PUBLIC HEALTH BULLETIN-PAKISTAN

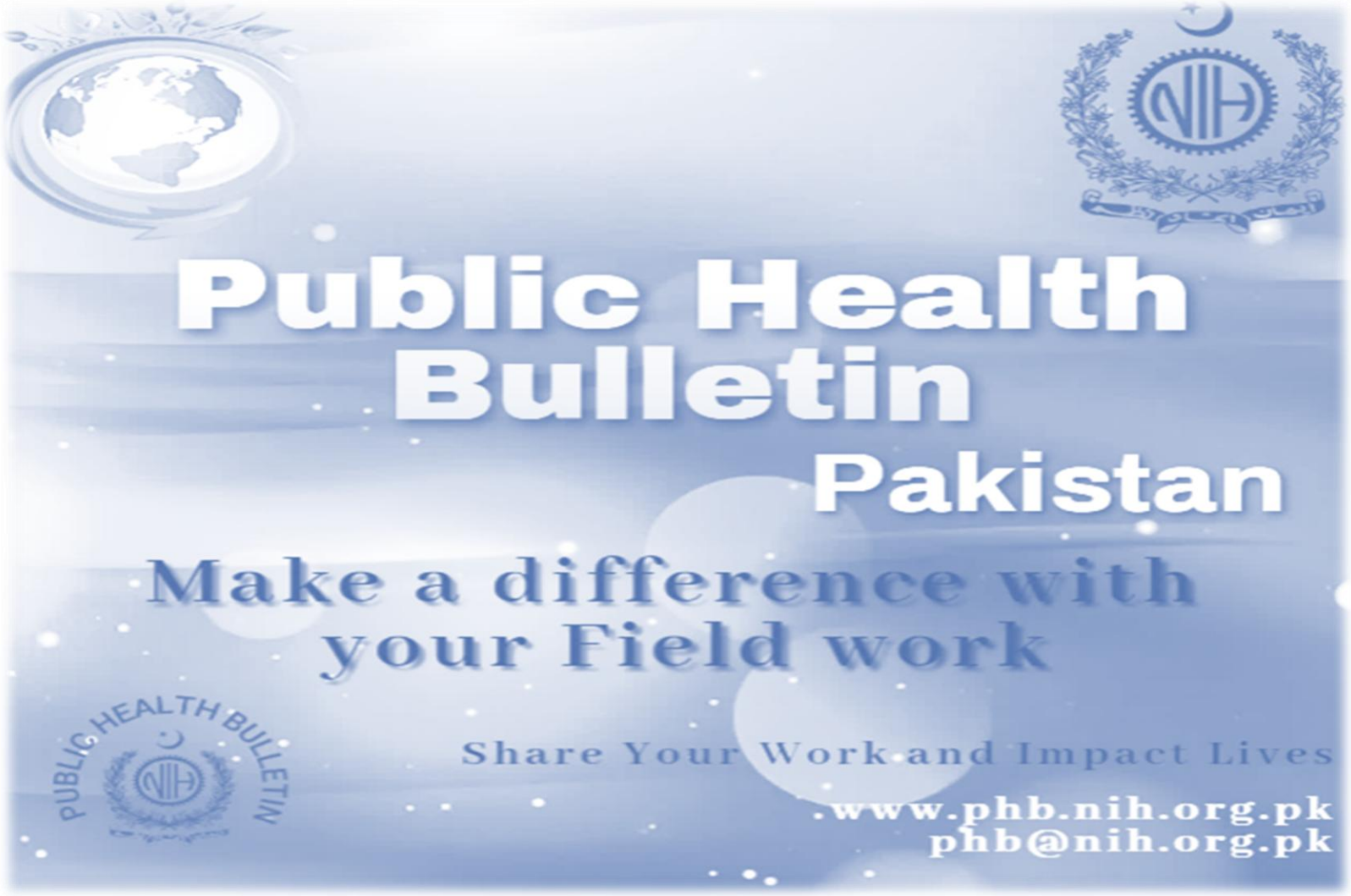
Vol. 5 | Week 28
11th JULY – 17th JULY
21th JULY, 2025

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 28, 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;

- *Strengthening IDSR through Laboratory Integration: A Milestone in IDSR Strengthing*
- *Outbreak Investigation Report: Measles in Muslim Town, Union Council 3, Bhara Kahu, Islamabad, July 2025*
- *Knowledge hub on Understanding Measles: 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.

Subscribe to the Weekly Bulletin today!

Stay informed. Stay prepared. Stay healthy.

Sincerely,
The Chief Editor

Note: All reported cases in this report are suspected cases

- *During Week 28, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, TB, ALRI <5 years, B. Diarrhea, VH (B, C & D), dog bite Typhoid and SARI.*
- *Twenty-four cases of AFP reported from KP, twelve from Sindh and four from AJK.*
- *Eighteen suspected cases of HIV/ AIDS reported from Sindh, nine from KP and three from AJK.*
- *Two suspected cases of Brucellosis reported from KP.*
- *Among VPDs, there is an increase in number of cases of Measles, Mumps, Chicken pox and Pertussis this week.*
- *Among Respiratory diseases, there is an increase in number of cases of ILI, TB, ALRI<5 years and SARI this week.*
- *Among Water/food-borne diseases, there is an increase in number of cases of Acute Diarrhea (Non-Cholera), B. Diarrhea and Typhoid this week.*
- *Among Vector-borne diseases, there is an increase in number of cases of Malaria this week.*
- *Among STDs, there is an increase in number of cases of HIV/AIDs this week.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts is 77%*
- *Sindh is the top reporting regions with a compliance rate of 96%, followed by AJK 95%, GB 92% and ICT 76%*
- *The lowest compliance rate was observed in Baluchistan 65% and KP 63%*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2704	1697	63
Azad Jammu Kashmir	404	382	95
Islamabad Capital Territory	38	29	76
Baluchistan	1308	852	65
Gilgit Baltistan	410	379	92
Sindh	2111	2017	96
National	6975	5356	77

Public Health Actions

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

Measles

- **Strengthen Surveillance and Case Notification:** Enhance measles case reporting through the IDSR system by training healthcare providers to recognize and report suspected cases (fever with maculopapular rash and cough, coryza, or conjunctivitis). Ensure immediate outbreak alerts.
- **Expand Laboratory Confirmation:** Strengthen laboratory capacity for measles IgM antibody testing and PCR, particularly for outbreak investigations and elimination verification.
- **Improve Immunization Coverage:** Ensure high and equitable coverage of measles-containing vaccines (MCV1 and MCV2) through routine immunization, outreach services, and catch-up campaigns in underserved areas.
- **Conduct Supplemental Immunization Activities (SIAs):** Organize targeted campaigns to close immunity gaps, especially during outbreaks or in low-coverage districts.
- **Strengthen Outbreak Preparedness and Response:** Establish rapid response teams for case isolation, contact tracing, and ring vaccination.
- **Raise Public Awareness:** Implement community engagement and communication campaigns to promote vaccine acceptance, early healthcare-seeking, and understanding of measles symptoms and risks.

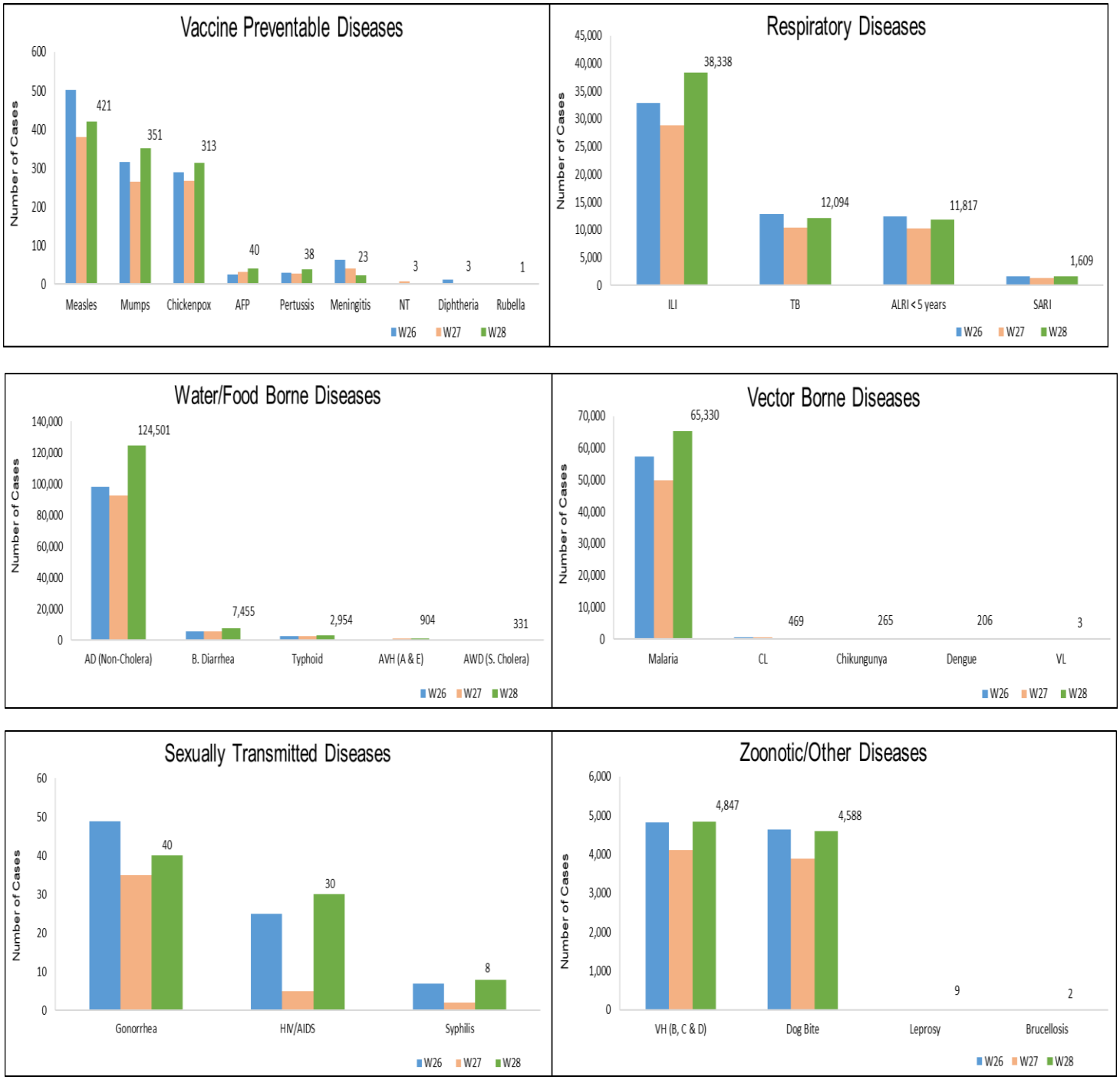
Mumps

- **Enhance Surveillance and Case Detection:** Strengthen mumps case detection within IDSR by training health workers to apply standard case definitions and promptly report suspected cases, particularly in schools and crowded institutions.
- **Expand Laboratory Capacity:** Support laboratory confirmation through IgM antibody testing and PCR where feasible, especially during outbreaks.
- **Promote Vaccination:** Increase coverage of the Measles-Mumps-Rubella (MMR) vaccine via routine immunization services and supplemental campaigns in high-risk or low-coverage populations.
- **Implement Outbreak Control Measures:** Encourage isolation of suspected cases during the infectious period and conduct contact tracing in schools and workplaces to minimize transmission.
- **Raise Community Awareness:** Disseminate health education materials highlighting mumps symptoms, routes of transmission (respiratory droplets), preventive measures, and importance of vaccination.
- **Strengthen Multi-Sectoral Collaboration:** Work with educational institutions and community leaders to promote vaccination campaigns and enforce outbreak control strategies.

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 28, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (non-cholera)	2,458	8,749	2,339	535	46,629	NR	63,791	124,501
Malaria	5	3,561	0	2	5,862	NR	55,900	65,330
ILI	1,596	5,968	343	768	3,523	NR	26,140	38,338
TB	46	86	115	14	417	NR	11,416	12,094
ALRI < 5 years	700	1,742	579	3	760	NR	8,033	11,817
B. Diarrhea	80	1,720	161	3	1,229	NR	4,262	7,455
VH (B, C & D)	37	49	2	2	91	NR	4,666	4,847
Dog Bite	133	135	3	0	1,117	NR	3,200	4,588
Typhoid	20	517	104	1	957	NR	1,355	2,954
SARI	76	691	155	0	557	NR	130	1,609
AVH (A & E)	21	17	3	0	284	NR	579	904
CL	0	58	0	0	408	NR	3	469
Measles	13	27	30	2	226	NR	123	421
Mumps	6	45	6	0	222	NR	72	351
AWD (S. Cholera)	18	203	25	0	44	NR	41	331
Chickenpox/ Varicella	9	10	44	2	194	NR	54	313
Chikungunya	0	0	0	0	0	NR	265	265
Dengue	0	2	0	0	41	NR	163	206
Gonorrhea	0	34	0	0	2	NR	4	40
AFP	4	0	0	0	24	NR	12	40
Pertussis	0	20	7	0	9	NR	2	38
HIV/AIDS	3	0	0	0	9	NR	18	30
Meningitis	4	0	1	0	4	NR	14	23
Leprosy	0	0	0	0	0	NR	9	9
Syphilis	0	0	0	0	0	NR	8	8
VL	0	0	0	0	0	NR	3	3
NT	0	0	0	0	3	NR	0	3
Diphtheria (Probable)	0	0	0	0	1	NR	2	3
Brucellosis	0	0	0	0	2	NR	0	2
Rubella (CRS)	1	0	0	0	0	NR	0	1

Figure 1: Most frequently reported suspected cases during Week 28, Pakistan.



Sindh

- AD (non-cholera) cases were maximum followed by Malaria, ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, Dog bite, Typhoid and AVH (A & E).
- AD (non-cholera) cases are mostly from Karachi south, Mirpur Khas, Badin and Khairpur whereas Malaria cases are from Khairpur, Larkana, and Sanghar.
- Twelve cases of AFP reported from Sindh. They are suspected cases and need field verification.
- There is a decline in number of cases of Meningitis while an increase in number of cases of AD (Non-Cholera), B. Diarrhea, Malaria, ILI, ALRI<5 Years, TB, dog bite, VH (B, C, D), Measles, Mumps, Chicken pox and AFP this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 28, Sindh

Districts	AD (non-cholera)	Malaria	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A & E)
Badin	4,159	3,519	1,875	687	303	132	274	188	49	16
Dadu	2,805	3,334	571	331	845	8	640	427	57	44
Ghotki	1,696	3,121	21	530	346	517	151	232	0	4
Hyderabad	3,196	755	1,132	307	139	88	84	65	20	3
Jacobabad	679	403	1,313	104	640	129	121	184	20	0
Jamshoro	2,042	2,104	53	525	241	188	134	72	20	11
Kamber	1,975	2,736	0	689	222	104	127	173	17	0
Karachi Central	1,359	17	1,456	203	12	18	13	23	117	14
Karachi East	306	36	131	8	1	4	12	4	20	0
Karachi Keamari	692	5	382	3	16	1	4	2	2	3
Karachi Korangi	397	80	0	16	4	0	4	1	1	1
Karachi Malir	2,030	216	3,088	205	296	25	69	60	17	6
Karachi South	6,521	205	26	465	159	240	334	165	454	144
Karachi West	871	276	996	68	194	16	14	79	25	0
Kashmore	485	1,752	267	236	125	28	78	87	9	1
Khairpur	3,897	5,062	5,607	981	813	223	372	249	194	22
Larkana	1,924	4,634	0	845	230	55	273	36	7	4
Matiari	2,352	2,760	0	572	241	381	68	58	2	6
Mirpurkhas	5,019	2,842	2,259	639	317	245	124	145	19	4
Naushero Feroze	1,164	1,340	696	312	261	54	190	216	134	0
Sanghar	2,629	4,563	127	1,024	358	1,013	124	154	21	10
Shaheed Benazirabad	2,052	1,873	4	286	158	147	91	138	91	0
Shikarpur	1,227	1,802	3	247	147	179	163	130	3	1
Sujawal	2,308	348	15	101	10	49	41	60	6	0
Sukkur	1,546	2,050	1,984	319	347	84	125	91	4	0
Tando Allahyar	2,168	2,268	727	448	145	183	87	60	11	2
Tando Muhammad Khan	1,879	1,292	62	549	150	187	158	12	0	0
Tharparkar	2,437	2,689	1,165	376	389	51	179	5	14	19
Thatta	1,848	1,607	2,180	50	629	195	64	84	12	259
Umerkot	2,128	2,211	0	290	295	122	144	0	9	5
Total	63,791	55,900	26,140	11,416	8,033	4,666	4,262	3,200	1,355	579

