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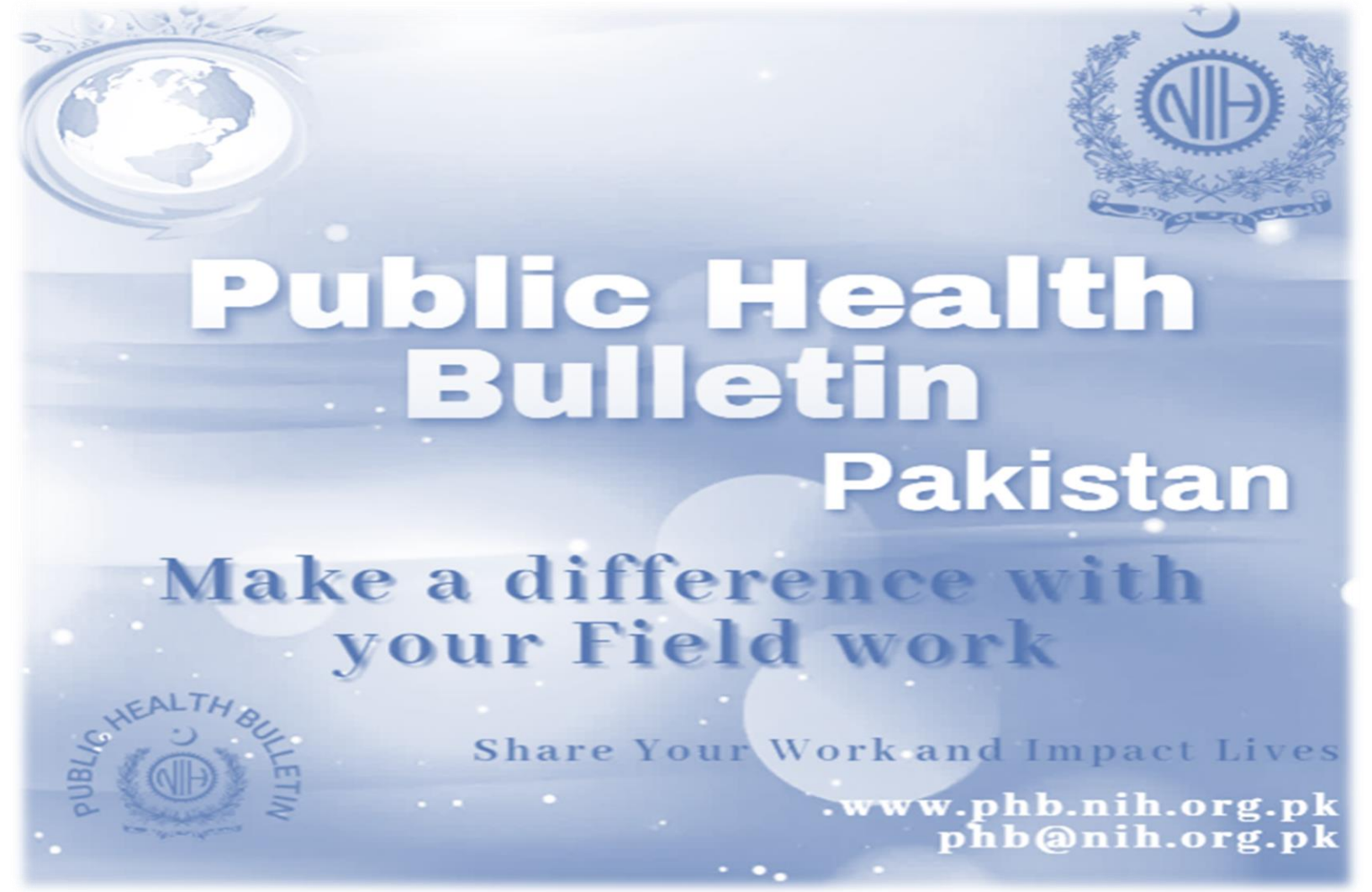
PUBLIC HEALTH BULLETIN-PAKISTAN

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 18, 2026

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 week's highlights include;

- *Urban Tree Loss and Climate Resilience: A One Health Perspective from Islamabad*
- *Knowledge hub on Understanding Brucellosis: A Public Health Priority*

By transforming complex health data into actionable intelligence, the Public Health Bulletin continues to be an indispensable tool in our collective journey toward a healthier Pakistan.

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Stay informed. Stay prepared. Stay healthy.

Sincerely,
The Chief Editor

Overview

Note: All reported cases in this report are suspected cases

- *During Week 18, the most frequently reported cases were of Acute Diarrhea (Non-Cholera), followed by Malaria, ILI, ALRI <5 years, TB, Dog Bite, B. Diarrhea, VH (B, C & D), Typhoid, SARI, and Measles.*
- *Twenty-seven cases of AFP were reported from KP, eight from Sindh, four from AJK, and two from GB.*
- *Eight suspected cases of HIV/ AIDS were reported from Sindh, five from KP, and one from Balochistan.*
- *One suspected case of Brucellosis reported from KP.*
- *Among VPDs, there is an increase in the number of cases of Measles, AFP, meningitis, diphtheria, and Rubella this week.*
- *Among Respiratory diseases, there is an increase in the number of cases of SARI this week.*
- *Among Water/food-borne diseases, there is a decrease in the number of cases of AD (non- Cholera) and B.Diarrhea this week.*
- *Among Vector-borne diseases, there is a decrease in the number of cases of Malaria this week.*
- *Among STDs, there is a decline in the number of cases of HIV/AIDs this week.*
- *Among Zoonotic/Other diseases, there is a decrease in the number of cases of dog bite and VH (B, C & D) this week.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts is 81%*
- *Sindh is the top reporting regions with a compliance rate of 98%, followed by AJK 97%, KP 81%, and GB 90%.*
- *The lowest compliance rate was observed in KP 81%, ICT 79%, and Balochistan 44%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2,277	1,850	81
Azad Jammu Kashmir	476	463	97
Islamabad Capital Territory	38	30	79
Balochistan	1,303	578	44
Gilgit Baltistan	405	366	90
Sindh	2,111	2,076	98
National	6,610	5,363	81

Public Health Actions

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

Brucellosis

• **Strengthen Surveillance and Reporting:** Integrate human and animal brucellosis surveillance within the One Health framework to ensure early detection, reporting, and response to outbreaks.

• **Improve Laboratory Diagnosis:** Expand laboratory capacity for serological and molecular confirmation at district and provincial levels; ensure biosafety standards in sample handling.

• **Enhance Intersectoral Collaboration:** Coordinate with livestock and agriculture departments for joint outbreak investigations, animal vaccination campaigns, and control of infection sources.

• **Promote Safe Animal Handling Practices:** Educate farmers, veterinarians, and abattoir workers on safe handling of livestock, proper disposal of animal products, and use of protective gear.

• **Raise Public Awareness:** Conduct community education on avoiding consumption of unpasteurized dairy products and promoting early care-seeking for prolonged fever or joint pain.

Diphtheria

• **Strengthen Surveillance and Case-Based Reporting:** Enhance integrated disease surveillance for diphtheria to ensure timely case detection, immediate notification, and monitoring of trends, particularly in high-risk and under-immunized populations.

• **Improve Laboratory Confirmation:** Strengthen laboratory capacity for prompt bacteriological confirmation of Corynebacterium diphtheriae, including toxin testing, and ensure proper specimen collection, transport, and biosafety practices.

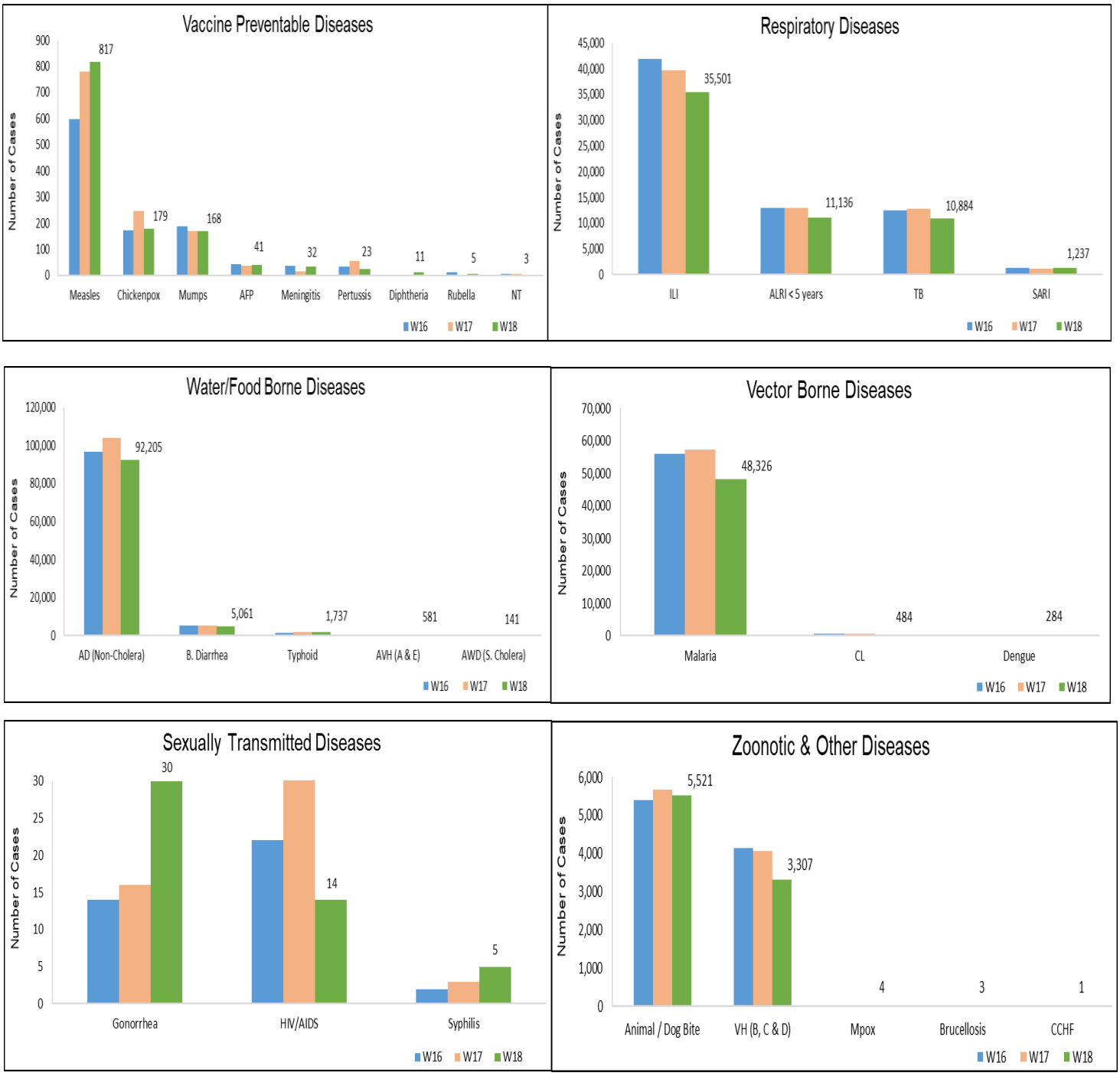
• **Ensure Rapid Case Management and Response:** Ensure availability of diphtheria antitoxin (DAT) and appropriate antibiotics at designated health facilities; implement standard case management protocols and isolation of suspected cases to prevent transmission.

• **Strengthen Immunization Services:** Intensify routine immunization and booster dose coverage (DPT/Td), and conduct targeted catch-up and outbreak response immunization activities in affected and high-risk areas

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 18, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (non-cholera)	1,992	5,422	813	649	36,390	NR	46,939	92,205
Malaria	0	1,628	0	0	3,728	NR	42,970	48,326
ILI	1,835	3,941	385	1,226	3,122	NR	24,992	35,501
ALRI < 5 years	1,239	961	706	2	750	NR	7,478	11,136
TB	119	21	94	22	303	NR	10,325	10,884
Animal / Dog Bite	112	131	4	3	1,491	NR	3,780	5,521
B. Diarrhea	65	799	61	8	972	NR	3,156	5,061
VH (B, C & D)	42	27	2	0	148	NR	3,088	3,307
Typhoid	30	199	112	0	528	NR	868	1,737
SARI	112	314	88	0	436	NR	287	1,237
Measles	18	11	7	0	525	NR	256	817
AVH (A & E)	23	1	2	0	114	NR	441	581
CL	0	32	0	0	440	NR	12	484
Dengue	0	95	0	0	33	NR	156	284
Chickenpox/ Varicella	5	8	12	3	94	NR	57	179
Mumps	5	19	10	0	97	NR	37	168
AWD (S. Cholera)	6	84	8	0	0	NR	43	141
AFP	4	0	2	0	27	NR	8	41
Meningitis	4	0	6	0	7	NR	15	32
Gonorrhea	0	22	0	0	0	NR	8	30
Pertussis	0	9	0	0	9	NR	5	23
HIV/AIDS	0	1	0	0	5	NR	8	14
Diphtheria	0	0	0	0	11	NR	0	11
Leprosy	0	0	0	0	0	NR	10	10
Rubella (CRS)	0	2	0	0	0	NR	3	5
Syphilis	0	0	0	0	0	NR	5	5
Mpox	0	0	0	0	3	NR	1	4
Brucellosis	0	0	0	0	3	NR	0	3
NT	0	0	1	0	2	NR	0	3
CCHF	0	0	0	0	1	NR	0	1

Figure 1: Most frequently reported suspected cases during Week 18, Pakistan.



Sindh

- AD (non-cholera) cases were maximum followed by Malaria, ILI, TB, ALRI<5 Years, Dog bite, B. Diarrhea, VH (B, C, D), Typhoid and AVH (A & E).
- Malaria cases are mostly from Khairpur, Dadu and Larkana whereas ILI cases are from Khairpur, Badin and Umerkot.
- Eight cases of AFP reported from Sindh. They are suspected cases and need field verification.
- There is a decline in number of cases of Chickenpox, Mumps, AFP, Pertussis, ILI, TB, ALRI < 5years, AD (non-cholera), Malaria, HIV/AIDS, Dog bite, and VH (B, C &D) while an increase in number of cases of Measles, Meningitis, Rubella, SARI and AVH(A&E) this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 18, Sindh.

Districts	AD (Non-Cholera)	Malaria	ILI	TB	ALRI < 5 years	Animal / Dog Bite	B. Diarrhea	VH (B, C & D)	Typhoid	AVH (A & E)
Badin	3,935	3,067	2,537	820	332	76	269	235	115	1
Dadu	2,183	2,139	267	454	798	266	371	44	87	20
Ghotki	1,391	2,166	19	451	330	306	115	510	1	0
Hyderabad	2,360	701	1,179	335	113	76	66	63	9	4
Jacobabad	654	1,514	670	206	381	296	73	90	30	0
Jamshoro	2,185	1,969	83	653	316	99	131	180	41	4
Kamber	1,677	2,349	0	686	214	248	137	75	11	0
Karachi Central	1,725	18	1,559	194	87	142	4	36	80	197
Karachi East	429	64	12	18	9	1	3	1	7	1
Karachi Keamari	602	9	367	10	20	11	18	0	1	0
Karachi Korangi	340	46	0	63	0	14	3	2	10	0
Karachi Malir	1,325	74	1,467	60	228	43	35	4	8	2
Karachi South	81	16	0	0	0	1	0	0	0	0
Karachi West	1,036	286	1,370	93	218	89	22	19	33	0
Kashmore	370	1,437	194	107	66	133	39	8	3	0
Khairpur	3,118	3,277	7,163	793	838	284	283	210	202	22
Larkana	2,449	2,510	0	592	253	97	221	29	5	0
Matiari	1,594	2,114	55	681	182	112	103	148	1	24
Mirpurkhas	3,058	1,666	2,478	605	265	183	172	33	12	65
Naushero Feroze	1,578	1,714	1,185	311	315	325	186	138	55	0
Sanghar	1,561	2,609	55	710	267	234	43	483	10	1
Shaheed Benazirabad	1,724	2,008	0	265	145	153	60	82	74	0
Shikarpur	1,174	1,363	5	224	239	257	181	47	2	0
Sujawal	1,248	892	0	204	187	79	64	65	3	0
Sukkur	1,300	1,159	1,868	338	186	70	137	53	8	0
Tando Allahyar	1,786	1,260	902	317	98	79	75	264	7	2
Tando Muhammad Khan	1,303	681	45	454	146	22	70	7	0	0
Tharparkar	1,866	1,750	820	338	572	0	92	38	4	29
Thatta	1,135	1,271	692	58	438	84	40	163	2	69
Umerkot	1,752	2,841	0	285	235	0	143	61	47	0
Total	46,939	42,970	24,992	10,325	7,478	3,780	3,156	3,088	868	441

Figure 2: Most frequently reported suspected cases during Week 18, Sindh.

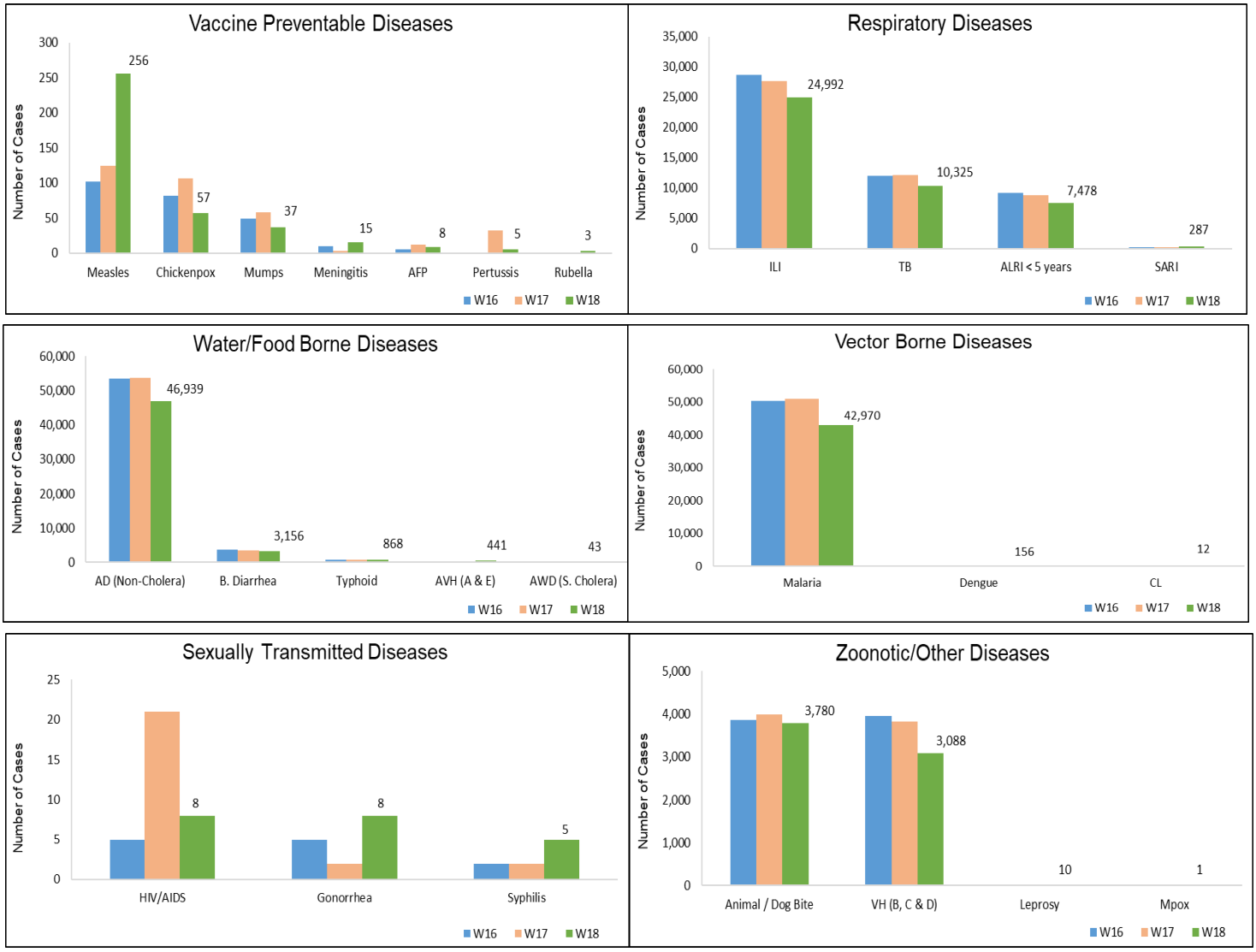
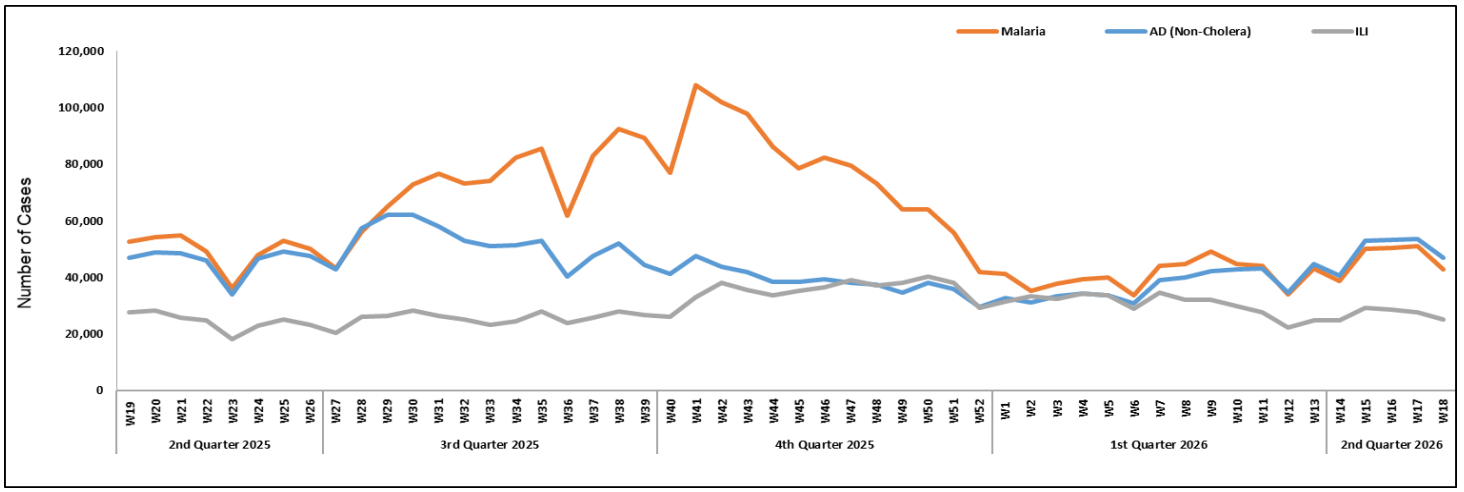


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh.



Balochistan

- AD (Non-Cholera), ILI, Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, Dog Bite, Dengue and AWD (S. Cholera) were the most frequently reported diseases from Balochistan province.
- ILI cases are mostly reported from Gwadar, Quetta and Kharan while AD (Non-Cholera) cases are mostly reported from Usta Muhammad, Gwadar and Lasbella.
- One case of HIVAIDS was reported from Balochistan. Field investigation is required to confirm the case.
- Chickenpox, Rubella, and Dengue showed an increase in the number of cases. At the same time, a decline has been observed in the number of cases of Measles, Mumps, Pertussis, ILI, ALRI<5years, SARI, and AD (non-cholera), Typhoid, and AWD (S. Cholera), Malaria, CL, Dog bite, and VH (B, C & D)

Table 3: District wise distribution of most frequently reported suspected cases* during *Week 18, Balochistan.

Districts	AD (non-cholera)	ILI	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Animal / Dog Bite	Dengue	AWD (S. Cholera)
Awaran	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barkhan	102	46	38	14	7	2	25	0	0	5
Chagai	162	183	38	0	40	0	5	0	0	0
Chaman	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dera Bugti	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Duki	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Gwadar	577	867	53	1	136	0	25	5	37	2
Harnai	198	7	71	154	68	0	0	24	0	0
Hub	232	40	57	8	8	0	0	2	0	0
Jaffarabad	129	5	104	2	12	0	1	1	0	0
Jhal Magsi	0	0	0	0	0	0	0	0	0	0
Kachhi (Bolan)	242	277	407	59	28	6	NR	16	NR	21
Kalat	3	0	2	10	2	1	2	0	0	0
Kech (Turbat)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Kharan	244	407	18	2	90	27	6	0	0	0
Khuzdar	99	63	54	7	28	2	13	0	0	0
Killa Abdullah	197	81	3	1	36	40	19	1	0	19
Killa Saifullah	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Kohlu	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lasbella	444	92	335	128	33	2	3	29	58	0
Loralai	237	353	39	29	26	55	13	3	0	1
Mastung	331	251	43	131	101	43	6	10	0	0
MusaKhel	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naseerabad	317	14	143	36	23	29	48	12	0	2
Nushki	156	0	1	6	46	0	0	0	0	0
Panjgur	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Pishin	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Quetta	395	556	5	56	15	26	9	0	0	4
Sherani	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sibi	257	292	75	24	15	27	3	6	0	18
Sohbat pur	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Surab	8	27	0	0	0	0	0	0	0	0
Usta Muhammad	797	148	94	167	66	13	4	9	0	0
Washuk	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Zhob	63	27	4	40	19	36	NR	NR	NR	6
Ziarat	232	205	44	86	0	5	17	13	0	6
Total	5,422	3,941	1,628	961	799	314	199	131	95	84

Figure 4: Most frequently reported suspected cases during Week 18, Balochistan.

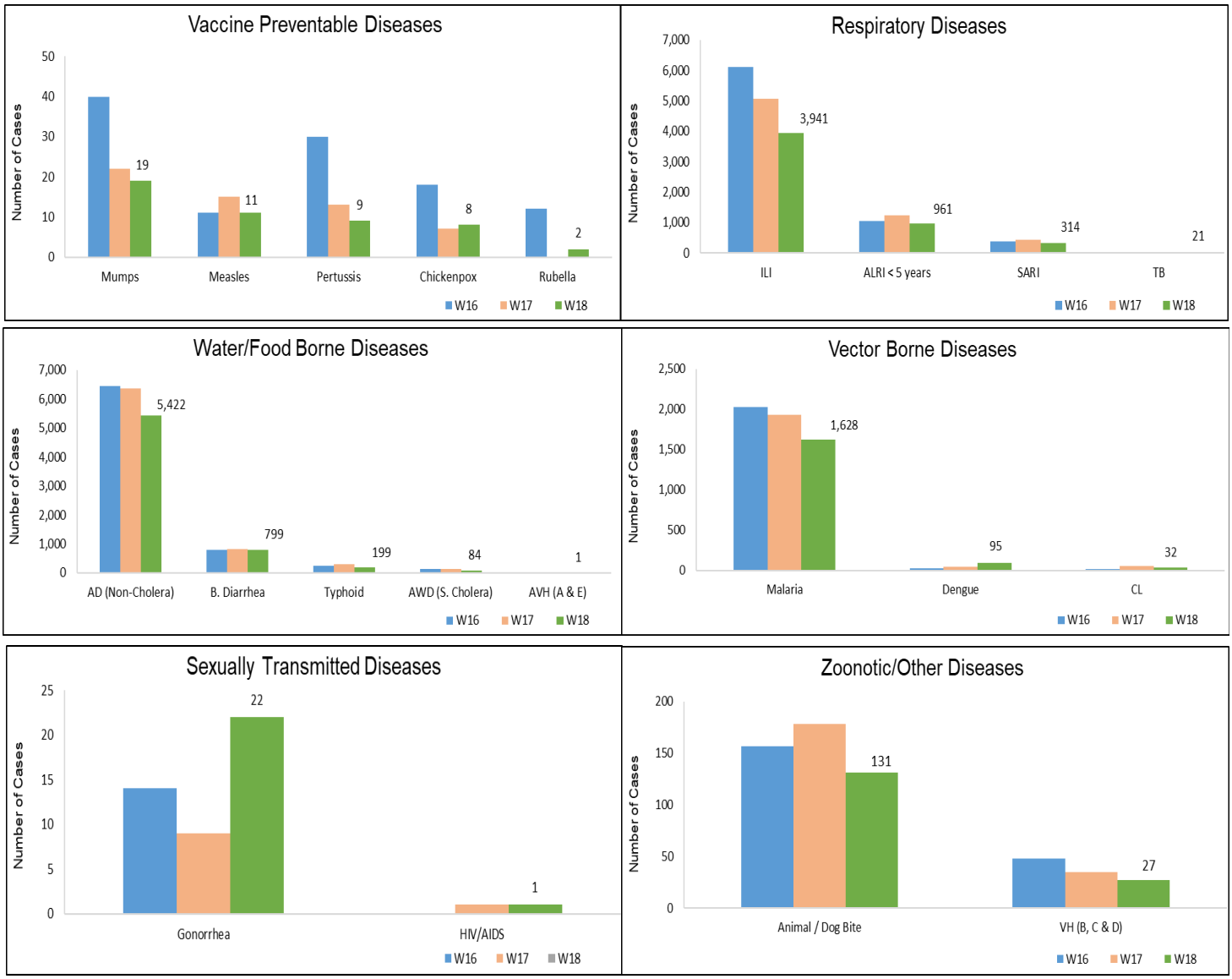
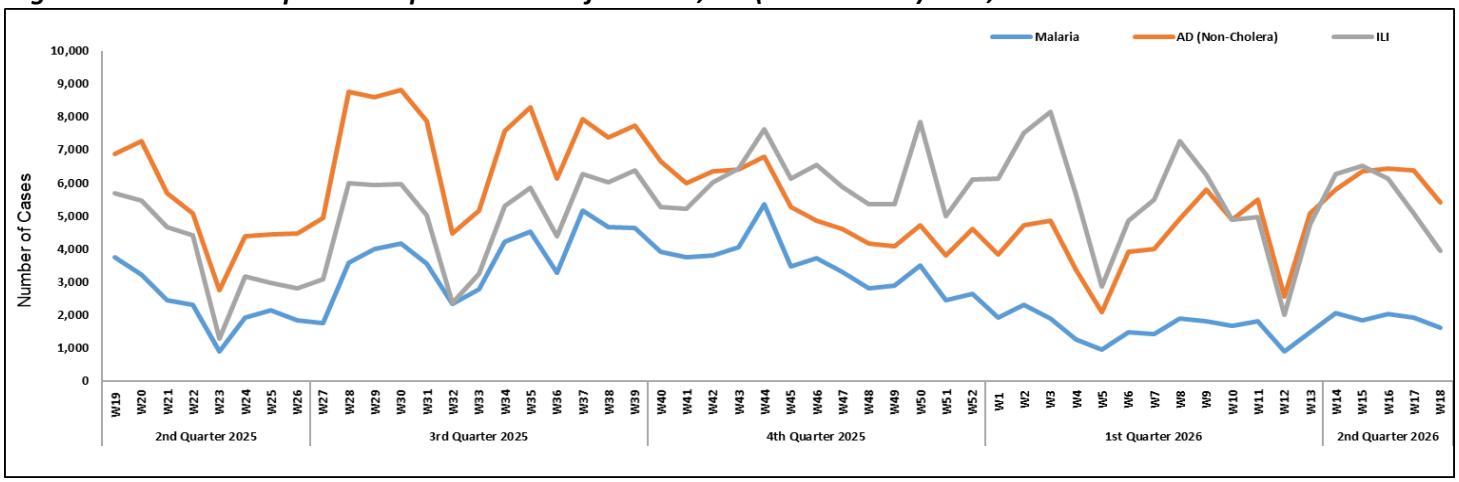


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan.



Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, Dog Bite, B. Diarrhea, ALRI <5years, Typhoid, Measles. CL, and SARI.
- Mumps, AFP, Diphtheria, SARI, TB and dog bite cases showed an increase in number while Measles, Chicken pox, Meningitis, NT, ILI, ALRI < 5years, AD (Non-Cholera), Malaria, CL, HIV/AIDS, VH (B, C & D) showed a decline in number this week.
- Twenty-seven cases of AFP reported from KP. All are suspected cases and need field verification.
- Five cases of HIV/AIDs reported from KP. A field investigation is required.
- One suspected case of Brucellosis was reported from KP, which requires field verification.

Table 4: District wise distribution of most frequently reported suspected cases during Week 18, KP.

Districts	AD (Non-Cholera)	Malaria	ILI	Animal / Dog Bite	B. Diarrhea	ALRI < 5 years	Typhoid	Measles	CL	SARI
Abbottabad	852	0	47	56	5	32	7	4	0	6
Bajaur	676	137	0	64	28	14	2	16	25	20
Bannu	858	857	4	0	13	5	71	89	6	0
Battagram	360	57	524	10	2	2	2	0	0	3
Buner	370	84	0	16	0	0	58	0	0	0
Charsadda	1,868	239	269	52	93	107	102	20	0	0
Chitral Lower	571	8	19	5	17	19	7	2	12	11
Chitral Upper	114	4	7	2	4	4	8	0	0	4
D.I. Khan	2,911	211	0	18	41	26	1	93	2	0
Dir Lower	2,014	72	0	92	73	9	19	22	9	0
Dir Upper	1,484	5	21	21	38	95	12	6	0	0
Hangu	457	67	0	8	70	0	2	0	20	0
Haripur	1,599	0	405	67	0	38	15	10	0	21
Karak	480	144	3	36	31	33	7	36	145	0
Khyber	712	237	54	36	122	47	37	0	47	2
Kohat	730	70	3	58	35	0	10	1	73	0
Kohistan Lower	104	0	0	0	2	0	1	1	0	0
Kohistan Upper	437	17	0	2	10	2	0	1	2	0
Kolai Palas	105	0	7	0	2	0	2	0	0	4
L & C Kurram	7	4	0	0	4	0	1	2	0	0
Lakki Marwat	812	158	0	83	10	2	10	5	0	0
Malakand	950	13	178	0	0	20	0	13	2	27
Mansehra	597	0	67	0	0	0	11	0	0	0
Mardan	2,005	84	3	18	55	94	25	41	1	1
Mohmand	121	43	98	6	10	0	5	3	51	107
North Waziristan	68	75	3	3	8	3	9	19	3	4
Nowshera	2,824	252	19	60	23	27	4	27	21	11
Orakzai	103	7	0	18	1	0	0	2	0	0
Peshawar	4,980	18	362	15	91	35	20	60	0	0
Shangla	1,318	489	0	230	5	20	18	3	0	0
South Waziristan (Lower)	107	67	112	12	39	9	10	5	13	106
SWU	22	3	4	0	0	0	0	0	0	0
Swabi	2,175	89	522	167	16	12	2	33	0	73
Swat	2,861	44	207	260	53	67	44	10	0	0
Tank	366	109	26	9	2	3	0	1	0	0
Tor Ghar	159	60	0	15	22	12	4	0	8	0
Upper Kurram	213	4	158	52	47	13	2	0	0	36
Total	36,390	3,728	3,122	1,491	972	750	528	525	440	436

Figure 6: Most frequently reported suspected cases during Week 18, KP.

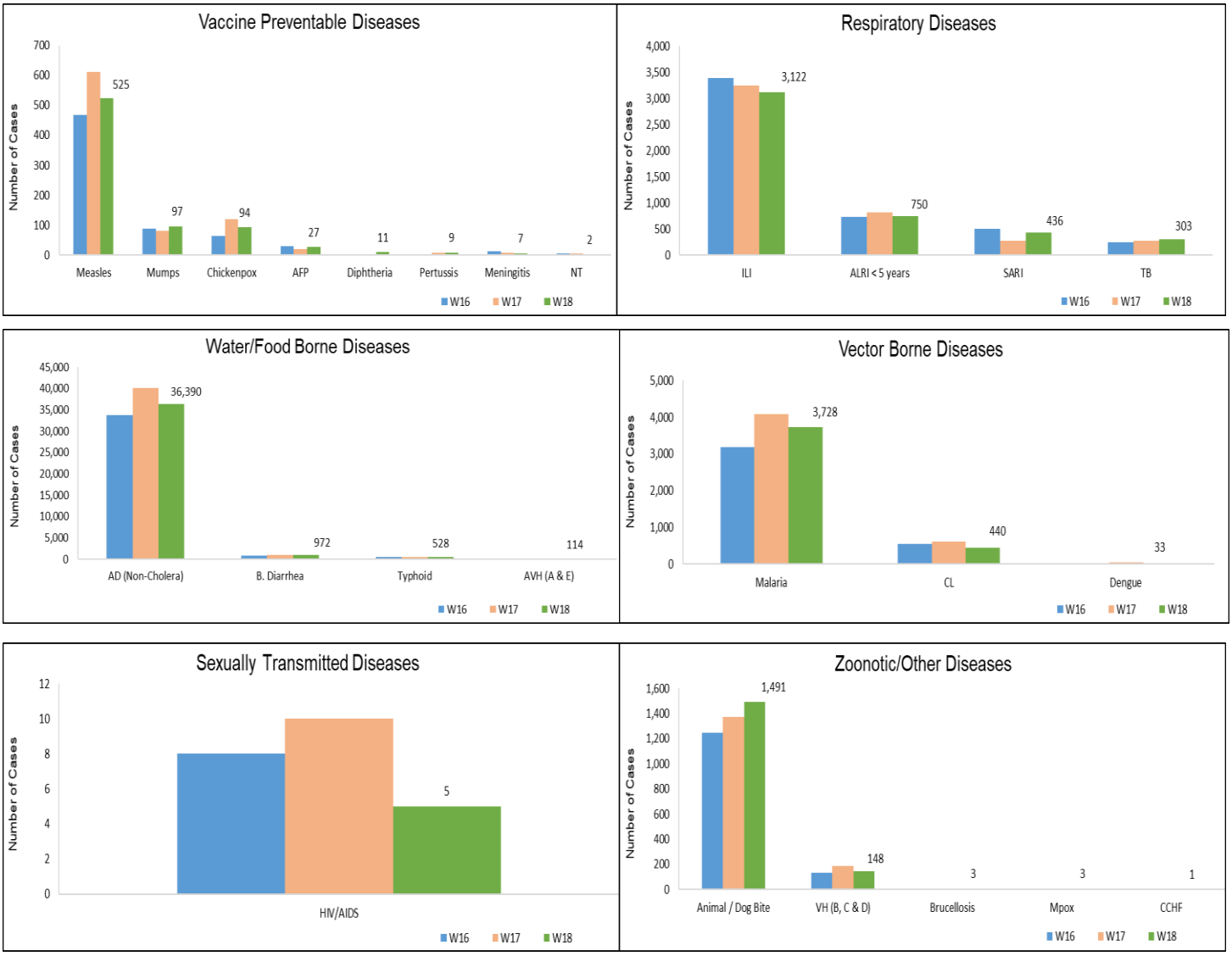
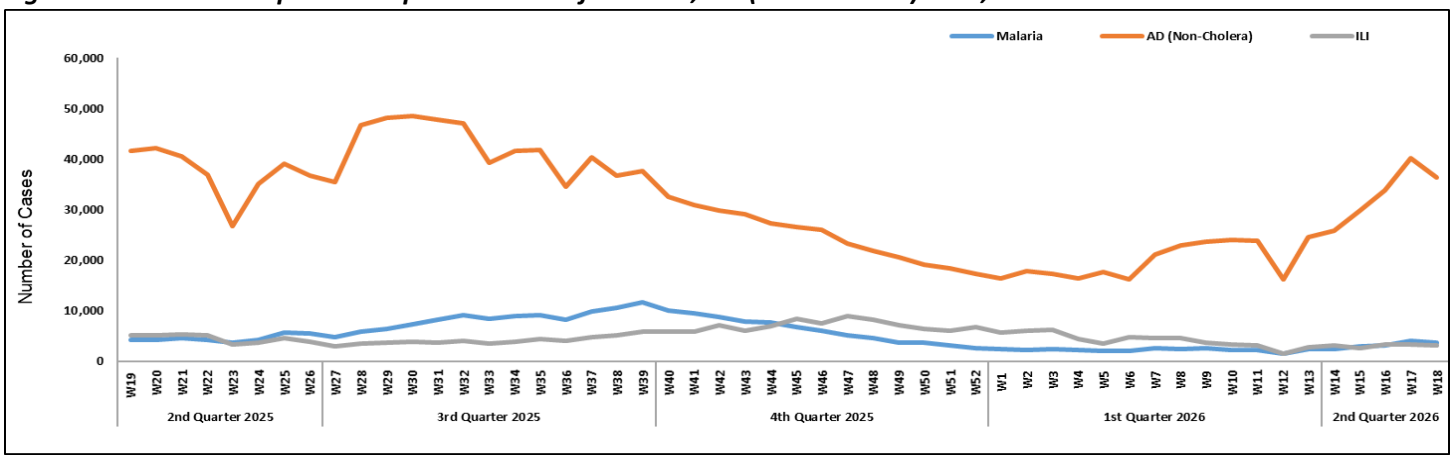


Figure 7: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, KP.



ICT, AJK & GB

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

AJK: AD (non-cholera), cases were maximum followed by ILI, ALRI < 5years, TB, SARI, Dog Bite, B. Diarrhea, VH (B, C & D), Typhoid, AVH (A & E), and Measles cases. An increase in the number of suspected cases was observed for Mumps, Chicken pox, AFP, Meningitis, ILI, B.Diarrhea, Typhoid, and VH (B, C, D). In contrast, a decline in cases was observed for Measles, ALRI <5years, SARI, AD (non-cholera), and Dog bite cases this week.

GB: AD (non-cholera) cases were the most frequently reported diseases, followed by ALRI <5 Years), ILI, Typhoid, TB, SARI, and B. Diarrhea cases. An increase in cases is observed for AD (non-cholera), B.Diarrhea, AWD (S. Cholera), ILI, TB, Chicken-pox, and Mumps. In contrast, a decline is observed in the number of cases of ALRI <5 Years and SARI this week.

Figure 8: Most frequently reported suspected cases during Week 18, AJK.

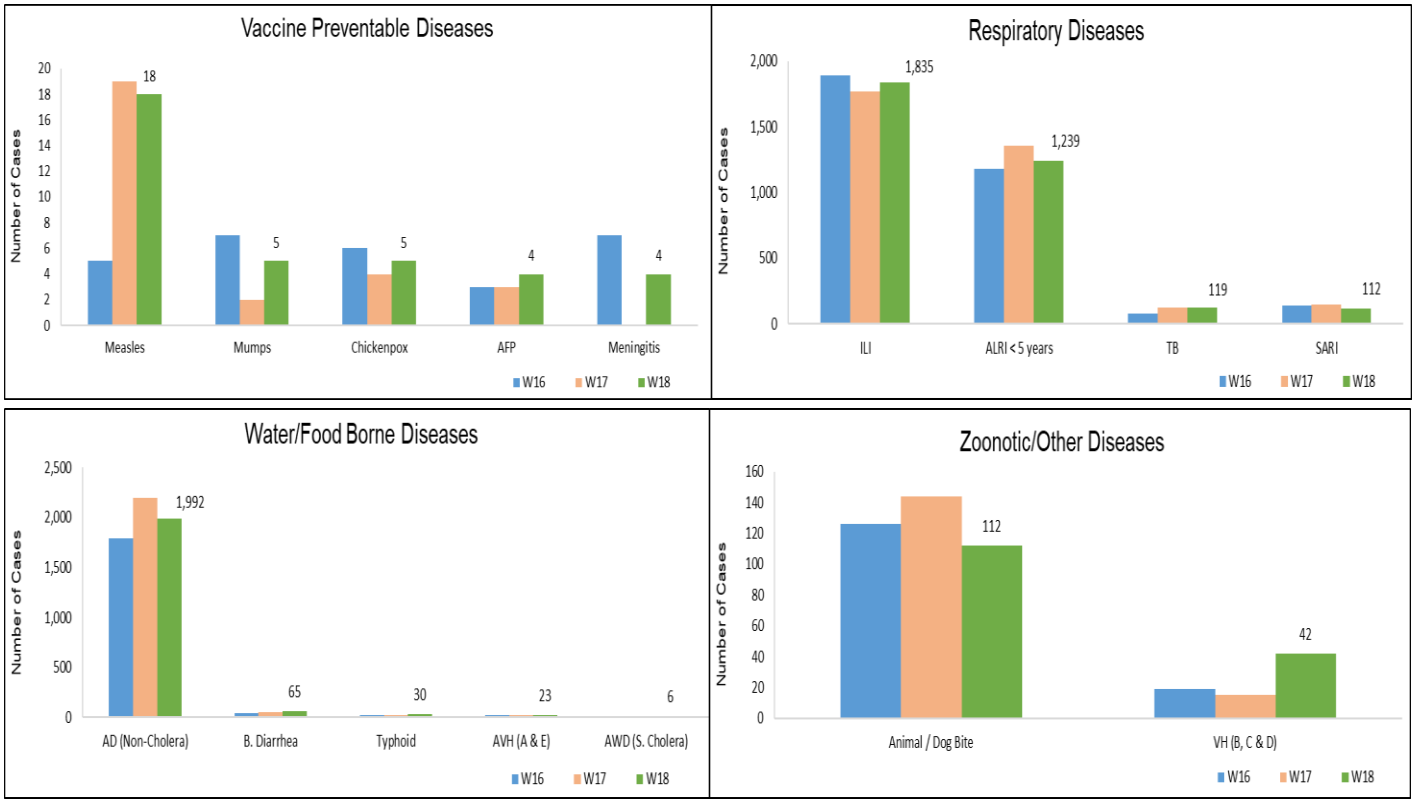


Figure 9: Week wise reported suspected cases of ILI and AD (Non-Cholera), AJK.

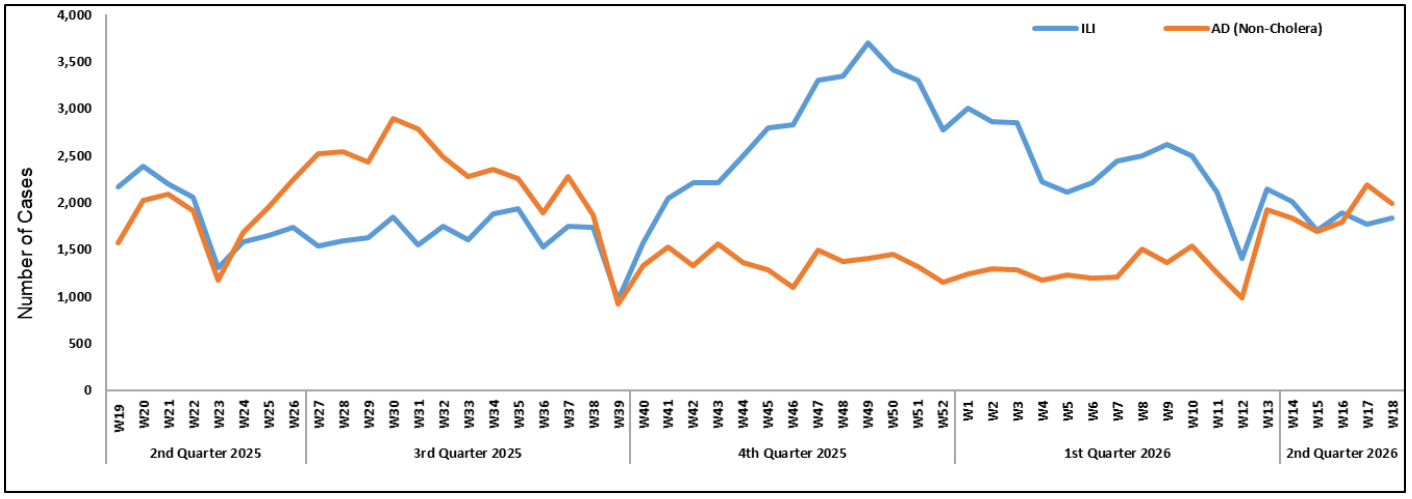


Figure 10: Most frequently reported suspected cases during Week 18, ICT.

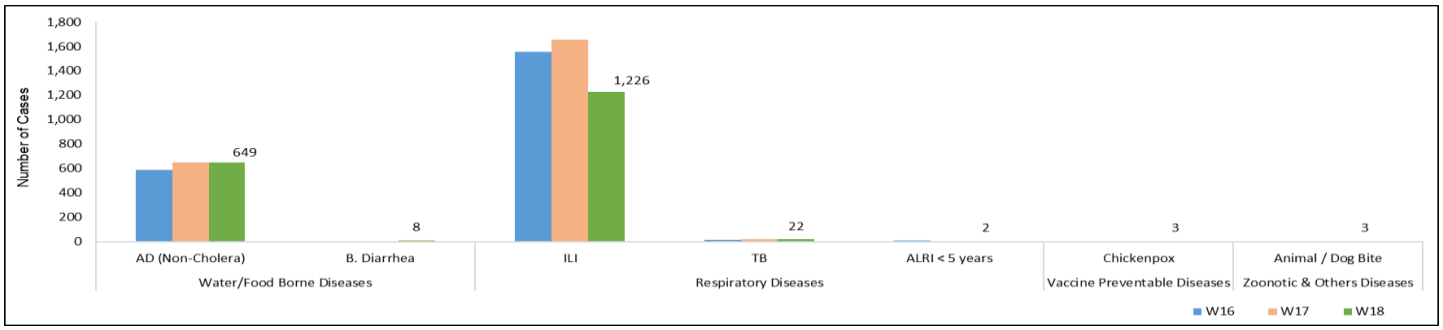


Figure 11: Week wise reported suspected cases of ILI, ICT.

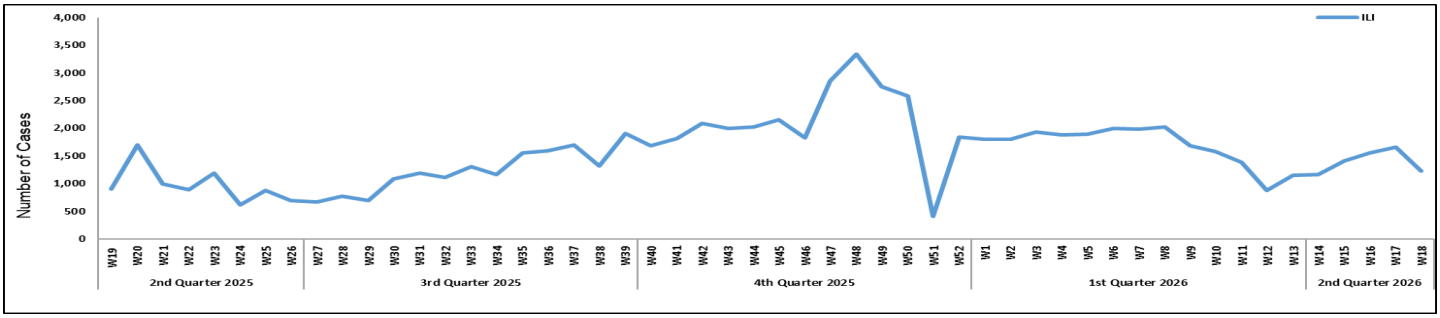


Figure 12: Most frequently reported suspected cases during Week 18, GB.

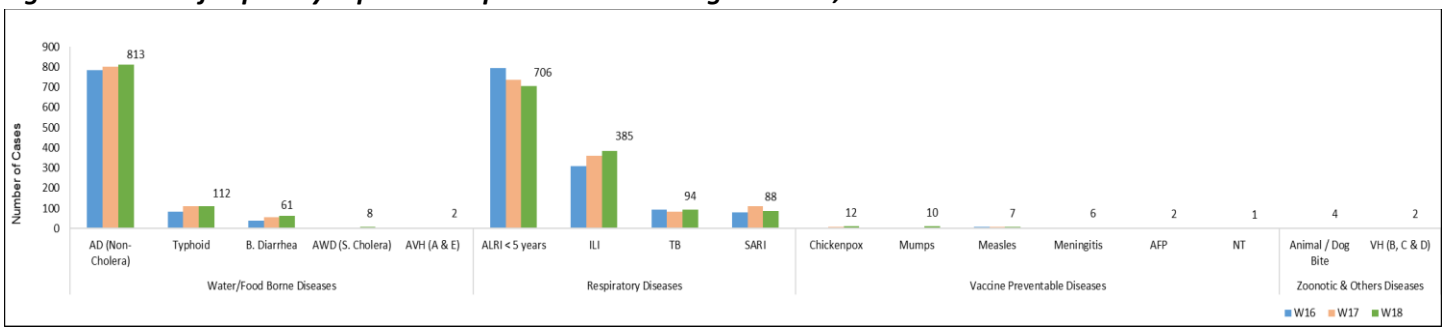


Figure 13: Week wise reported suspected cases of AD (Non-Cholera)

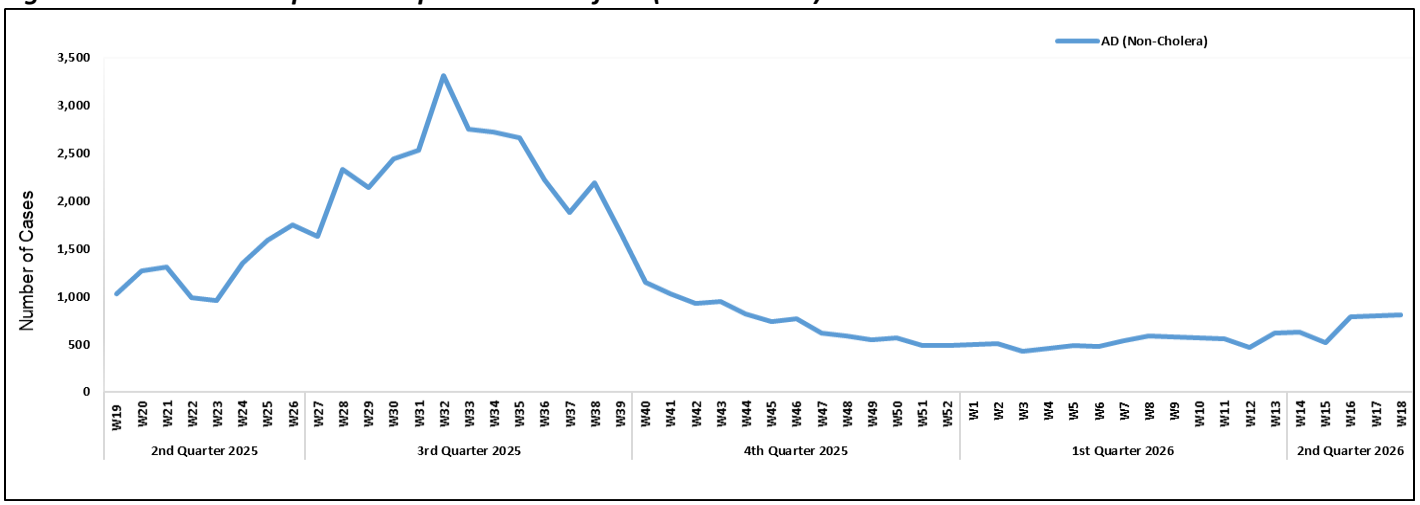


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epi Week 18, Pakistan.

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)		44	1	-	-	-	-	-	-	-	-	-	-	-	-
Stool culture & Sensitivity		228	2	-	-	-	-	-	-	-	-	-	-	-	-
Malaria		5,706	289	1,915	141	3	0	-	-	248	0	-	-	44	0
CCHF		1	0	27	0	-	-	-	-	-	-	-	-	-	-
Dengue		1,634	109	859	192	7	0	-	-	-	-	-	-	30	0
VH (B)		14,065	301	1,069	102	23	2	-	-	1,363	14	-	-	541	1
VH (C)		14,431	1,308	1,077	90	26	1	-	-	1,400	2	-	-	542	1
VH (D)		223	72	12	1	-	-	-	-	-	-	-	-	-	-
VH (A)		171	65	-	-	1	1	-	-	-	-	-	-	-	-
VH (E)		6	1	-	-	-	-	-	-	-	-	-	-	-	-
Covid-19		-	-	2	0	-	-	-	-	-	-	-	-	5	0
TB		872	96	133	21	2	0	-	-	50	3	-	-	86	7
HIV/ AIDS		5,262	35	554	1	12	0	-	-	308	0	-	-	482	0
Syphilis		1,080	24	116	0	-	-	-	-	234	0	-	-	-	-
Typhoid		633	8	71	9	-	-	-	-	234	5	-	-	-	-
Diphtheria		2	0	-	-	-	-	-	-	-	-	-	-	-	-
ILI		3	1	5	0	-	-	-	-	-	-	-	-	-	-
Pneumonia (ALRI)		110	18	3	1	-	-	-	-	-	-	-	-	-	-
Meningitis		9	0	-	-	-	-	-	-	-	-	-	-	-	-
Measles		567	253	86	32	492	175	6	2	4	3	490	94	32	15
Rubella (CRS)		-	-	-	-	3	3	-	-	-	-	-	-	-	-
Leishmaniosis (cutaneous)		-	-	21	4	-	-	-	-	2	1	-	-	-	-
Mpox		75	3	-	-	-	-	-	-	-	-	-	-	-	-
SARI		7	3	-	-	-	-	-	-	-	-	-	-	-	-
Covid-19	ILI	2	0	-	-	-	-	6	0	-	-	12	0	6	0
	SARI	2	0	-	-	-	-	22	0	-	-	121	0	5	0
Influenza A	ILI	2	0	-	-	-	-	6	0	-	-	12	0	6	0
	SARI	2	0	-	-	-	-	22	0	-	-	121	0	5	0
Influenza B	ILI	2	0	-	-	-	-	6	0	-	-	12	0	6	0
	SARI	2	0	-	-	-	-	22	0	-	-	121	0	5	0
RSV	ILI	2	0	-	-	-	-	6	0	-	-	12	0	6	0
	SARI	2	0	-	-	-	-	22	2	-	-	121	0	5	0

Integrated Respiratory Viruses Sentinel Surveillance, National Influenza Centre

The National Influenza Centre (NIC) comprises twelve Laboratory-Based sentinel surveillance sites strategically located at major tertiary care hospitals across Pakistan providing comprehensive geographical coverage. These sites collect samples from individuals with Influenza-Like Illness (ILI) and Severe Acute Respiratory Infections (SARI), which are then analyzed for high-impact Respiratory pathogens with epidemic and pandemic potential, including Influenza, SARS-CoV-2, and Respiratory Syncytial Virus.

Figure 14: District wise Influenza sentinel sites, Pakistan.

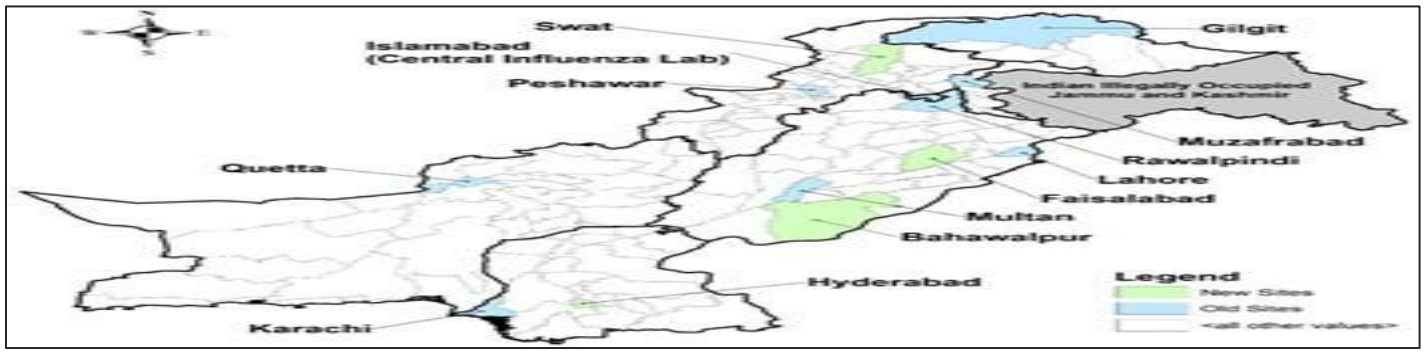


Figure 15: Distribution of suspected samples of ILI and positive cases of Influenza A, Influenza B, COVID-19 and RSV, Week 18, Pakistan.

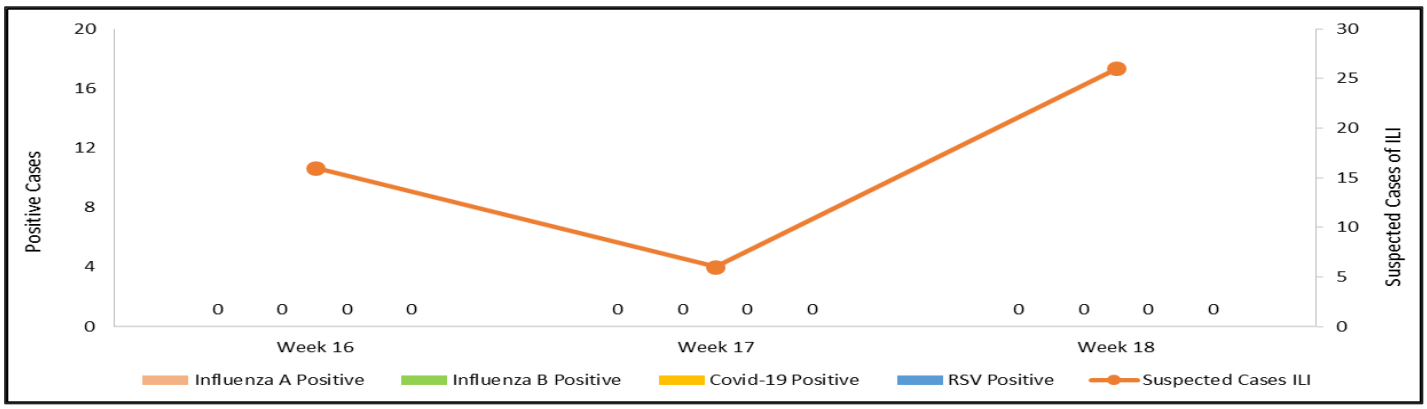
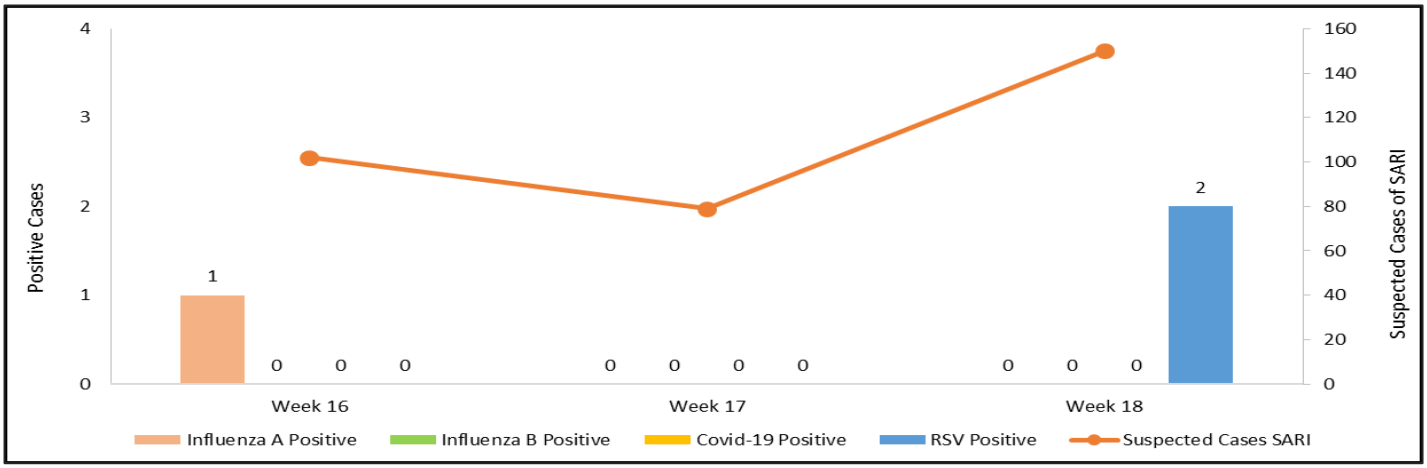


Figure 16: Distribution of suspected samples of SARI and positive cases of Influenza A, Influenza B, COVID-19 and RSV, Week 18, Pakistan.



IDSR Reports Compliance

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

Table 6: Compliance of IDSR reporting districts Week 18, Pakistan.

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	105	95%
	Bannu	241	130	54%
	Battagram	59	43	73%
	Buner	34	34	100%
	Bajaur	44	42	95%
	Charsadda	61	60	98%
	Chitral Upper	31	30	97%
	Chitral Lower	37	37	100%
	D.I. Khan	115	114	99%
	Dir Lower	63	62	98%
	Dir Upper	56	53	95%
	Hangu	23	19	83%
	Haripur	72	72	100%
	Karak	36	36	100%
	Khyber	53	40	75%
	Kohat	61	61	100%
	Kohistan Lower	13	10	77%
	Kohistan Upper	22	18	82%
	Kolai Palas	10	9	90%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	11	26%
	Upper Kurram	38	37	97%
	Malakand	41	41	100%
	Mansehra	133	130	98%
	Mardan	82	72	88%
	Nowshera	57	56	98%
	North Waziristan	12	10	83%
	Peshawar	157	125	80%
	Shangla	37	36	97%
	Swabi	65	64	98%
	Swat	77	74	96%
	South Waziristan (Upper)	93	37	40%
	South Waziristan (Lower)	29	29	100%
	Tank	34	32	94%
	Torghar	13	13	100%
	Mohmand	68	28	41%
	Orakzai	69	9	13%
Azad Jammu Kashmir	Mirpur	41	41	100%
	Bhimber	85	85	100%
	Kotli	60	60	100%
	Muzaffarabad	45	45	100%
	Poonch	46	45	98%
	Haveli	39	39	100%

	Bagh	54	54	100%
	Neelum	39	38	97%
	Jhelum Velley	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	24	24	100%
	CDA	14	6	43%
Balochistan	Gwadar	26	23	88%
	Kech	44	0	0%
	Khuzdar	74	14	19%
	Killa Abdullah	26	22	85%
	Lasbella	55	55	100%
	Pishin	65	0	0%
	Quetta	56	21	38%
	Sibi	36	21	58%
	Zhob	39	13	33%
	Jaffarabad	16	15	94%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	0	0%
	Kohlu	75	0	0%
	Chagi	36	18	50%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	18	51%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	0	0%
	Surab	32	3	9%
	Mastung	45	45	100%
	Loralai	33	26	79%
	Killa Saifullah	28	0	0%
	Ziarat	29	26	90%
	Duki	31	0	0%
	Nushki	29	29	100%
	Dera Bugti	45	0	0%
	Washuk	46	0	0%
	Panjgur	38	0	0%
	Awaran	23	0	0%
	Chaman	25	0	0%
	Barkhan	20	18	90%
	Hub	33	30	91%
	Musakhel	41	0	0%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	30	94%
	Nagar	20	19	95%
	Ghizer	38	38	100%
	Gilgit	44	43	98%
	Diamer	62	57	92%
	Astore	55	54	98%
	Shigar	23	22	96%
	Skardu	54	54	100%

	Ganche	29	24	83%
	Kharmang	25	25	100%
Sindh	Hyderabad	72	72	100%
	Ghotki	64	64	100%
	Umerkot	65	65	100%
	Naushahro Feroze	102	102	100%
	Tharparkar	273	269	99%
	Shikarpur	59	59	100%
	Thatta	50	50	100%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	21	17	81%
	Karachi-West	20	20	100%
	Karachi-Malir	35	29	83%
	Karachi-Kemari	22	21	95%
	Karachi-Central	12	11	92%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	54	98%
	Mirpur Khas	106	106	100%
	Badin	123	123	100%
	Sukkur	63	63	100%
	Dadu	90	90	100%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	168	168	100%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	74	74	100%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	41	41	100%
	Shaheed Benazirabad	122	122	100%

Table 7: Compliance of IDSR reporting Tertiary care hospitals Week 18, Pakistan.

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
AJK	Mirpur	2	2	100%
	Bhimber	1	1	100%
	Kotli	1	1	100%
	Muzaffarabad	2	2	100%
	Poonch	2	2	100%
	Haveli	1	1	100%
	Bagh	1	1	100%
	Neelum	1	1	100%
	Jhelum Vellay	1	1	100%
	Sudhnooti	1	1	100%
Sindh	Karachi-South	3	2	67%
	Sukkur	1	1	100%
	Shaheed Benazirabad	1	1	100%
	Karachi-East	1	1	100%
	Karachi-Central	1	1	100%
KP	Peshawar	3	1	33%
	Swabi	1	0	0%
	Nowshera	1	1	100%
	Mardan	1	1	100%
	Abbottabad	1	1	100%
	Swat	1	1	100%

Letter to the Editor

Urban Tree Loss and Climate Resilience: A One Health Perspective from Islamabad

Dear Editor,

Pakistan's summer of 2025 exposed the growing intersection of climate change, environmental degradation, and public health vulnerability. Islamabad recorded temperatures approaching 45°C in June, followed by intense monsoon rainfall in July that caused severe urban flooding across Islamabad, Rawalpindi, and adjoining districts. Within 18 hours, over 240 mm of rainfall inundated parts of the twin cities, while nearby Chakwal recorded a cloudburst of over 423 mm. Nationwide, the monsoon season resulted in more than 1,000 deaths, affected over 6.5 million people, and caused economic losses estimated at Rs822 billion (1–3).

These events should not be viewed as isolated climate disasters. They reflect a broader ecological and public health emergency in which environmental degradation amplifies the effects of extreme weather events. In this context, the reported removal of approximately 30,000 trees in Islamabad raises serious concerns regarding urban resilience and environmental health.

Although tree removal has been justified in some instances as a strategy to control invasive species and pollen exposure, large-scale deforestation in an already climate-stressed urban setting may unintentionally increase public health risks. Urban trees play critical ecological functions: they reduce heat island effects, intercept stormwater runoff, stabilize soil, improve air quality, and support mental well-being. Their loss weakens the city's natural defenses against heatwaves, flash floods, and environmental stressors that increasingly threaten urban populations (4).

The public health implications extend beyond physical infrastructure damage. Flood-affected communities across Pakistan reported rising cases of diarrheal disease, skin infections, and vector-borne illnesses during the monsoon period. Mental health consequences, including anxiety, trauma, and psychosocial distress among displaced families, further compounded the burden on vulnerable populations (5).

These interconnected risks highlight the urgent need for a One Health approach that recognizes the links between human health, environmental systems, and climate resilience. Urban planning and environmental policies should incorporate ecological, hydrological, and public health assessments before implementing large-scale land-use changes. Similarly, climate-sensitive disease surveillance systems should inform urban development and environmental decision-making.

For Islamabad and other rapidly urbanizing cities in Pakistan, practical measures are urgently needed. These include restoration of native urban tree cover, protection of drainage corridors, investment in green infrastructure, strengthening of early warning systems, and integration of mental health support into disaster response frameworks. Establishing cross-sectoral One Health coordination mechanisms can help ensure that environmental management decisions do not inadvertently increase health vulnerabilities.

The lessons of 2025 are clear. Human health cannot be protected while the ecosystems supporting urban resilience continue to erode. Climate adaptation, environmental conservation, and public health preparedness must now be treated as interconnected national priorities rather than separate policy domains.

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Knowledge Hub

What is Brucellosis?

It is a bacterial disease caused by various species of the Brucella bacteria. It primarily infects livestock (cattle, goats, sheep, pigs) but can be transmitted to humans. The illness in humans is often chronic and debilitating, affecting multiple organ systems. The bacteria are highly infectious and can survive in the environment for several months under certain conditions.

The most common species of Brucella that infect humans are:

- B. melitensis (primarily from sheep and goats, causing the most severe disease).
- B. abortus (from cattle).
- B. suis (from pigs).
- B. canis (from dogs).

How Brucellosis Spreads to Humans

- **Contact with infected animals or consumption of contaminated animal products:** Brucellosis is not typically spread from person to person**.** Transmission occurs through contact with infected animals or consumption of contaminated animal products.
- **Eating Contaminated Foods:** This is the most common route.
- **Consuming unpasteurized (raw) milk**, cheese, or ice cream from infected animals (especially goats, sheep, or cows).
- **Eating undercooked meat** from infected animals.
- **Occupational Exposure (Direct Contact):** People who work with animals are at high risk.
- Coming **into contact with blood, urine, vaginal discharge**, or, most dangerously, **placentas and fetuses of infected animals** (e.g., veterinarians, farmers, slaughterhouse workers).
- The bacteria can enter the **body through cuts, abrasions, or the mucous membranes** (eyes, nose, mouth).
- **Inhalation:** Breathing in the bacteria, which can happen in laboratories or slaughterhouses.

Signs & Symptoms

Symptoms of brucellosis can appear anywhere from 5 days to 6 months after exposure, but usually within 1 to 3 weeks. The illness often starts slowly.

Common symptoms include:

- **Fever:** The defining feature is the undulating fever rising in the evening and dropping in the morning.

• **Sweating:** Profuse sweating (often with a foul odor).

• **Fatigue and malaise** (general feeling of being unwell).

• **Muscle and joint pain** (arthritis is common).

• **Headache**

• **Loss of appetite and weight loss.**

If the infection is not treated, it can become chronic and cause more serious symptoms that persist for months or years.

Complications

Although brucellosis is rarely fatal (less than 2%), it can lead to severe and chronic complications if not properly treated, often affecting the joints and central nervous system.

• **Arthritis:** Inflammation of the joints, particularly the hip, knee, or spine.

• **Epididymo-orchitis**: Swelling and pain in the testicles.

• **Endocarditis**: Infection of the heart lining, which is the most common cause of death from brucellosis.

• **Neurobrucellosis**: Infection of the central nervous system (brain and meninges), leading to meningitis or abscesses.

• **Chronic Fatigue**: Persistent fatigue, joint pain, and fever that can last for years.

Prevention

• It focuses heavily on controlling the disease in animals and protecting humans from exposure.

Food Safety:

• Avoid consuming unpasteurized milk, cheese, and ice cream. Boiling milk or buying products labeled "pasteurized" kills the bacteria.

• Cook meat thoroughly (well-done).

Occupational Protection:

• Use personal protective equipment (PPE), including gloves, goggles, and face shields, when assisting with animal births or handling infected tissues.

• **Vaccination programs for livestock** (cattle, sheep, and goats) are critical for controlling the disease in animal populations.

Laboratory Safety:

• Proper safety protocols are required when handling Brucella bacteria in a laboratory setting.

Diagnosis and Treatment

Diagnosis is confirmed through:

• **Blood Culture:** Growing the bacteria from a blood sample.

• **Serology:** Testing the blood for antibodies against the Brucella bacteria.

Treatment typically involves a combination of two antibiotics (most commonly doxycycline plus rifampicin or streptomycin) taken for a period of 6 to 8 weeks to prevent relapse. It is crucial to complete the entire course of antibiotics.

More Information

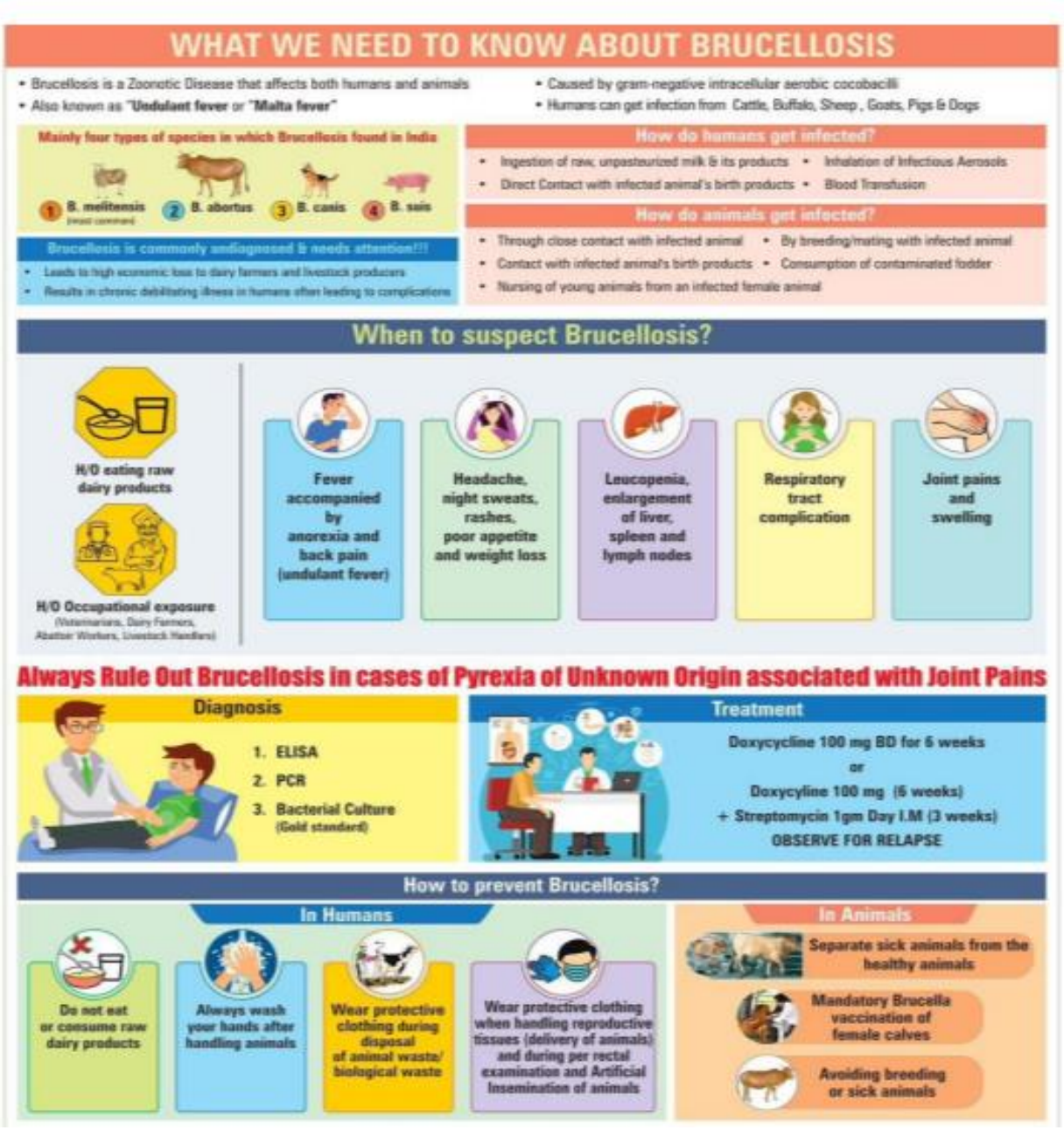
For additional authoritative information on brucellosis, please visit:

1. Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/brucellosis/index.html

2. World Health Organization (WHO): https://www.who.int/news-room/factsheets/detail/brucellosis

3. Public Health Agency of Canada (PHAC): https://www.canada.ca/en/publichealth/services/diseases/brucellosis.ht

4. UK Health Security Agency (UKHSA): https://www.gov.uk/guidance/brucellosisguidance-data-and-analysis



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UK Health Security Agency

World Health Organization

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION