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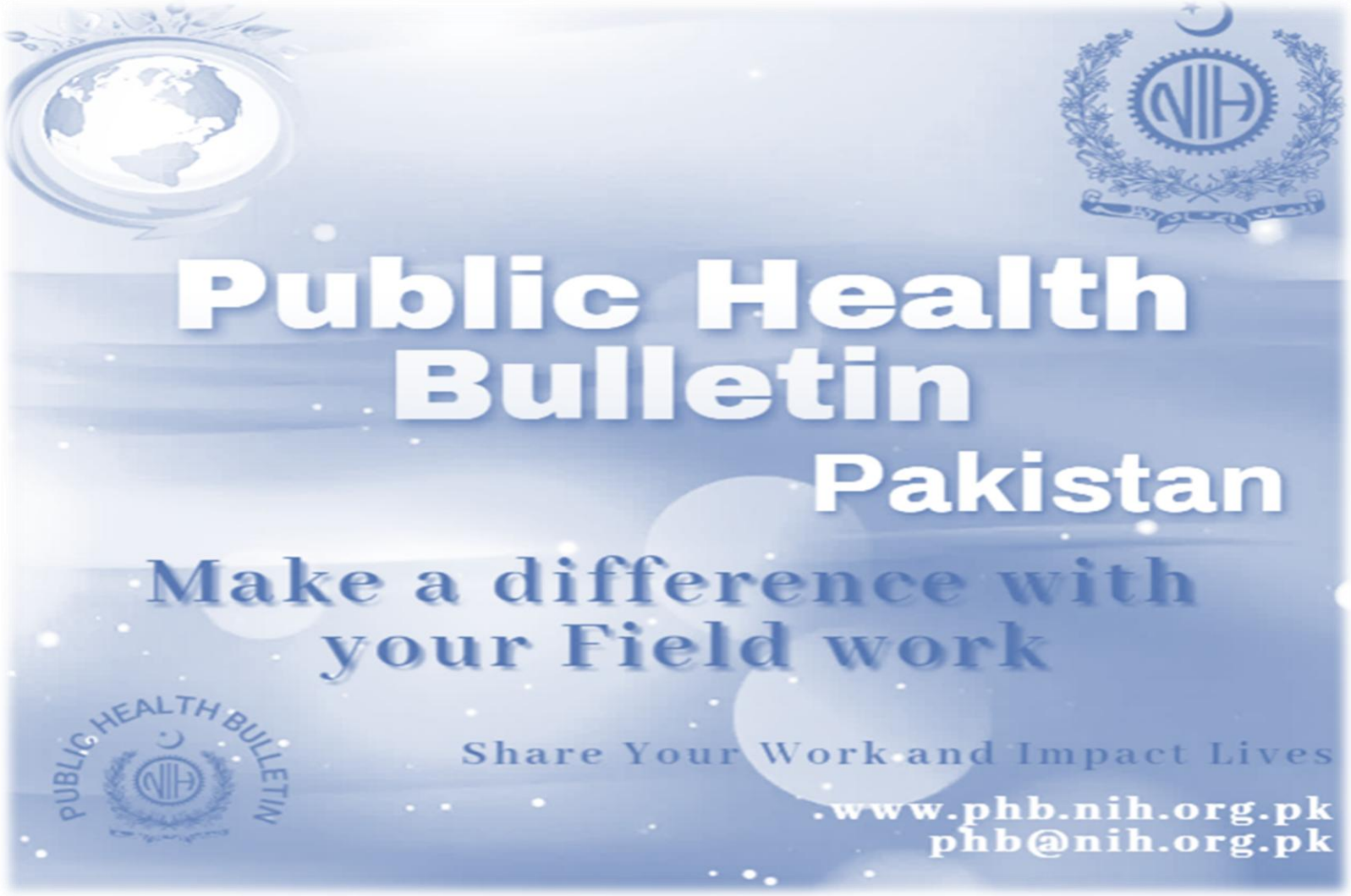
Integrated Disease Surveillance & Response (IDSR) Report

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.



Overview

IDSR Reports

Ongoing Events

Field Reports

Public Health Bulletin - Pakistan, Week 34, 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;

- *Chickenpox Outbreak Investigation Report Union Council Mughal Kot, Tehsil Darazinda, District D.I. Khan, Khyber Pakhtunkhwa, Pakistan – August 2025*
- *Knowledge hub on Mumps: What yoy 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

Overview

Note: All reported cases in this report are suspected cases

- *During Week 34, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, TB, ALRI <5 years, B. Diarrhea, dog bite, VH (B, C & D), Typhoid and SARI.*
- *Sixteen cases of AFP reported from KP, ten from Sindh, three from AJK and one from Balochistan.*
- *Twenty suspected cases of HIV/ AIDS reported from Sindh, seven from KP and two from Balochistan.*
- *Six suspected cases of Brucellosis reported from KP.*
- *Among VPDs, there is an increase in number of cases of Measles, Mumps, Meningitis and Rubella this week.*
- *Among Respiratory diseases, there is an increase in number of cases ILI, ALRI < 5years and TB 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 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.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts is 78%*
- *Sindh is the top reporting regions with a compliance rate of 98%, followed by AJK 95%, GB 92% and ICT 71%.*
- *The lowest compliance rate was observed in KP 67% and Balochistan 55%.*

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

Public Health Actions

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

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 or nationwide 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.