Figure 2: Most frequently reported suspected cases during Week 28 Sindh

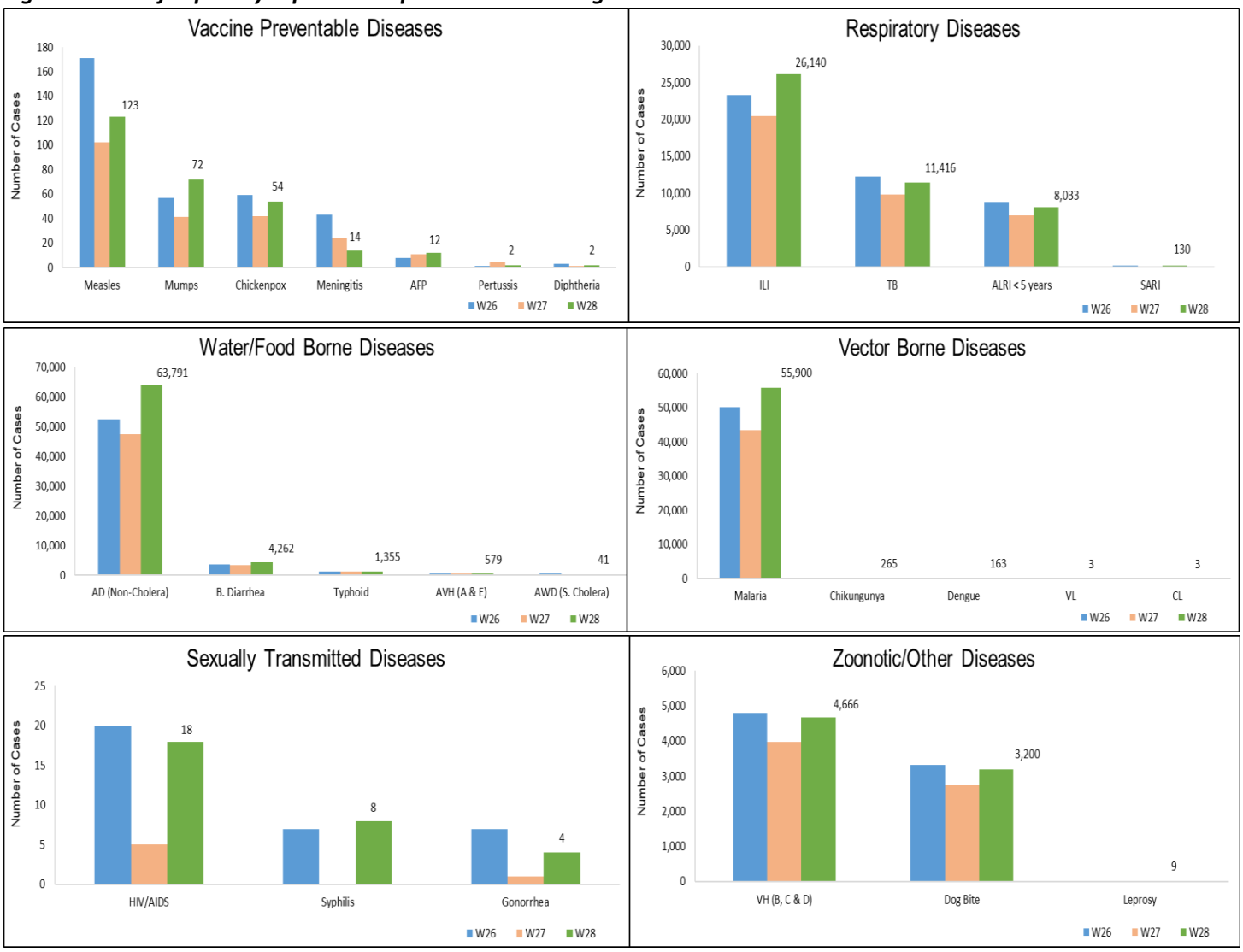
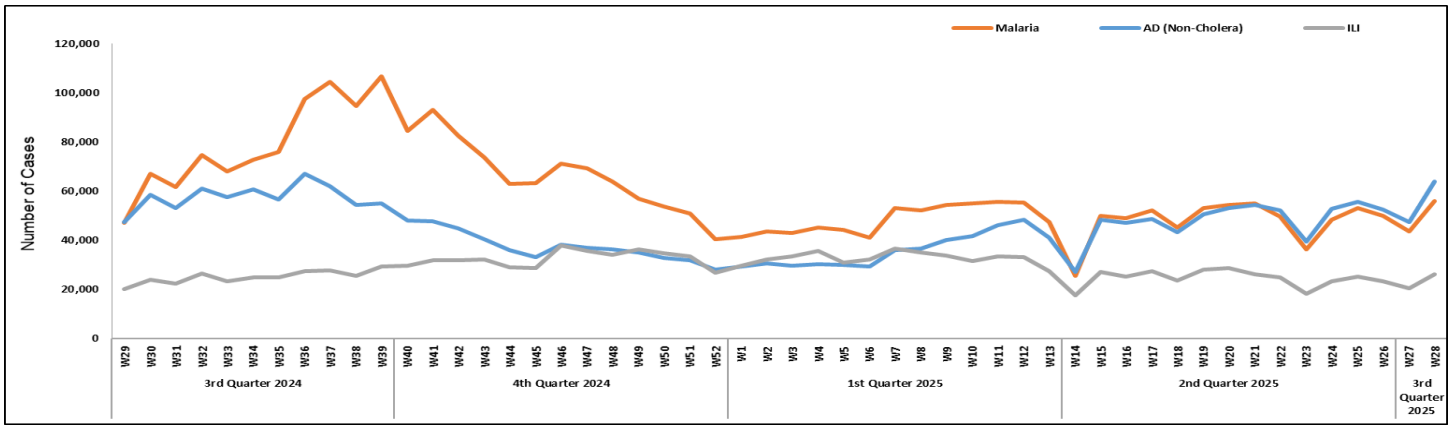


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh



Balochistan

- AD (Non-Cholera), ILI, Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, AWD (S. Cholera), dog bite and TB cases were the most frequently reported diseases from Baluchistan province.
- AD (non-cholera) cases are mostly reported from Quetta, Pishin, Gwadar and Usta Muhammad while ILI cases are mostly reported from Gwadar, Quetta and Kech (Turbat).
- AD (Non-Cholera), B. Diarrhea, Typhoid, AWD (S. Cholera), ILI, ALRI <5years, SARI, Malaria, dog bite, VH (B, C & D), Measles, Mumps, Pertussis and Chickenpox showed an increase in number of cases this week.

Table 3: District wise distribution of most frequently reported suspected cases during Week 28, Baluchistan

Districts	AD (Non-Cholera)	ILI	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	AWD (S. Cholera)	Dog Bite	TB
Barkhan	97	46	78	27	6	2	27	12	33	4
Chagai	148	199	68	0	58	0	16	0	0	1
Dera Bugti	94	0	76	0	3	0	0	0	0	0
Gwadar	664	773	118	61	130	0	47	5	2	0
Harnai	44	2	69	72	29	0	0	0	11	0
Hub	332	65	131	7	10	4	0	0	0	0
Jaffarabad	281	85	251	4	76	14	3	0	5	23
Jhal Magsi	243	197	301	34	0	0	21	0	15	7
Kachhi (Bolan)	135	17	47	12	47	94	11	3	0	1
Kalat	53	5	35	2	33	0	28	0	0	0
Kech (Turbat)	421	653	242	94	60	NR	NR	NR	NR	NR
Kharan	243	443	45	0	90	17	6	0	0	0
Khuzdar	113	110	120	2	24	29	24	3	0	0
Killa Abdullah	164	91	16	6	51	39	10	41	0	0
Killa Saifullah	242	0	217	119	106	20	25	2	9	0
Kohlu	227	291	144	11	60	10	39	NR	1	NR
Lasbella	509	46	232	165	42	1	14	0	7	0
Loralai	368	388	68	38	56	85	21	4	3	0
Mastung	183	108	55	25	17	22	10	0	0	1
MusaKhel	54	15	158	8	13	1	12	13	2	1
Naseerabad	301	29	121	12	10	30	53	1	7	8
Nushki	159	0	16	0	59	6	0	0	0	0
Panjgur	152	95	141	72	33	0	1	45	0	0
Pishin	768	545	51	121	225	38	22	21	6	0
Quetta	884	738	17	194	84	57	26	4	2	0
Sibi	402	340	190	125	49	116	43	19	4	0
Sohbat pur	231	6	110	96	78	4	22	0	1	0
Surab	13	22	9	0	0	0	0	0	0	0
Usta Muhammad	636	78	165	129	85	0	10	0	20	0
Washuk	232	262	102	21	98	38	7	11	2	0
Zhob	205	158	81	267	49	57	10	2	0	40
Ziarat	151	161	87	18	39	7	9	17	5	0
Total	8,749	5,968	3,561	1,742	1,720	691	517	203	135	86

Figure 4: Most frequently reported suspected cases during Week 28, Baluchistan

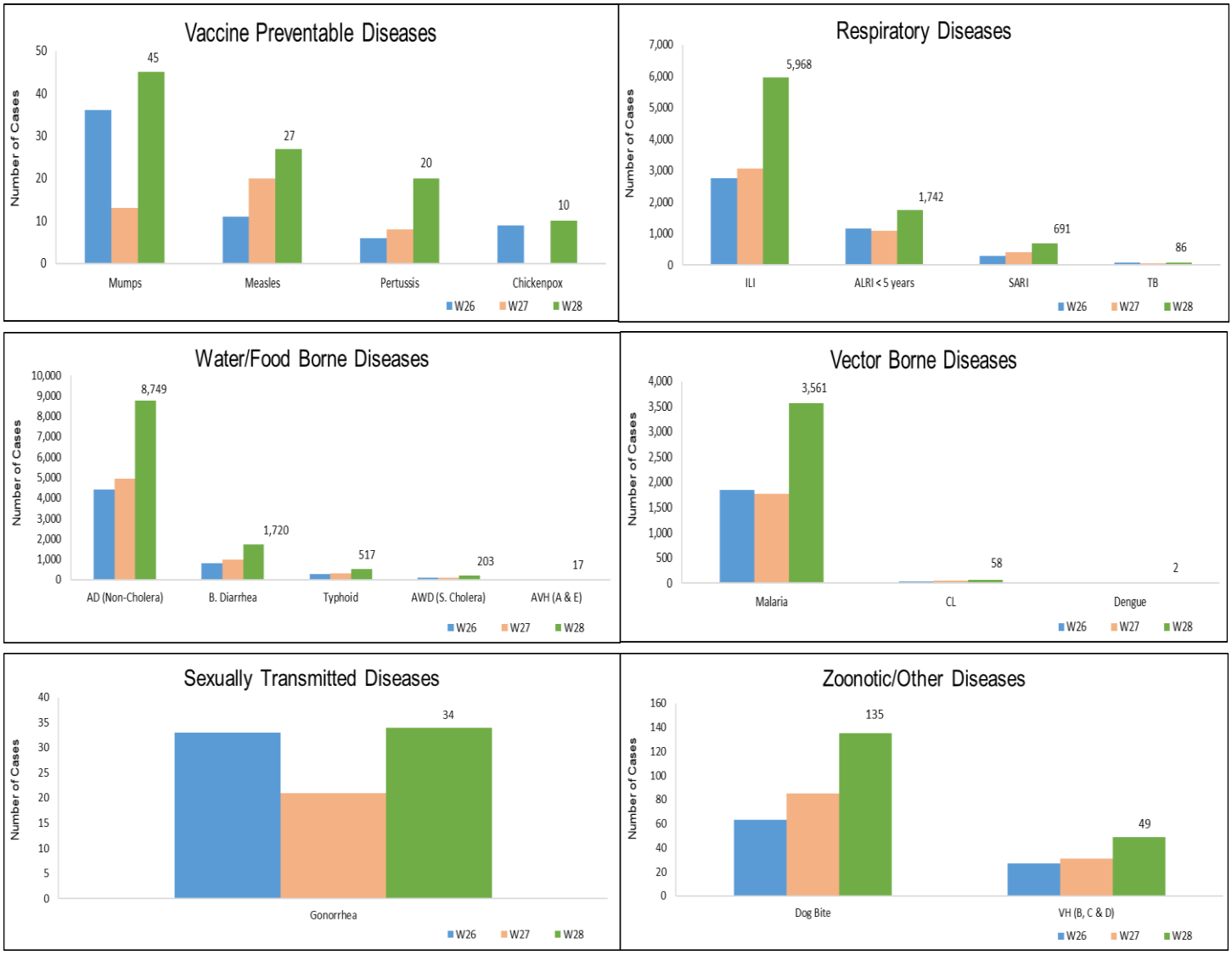
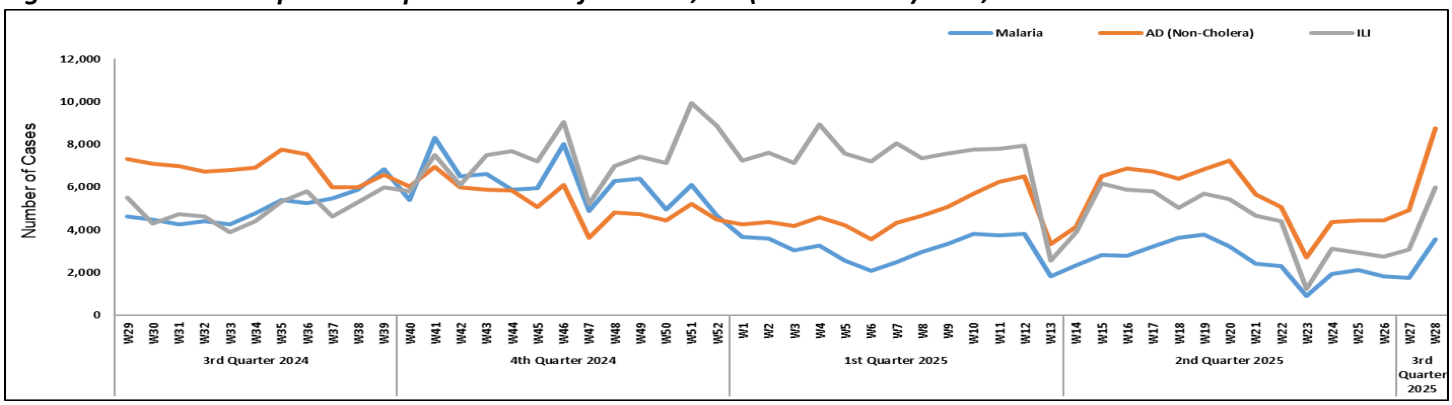


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



Khyber Pakhtunkhwa

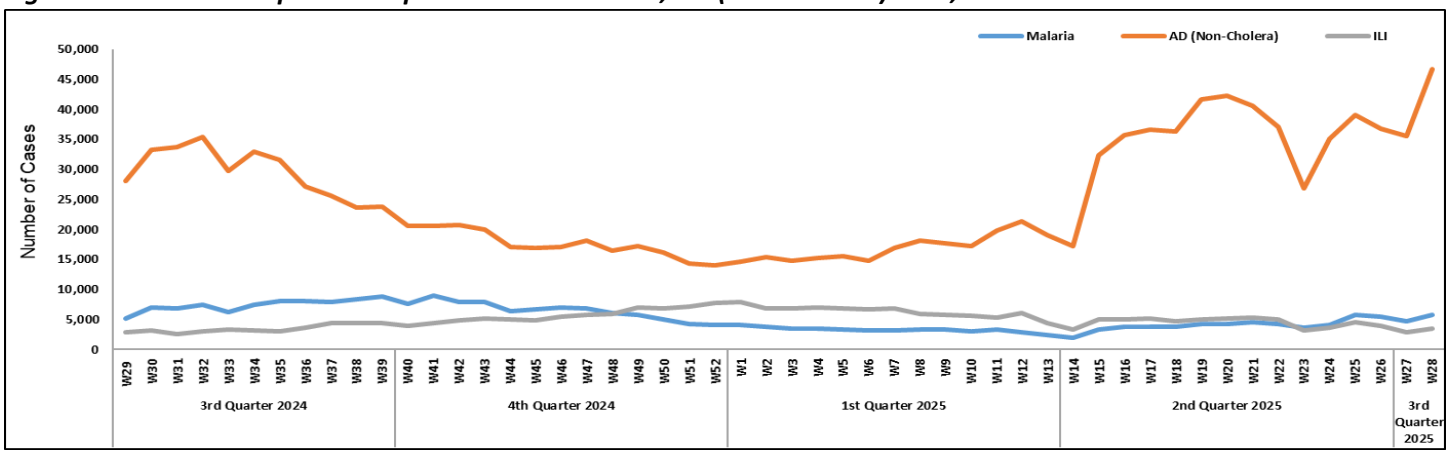
- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, B. Diarrhea, dog bite, Typhoid, ALRI <5 years, SARI, TB &CL
- Chicken pox, Pertussis, Meningitis, NT & CL showed a decline in number while AD (Non-Cholera), B. Diarrhea, Typhoid, Malaria, Mumps, ILI, SARI, TB, AFP dog bite and HIV/AIDs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

Table 4: District wise distribution of most frequently reported suspected cases during Week 28, KP

Districts	AD (non-cholera)	Malaria	ILI	B. Diarrhea	Dog Bite	Typhoid	ALRI < 5 years	SARI	TB	CL
Abbottabad	2,192	0	108	12	26	16	6	7	4	0
Bajaur	1,189	328	0	100	131	11	19	72	10	18
Bannu	1,231	1,565	5	12	3	99	28	7	21	0
Battagram	841	57	549	3	15	10	NR	NR	64	4
Buner	523	326	0	0	11	3	0	0	1	0
Charsadda	3,010	438	1,010	230	21	116	255	3	9	0
Chitral Lower	1,143	20	68	25	7	9	16	13	2	3
Chitral Upper	179	6	55	10	5	10	21	53	3	0
D.I. Khan	1,868	376	0	26	41	0	3	0	42	2
Dir Lower	2,318	173	0	49	70	43	4	0	0	0
Dir Upper	1,986	12	33	21	37	23	77	0	20	4
Hangu	24	25	17	2	0	2	0	0	0	0
Haripur	1,461	0	21	0	23	0	1	0	0	0
Karak	608	133	34	4	78	6	34	13	5	242
Khyber	681	386	99	112	27	75	59	23	12	32
Kohat	925	131	0	13	41	31	0	1	0	29
Kohistan Lower	188	4	0	8	3	0	0	0	0	0
Kohistan Upper	305	7	0	23	1	2	0	2	5	0
Kolai Palas	128	1	0	9	0	0	0	0	0	0
L & C Kurram	12	5	0	22	0	0	0	0	0	0
Lakki Marwat	841	410	0	18	69	13	1	0	11	0
Malakand	793	30	22	0	0	64	0	0	0	10
Mansehra	1,775	3	251	0	0	8	2	0	3	0
Mardan	1,402	55	7	22	14	1	62	0	13	0
Mohmand	214	229	88	30	18	6	1	131	4	50
North Waziristan	106	60	11	17	1	17	10	0	1	1
Nowshera	2,820	200	21	21	18	27	1	4	11	3
Orakzai	171	36	10	16	2	0	0	0	0	0
Peshawar	5,384	47	276	187	13	187	12	20	22	0
SD Tank	24	11	3	13	0	0	3	0	0	0
Shangla	2,645	320	0	6	127	11	8	0	70	0
South Waziristan (Lower)	41	112	87	3	13	11	0	10	8	6
SWU	77	54	15	1	2	0	7	24	0	0
Swabi	2,078	59	485	34	227	91	41	64	34	0
Swat	6,626	34	120	101	53	40	78	35	31	0
Tank	506	156	69	5	0	0	7	0	2	0
Tor Ghar	141	36	6	26	16	11	4	25	7	4
Upper Kurram	173	17	53	48	4	14	0	50	2	0
Total	46,629	5,862	3,523	1,229	1,117	957	760	557	417	408

Figure 6: Most frequently reported suspected cases during Week 28, KP

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



PUNJAB

- The most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by TB, dog bite, ALRI <5 years, Malaria, Typhoid and AWD (S. Cholera) this week.
- There is a decline in cases observed for Acute Diarrhea (Non-Cholera), TB, dog bite, ALRI <5 years, Malaria and Typhoid this week.
- Five cases of AFP reported Punjab this week. They are suspected cases and need field verification.
- Five suspected cases of HIV/ AIDS reported from Punjab this week. They require field investigation.

Figure 8: Most frequently reported suspected cases during Week 14, Punjab

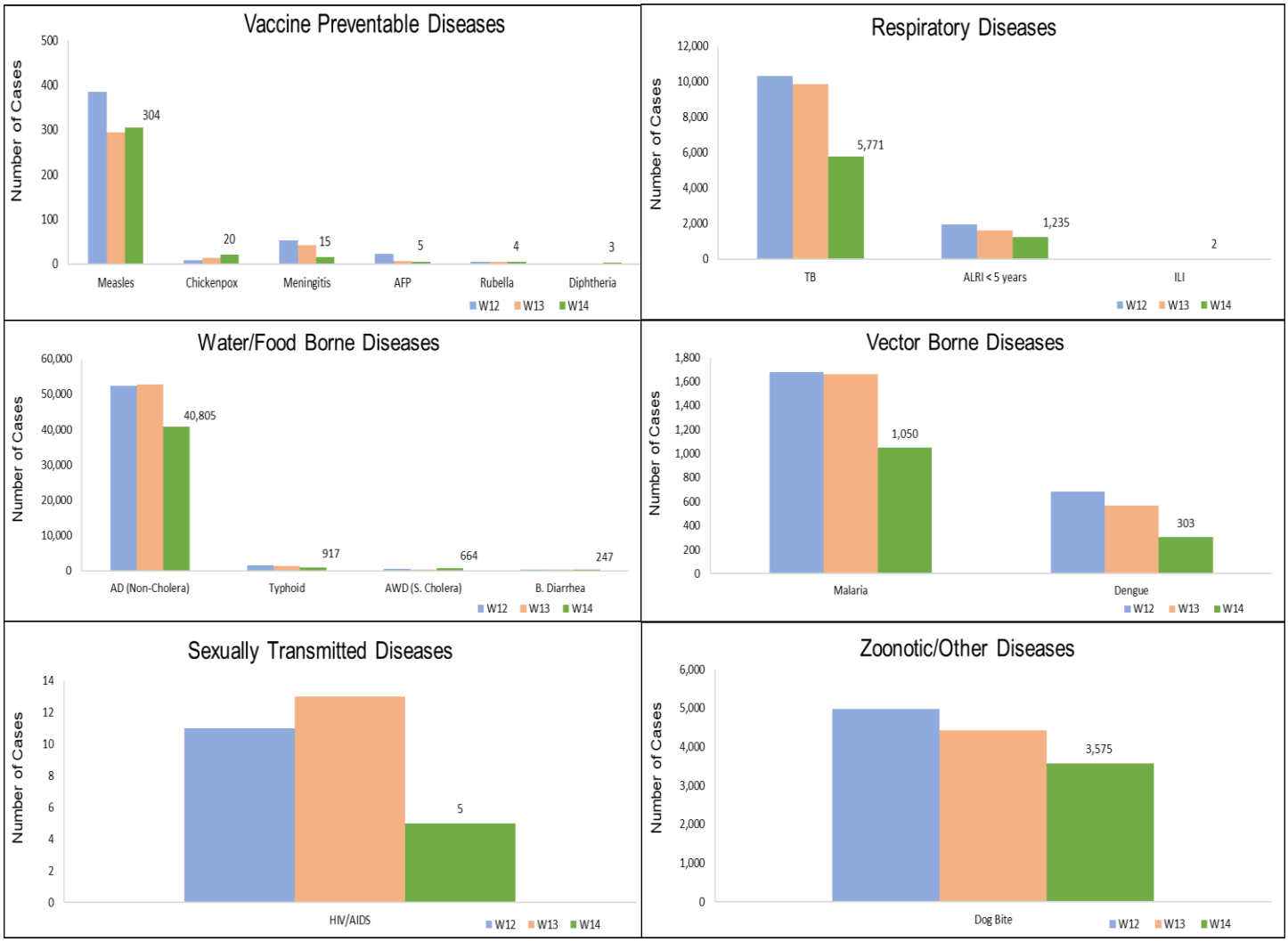
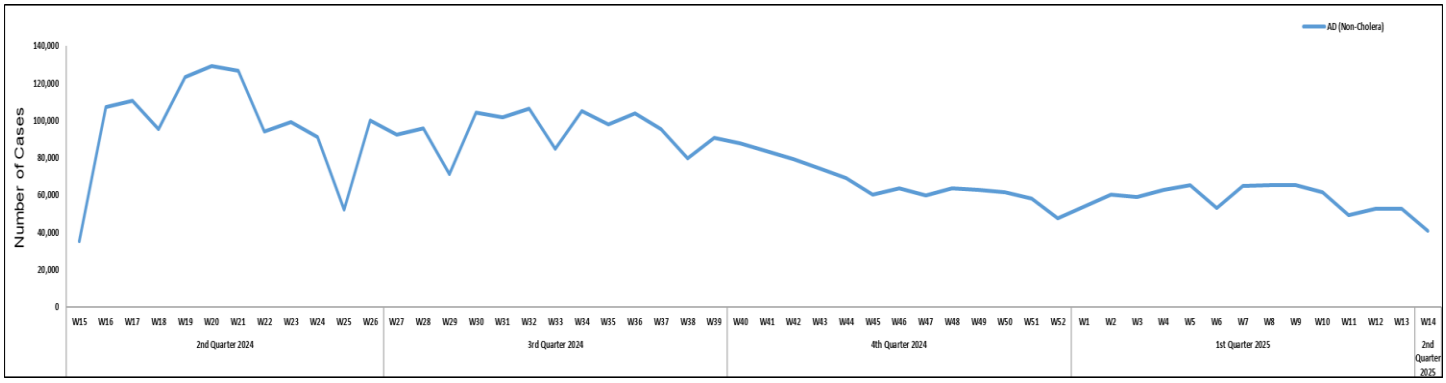


Figure 9: Week wise reported suspected cases of AD (Non-Cholera), Punjab



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 increase in number this week.

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

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

Figure 10: Most frequently reported suspected cases during Week 28, AJK

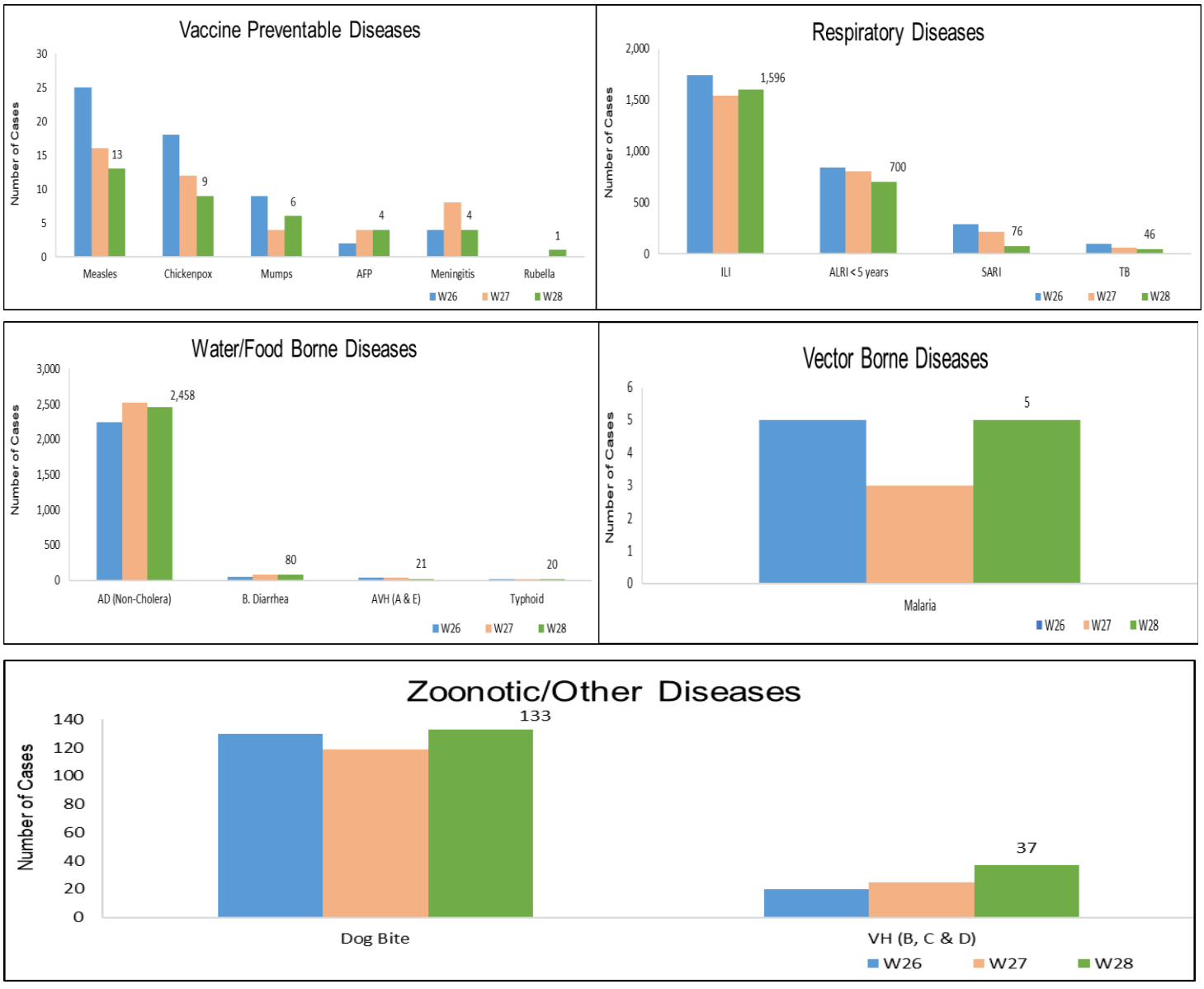


Figure 11: Week wise reported suspected cases of ILI and AD (Non-Cholera)

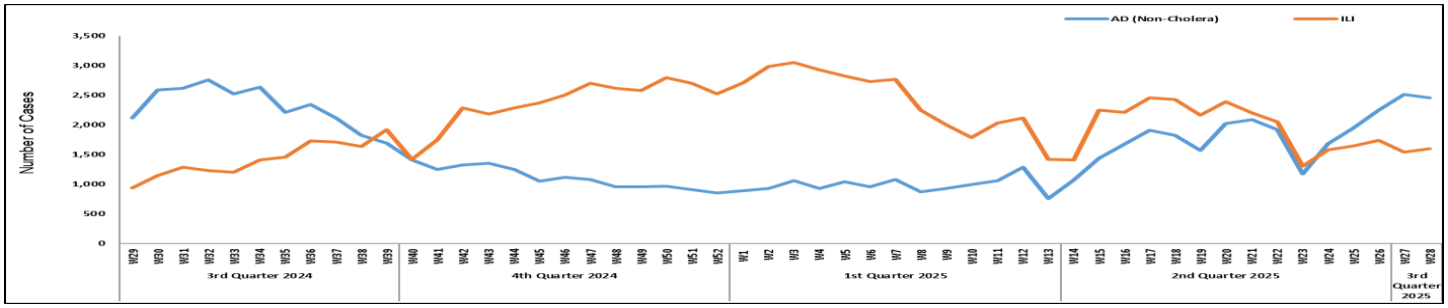


Figure 12: Most frequently reported suspected cases during Week 28, ICT

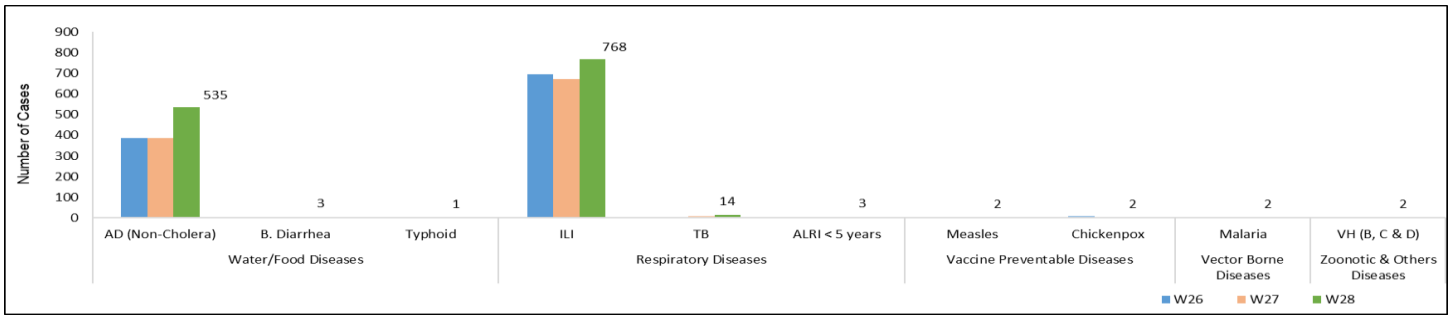


Figure 13: Most frequent cases reported during Week 28, GB

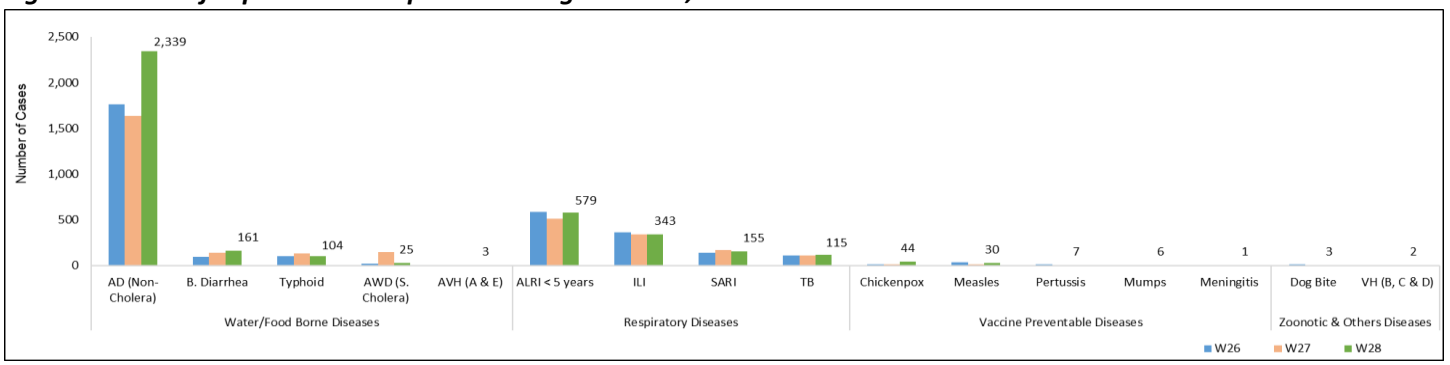


Figure 14: Week wise reported suspected cases of AD (Non-Cholera), GB

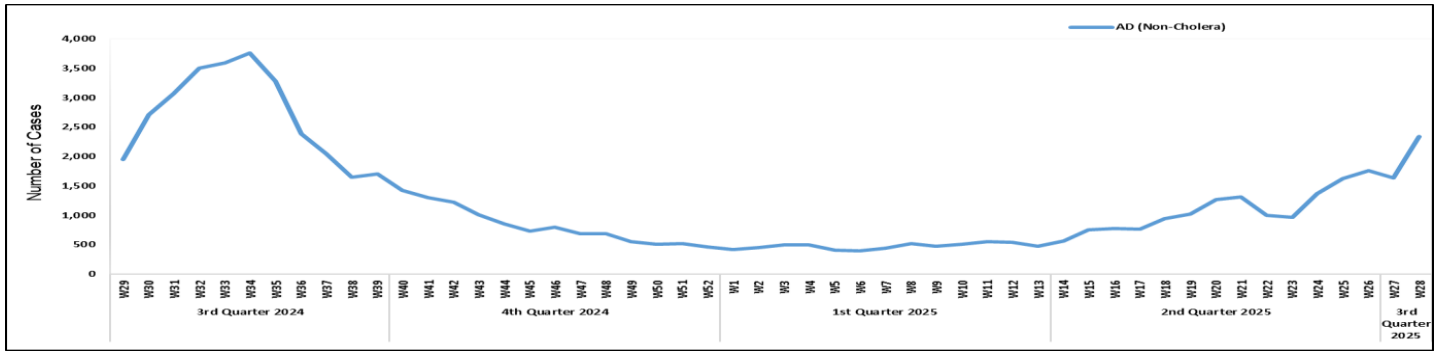


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 28

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)		52	6	-	-	0	0	-	-	0	0	-	-	0	0
Stool culture & Sensitivity		249	3	-	-	0	0	-	-	0	0	-	-	0	0
Malaria		9,053	993	-	-	140	18	-	-	155	0	-	-	17	0
CCHF		8	0	6	2	0	0	-	-	0	0	-	-	0	0
Dengue		2,566	328	1	0	0	0	-	-	0	0	-	-	6	0
VH (B)		17,212	462	43	37	93	0	-	-	667	12	-	-	657	1
VH (C)		17,163	1,282	68	27	93	0	-	-	631	3	-	-	659	22
VH (D)		68	15	32	5	0	0	-	-	0	0	-	-	0	0
VH (A)		184	49	-	-	0	0	-	-	0	0	-	-	0	0
VH (E)		129	21	-	-	0	0	-	-	0	0	-	-	0	0
Covid-19		27	0	2	0	0	0	-	-	0	0	-	-	13	0
TB		555	109	-	-	0	0	-	-	14	1	-	-	79	7
HIV/ AIDS		6,537	52	-	-	81	0	-	-	150	0	-	-	480	1
Syphilis		1,761	26	-	-	6	0	-	-	145	1	-	-	0	0
B. Diarrhea		1	1	-	-	0	0	-	-	0	0	-	-	0	0
Brucellosis		11	0	-	-	0	0	-	-	0	0	-	-	0	0
Chickenpox		8	0			0	0	-	-	0	0	-	-	0	0
Chikungunya		3	0	1	0	0	0	-	-	0	0	-	-	0	0
Typhoid		2,046	45	-	-	2	0	-	-	72	4	-	-	0	0
Diphtheria		1	0	-	-	0	0	-	-	0	0	-	-	0	0
ILI		25	0	1	0	0	0	-	-	0	0	-	-	3	0
Pneumonia (ALRI)		247	92	-	-	0	0	-	-	0	0	-	-	0	0
Meningitis		35	3	-	-	0	0	-	-	0	0	-	-	0	0
Rabies		8	8	-	-	0	0	-	-	0	0	-	-	0	0
Measles		127	63	49	37	258	114	43	26	4	0	547	95	30	8
Rubella		127	2	49	2	258	2	43	1	4	0	547	5	30	1
Rubella (CRS)		6	4	-	-	0	0	-	-	0	0	-	-	0	0
Leishmaniansis (cutaneous)		0	0	-	-	23	4	-	-	0	0	-	-	0	0
Leishmaniansis (Visceral)		18	0	-	-	0	0	-	-	0	0	-	-	0	0
Covid-19	Out of SARI	17	0	0	0	26	0	22	3	0	0	49	0	19	0
	Out of ILI	0	0	0	0	3	0	9	0	0	0	22	0	12	0
Influenza A	Out of SARI	17	0	0	0	26	1	22	0	0	0	49	0	19	0
	Out of ILI	0	0	0	0	3	0	9	0	0	0	22	0	12	0
Influenza B	Out of SARI	17	1	0	0	26	0	22	0	0	0	49	0	19	0
	Out of ILI	0	0	0	0	3	0	9	0	0	0	22	0	12	0
RSV	Out of SARI	17	0	0	0	26	0	22	0	0	0	49	0	19	0
	Out of ILI	0	0	0	0	3	0	9	0	0	0	22	0	12	0

Table 6: IDSR reporting districts Week 28, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	102	92%
	Bannu	238	128	54%
	Battagram	59	39	66%
	Buner	34	20	59%
	Bajaur	44	41	93%
	Charsadda	59	58	98%
	Chitral Upper	34	28	82%
	Chitral Lower	35	34	97%
	D.I. Khan	114	113	99%
	Dir Lower	74	63	85%
	Dir Upper	37	26	70%
	Hangu	22	3	14%
	Haripur	72	68	94%
	Karak	36	36	100%
	Khyber	53	40	75%
	Kohat	61	61	100%
	Kohistan Lower	11	10	91%
	Kohistan Upper	20	16	80%
	Kolai Palas	10	8	80%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	3	7%
	Upper Kurram	41	30	73%
	Malakand	42	20	48%
	Mansehra	133	89	67%
	Mardan	80	52	65%
	Nowshera	56	51	91%
	North Waziristan	13	9	69%
	Peshawar	156	132	85%
	Shangla	37	35	95%
	Swabi	64	63	98%
	Swat	77	76	99%
	South Waziristan (Upper)	93	36	39%
	South Waziristan (Lower)	42	17	40%
	Tank	34	31	91%
	Torghar	14	14	100%
	Mohmand	68	58	85%
	SD Peshawar	5	0	0%
	SD Tank	58	6	10%
	Orakzai	69	12	17%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	42	20	48%
	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	23	100%
	CDA	15	6	40%
Balochistan	Gwadar	26	22	85%
	Kech	44	33	75%
	Khuzdar	74	20	27%
	Killa Abdullah	26	20	77%
	Lasbella	55	55	100%
	Pishin	69	38	55%
	Quetta	55	39	71%
	Sibi	36	36	100%
	Zhob	39	27	69%
	Jaffarabad	16	16	100%
	Naserabad	32	31	97%
	Kharan	30	30	100%
	Sherani	15	0	0%
	Kohlu	75	40	53%
	Chagi	36	21	58%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	9	26%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	4	13%
	Mastung	45	45	100%
	Loralai	33	27	82%
	Killa Saifullah	28	23	82%
	Ziarat	29	15	52%
	Duki	31	0	0%
	Nushki	32	0	0%
	Dera Bugti	45	28	62%
	Washuk	46	23	50%
	Panjgur	38	12	32%
	Awaran	23	0	0%
	Chaman	24	0	0%
	Barkhan	20	20	100%
	Hub	33	28	85%
	Musakhel	41	17	41%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	38	100%
	Gilgit	42	41	98%
	Diamer	62	61	98%
	Astore	55	55	100%

	Shigar	27	25	93%
	Skardu	53	53	100%
	Ganche	29	29	100%
	Kharmang	46	25	54%
Sindh	Hyderabad	72	71	99%
	Ghotki	64	64	100%
	Umerkot	62	62	100%
	Naushahro Feroze	107	98	92%
	Tharparkar	276	218	79%
	Shikarpur	60	60	100%
	Thatta	52	51	98%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	21	14	67%
	Karachi-West	20	20	100%
	Karachi-Malir	35	34	97%
	Karachi-Kemari	22	21	95%
	Karachi-Central	12	10	83%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	6	100%
	Sujawal	55	48	87%
	Mirpur Khas	106	105	99%
	Badin	124	124	100%
	Sukkur	64	63	98%
	Dadu	90	89	99%
	Sanghar	100	99	99%
	Jacobabad	44	44	100%
	Khairpur	170	169	99%
	Kashmore	59	58	98%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	41	41	100%
	Shaheed Benazirabad	122	122	100%

Table 7: IDSR reporting Tertiary care hospital Week 28, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
AJK	Mirpur	2	2	100%
	Bhimber	1	1	100%
	Kotli	1	1	100%
	Muzaffarabad	2	2	100%
	Poonch	2	2	100%
	Haveli	1	1	100%
	Bagh	1	1	100%
	Neelum	1	1	100%
	Jhelum Vellay	1	1	100%
	Sudhnooti	1	1	100%
Sindh	Karachi-South	1	1	100%
	Sukkur	1	0	0%
	Shaheed Benazirabad	1	0	0%
	Karachi-East	1	1	100%
	Karachi-Central	1	0	0%

Strengthening IDSR through Laboratory Integration: A Milestone in IDSR Strengthing

The National Institute of Health (NIH), in collaboration with the UK Health Security Agency (UKHSA) and the Gilgit-Baltistan Department of Health, recently organized a two-day training workshop in Skardu that placed laboratories at the heart of disease surveillance. This effort reflects an important shift in Pakistan's public health landscape: recognizing laboratories not only as diagnostic facilities but as critical contributors to Integrated Disease Surveillance and Response (IDSR).

The training brought together laboratory personnel from across Gilgit-Baltistan's districts, equipping them with practical skills in case-based and aggregate data entry, data analysis, interpretation, and dashboard development. By learning to capture and translate laboratory data into meaningful insights, participants are better prepared to detect disease patterns early and contribute to evidence-based decision-making. This integration ensures that laboratory-generated information once seen as standalone feeds directly into surveillance systems, enabling timely responses to outbreaks and improving coordination across sectors.

Experts from NIH and UKHSA underscored how laboratories act as the "eyes and ears" of public health. From confirming priority infectious diseases to providing reliable trend data, laboratories offer the evidence base upon which IDSR relies. Sessions highlighted standardized data tools, reporting formats, and clear data flow mechanisms ensuring that signals from the periphery reach decision-makers without delay. Importantly, this builds a foundation for laboratories to be active partners in outbreak investigation, risk assessment, and resource mobilization, rather than passive recipients of case referrals.

The closing sessions, featuring group presentations and interactive discussions, showcased participants' ability to apply their new knowledge, while the certificate distribution marked a collective commitment to strengthening laboratory-based surveillance.

This initiative is more than a training exercise it is a step toward embedding laboratories into the very fabric of surveillance and response. In regions like Gilgit-Baltistan, where geography and access pose unique challenges, having empowered and connected laboratories means faster detection of threats, stronger early warning systems, and ultimately, better protection for communities.

As Pakistan advances its IDSR implementation, such investments in laboratory capacity and integration will remain vital. When laboratories are empowered to contribute systematically, surveillance transforms from reactive to proactive ensuring that the country is not only detecting but anticipating health threats.

Notes from the field:

Outbreak Investigation Report: Measles in Muslim Town, Union Council 3, Bhara Kahu, Islamabad, July 2025

Introduction

Measles is a highly contagious viral illness caused by a member of the *Paramyxoviridae* family and remains one of the leading causes of child mortality globally despite the availability of a safe and effective vaccine. Complications include blindness, pneumonia, and encephalitis. The incubation period ranges from 7–21 days, with symptoms typically beginning 10–14 days after exposure. Early signs include fever, cough, coryza, and conjunctivitis, followed by a characteristic maculopapular rash that persists for 5–6 days.

Globally, measles continues to exert a heavy toll. In 2023, WHO and CDC reported 10.3 million cases and an estimated 107,500 deaths, mostly among children under five years of age. Post-pandemic disruptions in immunization have worsened coverage gaps, fueling resurgences. In Pakistan, WHO reported 12,732 cases between December 2024 and June 2025, with hotspots concentrated in slum populations of Sindh and Punjab. Within Islamabad Capital Territory (ICT), outbreaks have been linked to low vaccination coverage and population movement.

On 2nd July 2025, three hospitalized cases from PIMS, Islamabad, meeting the clinical case definition and with epidemiological linkage, were reported to FDSRU, NIH. A rapid response team was mobilized, confirming an outbreak in Muslim Town, UC Barakahu.

Objectives

- To determine the magnitude of the outbreak.
- To evaluate risk factors associated with measles transmission.
- To propose immediate control measures.
- To recommend strategies for future prevention.

Methods

This was a descriptive outbreak investigation followed by a case-control study. The study population included residents of Muslim Town, UC Barakahu 3, Simli Dam Road, ICT, from 31st May to 18th July 2025.

The outbreak investigation was conducted from 3rd to 18th July 2025 (Epi weeks 21–28). All suspected, probable, and confirmed cases meeting WHO case definitions and residing in the study area were included. Outsiders and suspected cases with negative measles IgM results were excluded. Age-matched asymptomatic community members served as controls.

Case definitions for this outbreak investigation were:

- **Suspected:** Any rash illness with fever in residents during the outbreak period.
- **Probable:** Meets clinical definition without an epidemiological link.
- **Confirmed:** Lab-confirmed case or epidemiologically linked to a confirmed case.

Data collection utilized structured questionnaires and a line list adapted from CDC guidelines. Active case finding was performed through community surveys and hospital record reviews. Laboratory confirmation was done by ELISA (Measles IgM) at WHO Reference Lab, NIH.

The analysis plan included descriptive statistics (age, sex, time, place), epidemic curve, spot map, attack rates, clinical features, and laboratory results. Odds ratios were calculated for exposures (close contact, vaccination status).

Results

A total of 7 cases were identified (1 laboratory confirmed, 6 epidemiologically linked). The mean age was 9.2 years, median 11 years, and age range 0–15 years. Age-specific distribution: 28.5% (0–5 years), 14.2% (6–10 years), 57.1% (11–15 years). All cases were under 15 years. The male-to-female ratio was 1:1.3. Household

clustering was observed, with 5 cases from a single family. Total population at risk was 193 individuals. Overall Attack rate was 3.6% (~4 per 100 persons (7/193)). Clinically the cases presented with Fever (100%), maculopapular rash (100%), cough (71%), conjunctivitis (57%), coryza (100%). Respiratory complications were recorded in 3 cases, and 4 required hospitalization.

Vaccination status revealed 5 cases were partially vaccinated, with 3 developing complications, suggesting low coverage. Community transmission was evident in 2 cases not directly linked to the index family. Out of 3 laboratory samples collected, 1 (33.3%) was IgM positive, 2 were negative. Risk factor analysis revealed that lose contact with a case had OR = 5.0 (children with close contact were 5 times more likely to develop measles) and Vaccination status: OR = 0.8 (vaccinated children had lower odds of infection).

Discussion

This outbreak highlights measles' high transmissibility in undervaccinated communities. The concentration of cases in children <15 years and clustering within households reflects transmission in close-contact settings and immunity gaps due to incomplete vaccination. The attack rate of ~4 per 100 persons underscores a significant localized outbreak in Muslim Town.

The epidemic curve and field investigation suggest exposure between late May and early June, with subsequent secondary transmission. Low immunization coverage, coupled with delayed recognition and sample collection, contributed to outbreak amplification. Laboratory confirmation was limited, reflecting weak specimen referral systems.

Findings are consistent with WHO reports of rising measles incidence in Pakistan due to suboptimal vaccine coverage, particularly in peri-urban settlements. Strengthened routine immunization, outbreak preparedness, and community engagement remain critical.

Conclusion

A measles outbreak in Muslim Town, UC Barakahu, Islamabad, was confirmed between 31st May and 18th July 2025. Seven cases were detected, primarily in children under 15 years, with household clustering and evidence of community spread. Partial vaccination and close contact were significant risk factors. The outbreak highlights immunity gaps, poor vaccination coverage, and weaknesses in surveillance and laboratory response systems.

Recommendations

1. **Surveillance & Response**: Intensify measles surveillance with mandatory immediate reporting.
2. Strengthen specimen collection and timely referral to national laboratories.
3. **Immunization**: Strengthen routine immunization systems, ensuring second-dose coverage.
4. **Community Engagement**: Conduct risk communication campaigns addressing vaccine hesitancy and misinformation.

References

1. World Health Organization. *Measles – Key Facts*. WHO; 2023.
2. World Health Organization & CDC. *Measles Surveillance Data 2021–2024*. Geneva: WHO; 2024.
3. National Institute of Health Pakistan. *Weekly Epidemiological Report, July 2025*. NIH; 2025.

Knowledge Hub

Understanding Measles: A Public Health Priority

Measles (rubeola) is a highly contagious respiratory disease caused by a virus. It is known for causing a characteristic rash all over the body. Measles can be very serious, especially for young children, and can lead to severe health problems.

What is Measles?

Measles is caused by a virus in the paramyxovirus family. It's a vaccine-preventable

disease. Before the **MMR (Measles, Mumps, and Rubella)** vaccine became widely available, measles was a common childhood illness. It's now rare in many parts of the world due to high vaccination rates, but outbreaks can still happen in communities where people are unvaccinated.

How Measles Spreads

Measles is one of the most contagious diseases known. It spreads through the air when an infected person coughs or sneezes. The virus can remain in the air and on surfaces for up to **two hours** after the infected person has left.

An infected person can spread the virus for **four days before** the rash appears and **four days after** the rash appears.

Signs & Symptoms

Symptoms usually begin **7-14 days after exposure** to the virus.

Initial symptoms include:

- High fever (can reach over 104◦F or 40◦C)
- Cough
- Runny nose
- Red, watery eyes
- **Koplik spots:** tiny white spots with bluish-white centers found inside the mouth on the inner cheek. These appear 2-3 days before the rash.

Complications

Measles can lead to severe complications, especially in young children and adults.

Common complications:

- Ear infections
- Diarrhea
- Pneumonia: The most common cause of death from measles in young children.

Prevention

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

- **Children:** The CDC and WHO recommend two doses: the first at **12-15 months of age** and the second at **4-6 years of age**.
- **Adults:** Adults who are not sure about their vaccination status or have certain risk factors may need one or two doses.

Vaccination is highly effective and safe. It helps to protect not only the vaccinated individual but also those who cannot be vaccinated (e.g., infants too young for the vaccine).

Diagnosis and Treatment

- **Diagnosis:** Measles is diagnosed by a doctor based on symptoms, vaccination history, and laboratory tests (blood or swab tests).
- **Treatment:** There is no specific antiviral treatment for measles. Care focuses on supportive measures to relieve symptoms:
    - Rest and plenty of fluids.
    - Fever reducers like acetaminophen (paracetamol). Do **NOT** give aspirin to children or teenagers due to the risk of Reye's syndrome.
    - Vitamin A supplementation for all children diagnosed with measles, as it can reduce the risk of severe outcomes.

People with measles should isolate themselves from others for four days after the rash appears to prevent spreading the virus.

More Information

For additional authoritative information on measles, please visit:

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

MEASLES
IT ISN'T JUST A LITTLE RASH

Measles can be dangerous, especially for babies and young children.

Measles symptoms typically include:

- **High fever** (may spike to more than 104°F)
- **Cough**
- **Runny nose**
- **Red and/or watery eyes**
- **Rash** (breaks out 3-5 days after symptoms begin)

Measles can be serious.

Measles can cause severe health complications, including pneumonia, swelling of the brain (encephalitis) and death.

- **1 out of 5** people who get measles will be hospitalized.
- **1 out of every 20** children with measles will get pneumonia, the most common cause of death from measles in young children.
- **1 out of every 1,000** people with measles will develop brain swelling, which may lead to brain damage.
- **1 to 3 out of 1,000** people with measles will die.

Long-term complications

A very rare, but deadly disease called subacute sclerosing panencephalitis can develop 7 to 10 years after a person has recovered from measles.

CDC

www.cdc.gov/measles

You have the power to protect your child.

Provide your children with safe and long-lasting protection against measles by making sure they get the measles-mumps-rubella (MMR) vaccine. Talk to your healthcare provider.

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

UK Health Security Agency

World Health Organization

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION