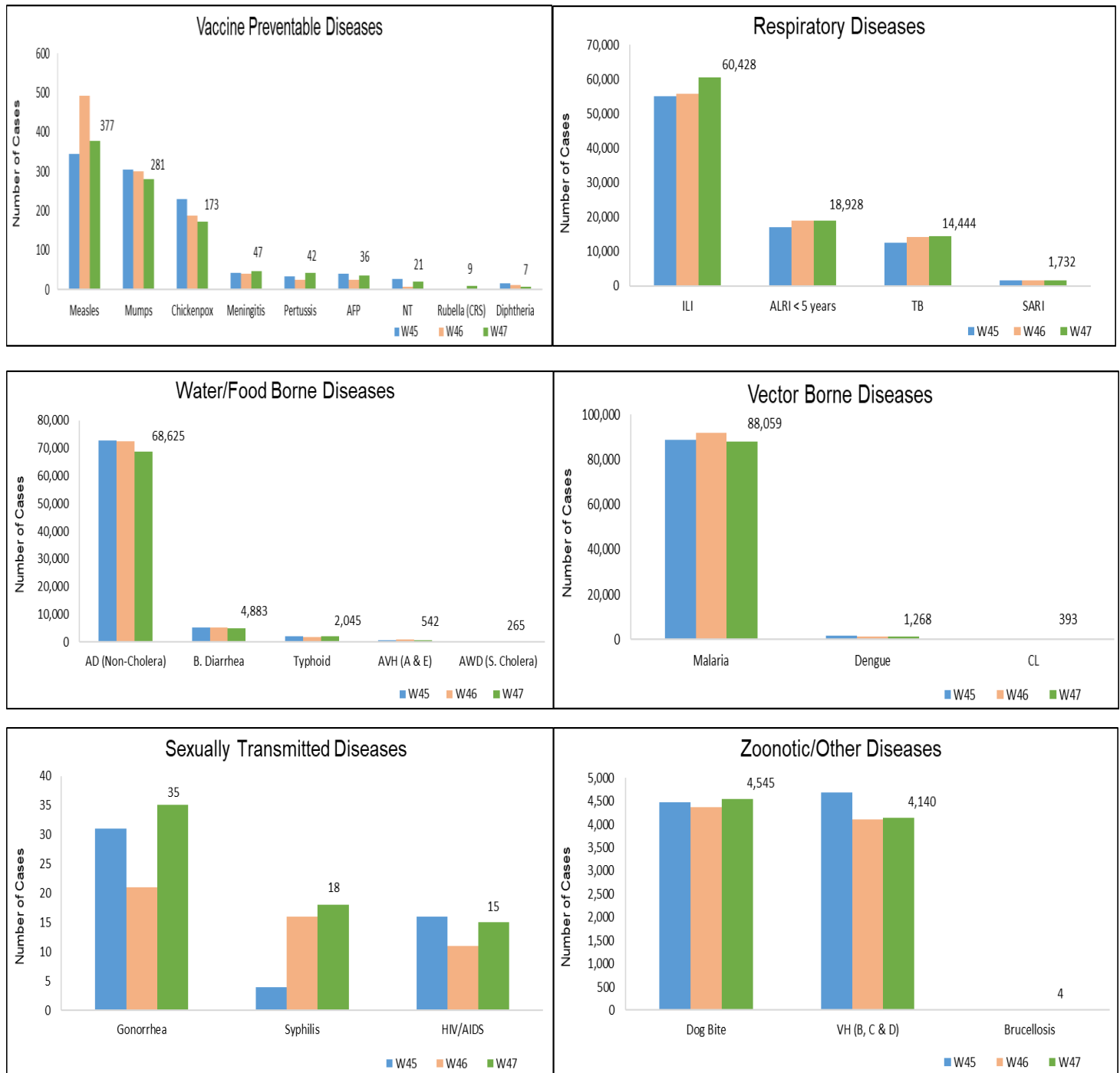
- **Strengthen Surveillance and Case Notification:** Enhance syphilis reporting into the IDSR system by training healthcare workers to use standard case definitions and improve detection in antenatal clinics and key populations.
- **Improve Diagnostic Services:** Expand access to rapid syphilis tests and confirmatory testing (e.g., RPR, TPHA) at primary and secondary healthcare levels, with linkage to care and partner testing.
- **Ensure Access to Treatment:** Ensure uninterrupted availability of Benzathine penicillin and other recommended antibiotics; implement partner notification and treatment to prevent reinfection.
- **Prevent Congenital Syphilis:** Enhance routine syphilis screening and treatment during antenatal care to prevent adverse birth outcomes, including stillbirth and congenital infection.
- **Raise Public Awareness and Promote Safer Behaviors:** Conduct behavior changes communication campaigns promoting condom use, STI testing, and early treatment-seeking, especially in adolescents and high-risk groups.



**Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 47, Pakistan.**

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
Malaria	6	3,305	0	3	5,109	NR	79,636	88,059
AD (Non-Cholera)	1,491	4,599	613	394	23,318	NR	38,210	68,625
ILI	3,307	5,868	497	2,855	8,969	NR	38,932	60,428
ALRI < 5 years	1,553	2,215	1,121	10	1,481	NR	12,548	18,928
TB	108	168	86	11	270	NR	13,801	14,444
B. Diarrhea	49	937	60	3	725	NR	3,109	4,883
Dog Bite	106	253	0	1	778	NR	3,407	4,545
VH (B, C & D)	23	64	0	0	107	NR	3,946	4,140
Typhoid	19	258	66	0	684	NR	1,018	2,045
SARI	276	552	118	0	676	NR	110	1,732
Dengue	92	2	0	0	222	NR	952	1,268
AVH (A & E)	32	3	0	0	171	NR	336	542
CL	2	76	0	0	314	NR	1	393
Measles	11	8	3	2	291	NR	62	377
Mumps	9	43	8	0	178	NR	43	281
AWD (S. Cholera)	13	239	2	0	11	NR	0	265
Chickenpox/ Varicella	13	1	44	1	104	NR	10	173
Meningitis	1	1	3	0	9	NR	33	47
Pertussis	1	26	1	0	13	NR	1	42
AFP	3	0	1	0	23	NR	9	36
Gonorrhea	1	32	0	0	0	NR	2	35
NT	0	9	0	0	4	NR	8	21
Syphilis	0	1	0	0	0	NR	17	18
HIV/AIDS	0	4	0	0	1	NR	10	15
VL	0	13	0	0	2	NR	0	15
Rubella (CRS)	0	9	0	0	0	NR	0	9
Diphtheria (Probable)	0	1	0	0	6	NR	0	7
Brucellosis	0	0	0	0	4	NR	0	4
COVID-19	0	0	0	0	4	NR	0	4

**Figure 1: Most frequently reported suspected cases during Week 47, Pakistan.**

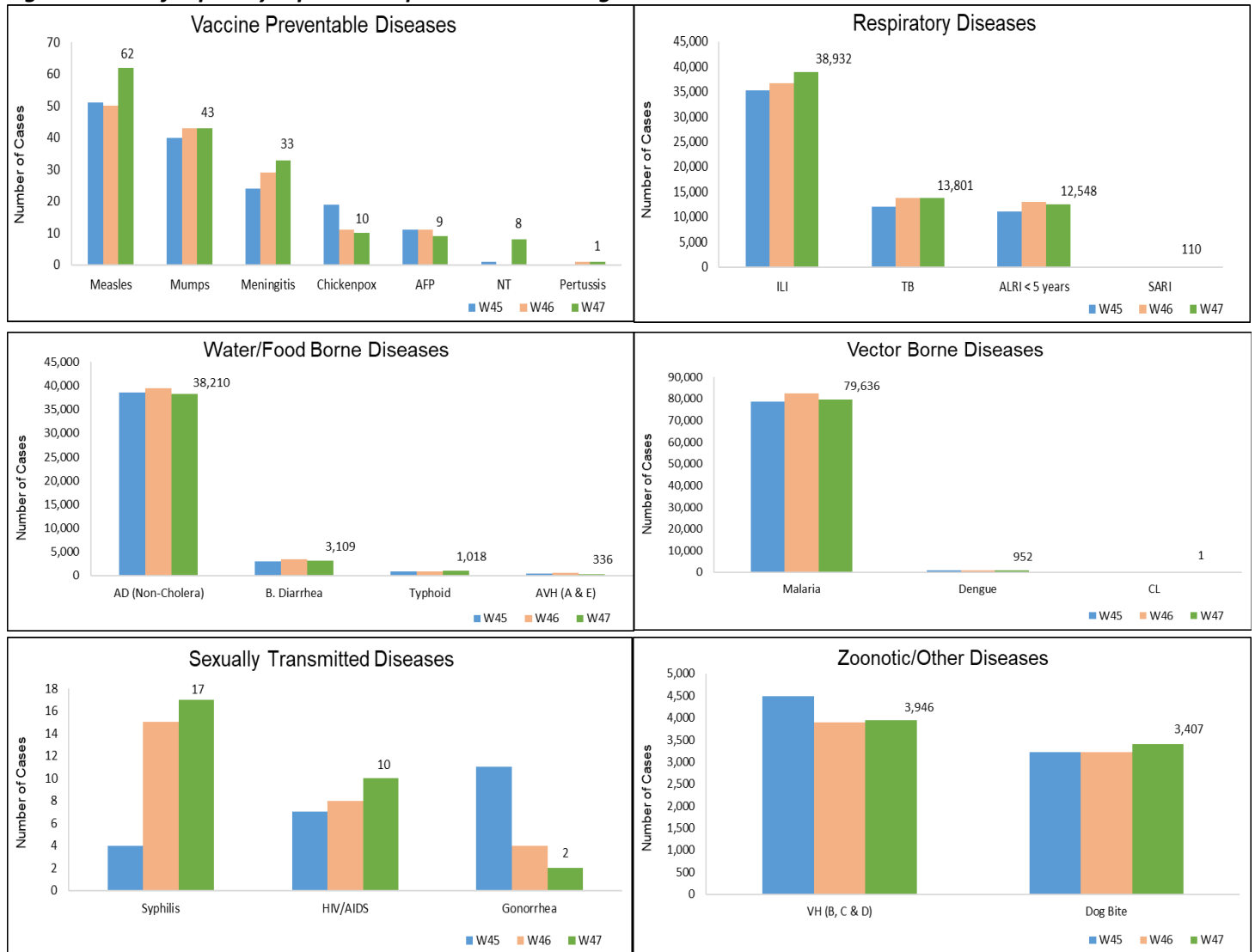


- Malaria cases were maximum followed by ILI, AD (Non-Cholera), TB, ALRI<5 Years, VH (B, C, D), dog bite B. Diarrhea, Typhoid and Dengue.
- AD (non-cholera) cases are mostly from Khairpur, Dadu and Badin whereas Malaria cases are from Larkana, Khairpur and Dadu.
- Nine cases of AFP reported from Sindh. They are suspected cases and need field verification.
- There is a decline in number of cases of Chicken pox, AFP, ALRI< 5years, AD (Non-Cholera), B. Diarrhea and Malaria while an increase in number of cases of Measles, Meningitis, NT, Typhoid, ILI and dog bite this week.

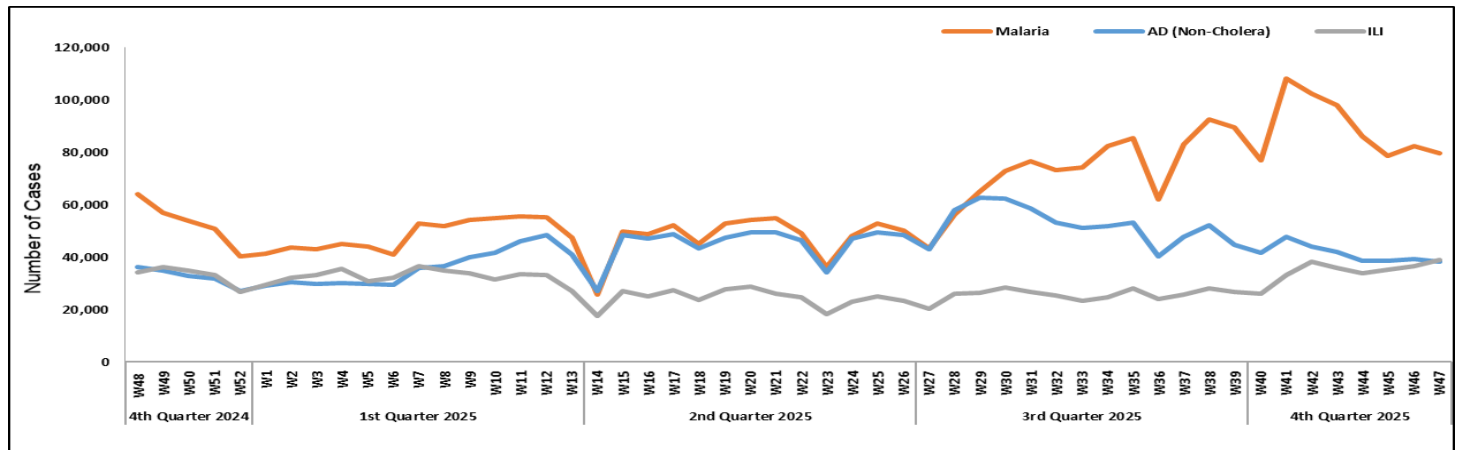
**Table 2: District wise distribution of most frequently reported suspected cases during Week 47, Sindh.**

Districts	Malaria	ILI	AD (Non-Cholera)	TB	ALRI < 5 years	VH (B, C & D)	Dog Bite	B. Diarrhea	Typhoid	Dengue
Badin	3,243	2,500	2,282	899	558	478	183	186	69	0
Dadu	5,532	728	2,313	615	1,198	110	575	366	166	0
Ghotki	3,560	40	772	569	739	408	227	93	0	0
Hyderabad	1,489	2,597	2,238	415	234	128	68	78	3	465
Jacobabad	1,689	1,517	795	244	516	239	211	121	43	0
Jamshoro	5,361	132	1,560	723	516	142	86	81	62	155
Kamber	4,628	0	1,567	920	360	91	205	110	23	0
Karachi Central	59	2,650	1,703	157	37	22	13	2	90	44
Karachi East	23	10	203	9	6	0	1	1	1	0
Karachi Keamari	17	495	498	4	15	0	0	4	1	0
Karachi Korangi	143	36	388	41	9	3	11	15	21	59
Karachi Malir	49	3,240	788	145	197	5	20	18	6	22
Karachi South	13	0	72	0	0	0	0	0	0	4
Karachi West	333	1,127	881	73	257	18	57	11	28	0
Kashmore	2,123	888	229	149	160	17	26	33	0	0
Khairpur	7,049	8,072	2,816	1,291	1,380	119	223	317	239	1
Larkana	7,280	2	1,495	897	379	31	58	244	2	0
Matiari	3,626	54	1,445	822	338	144	73	56	3	45
Mirpurkhas	3,532	5,859	2,256	869	675	32	206	162	14	7
Naushero Feroze	2,026	863	1,375	523	819	78	195	261	30	0
Sanghar	5,703	116	1,828	1,257	528	1,203	215	84	73	1
Shaheed Benazirabad	3,238	2	1,386	363	318	100	152	90	57	0
Shikarpur	3,330	17	1,030	307	208	242	192	125	6	0
Sujawal	1,041	19	660	110	639	0	25	97	0	0
Sukkur	3,448	2,380	1,213	535	217	43	131	143	1	0
Tando Allahyar	2,494	1,777	906	475	220	117	54	95	1	11
Tando Muhammad Khan	1,230	140	852	577	227	60	99	76	0	1
Tharparkar	2,640	1,428	1,907	501	784	18	5	99	55	136
Thatta	2,157	2,243	1,307	35	540	76	96	60	1	1
Umerkot	2,580	0	1,445	276	474	22	0	81	23	0
<b>Total</b>	<b>79,636</b>	<b>38,932</b>	<b>38,210</b>	<b>13,801</b>	<b>12,548</b>	<b>3,946</b>	<b>3,407</b>	<b>3,109</b>	<b>1,018</b>	<b>952</b>

**Figure 2: Most frequently reported suspected cases during Week 47 Sindh**



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





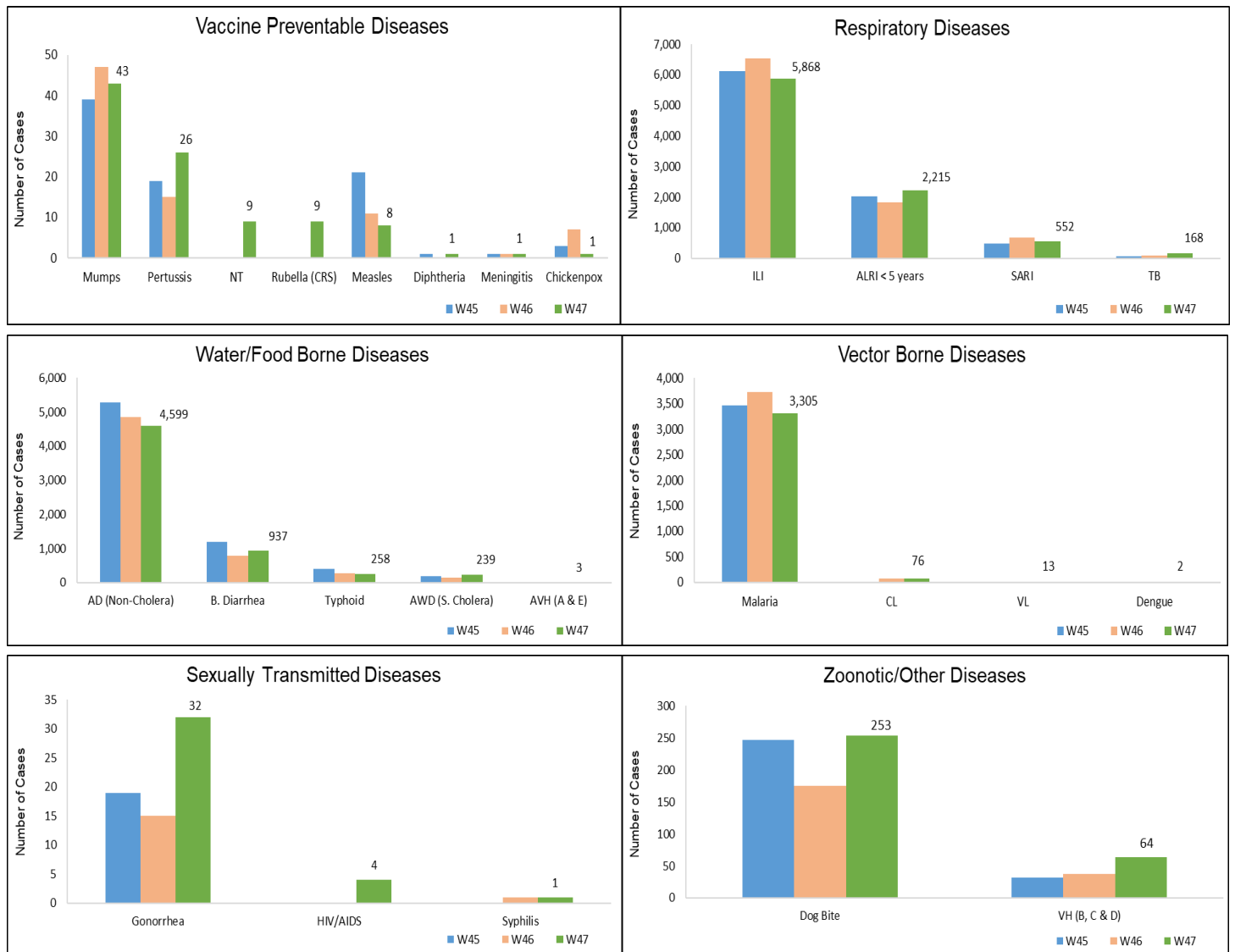
- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, dog bite, AWD (S. Cholera) and TB cases were the most frequently reported diseases from Balochistan province.
- AD (non-cholera) cases are mostly reported from Usta Muhammad, Jaffarabad and Naseerabad while ILI cases are mostly reported from Kharan Quetta and Chaman.
- Four cases of HIV/AIDs reported from Balochistan. Field investigation is required to confirm the cases.
- Pertussis, NT, Rubella, Diphtheria, ALRI <5 years, TB, B.Diarrhea, AWD (S. Cholera), HIV/AIDS, dog bite and VH (B, C & D) showed an increase in number of cases this week.

**Table 3: District wise distribution of most frequently reported suspected cases during Week 47, Balochistan.**

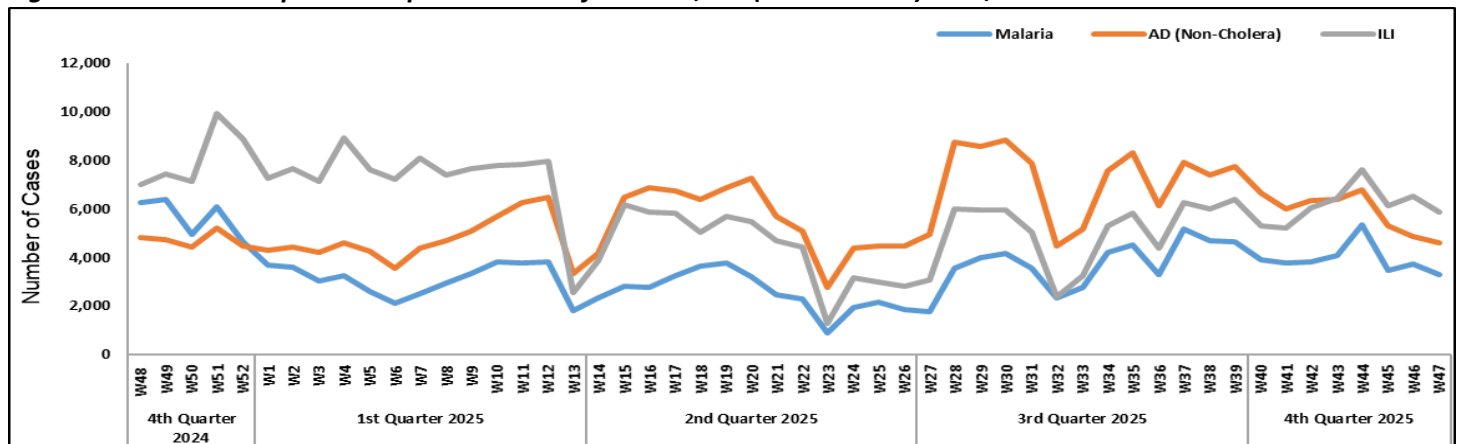
Districts	ILI	AD (Non-Cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dog Bite	AWD (S. Cholera)	TB
Awaran	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barkhan	34	20	25	0	0	0	12	0	3	0
Chagai	422	160	49	0	42	0	9	1	0	0
Chaman	578	65	0	27	48	11	30	38	0	0
Dera Bugti	0	27	42	44	0	0	1	0	0	0
Duki	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Gwadar	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Harnai	8	185	44	222	75	0	0	3	0	0
Hub	139	126	169	20	16	0	0	0	0	1
Jaffarabad	170	437	999	63	46	19	8	44	2	96
Jhal Magsi	84	122	166	61	0	0	11	5	0	6
Kachhi (Bolan)	326	334	314	0	92	9	0	6	107	3
Kalat	0	7	0	15	4	0	3	0	0	0
Kech (Turbat)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Kharan	791	145	26	0	55	61	5	0	1	0
Khuzdar	34	27	23	0	8	8	14	1	1	0
Killa Abdullah	306	158	2	29	61	89	10	9	38	1
Killa Saifullah	0	236	211	438	96	58	44	3	1	1
Kohlu	50	31	14	6	11	NR	3	NR	NR	NR
Lasbella	112	319	500	171	9	1	3	23	0	0
Loralai	480	185	23	108	32	89	17	0	0	0
Mastung	205	135	11	25	10	10	1	5	1	0
MusaKhel	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naseerabad	12	352	291	49	23	22	27	63	52	7
Nushki	79	30	0	0	5	13	0	0	0	0
Panjgur	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Pishin	558	206	3	128	80	69	16	8	1	1
Quetta	727	343	9	197	21	40	11	5	21	0
Sherani	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sibi	32	25	35	4	5	2	1	0	0	0
Sohbat pur	0	226	182	191	78	7	18	6	0	1
Surab	76	22	0	0	0	0	0	0	0	0
Usta Muhammad	345	534	140	302	85	15	4	33	0	0
Washuk	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Zhob	41	84	11	64	2	21	0	0	0	44
Ziarat	259	58	16	51	33	8	10	0	11	7
<b>Total</b>	<b>5,868</b>	<b>4,599</b>	<b>3,305</b>	<b>2,215</b>	<b>937</b>	<b>552</b>	<b>258</b>	<b>253</b>	<b>239</b>	<b>168</b>



**Figure 4: Most frequently reported suspected cases during Week 47, Balochistan.**



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



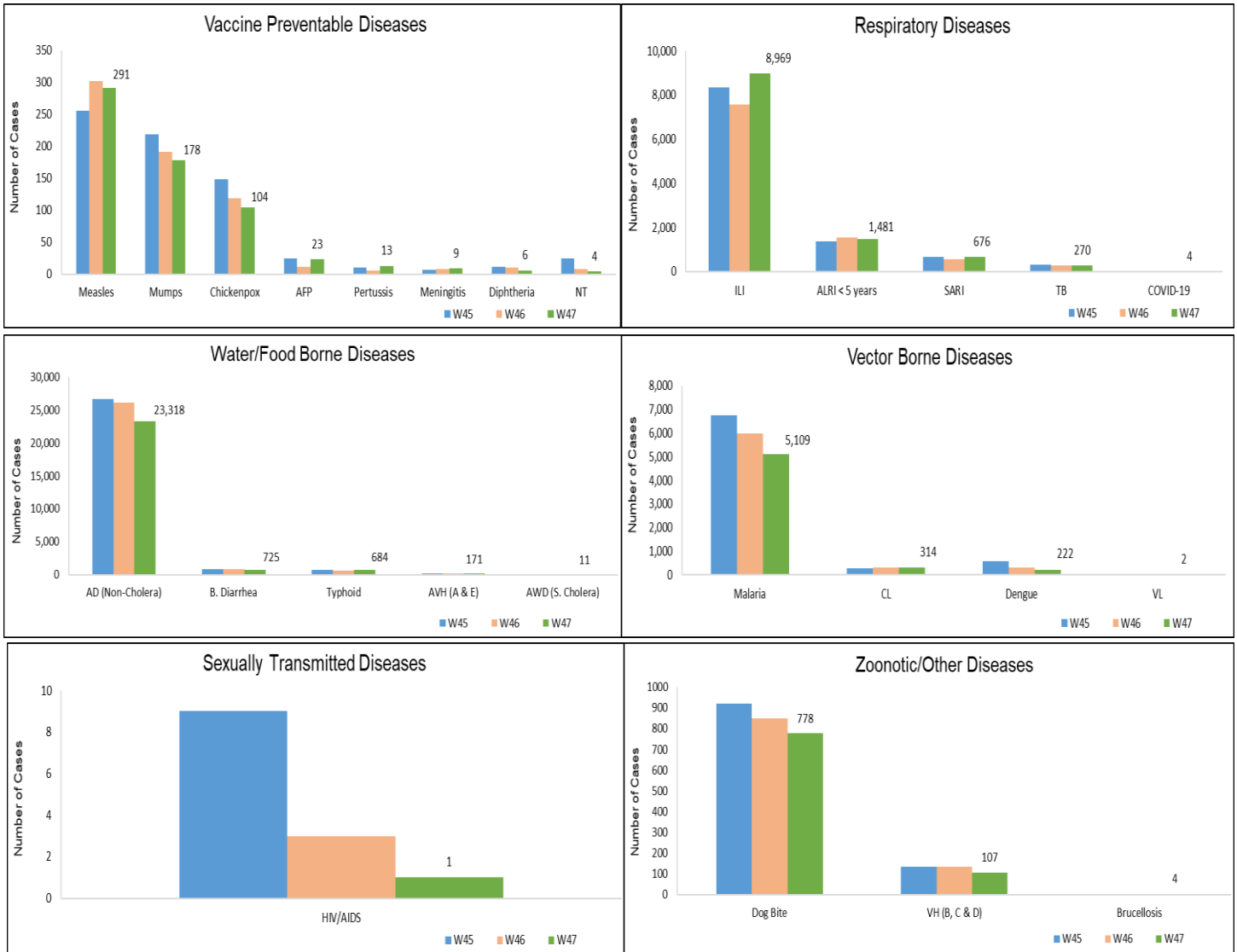
- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, dog bite, B. Diarrhea, Typhoid, SARI, CL & Measles.
- Measles, Mumps, Chicken pox, Diphtheria, NT, ALRI<5 years, AD (non- cholera) and B. Diarrhea, Malaria, Dengue, Dogbite, VH (B, C & D) and HIV/AIDS cases showed a decline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

**Table 4: District wise distribution of most frequently reported suspected cases during Week 47, KP.**

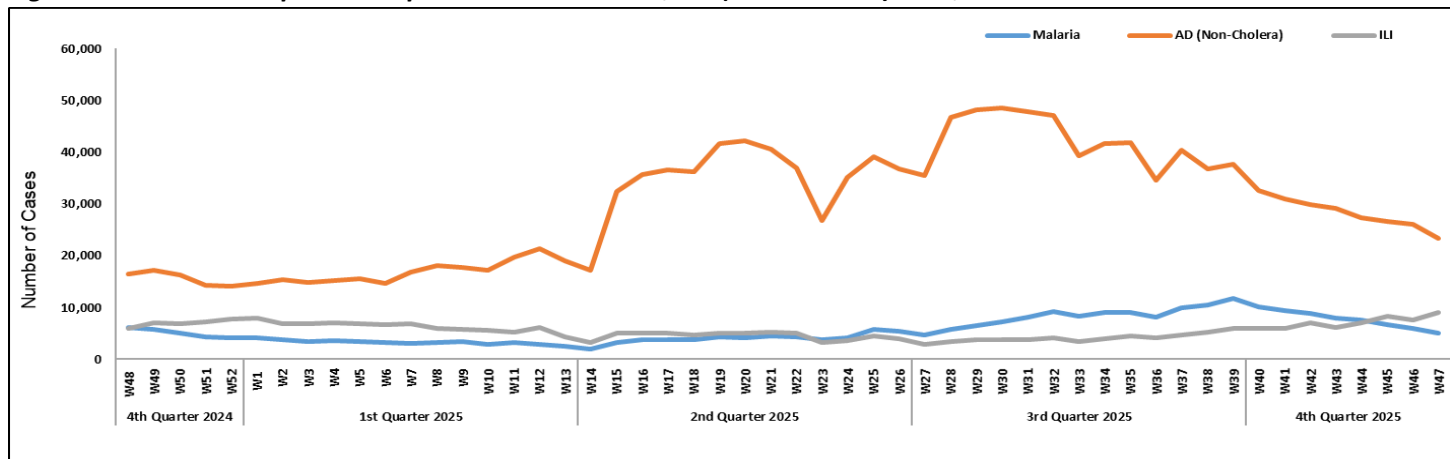
Districts	AD (Non-Cholera)	ILI	Malaria	ALRI < 5 years	Dog Bite	B. Diarrhea	Typhoid	SARI	CL	Measles
Abbottabad	383	227	0	21	45	5	17	3	0	13
Bajaur	537	112	174	21	105	53	3	81	18	12
Bannu	852	0	1,215	7	0	7	102	2	0	16
Battagram	152	782	36	8	4	NR	NR	10	NR	11
Buner	108	0	87	0	0	0	1	0	0	0
Charsadda	1,397	3,632	247	339	0	99	106	4	0	13
Chitral Lower	395	208	5	27	14	13	8	29	3	3
Chitral Upper	95	21	4	4	1	2	12	5	0	1
D.I. Khan	2,050	0	643	18	5	28	0	0	3	28
Dir Lower	1,288	0	107	8	75	64	26	0	0	17
Dir Upper	1,046	93	13	75	22	17	16	1	0	10
Hangu	269	12	68	1	10	2	3	0	71	1
Haripur	783	586	12	64	11	9	30	23	0	0
Karak	394	87	295	55	21	7	3	0	118	35
Khyber	419	42	337	70	35	80	89	20	34	0
Kohat	528	4	120	10	19	7	0	0	8	0
Kohistan Lower	95	0	0	0	0	5	0	0	0	0
Kohistan Upper	208	0	12	0	1	14	0	0	0	0
Kolai Palas	49	0	0	0	0	2	0	0	0	0
L & C Kurram	0	0	0	0	0	5	0	0	0	0
Lakki Marwat	577	46	435	15	63	5	14	0	0	0
Malakand	493	95	34	35	0	0	2	25	7	17
Mansehra	972	256	2	2	0	0	0	0	0	0
Mardan	967	107	67	187	27	29	34	11	1	9
Mohmand	118	109	114	1	9	5	3	195	39	1
North Waziristan	54	22	75	16	0	0	20	18	1	1
Nowshera	1,433	43	234	17	19	39	13	32	0	2
Orakzai	42	13	4	0	0	5	0	0	0	0
Peshawar	3,756	635	47	145	5	93	28	10	0	60
Shangla	674	0	271	28	61	0	22	0	0	10
South Waziristan (Lower)	73	127	73	87	14	1	11	80	6	0
SWU	25	1	16	8	0	3	3	19	0	0
Swabi	806	959	78	84	58	14	43	81	0	12
Swat	1,635	566	25	120	131	75	60	0	0	16
Tank	497	49	201	5	0	4	0	0	0	0
Tor Ghar	56	15	54	1	9	10	2	0	5	1
Upper Kurram	92	120	4	2	14	23	13	27	0	2
<b>Total</b>	<b>23,318</b>	<b>8,969</b>	<b>5,109</b>	<b>1,481</b>	<b>778</b>	<b>725</b>	<b>684</b>	<b>676</b>	<b>314</b>	<b>291</b>



**Figure 6: Most frequently reported suspected cases during Week 47, KP.**



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

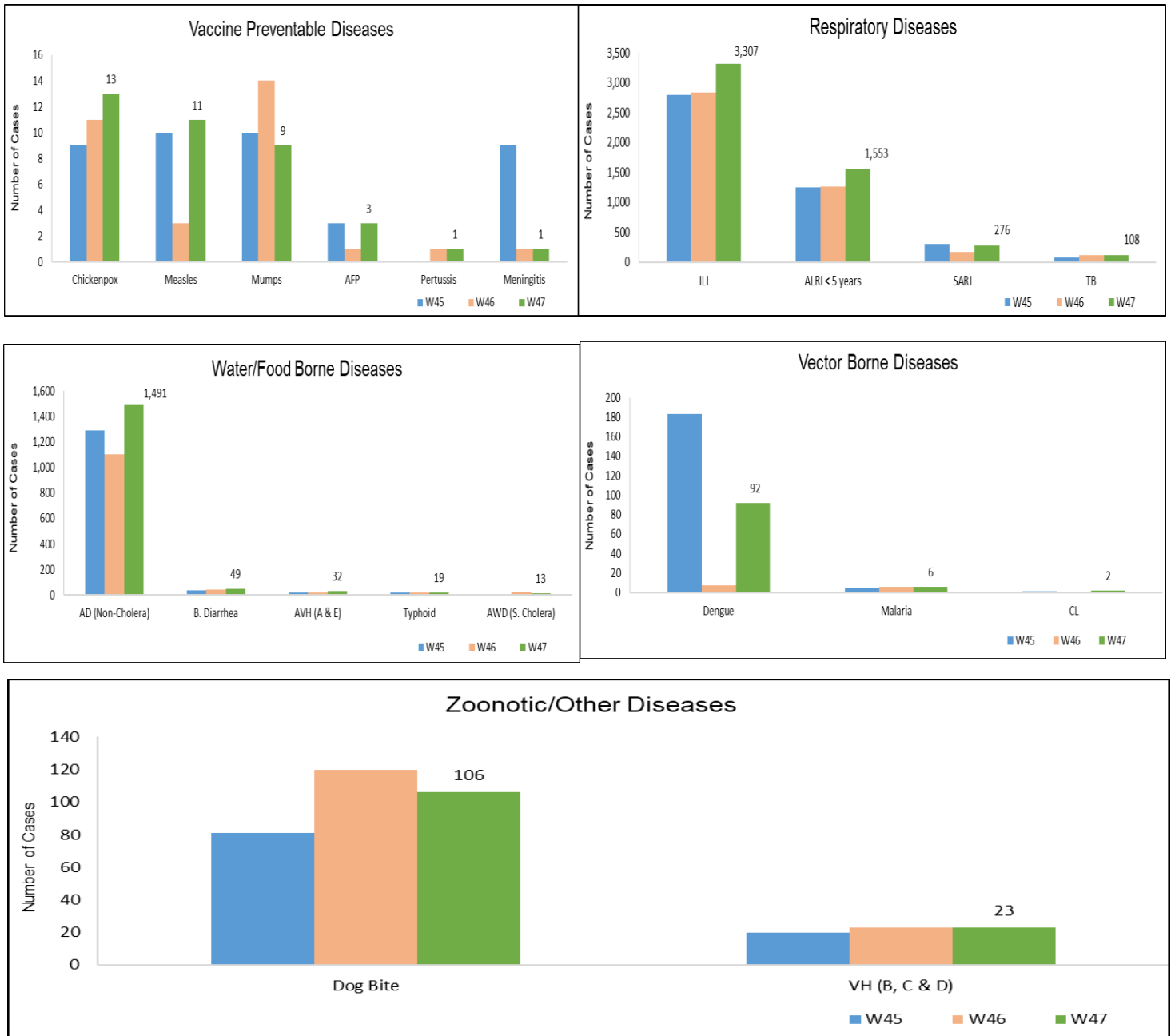


**ICT:** The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and TB. ILI and AD (Non-Cholera) cases showed an increase in number this week.

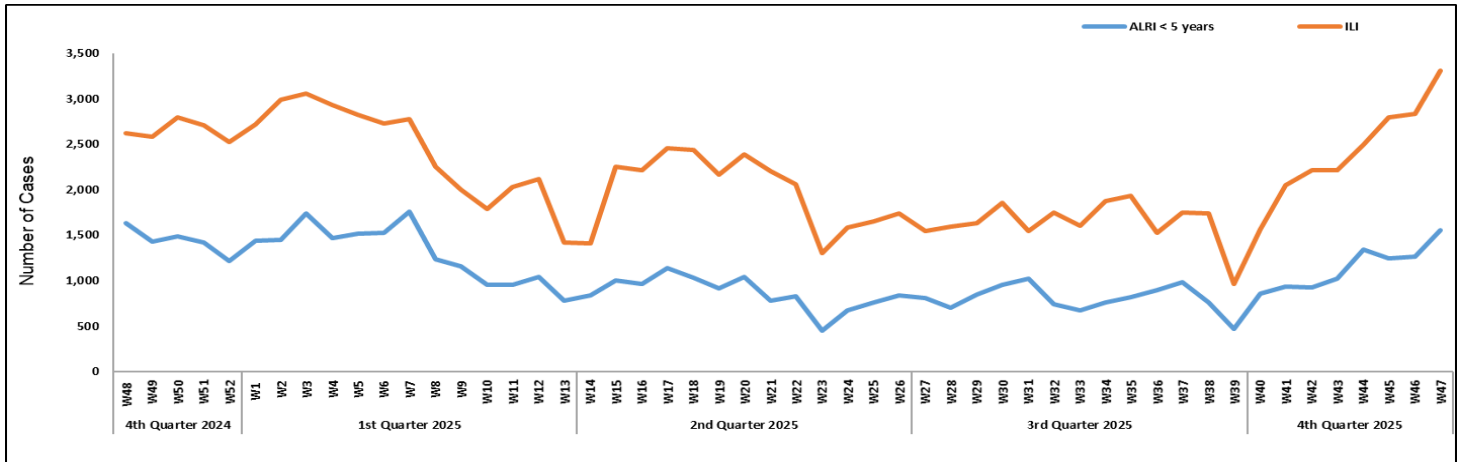
**AJK:** ILI cases were maximum followed by ALRI < 5years, AD (non- cholera), SARI, TB and dog bite. An increase in number of suspected cases was observed for Chicken pox, Measles, AFP, ILI, ALRI<5 years, SARI, AD (Non-Cholera) and Dengue while a decline in cases observed for Mumps and dog bite this week.

**GB:** ALRI <5 Years cases were the most frequently reported diseases followed by AD (Non-Cholera), ILI, SARI and TB. An increase in cases observed for ILI, TB and Chicken pox this week.

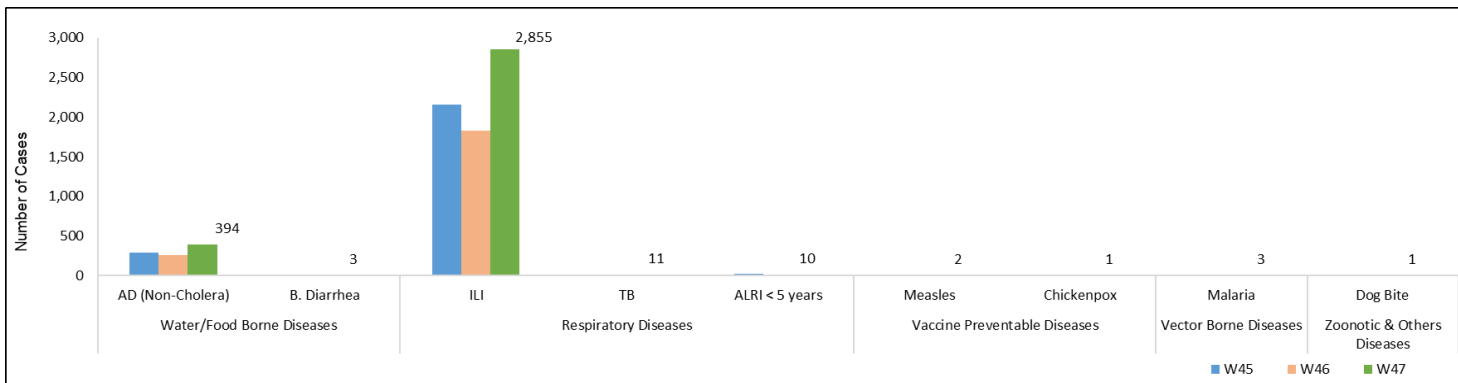
**Figure 8: Most frequently reported suspected cases during Week 47, AJK .**



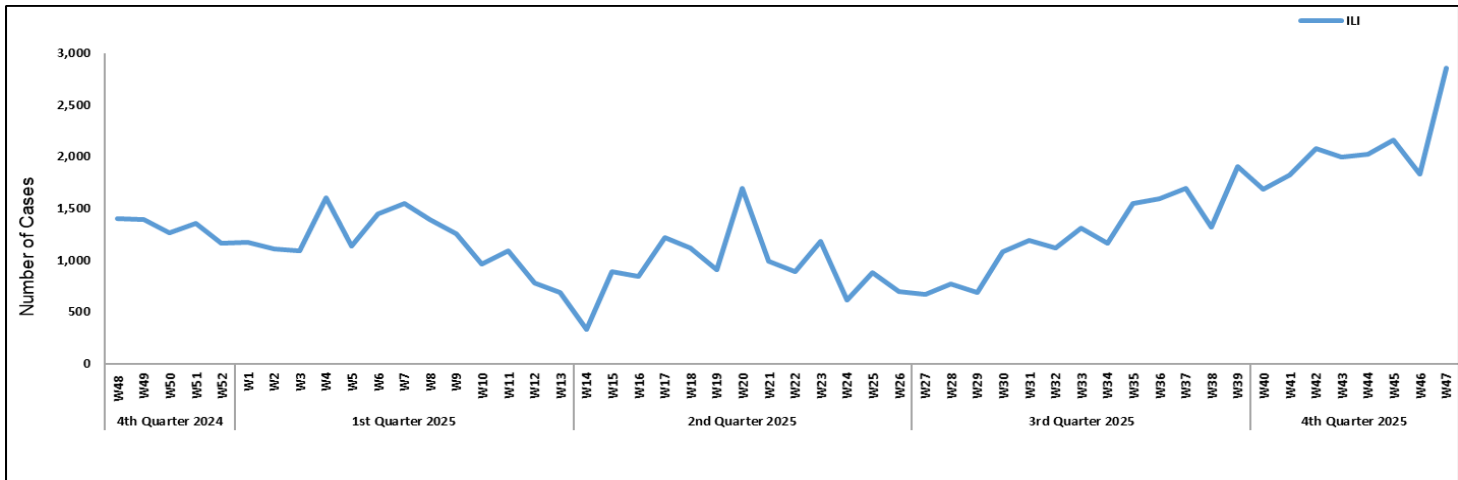
**Figure 9: Week wise reported suspected cases of ILI and ALRI <5 years, AJK.**



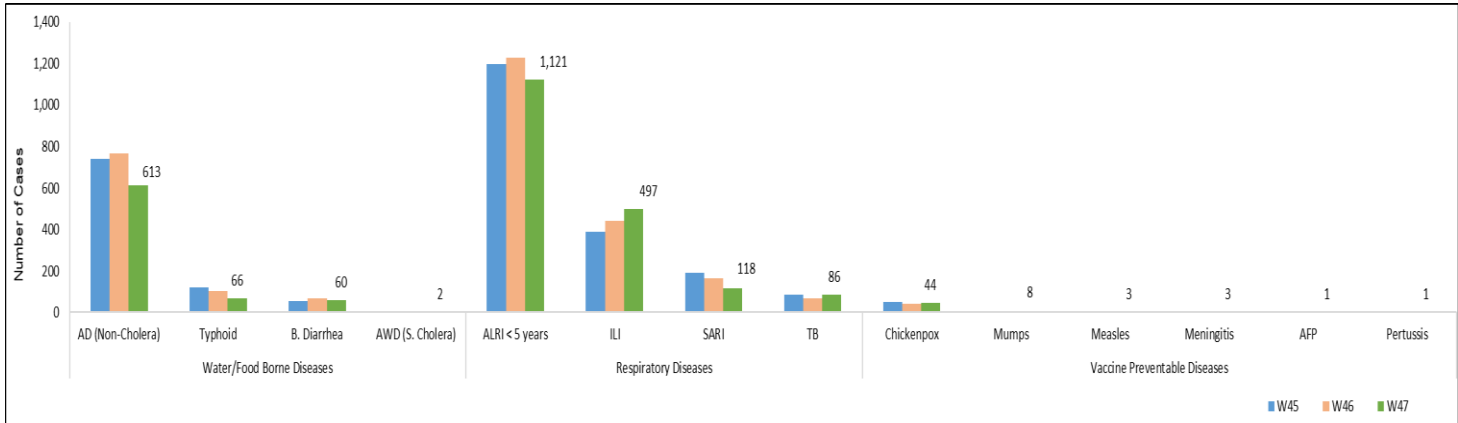
**Figure 10: Most frequently reported suspected cases during Week 47, ICT.**



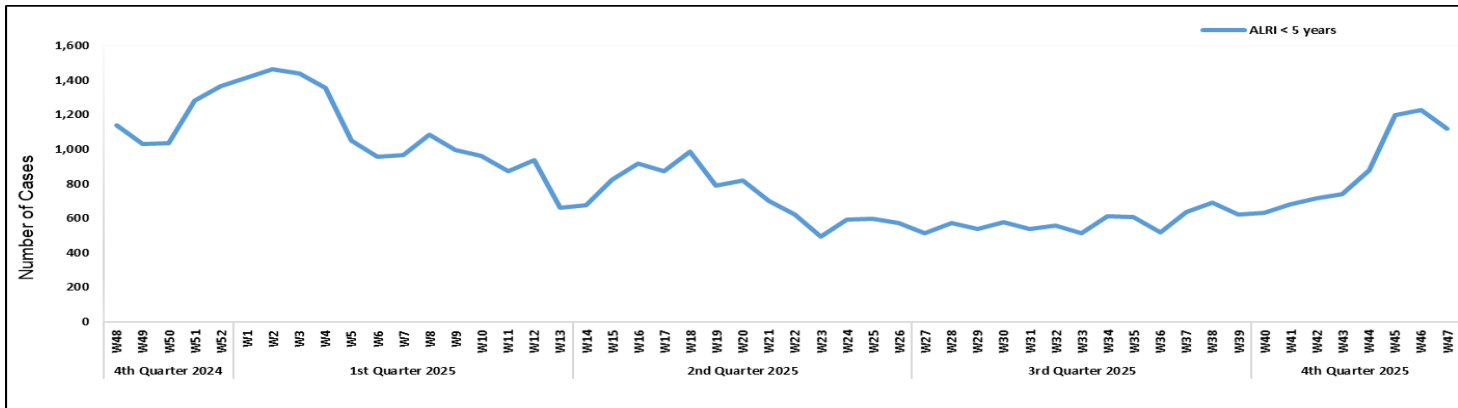
**Figure 11: Week wise reported suspected cases of ILI, ICT.**



**Figure 12: Most frequently reported suspected cases during Week 47, GB.**



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



**Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epi Week 47.**

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)	115	0	-	-	-	-	-	-	-	-	-	-	-	-
Stool culture & Sensitivity	169	1	-	-	-	-	-	-	-	-	-	-	-	-
Malaria	15,206	706	-	-	4,035	37	-	-	83	0	-	-	9	1
CCHF	2	0	-	-	-	-	-	-	-	-	-	-	-	-
Dengue	10,696	1,292	-	-	3,484	2	-	-	-	-	-	-	145	17
VH (B)	14,776	465	-	-	97	8	-	-	1,518	17	-	-	312	3
VH (C)	15,036	1,302	-	-	8	0	-	-	1,593	7	-	-	313	19
VH (D)	154	48	-	-	-	-	-	-	-	-	-	-	-	-
VH (A)	88	35	-	-	1	0	-	-	3	0	-	-	-	-
VH (E)	42	20	-	-	-	-	-	-	-	-	-	-	-	-
Covid-19	6	0	-	-	34	1	-	-	-	-	-	-	8	0
TB	799	91	-	-	-	-	-	-	33	0	-	-	50	5
HIV/ AIDS	4,799	37	-	-	362	1	-	-	127	1	-	-	233	0
Syphilis	939	23	-	-	8	0	-	-	84	0	-	-	-	-
Typhoid	1,131	34	-	-	-	-	-	-	176	6	-	-	10	0
Diphtheria	8	1	-	-	1	0	-	-	-	-	-	-	-	-
ILI	74	16	-	-	33	1	-	-	-	-	-	-	-	-
Pneumonia (ALRI)	318	32	-	-	-	-	-	-	-	-	-	-	-	-
Meningitis	6	0	-	-	-	-	-	-	-	-	-	-	-	-
Measles	135	61	-	-	179	91	23	19	1	0	332	96	12	7
Rubella (CRS)	5	4	-	-	-	-	-	-	-	-	-	-	-	-
Leishmaniosis (cutaneous)	8	1	-	-	8	3	-	-	-	-	-	-	-	-
Chikungunya	0	0	-	-	1	0	-	-	-	-	-	-	-	-
Chickenpox	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Gonorrhea	116	0	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Mpox	0	0	-	-	1	1	-	-	-	-	-	-	-	-
Leishmaniosis (Visceral)	9	0	-	-	-	-	-	-	-	-	-	-	-	-
SARI	69	30	-	-	-	-	-	-	-	-	-	-	-	-





# IDSR Reports Compliance

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

**Table 6: IDSR reporting districts Week 47, 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	125	53%
	Battagram	59	24	41%
	Buner	34	12	35%
	Bajaur	44	35	80%
	Charsadda	59	55	93%
	Chitral Upper	34	30	88%
	Chitral Lower	35	32	91%
	D.I. Khan	114	113	99%
	Dir Lower	74	61	82%
	Dir Upper	37	32	86%
	Hangu	22	18	82%
	Haripur	72	61	85%
	Karak	36	36	100%
	Khyber	53	44	83%
	Kohat	61	61	100%
	Kohistan Lower	11	7	64%
	Kohistan Upper	20	10	50%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	68	97%
	Lower & Central Kurram	42	1	2%
	Upper Kurram	41	23	56%
	Malakand	42	12	29%
	Mansehra	133	95	71%
	Mardan	80	62	78%
	Nowshera	56	53	95%
	North Waziristan	13	7	54%
	Peshawar	156	133	85%
	Shangla	37	31	84%
	Swabi	64	62	97%
	Swat	77	76	99%
	South Waziristan (Upper)	93	37	40%
	South Waziristan (Lower)	42	29	69%
Tank	34	31	91%	
Torghar	14	13	93%	
Mohmand	68	19	28%	
Orakzai	69	12	17%	
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	92	67	73%
	Kotli	60	60	100%
	Muzaffarabad	45	44	98%
	Poonch	46	46	100%
	Haveli	39	39	100%
	Bagh	54	41	76%



	Neelum	39	29	74%
	Jhelum Velley	29	29	100%
	Sudhnooti	27	27	100%
<b>Islamabad Capital Territory</b>	ICT	23	23	100%
	CDA	15	5	33%
<b>Balochistan</b>	Gwadar	26	0	0%
	Kech	44	0	0%
	Khuzdar	74	6	8%
	Killa Abdullah	26	26	100%
	Lasbella	55	55	100%
	Pishin	69	26	38%
	Quetta	55	28	51%
	Sibi	36	21	58%
	Zhob	39	11	28%
	Jaffarabad	16	16	100%
	Naserabad	32	31	97%
	Kharan	30	29	97%
	Sherani	15	0	0%
	Kohlu	75	6	8%
	Chagi	36	24	67%
	Kalat	41	40	98%
	Harnai	17	16	94%
	Kachhi (Bolan)	35	18	51%
	Jhal Magsi	28	14	50%
	Sohbat pur	25	25	100%
	Surab	32	12	38%
	Mastung	46	46	100%
	Loralai	33	24	73%
	Killa Saifullah	28	25	89%
	Ziarat	29	15	52%
	Duki	31	0	0%
	Nushki	32	29	91%
	Dera Bugti	45	27	60%
	Washuk	46	0	0%
	Panjgur	38	0	0%
	Awaran	23	0	0%
	Chaman	24	24	100%
	Barkhan	20	9	45%
Hub	33	26	79%	
Musakhel	41	0	0%	
Usta Muhammad	34	33	97%	
<b>Gilgit Baltistan</b>	Hunza	32	32	100%
	Nagar	25	18	72%
	Ghizer	38	37	97%
	Gilgit	44	44	100%
	Diamer	62	53	85%
	Astore	55	55	100%
	Shigar	27	25	93%
	Skardu	53	52	98%



	Ganche	29	28	97%
	Kharmang	46	22	48%
Sindh	Hyderabad	72	72	100%
	Ghotki	64	63	98%
	Umerkot	62	62	100%
	Naushahro Feroze	107	102	95%
	Tharparkar	276	256	93%
	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	24	69%
	Karachi-Kemari	22	21	95%
	Karachi-Central	12	11	92%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	52	95%
	Mirpur Khas	106	106	100%
	Badin	124	123	99%
	Sukkur	64	63	98%
	Dadu	90	87	97%
	Sanghar	100	99	99%
	Jacobabad	44	44	100%
	Khairpur	170	167	98%
	Kashmore	59	59	100%
	Matiari	42	42	100%
Jamshoro	75	74	99%	
Tando Allahyar	54	54	100%	
Tando Muhammad Khan	41	41	100%	
Shaheed Benazirabad	122	121	99%	



**Table 7: IDSR reporting Tertiary care hospital Week 47, 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	1	50%
	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	2	67%
	Sukkur	1	0	0%
	Shaheed Benazirabad	1	1	100%
	Karachi-East	1	1	100%
	Karachi-Central	1	1	100%
KP	Peshawar	3	0	0%
	Swabi	1	0	0%
	Nowshera	1	0	0%
	Mardan	1	1	100%
	Abbottabad	1	1	100%
	Swat	1	1	100%



## Strengthening Pakistan's Public Health Emergency Readiness: NIH Conducts National Functional Simulation Exercise

In a significant stride toward enhancing Pakistan's capacity to detect and respond to public health emergencies, the National Institutes of Health (NIH), Pakistan supported by The Global Fund under the C19RM grant successfully conducted a comprehensive three-day Functional Simulation Exercise. This national-level exercise was designed to test, validate, and strengthen critical components of Public Health Emergency Preparedness and Response across the country.



This milestone comes at a pivotal moment, following the successful completion of Pakistan's National Public Health Risk Profiling and the development of updated Public Health Emergency Preparedness and Response Plans. With planning structures now in place, the national health system has transitioned into the next essential phase: practical, real-time testing of emergency management systems, technical protocols, and coordination mechanisms. The exercise provided a controlled yet realistic environment to examine how effectively national and provincial systems can function when faced with simulated real-world public health threats.



The simulation brought together public health experts, surveillance officers, epidemiologists, and emergency response teams from Provincial Disease Surveillance and Response Units (PDSRUs) and Provincial Public Health Emergency Operation Centres (PHEOCs). Their active participation enabled rigorous testing of multi-sectoral coordination, risk communication workflows, data-sharing channels, and rapid response procedures. By working through time-pressured scenarios and operational challenges, participants strengthened their readiness to manage future emergencies collaboratively and efficiently.



The exercise also underscored the importance of a unified national response approach, promoting interoperability between federal and provincial teams. Through hands-on practice, participants refined their competencies in incident management, early warning systems, emergency coordination, logistics management, and decision-making.

As Pakistan continues to face evolving public health threats from pandemics to climate-related outbreaks, this simulation exercise represents a critical investment in resilience. By transforming plans into action and strengthening technical and operational capacity nationwide.

# Notes from the field:

## Cholera Outbreak Investigation Report, District Khyber Pakhtunkhwa (August 2025)

### Introduction

Cholera is a water borne illness caused by *Vibrio cholerae*, transmitted primarily through contaminated water and food. Globally, an estimated 1.3 to 4.0 million cases and up to 143,000 deaths occur annually, affecting communities with poor WASH systems. In the Eastern Mediterranean Region, recurrent outbreaks are influenced by displacement, inadequate sanitation, and climate-related flooding. Pakistan remains endemic, reporting more than 21,000 suspected and over 250 confirmed cases annually from 2023–2025. In Khyber Pakhtunkhwa, widespread outbreaks were recorded during the 2022 floods, including 43 confirmed deaths.

On 30 August 2025, the District Health Office Khyber detected an unusual rise in acute watery diarrhea cases and a child death reported from DHQ Hospital Landi Kotal and HMC Peshawar. This triggered an urgent notification and deployment of FETP fellows for outbreak investigation and response.

### Objectives

1. To identify existence and determine magnitude of the outbreak.
2. To Identify risk factors associated with illness.
3. To suggest strategies for containment and prevention of future outbreaks.

### Methods

A descriptive outbreak investigation was conducted. All individuals residing in Tehsil Landi Kotal or visiting the affected household between 16–30 August 2025 who developed acute watery diarrhea were included. The investigation area included three UCs: Khuga Khel, Pero Khel, and

Shekhmal. “A suspected case was defined as “any person residing in the affected areas with more than 4 liquid stools/ day”. “A confirmed case required *Vibrio cholerae* O1/O139 detection”. Case finding involved hospital record review and active case search through door-to-door visits and snowball sampling. Data were collected using a structured questionnaire. Analysis included descriptive epidemiology and summary of clinical and exposure characteristics.

### Results

A total of 26 suspected cholera cases were identified. Ages ranged from 1.5 to 66 years. Female to male ratio was 1:3. One fatality occurred, yielding a CFR of 3.84%. Cases were distributed across three UCs: Khuga Khel (n=5), Pero Khel (n=5), and Shekhmal (n=16). Eighteen cases required hospitalization; seven were managed as outpatients. All cases attended the funeral event, suggesting a common exposure. Clinical symptoms included acute watery diarrhea (100%), vomiting (80%), and severe dehydration (40%). The key risk factor identified was consumption of untreated stream water. Environmental assessment revealed contamination of the stream water following heavy rains.

### Discussion

The pattern indicates a suspected cholera outbreak linked to contaminated water exposure in a flood-affected setting. The clinical presentation and epidemiological clustering are consistent with cholera. Female predominance may reflect gender roles in food and water handling. While laboratory confirmation is pending, the evidence aligns with regional cholera trends. This outbreak indicates that strengthening water safety, sanitation, and community awareness is essential.

### Conclusion

A suspected cholera outbreak occurred among funeral attendees in three UCs of Tehsil Landi Kotal. All cases met the clinical definition of



cholera. The most likely source was contaminated stream water. Rapid response efforts are underway; however, continued surveillance is critical.

### Recommendations

1. Maintain active surveillance through LHWs and community volunteers.
2. Strengthen water chlorination and promote household water treatment.
3. Enhance community education on hygiene and safe water use.
4. Conduct follow-up water quality assessments.
5. Strengthen One Health coordination between Health Animal and Environment department for timely response.

### References

1. WHO. Cholera – Key Facts. 2023.
2. WHO EMRO. Cholera Situation Reports 2022–2023.
3. EMRO-GAT. Pakistan Cholera Surveillance Report 2023–2025.
4. CDC. Cholera—Epidemiology & Transmission. 2023.

## Knowledge Hub

### Understanding Smog: What You Need to Know

Smog is a severe form of air pollution that significantly reduces visibility and poses major health risks. The word "smog" is a combination of "smoke" and "fog." Modern smog is a complex mix of pollutants formed by emissions from vehicles and industry reacting with sunlight.

### Types of Smog and Key Pollutants

Smog is classified based on its chemical composition:

1. Photochemical Smog (Modern Smog)
  - Formation: Forms when Nitrogen Oxides and Volatile Organic Compounds (VOCs) primarily from car exhaust and

industrial sources react with sunlight and heat.

#### • Key Pollutants of Concern:

**Ground-Level Ozone:** A powerful irritant and the main toxic component. Unlike stratospheric ozone, which protects the Earth, ground-level ozone is harmful to breathe.

- **Particulate Matter** Tiny solid or liquid particles suspended in the air (particles less than 2.5 micrometers in diameter) is particularly dangerous because it can penetrate deep into the lungs and enter the bloodstream.

#### 2. Sulfurous Smog (London Smog)

- **Formation:** Created by high concentrations of sulfur oxides and particulate matter from burning coal and heavy oils. It is usually intensified by high humidity and cold temperatures.

#### Sources of Precursor Pollutants

The primary sources of the compounds that create modern photochemical smog are:

- **Mobile Sources:** Exhaust from all types of vehicles is the largest source of and VOCs in urban areas.
- **Stationary Sources:** Emissions from power plants, refineries, and factories.
- **Area Sources:** Vapors released from chemical solvents, paints, gasoline refueling, and commercial enterprises.

#### Health and Environmental Impacts

The severity of smog's impact is tied directly to the concentration of ozone and particulate matter

**Vulnerability:** Children, the elderly, outdoor workers, and people with preexisting heart or lung conditions are at the highest risk.

#### Measuring Smog Severity:



### The Air Quality Index (AQI)

The Air Quality Index (AQI) is a color-coded tool used by governments to communicate how clean or polluted the air is and what associated health effects might be a concern. The AQI measures the levels of key pollutants, including ozone

### Prevention and Mitigation

Effective smog control requires coordinated efforts to reduce the emission of precursor pollutants.

- **Transportation Policies:** Promoting electric and hybrid vehicles, and investing in high-efficiency public transit systems.
- **Industrial Controls:** Implementing and enforcing strict emission standards on factories and power plants, including requiring the use of scrubbers and catalytic converters.
- **Public Action:** Limiting driving, avoiding high-polluting activities (like using gasoline-powered lawn tools), and staying indoors during periods of high AQI, especially on sunny afternoons when ozone levels peak.

**More Information** For additional authoritative information on smog, air pollution, and its health effects, please visit:

- **World Health Organization (WHO):** <https://www.who.int/air-pollution>
- **Centers for Disease Control and Prevention (CDC):** <https://www.cdc.gov/air/airquality.html>
- **U.S. Environmental Protection Agency (EPA):** <https://www.epa.gov/air-quality>
- **Public Health Agency of Canada (PHAC):** [https://www.canada.ca/en/public-health/services/health-](https://www.canada.ca/en/public-health/services/health-risk-safety/environmental-public-health/air-quality.html)

[risk-safety/environmental-public-health/air-quality.html](https://www.canada.ca/en/public-health/risk-safety/environmental-public-health/air-quality.html)

- **UK Health Security Agency (UKHSA) / National Health Service (NHS):** <https://www.nhs.uk/conditions/air-pollution/>





# AIR POLLUTION PM2.5



## SOURCES

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## HEALTH EFFECTS



EYE IRRITATION



RUNNY NOSE



SHORTNESS OF BREATH



COUGHING

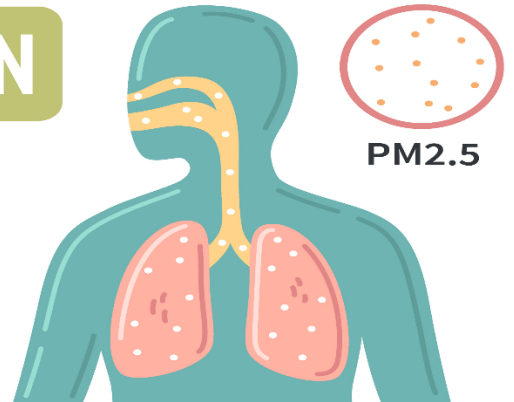
## PROTECTION




AIR CLEANER



N95 FACE MASK



PM2.5

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	<a href="mailto:idsr-pak@nih.org.pk">idsr-pak@nih.org.pk</a>		<a href="https://www.facebook.com/NIH.PK/">https://www.facebook.com/NIH.PK/</a>