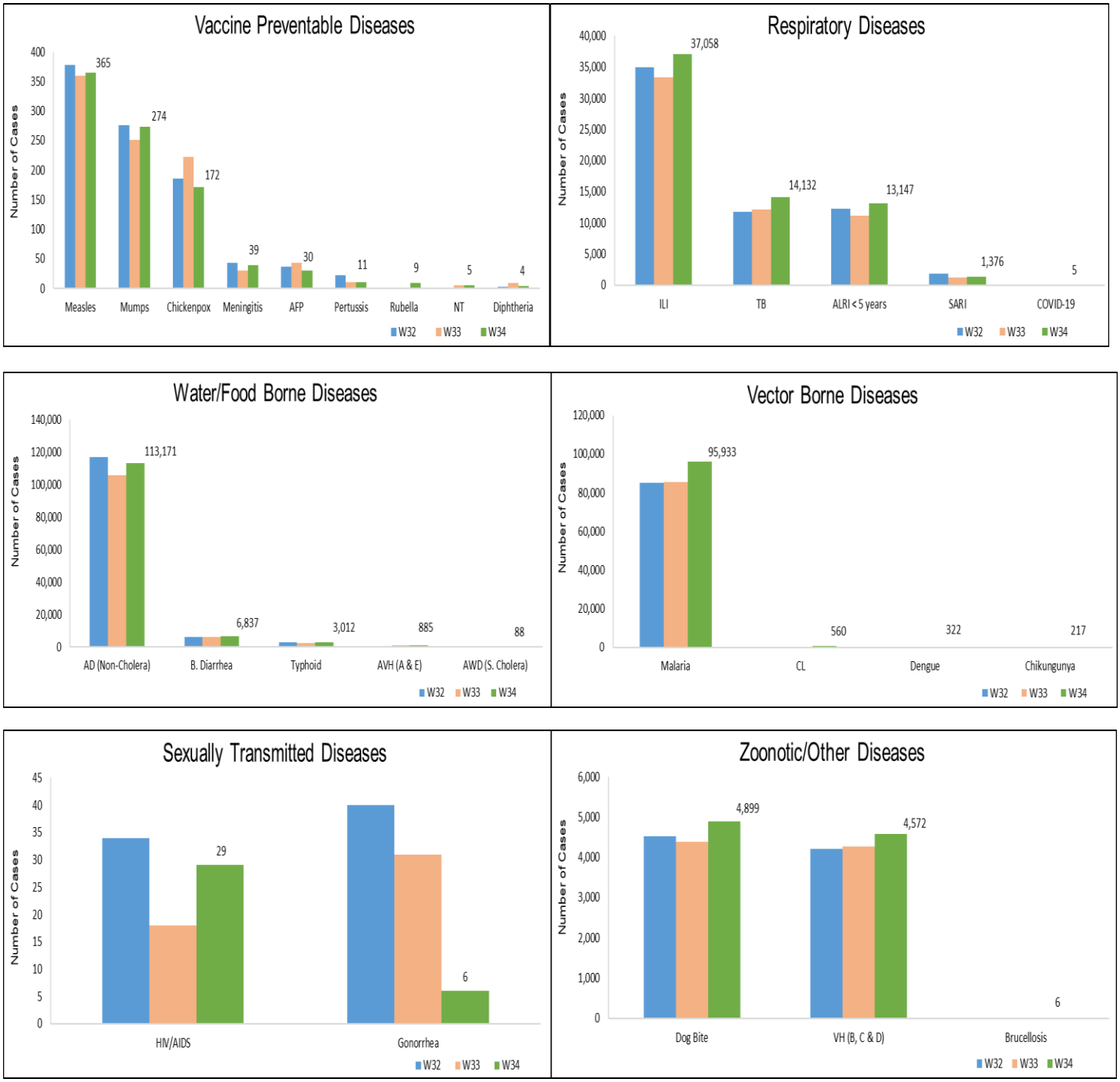
Mumps

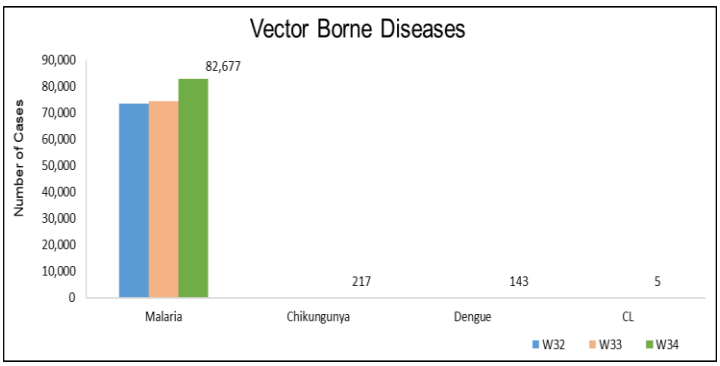
- **Enhance Surveillance and Case Detection:** Strengthen mumps case detection within IDSR by training health workers to apply standard case definitions and promptly report suspected cases, particularly in schools and crowded institutions.
- **Expand Laboratory Capacity:** Support laboratory confirmation 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 34, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	2352	7515	2727	519	41668	NR	58390	113171
Malaria	4	4215	2	2	9033	NR	82677	95933
ILI	1877	5209	306	1165	3889	NR	24612	37058
TB	99	98	167	12	294	NR	13462	14132
ALRI < 5 years	760	1349	613	2	954	NR	9469	13147
B. Diarrhea	83	1285	158	1	1199	NR	4111	6837
Dog Bite	137	329	3	0	908	NR	3522	4899
VH (B, C & D)	50	73	4	0	93	NR	4352	4572
Typhoid	15	519	85	2	889	NR	1502	3012
SARI	184	360	124	0	515	NR	193	1376
AVH (A & E)	33	5	6	0	328	NR	513	885
CL	0	171	0	0	384	NR	5	560
Measles	11	20	42	0	249	NR	43	365
Dengue	20	9	0	1	149	NR	143	322
Mumps	5	48	7	0	179	NR	35	274
Chikungunya	0	0	0	0	0	NR	217	217
Chickenpox/ Varicella	12	11	21	1	113	NR	14	172
AWD (S.Cholera)	10	27	23	0	28	NR	0	88
Meningitis	7	0	3	0	19	NR	10	39
AFP	3	1	0	0	16	NR	10	30
HIV/AIDS	0	2	0	0	7	NR	20	29
Pertussis	0	1	0	0	1	NR	9	11
Rubella (CRS)	0	5	0	0	0	NR	4	9
Brucellosis	0	0	0	0	6	NR	0	6
Gonorrhea	0	0	0	0	1	NR	5	6
COVID-19	0	0	0	0	5	NR	0	5
NT	0	0	0	0	2	NR	3	5
Diphtheria	0	0	0	0	2	NR	2	4

Figure 1: Most frequently reported suspected cases during Week 34, Pakistan.




Vector Borne Diseases
Number of Cases
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
82,677
217
143
5
Malaria
Chikungunya
Dengue
CL
W32
W33
W34

Sindh

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

Table 2: District wise distribution of most frequently reported suspected cases during Week 34, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A & E)
Badin	6208	3183	1962	862	451	105	292	151	61	5
Dadu	4067	2867	527	603	870	71	497	536	114	221
Ghotki	5084	1336	15	643	535	487	126	321	0	0
Hyderabad	1352	2550	1212	357	146	73	60	49	4	8
Jacobabad	1450	924	1116	174	488	189	106	194	19	0
Jamshoro	3325	1927	59	582	266	134	119	86	48	10
Kamber	4103	2157	0	825	226	150	104	214	15	0
Karachi Central	103	984	1109	176	2	21	18	13	128	6
Karachi East	33	230	110	36	14	0	1	1	17	0
Karachi Keamari	16	501	241	2	11	0	0	0	2	1
Karachi Korangi	78	242	35	16	0	0	5	0	1	1
Karachi Malir	241	1483	2462	143	278	12	81	38	26	6
Karachi South	198	6695	24	181	128	95	241	44	222	21
Karachi West	254	769	1073	68	190	17	17	75	21	8
Kashmore	2155	519	512	255	138	10	70	61	0	0
Khairpur	6668	3305	5749	1274	892	166	346	262	272	6
Larkana	6694	2052	0	894	207	27	280	43	4	0
Matiari	4407	1827	3	693	199	292	58	106	1	9
Mirpurkhas	4490	3544	2808	947	430	73	191	145	122	54
Naushero Feroze	2094	1567	824	359	435	25	289	255	184	2
Sanghar	5597	2286	106	1223	381	1412	107	192	61	13
Shaheed Benazirabad	3074	2069	13	357	194	157	101	151	99	0
Shikarpur	2091	1309	5	270	147	179	159	181	2	0
Sujawal	1769	3460	8	57	335	0	59	76	11	48
Sukkur	2535	1512	1960	443	532	137	123	118	6	0
Tando Allahyar	3417	1747	747	527	153	291	126	60	6	5
Tando Muhammad Khan	2769	1683	92	693	164	48	163	76	0	0
Tharparkar	3438	2686	1219	501	676	25	213	2	23	23
Thatta	1997	1289	621	36	630	82	60	72	16	61
Umerkot	2970	1687	0	265	351	74	99	0	17	5
Total	82677	58390	24612	13462	9469	4352	4111	3522	1502	513

Figure 2: Most frequently reported suspected cases during Week 34 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, Typhoid, SARI, dog bite, CL and TB cases were the most frequently reported diseases from Balochistan province.
- AD (non-cholera) cases are mostly reported from Quetta, Kech (Turbat) and Pishin while ILI cases are mostly reported from Kech (Turbat), Gwadar and Quetta.
- Two cases of HIV/AIDs reported from Balochistan. Field investigation is required to confirm the cases.
- AD (Non-Cholera), B. Diarrhea, Typhoid ILI, ALRI <5 years, SARI, TB, dog bite, VH (B, C & D), Malaria, CL, Measles, Mumps, Rubella and Chickenpox showed an increase in number of cases this week.

Table 3: District wise distribution of most frequently reported suspected cases during Week 34, Balochistan

Districts	AD (Non-Cholera)	ILI	Malaria	ALRI < 5 years	B. Diarrhea	Typhoid	SARI	Dog Bite	CL	TB
Awaran	57	47	79	1	14	0	0	0	0	0
Barkhan	111	52	111	11	9	31	0	26	0	7
Chagai	115	177	50	0	33	8	0	0	0	0
Dera Bugti	101	0	106	0	2	0	0	0	0	0
Gwadar	306	662	121	2	83	26	0	3	0	0
Harnai	204	0	83	128	68	0	0	3	0	0
Hub	165	43	116	0	10	0	0	2	1	0
Jaffarabad	453	108	745	5	89	9	10	96	140	50
Jhal Magsi	348	413	296	20	3	34	0	27	1	19
Kachhi (Bolan)	68	4	89	0	51	0	0	2	2	0
Kalat	55	1	45	10	13	25	5	0	0	0
Kech (Turbat)	630	893	633	55	78	4	NR	NR	1	NR
Kharan	251	473	42	0	96	10	0	0	0	0
Khuzdar	200	157	101	2	24	39	14	0	0	2
Killa Abdullah	108	17	3	0	15	8	13	2	0	0
Killa Saifullah	242	0	192	261	93	82	0	0	0	2
Kohlu	23	53	30	1	15	14	NR	1	NR	NR
Lasbella	442	84	380	167	29	18	2	17	11	0
Loralai	211	161	51	15	20	14	47	4	0	0
Mastung	92	86	60	4	20	9	64	0	0	0
MusaKhel	49	30	151	16	6	10	3	0	0	0
Naseerabad	335	5	117	12	9	63	29	111	7	12
Nushki	125	0	10	0	13	0	0	0	0	0
Pishin	607	455	46	93	214	34	30	2	2	0
Quetta	785	608	25	204	79	39	65	0	0	1
Sherani	61	46	13	12	7	0	4	0	0	0
Sibi	430	403	192	88	51	21	68	2	1	3
Sohbat pur	282	27	104	100	72	15	4	11	5	2
Surab	14	49	2	0	0	0	0	0	0	0
Usta Muhammad	561	110	168	118	68	6	0	20	0	0
Zhob	84	45	54	24	1	0	2	0	0	0
Total	7515	5209	4215	1349	1285	519	360	329	171	98

Figure 4: Most frequently reported suspected cases during Week 34, Balochistan

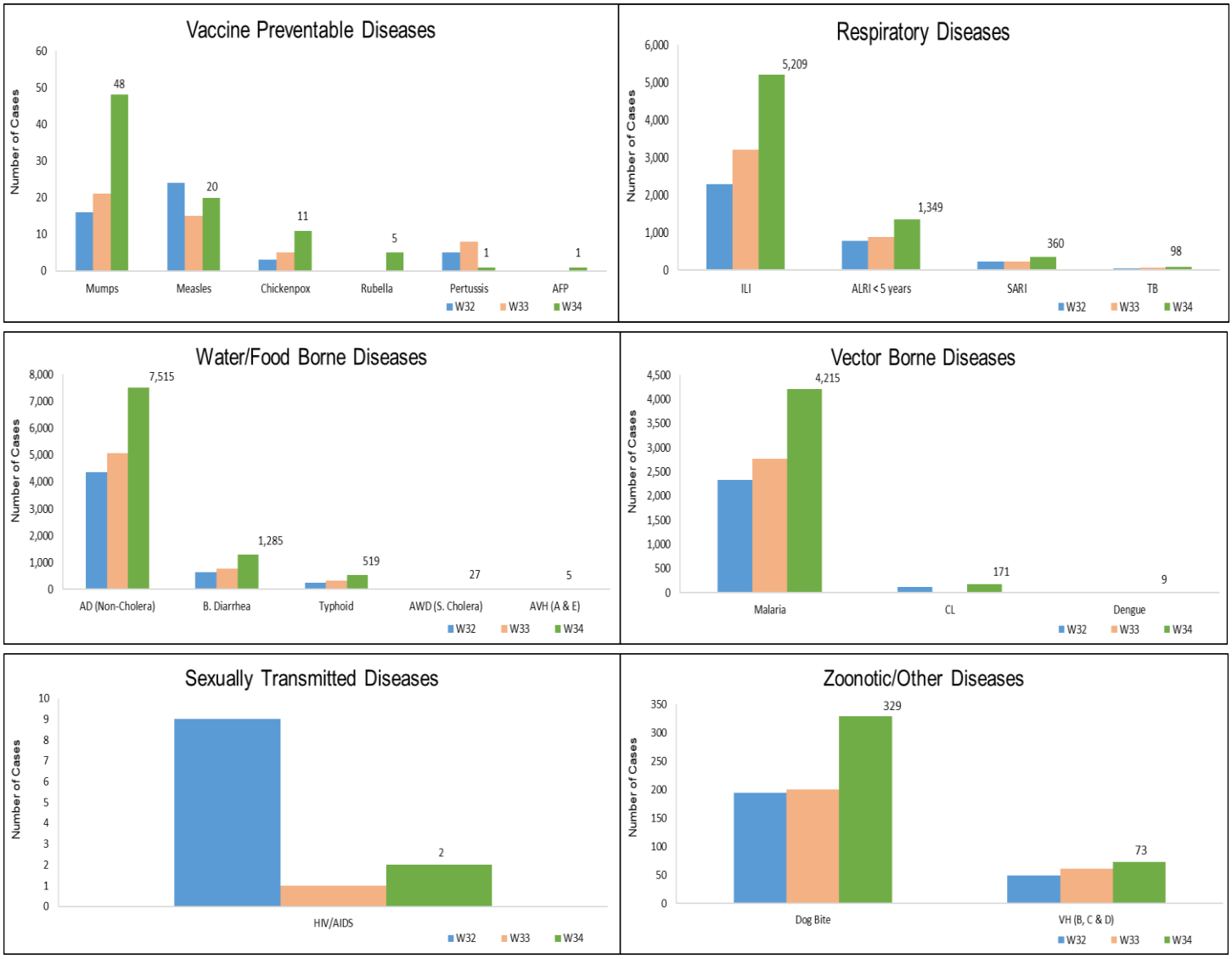
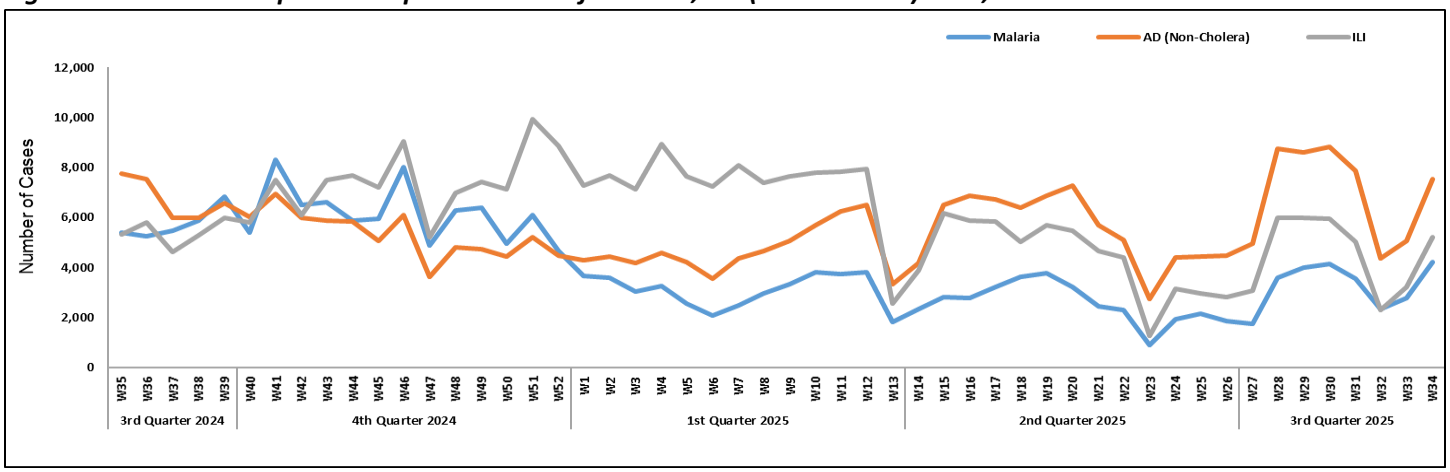


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, B. Diarrhea, ALRI<5 Years, dog bite, Typhoid, SARI, CL and AVH (A&E)
- Chicken Pox, AFP, SARI and dog bite cases showed a decline in number while Measles, Mumps, Meningitis, AD (non-cholera), ILI, ALRI<5 years, TB , HIV/AIDS and Malaria showed an increase in number this week.
- Sixteen cases of AFP reported from KP. All are suspected cases and need field verification.
- Seven cases of HIV/AIDs reported from KP. Field investigation is required.
- Six suspected cases of Brucellosis reported from KP. They require field verification.

Table 4: District wise distribution of most frequently reported suspected cases during Week 34, KP

Districts	AD (Non-Cholera)	Malaria	ILI	B. Diarrhea	ALRI < 5 years	Dog Bite	Typhoid	SARI	CL	AVH (A & E)
Abbottabad	1602	1	9	12	12	26	22	3	0	0
Bajaur	1056	446	57	100	2	74	5	46	10	25
Bannu	969	1646	5	23	6	2	115	1	0	8
Battagram	812	154	587	5	6	10	5	3	NR	NR
Buner	398	307	0	0	0	31	6	0	0	3
Charsadda	2617	518	1257	106	217	16	77	90	0	56
Chitral Lower	1124	37	24	24	14	19	7	13	8	0
Chitral Upper	305	8	38	16	24	1	13	12	0	1
D.I. Khan	2001	706	0	18	0	27	4	0	0	0
Dir Lower	2031	183	1	99	11	23	37	0	0	14
Dir Upper	2224	13	29	31	59	13	10	0	0	5
Hangu	230	165	80	18	72	0	6	0	21	0
Haripur	1377	0	21	0	6	31	0	0	0	0
Karak	816	323	41	16	18	39	4	0	174	7
Khyber	1032	715	65	155	195	80	110	14	61	15
Kohat	951	344	0	31	0	40	24	1	15	2
Kohistan Lower	223	1	5	2	3	0	0	0	0	0
Kohistan Upper	319	11	0	33	0	4	0	0	0	1
Kolai Palas	97	3	10	9	2	0	2	2	0	0
L & C Kurram	11	12	5	29	0	0	1	0	0	0
Lakki Marwat	1034	605	0	7	0	75	16	0	0	0
Malakand	1600	26	37	0	0	1	18	0	6	102
Mansehra	1264	9	158	1	0	0	34	0	0	1
Mardan	1475	263	3	73	37	18	22	0	0	0
Mohmand	215	355	71	31	1	10	14	200	59	1
North Waziristan	45	109	0	24	42	1	24	15	2	0
Nowshera	2663	474	66	33	21	8	28	6	2	30
Orakzai	133	57	7	17	0	7	0	0	0	0
Peshawar	5129	97	316	127	18	26	147	1	2	11
Shangla	724	719	0	0	0	10	21	0	0	0
South Waziristan (Lower)	76	96	93	1	48	17	10	14	21	0
South Waziristan (Upper)	71	125	21	5	4	0	0	19	0	0
Swabi	1590	126	465	15	39	173	49	12	0	20
Swat	4551	41	273	59	84	113	45	5	0	26
Tank	581	240	42	12	11	0	0	0	0	0
Tor Ghar	130	81	4	25	0	5	2	17	3	0
Upper Kurram	192	17	99	42	2	8	11	41	0	0
Total	41668	9033	3889	1199	954	908	889	515	384	328

Figure 6: Most frequently reported suspected cases during Week 34, KP

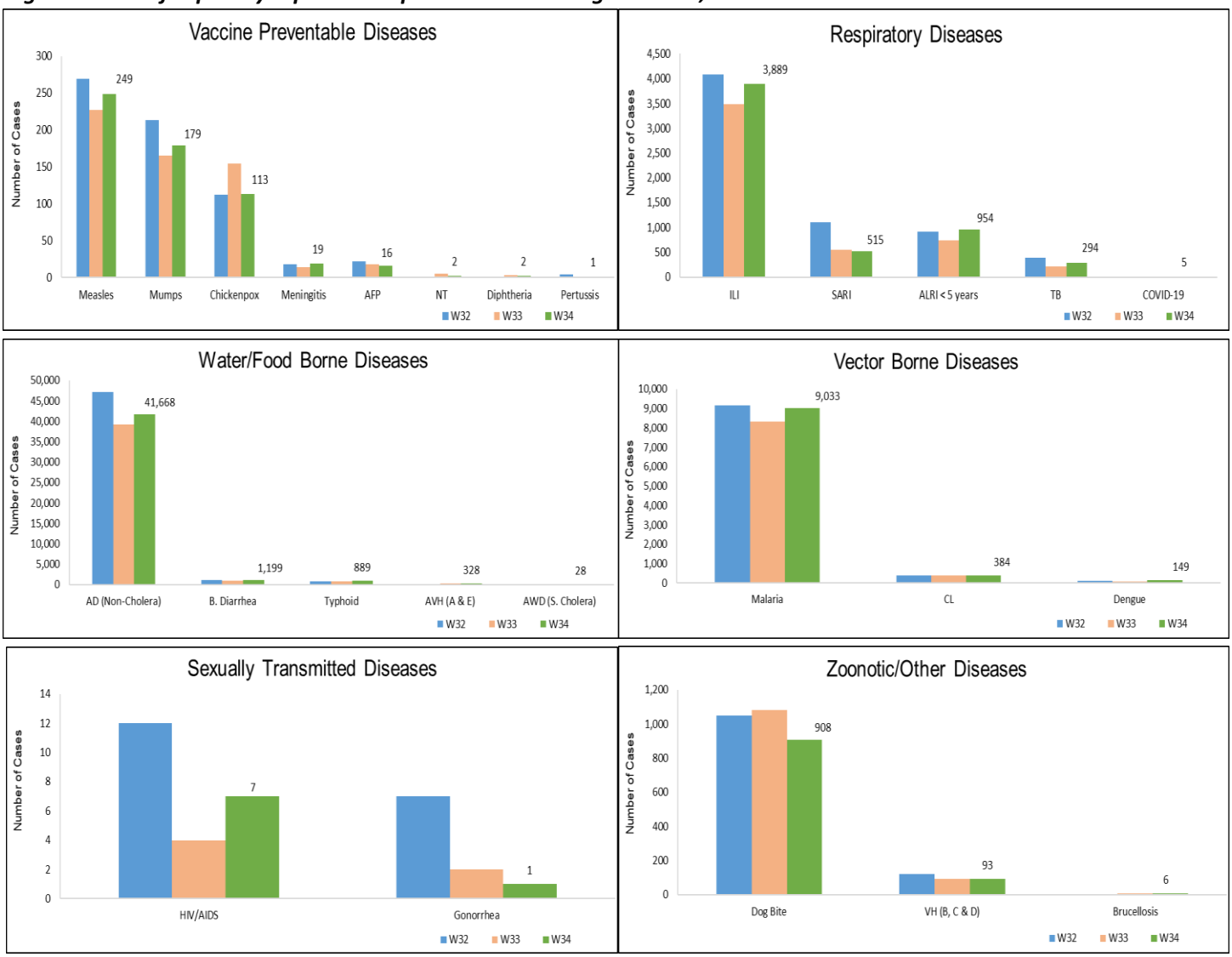
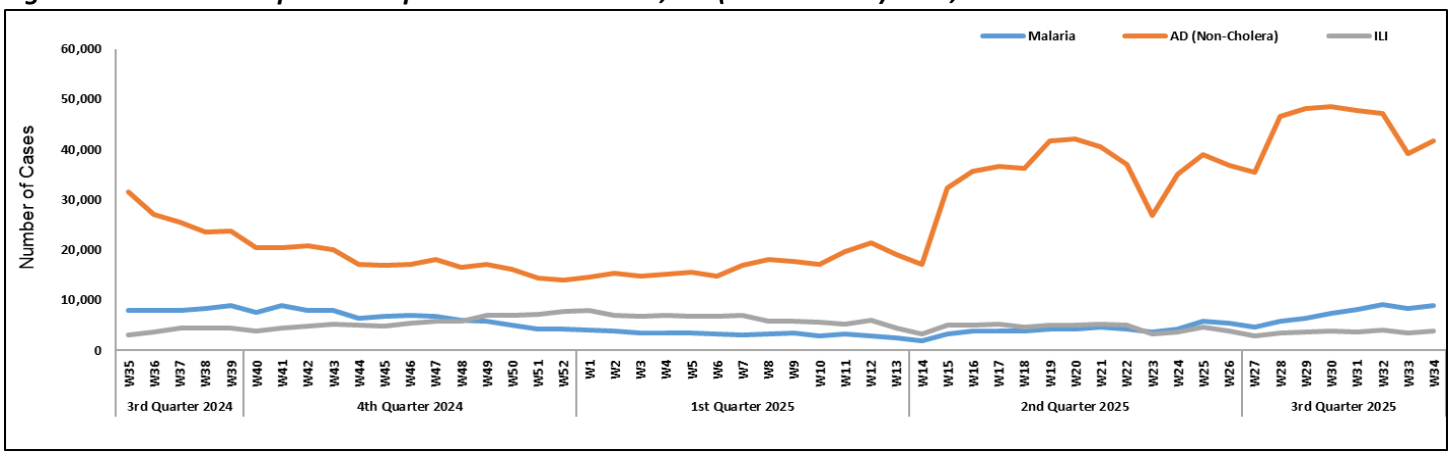


Figure 7: Week wise reported suspected cases Malaria, AD (Non-Cholera) & ILI, KP



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and TB. AD (non-cholera) cases showed an increase while ILI cases showed a decline this week.

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

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

Figure 8: Most frequently reported suspected cases during Week 34, AJK

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

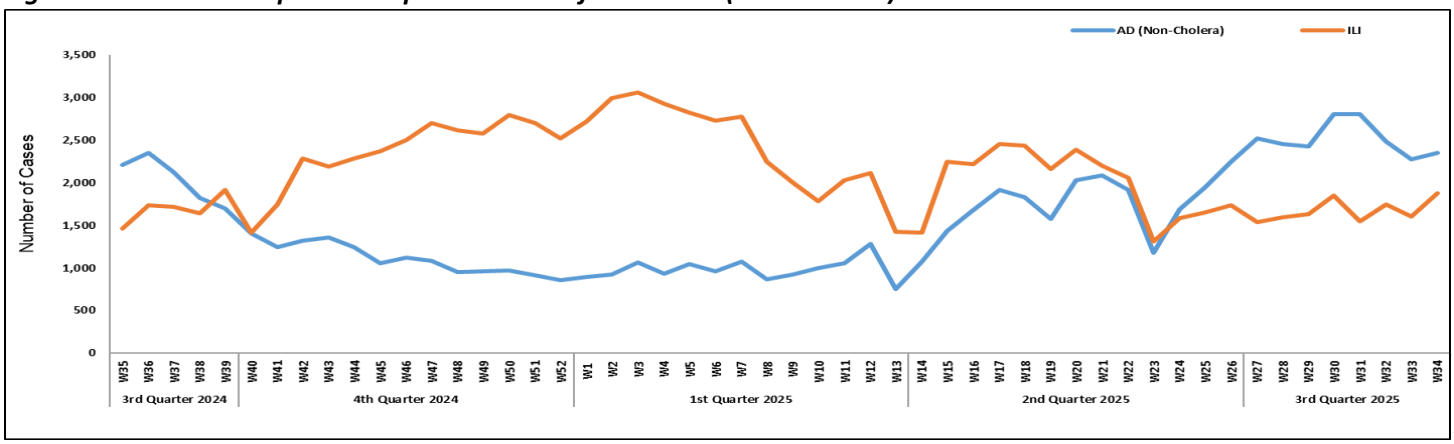


Figure 10: Most frequently reported suspected cases during Week 34, ICT

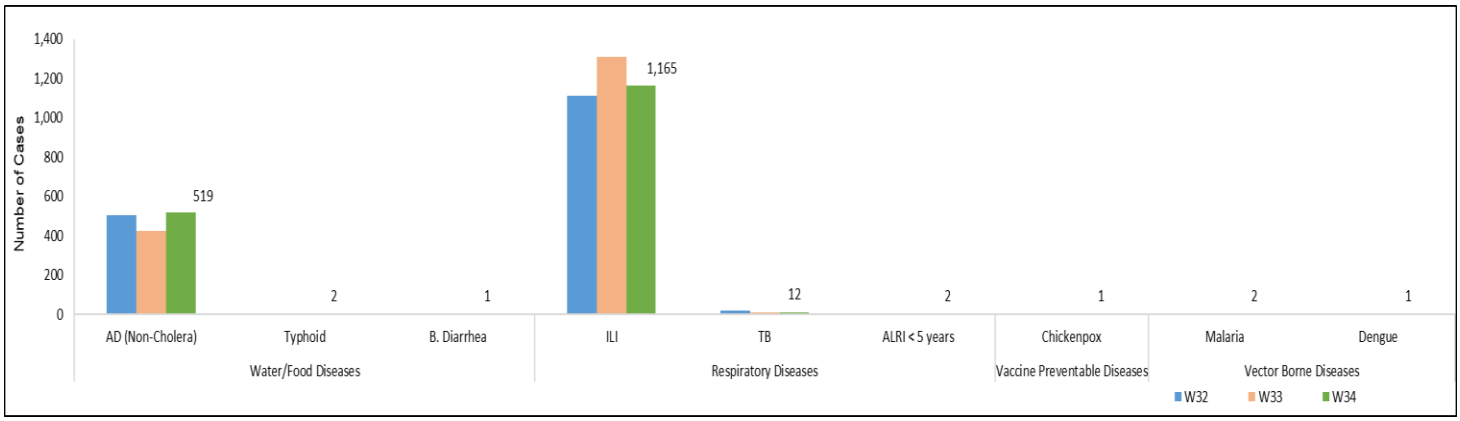


Figure 11: Week wise reported suspected cases of ILI, ICT

Figure 12: Most frequently reported suspected cases during Week 34, GB

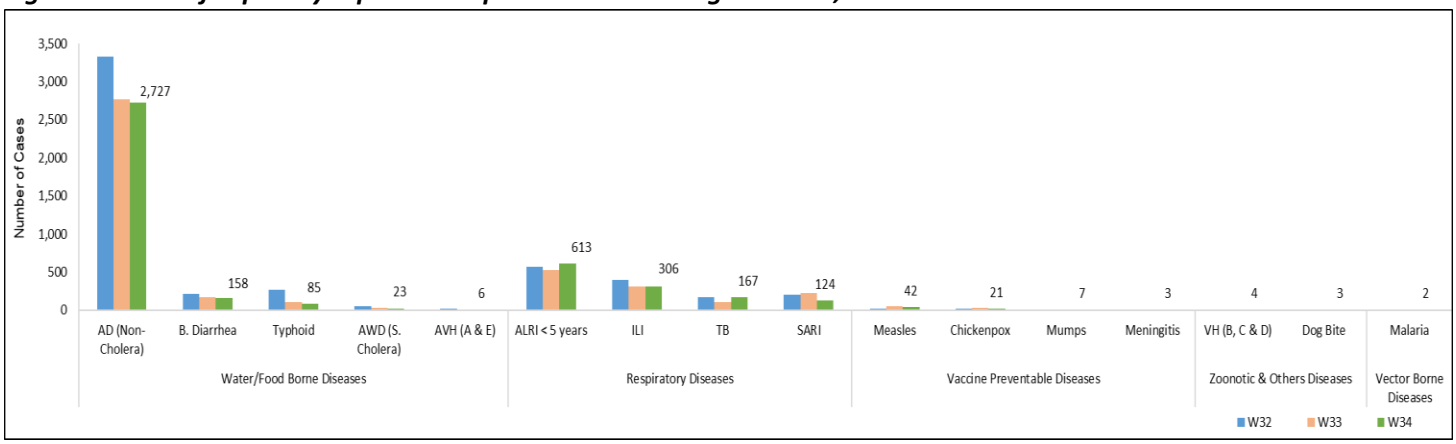


Figure 13: Week wise reported suspected cases of AD (Non-Cholera), GB

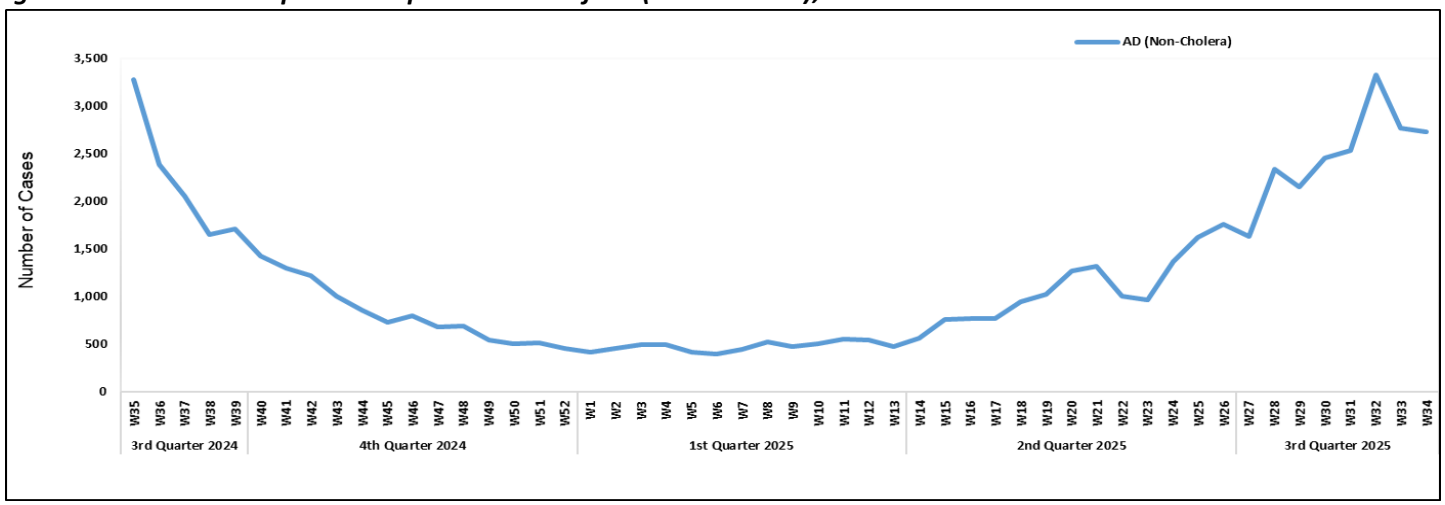


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epi Week 34

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	Tota l Pos	Total Test	Total Pos	Total Test	Total Pos
AWD (S. Cholera)	66	3	-	-	-	-	-	-	-	-	-	-	-	-
Stool culture & Sensitivity	174	5	-	-	21	0	-	-	1	0	-	-	-	-
Malaria	10,331	1,072	-	-	-	-	-	-	96	0	-	-	41	0
CCHF	0	0	8	4	2	2	-	-			-	-	-	-
Dengue	2,321	312	7	0	6	1	-	-			-	-	39	15
VH (B)	12,026	446	85	64	30	6	-	-	1,039	9	-	-	582	7
VH (C)	12,060	1,002	45	23	27	5	-	-	1,036	5	-	-	585	22
VH (D)	79	21	22	4	-	-	-	-			-	-	-	-
VH (A)	134	31	3	1	-	-	-	-	8	1	-	-	-	-
VH (E)	52	2	-	-	-	-	-	-			-	-	-	-
Covid-19	32	1	-	-	-	-	-	-	3	0	-	-	13	0
TB	486	44	-	-	5	3	-	-	34	1	-	-	85	10
HIV/ AIDS	3,821	34	-	-	13	3	-	-	220	0	-	-	532	0
Syphilis	1,074	6	-	-	-	-	-	-	93	1	-	-	-	-
Typhoid	1,989	58	-	-	-	-	-	-	58	2	-	-	-	-
Diphtheria	13	8	2	0	9	3	4	2			1	0	-	-
ILI	23	3	-	-	-	-	-	-	-	-	-	-	-	-
Pneumonia (ALRI)	245	63	-	-	-	-	-	-	-	-	-	-	-	-
Meningitis	23	0	-	-	-	-	-	-	-	-	-	-	-	-
Measles	92	41	30	18	224	109	11	6	29	11	397	84	9	4
Rubella	92	2	30	1	224	4	11	1	29	0	397	13	9	0
Rubella (CRS)	34	6	-	-	-	-	-	-	-	-	-	-	-	-
Leishmaniansis (cutaneous)	23	2	-	-	-	-	-	-	-	-	-	-	-	-
Chikungunya	4	0	7	0	-	-	-	-	-	-	-	-	-	-
Gonorrhea	112	0	-	-	-	-	-	-	-	-	-	-	-	-

Table 6: IDSR reporting districts Week 34, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	105	95%
	Bannu	238	131	55%
	Battagram	59	41	69%
	Buner	34	34	100%
	Bajaur	44	37	84%
	Charsadda	59	59	100%
	Chitral Upper	34	30	88%
	Chitral Lower	35	35	100%
	D.I. Khan	114	113	99%
	Dir Lower	74	63	85%
	Dir Upper	37	34	92%
	Hangu	22	13	59%
	Haripur	72	69	96%
	Karak	36	36	100%
	Khyber	53	48	91%
	Kohat	61	61	100%
	Kohistan Lower	11	9	82%
	Kohistan Upper	20	16	80%
	Kolai Palas	10	9	90%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	6	14%
	Upper Kurram	41	28	68%
	Malakand	42	27	64%
	Mansehra	133	92	69%
	Mardan	80	53	66%
	Nowshera	56	53	95%
	North Waziristan	13	8	62%
	Peshawar	156	135	87%
	Shangla	37	35	95%
	Swabi	64	63	98%
	Swat	77	72	94%
	South Waziristan (Upper)	93	91	98%
	South Waziristan (Lower)	42	25	60%
	Tank	34	31	91%
	Torghar	14	14	100%
	Mohmand	68	61	90%
	SD Peshawar	5	0	0%
	SD Tank	58	5	9%
	Orakzai	69	9	13%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	71	71	100%
	Kotli	60	60	100%
	Muzaffarabad	45	45	100%
	Poonch	46	46	100%

	Haveli	39	39	100%
	Bagh	40	40	100%
	Neelum	39	39	100%
	Jhelum Velley	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	23	21	91%
	CDA	15	6	40%
Balochistan	Gwadar	26	13	50%
	Kech	44	35	80%
	Khuzdar	74	20	27%
	Killa Abdullah	26	14	54%
	Lasbella	55	55	100%
	Pishin	69	36	52%
	Quetta	55	39	71%
	Sibi	36	36	100%
	Zhob	39	7	18%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	4	27%
	Kohlu	75	6	8%
	Chagi	36	18	50%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	2	6%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	7	22%
	Mastung	45	45	100%
	Loralai	33	13	39%
	Killa Saifullah	28	26	93%
	Ziarat	29	0	0%
	Duki	31	0	0%
	Nushki	32	25	78%
	Dera Bugti	45	37	82%
	Washuk	46	0	0%
	Panjgur	38	0	0%
	Awaran	23	15	65%
	Chaman	24	0	0%
	Barkhan	20	19	95%
	Hub	33	15	45%
	Musakhel	41	8	20%
	Usta Muhammad	34	33	97%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	38	100%
	Gilgit	42	41	98%
	Diamer	62	59	95%
	Astore	55	55	100%
	Shigar	27	25	93%

	Skardu	53	53	100%
	Ganche	29	29	100%
	Kharmang	46	25	54%
Sindh	Hyderabad	72	72	100%
	Ghotki	64	64	100%
	Umerkot	62	62	100%
	Naushahro Feroze	107	102	95%
	Tharparkar	276	260	94%
	Shikarpur	60	59	98%
	Thatta	52	52	100%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	21	14	67%
	Karachi-West	20	20	100%
	Karachi-Malir	35	33	94%
	Karachi-Kemari	22	22	100%
	Karachi-Central	12	10	83%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	55	100%
	Mirpur Khas	106	106	100%
	Badin	124	124	100%
	Sukkur	64	63	98%
	Dadu	90	89	99%
	Sanghar	100	99	99%
	Jacobabad	44	44	100%
	Khairpur	170	168	99%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	53	98%
	Tando Muhammad Khan	41	40	98%
	Shaheed Benazirabad	122	122	100%

Table 7: IDSR reporting Tertiary care hospital Week 34, 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%

Notes from the field:

Chickenpox Outbreak Investigation Report Union Council Mughal Kot, Tehsil Darazinda, District D.I. Khan, Khyber Pakhtunkhwa, Pakistan – August 2025

Dr. Muhammad Ishfaq (Public Health Coordinator, Lakki Marwat)
Dr. Hunar Dar Khan (District Surveillance Coordinator, D.I. Khan)
Fellow, FETP Frontline 24th Cohort

Introduction

Chickenpox (varicella) is a highly contagious viral disease caused by the varicella-zoster virus (VZV), primarily affecting unvaccinated children. Globally, chickenpox remains a significant cause of morbidity despite the availability of an effective vaccine, particularly in regions with incomplete immunization coverage. The World Health Organization estimates millions of cases annually, with severe outcomes more common in immunocompromised individuals and adults. In South Asia, periodic outbreaks continue to occur due to suboptimal vaccination coverage and weak surveillance. In Pakistan, varicella is a notifiable disease under the Integrated Disease Surveillance and Response (IDSR) system, yet underreporting from private sectors remains a challenge.

The objectives of this investigation were:

To determine the magnitude of the chickenpox outbreak.

To identify potential risk factors contributing to the spread of the disease.

To recommend public health measures for outbreak containment and prevention of future occurrences.

Methods

This investigation was a **descriptive outbreak investigation** conducted in **Union Council (UC) Mughal Kot**, Tehsil **Darazinda**, District **D.I. Khan**, Khyber Pakhtunkhwa, during **August 2025** (Epidemiological Week 32).

The **study population** included all suspected chickenpox cases identified in the affected area. The **area** under investigation was the village Spalmay Waam within UC Mughal Kot, a rural community with limited healthcare access and low immunization coverage.

Case definitions were adopted as per national IDSR guidelines. A **probable case** was defined as any individual with acute onset of generalized maculopapulovesicular rash without other apparent cause, not laboratory confirmed, and not epidemiologically linked to another probable or confirmed case. A **confirmed case** was defined as a probable case that was laboratory confirmed for VZV IgM or epidemiologically linked to a confirmed case. Two epidemiologically linked probable cases were also considered confirmed.

Data were collected using a **structured case investigation form**, which included demographic, clinical, and exposure information. Immunity profiling was also conducted. Active case search was performed by conducting **door-to-door visits in 30 households** around the index case household.

For **laboratory confirmation**, **3 ml of blood serum samples** were collected from suspected patients in serum tubes and transported under **reverse cold chain** to the **National Institute of Health (NIH), Islamabad** for serologic testing (IgM and IgG).

The **analysis plan** included calculation of attack rates (overall, age-specific, and area-specific) where data permitted, along with descriptive epidemiological analysis by person, place, and time.

Results

A total of six chickenpox cases were identified during the investigation conducted in UC Mughal Kot, Village Spalmay Waam, Tehsil Darazinda, District D.I. Khan, in August 2025. The index case was a 16-month-old male child with onset of rash on 4 August 2025. The child had no recent travel history, but according to the parents, relatives from another village within the same UC had visited earlier with a child showing similar rashes, indicating possible local transmission. Subsequently, two additional family members—the child's 30-year-old mother and 10-year-old elder brother—developed similar vesicular lesions, which had crusted at the time of field investigation. Active case search was carried out in 30 nearby households as per district outbreak response protocol, resulting in the identification of three more cases: two brothers aged 2 and 7 years from one household and another child aged 3 years from a neighboring household.

Among all six cases, five were males and one was female, yielding a male-to-female ratio of 5:1. The age distribution showed that one case was below 2 years, two were between 2–5 years, and three were above 5 years, with a mean age of approximately eight years. None of the cases had documented or recalled vaccination against chickenpox. The outbreak remained geographically confined to Village Spalmay Waam within UC Mughal Kot. The overall attack rate was highest among children under ten years of age, reflecting the known susceptibility pattern in unvaccinated populations. Clinically, all patients presented with a generalized maculopapulovesicular rash accompanied by low-grade fever and malaise; no severe complications or hospitalizations were reported.

Blood serum samples (3 ml each) collected from suspected patients were sent to the National Institute of Health, Islamabad, for laboratory confirmation. The samples tested positive for varicella-zoster virus IgM, confirming the outbreak etiology. Key risk factors identified included absence of vaccination, close contact among children within households, and low awareness about isolation and infection prevention practices in the community.

Discussion

The investigation confirmed a localized **chickenpox outbreak** in UC Mughal Kot, D.I. Khan. The clustering of cases within households and among young, unvaccinated children indicates **person-to-person transmission** in a population with poor vaccine uptake. The absence of vaccination in all cases underscores a critical **immunization gap**.

Although the incidence of chickenpox in D.I. Khan had been low (1 per million population until August 2025), underreporting from private health facilities likely masked the true burden. The initial detection of cases through private healthcare providers highlights the **importance of integrating private sector reporting** into IDSR surveillance.

Socioeconomic conditions, close family living arrangements, and limited access to healthcare contributed to transmission dynamics. No severe or fatal cases were reported, consistent with the typical mild course of varicella in children. Nonetheless, without intervention, such outbreaks may spread rapidly and cause complications in susceptible adults or immunocompromised individuals.

Comparable studies from low-vaccination settings show that early **isolation of cases**, **community sensitization**, and **ring immunization** can effectively halt transmission (Ref: WHO Varicella Surveillance Manual, 2022;

CDC Varicella Outbreak Control Guidelines, 2023).

Conclusion

This investigation confirmed a **chickenpox outbreak** in UC Mughal Kot, Village Spalmay Waam, Tehsil Darazinda, D.I. Khan, involving six unvaccinated individuals, predominantly male children under ten years. The likely source was local transmission from a visiting relative. Timely public health response, including community education and isolation of cases, was critical to containing further spread.

Recommendations

Enforce **isolation of all suspected and confirmed chickenpox cases** for at least one incubation period (14–16 days).

Enhance varicella vaccination coverage through outreach campaigns—administer one dose to preschool children and two doses to school-aged children.

Conduct **monthly awareness sessions in schools and communities** on vaccine-preventable diseases (VPDs).

Expand **active surveillance and contact tracing** beyond the initial 30 households to ensure containment.

Strengthen **reporting from private healthcare facilities** to improve early outbreak detection.

Implement **infection control practices** in all residential and healthcare settings during outbreaks.

References

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Knowledge Hub

Mumps: What You Need to Know

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

What is Mumps?

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

How Mumps Spreads

Mumps is spread through respiratory droplets from an infected person's nose or throat. It can spread when an infected person:

Coughs, sneezes, or talks.

Shares drinks, food, or eating utensils.

Is in close contact with others for a long period of time (e.g., in classrooms, dormitories).

A person with mumps is most contagious from a few days before their salivary glands swell until about five days after the swelling begins.

Signs & Symptoms

Symptoms usually appear 16 to 18 days after exposure to the virus, but can range from 12 to 25 days. About one-third of people infected with mumps have very mild symptoms or no symptoms at all.

Common symptoms, when they appear, include:

Swollen, tender salivary glands (parotitis) under the ears on one or both sides of the face. This makes the cheeks and jaw look puffy.

Fever.

Headache.

Muscle aches.

Tiredness.

Loss of appetite.

Pain while chewing or swallowing.

Complications

Most people recover fully from mumps, but complications can occur, especially in adults. Complications are rare but include:

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

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

Encephalitis: Inflammation of the brain (very rare).

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

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

Prevention

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

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

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

Diagnosis and Treatment

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

Treatment: There is no specific treatment to cure mumps once you have it. Treatment focuses on managing symptoms:

Rest: Get plenty of rest.

Pain Relief: Use over-the-counter pain relievers (like acetaminophen or ibuprofen) for fever and aches.

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

More Information

For additional authoritative information on mumps, please visit:

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

World Health Organization (WHO): https://www.who.int/news-room/fact-sheets/detail/mumps

Public Health Agency of Canada (PHAC): https://www.canada.ca/en/public-health/services/diseases/mumps.html

UK Health Security Agency (UKHSA) / National Health Service (NHS - UK): https://www.nhs.uk/conditions/mumps/

PROTECT YOURSELF AGAINST MUMPS

MMR VACCINATION IS THE BEST WAY TO PREVENT MUMPS!

THERE IS NO TREATMENT FOR MUMPS IF YOU GET IT

KEEP FROM SPREADING MUMPS

Don't share things that have saliva on them

Cover your coughs and sneezes

Stay home when you are sick

Wash your hands often with soap and water

Clean and disinfect surfaces

SIGNS AND SYMPTOMS OF MUMPS

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

Fever

Headache

Loss of appetite

Muscle aches

Tiredness

VACCINATION ALSO HELPS PREVENT MUMPS COMPLICATIONS

Complications can include swelling of the:

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

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

CDC

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

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CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION