

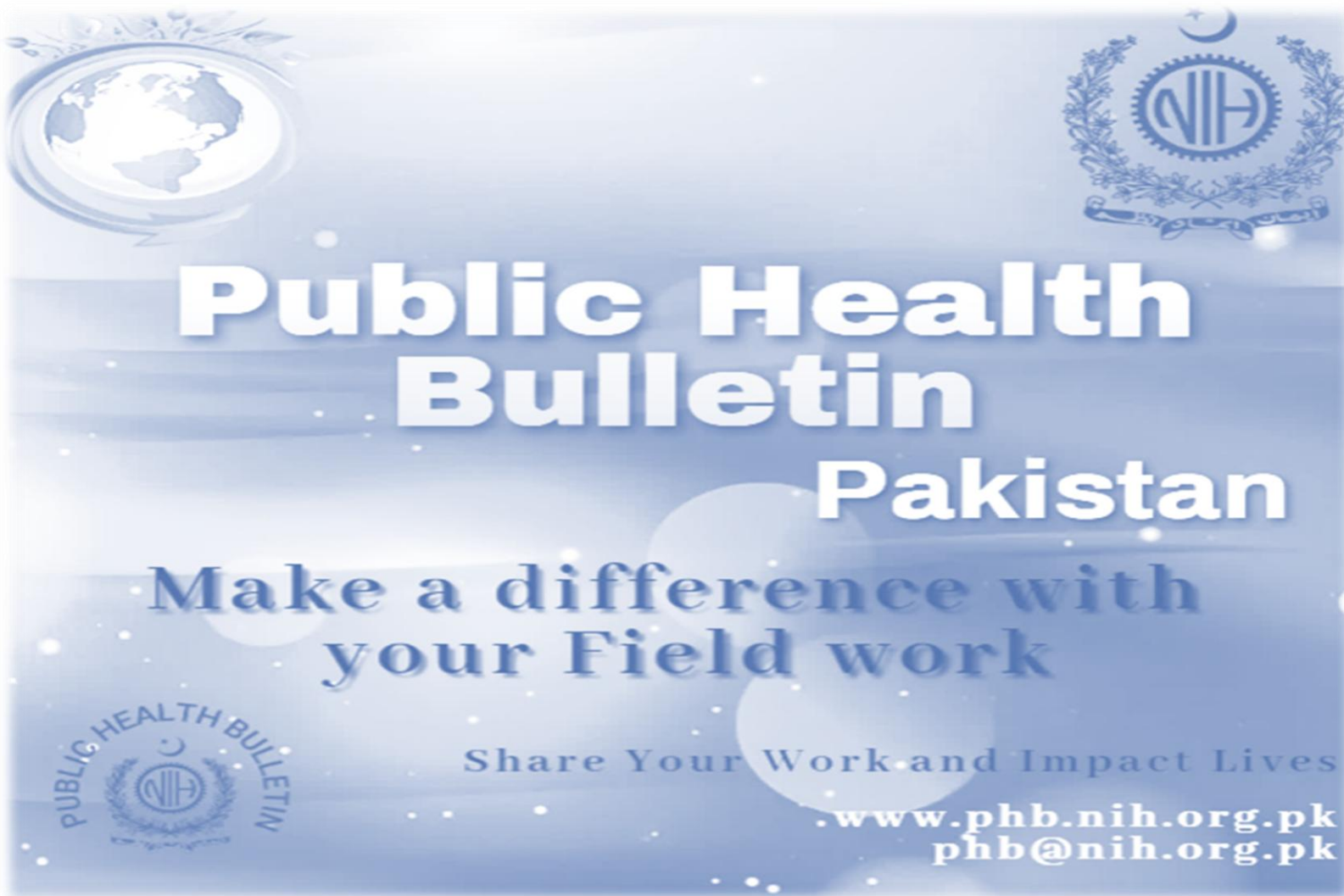
Integrated Disease Surveillance & Response (IDSR) Report

Center of Disease Control
National Institute of Health, Islamabad

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

Vol. 5 | Week 32
04th AUGUST – 10th AUGUST
18th AUGUST, 2025

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

Public Health Bulletin - Pakistan, Week 32, 2025

IDSR Reports

Ongoing Events

Field Reports

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;

- *Malaria Outbreak Investigation in UC Qasim, District Mardan, Khyber Pakhtunkhwa - July 2025*
- *Knowledge hub on Understanding HIV/AIDS: 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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*Sincerely,
The Chief Editor*

- During Week 32, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, ALRI <5 years, TB, B. Diarrhea, dog bite, VH (B, C & D), Typhoid and SARI
- Twenty 22 cases of AFP reported from KP, eleven from Sindh and three from AJK
- Thirteen suspected cases of HIV/ AIDS reported from Sindh, twelve from KP and nine from Balochistan.
- Among VPDs, there is an increase in number of cases of Measles, Meningitis and AFP this week.
- Among Respiratory diseases, there is decrease in number of cases of ILI, ALRI <5 years and TB this week.
- Among Water/food-borne diseases, there is decrease in number of cases of Acute Diarrhea (Non-Cholera) and B. Diarrhea this week.
- Among Vector-borne diseases, there is decrease in number of cases of Malaria this week.
- Among STDs, there is an increase in number of cases of HIV/AIDs this week.
- Among Zoonotic/Other diseases, there is decrease in number of cases of dog bite this week.
- Field investigation is required for verification of the alerts and for prevention and control of the outbreaks.

IDSR compliance attributes

- The national compliance rate for IDSR reporting in 158 implemented districts is 72%
- Sindh is the top reporting regions with a compliance rate of 96%, followed by GB 92%, AJK 89% and ICT 74%.
- The lowest compliance rate was observed in KP 64% and Balochistan 36%.

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2704	1734	64
Azad Jammu Kashmir	415	370	89
Islamabad Capital Territory	38	28	74
Balochistan	1308	475	36
Gilgit Baltistan	410	377	92
Sindh	2111	2026	96
National	6986	5289	72

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

Mumps

- **Enhance Surveillance and Case Notification:** Strengthen mumps reporting within the IDSR framework by training healthcare providers on the standard case definition, outbreak detection, and timely notification particularly in schools and crowded settings.
- **Promote Immunization Coverage:** Ensure high coverage of the Measles-Mumps-Rubella (MMR) vaccine through routine immunization and targeted campaigns in areas with low vaccination rates or recent outbreaks.
- **Strengthen Laboratory Confirmation:** Support laboratory capacity for mumps confirmation through serological and PCR testing, especially during outbreaks or in atypical cases.
- **Implement Outbreak Control Measures:** Isolate suspected cases during the infectious period and conduct contact tracing in school and institutional settings to limit further transmission.
- **Raise Community Awareness:** Disseminate culturally appropriate information on mumps symptoms, transmission through respiratory droplets, importance of vaccination, and timely careseeking behavior.

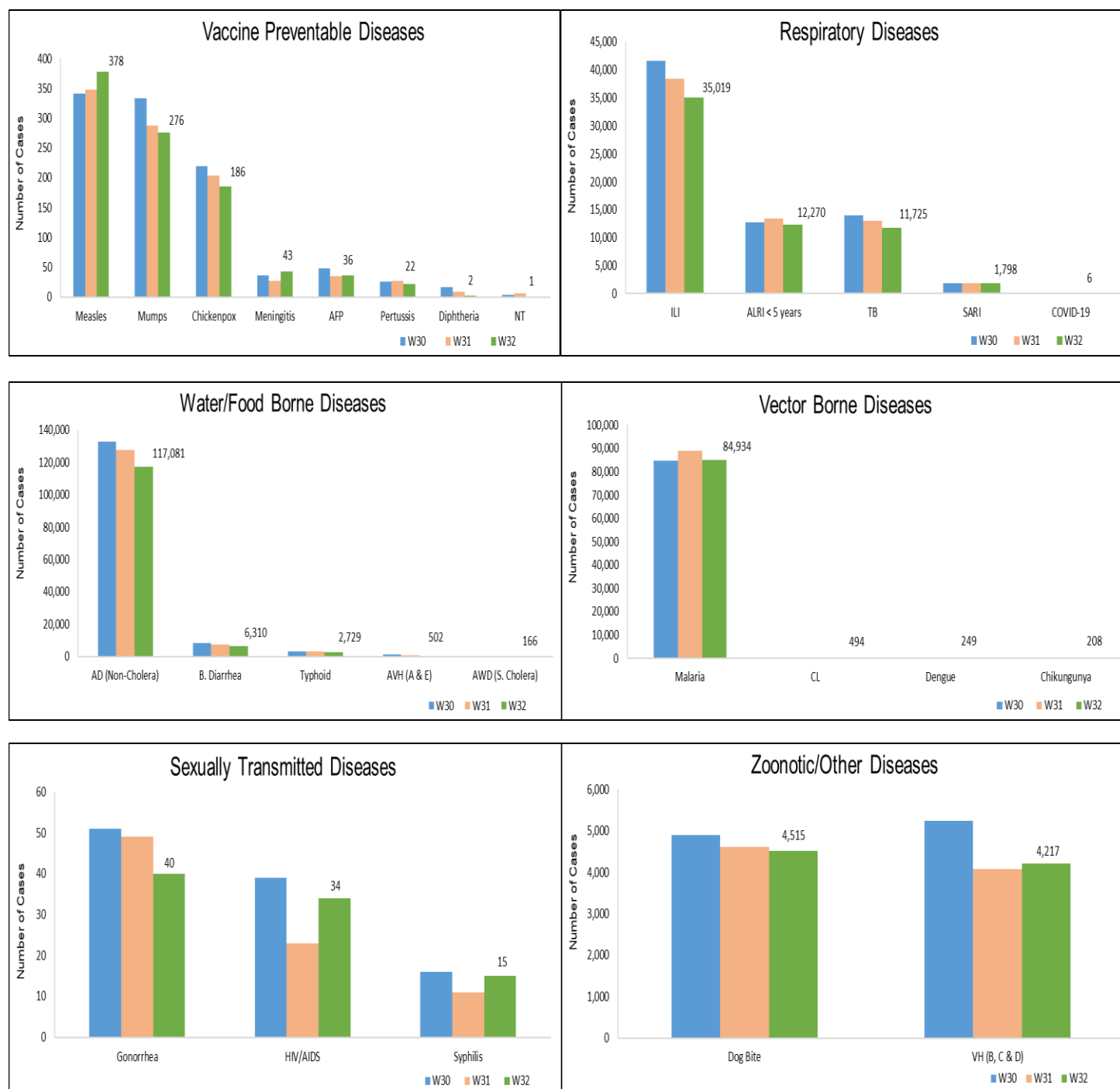
Acute Viral Hepatitis (A & E)

- **Enhance Case Detection and Reporting:** Strengthen AHV (A & E) surveillance in the IDSR system by training health personnel to recognize symptoms and ensure timely reporting, especially during seasonal peaks or in outbreak-prone areas.
- **Strengthen Laboratory Confirmation:** Improve diagnostic capacity by ensuring availability of rapid and confirmatory tests (e.g., IgM for HAV/HEV) at regional laboratories to facilitate timely outbreak response.
- **Improve WASH Infrastructure:** Coordinate with municipal and rural development authorities to upgrade water supply systems, prevent sewage contamination, and promote latrine use to interrupt fecal-oral transmission.
- **Engage in Risk Communication:** Design and disseminate targeted messages through community channels to raise awareness about safe drinking water, personal hygiene, food safety, and the risks of consuming contaminated water or raw produce.

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 32, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	2,482	4,361	3,322	503	47,121	NR	59,292	117,081
Malaria	8	2,339	2	0	9,162	NR	73,423	84,934
ILI	1,747	2,293	400	1,112	4,082	NR	25,385	35,019
ALRI < 5 years	740	773	565	5	917	NR	9,270	12,270
TB	114	50	175	19	390	NR	10,977	11,725
B. Diarrhea	56	641	218	6	1,104	NR	4,285	6,310
Dog Bite	108	195	5	1	1,050	NR	3,156	4,515
VH (B, C & D)	17	49	2	0	120	NR	4,029	4,217
Typhoid	15	244	272	2	831	NR	1,365	2,729
SARI	157	240	202	0	1,111	NR	88	1,798
AVH (A & E)	20	0	18	0	209	NR	255	502
CL	0	112	0	0	380	NR	2	494
Measles	15	24	18	0	269	NR	52	378
Mumps	4	16	8	0	213	NR	35	276
Dengue	1	13	0	0	112	NR	123	249
Chikungunya	0	0	0	0	0	NR	208	208
Chickenpox/ Varicella	9	3	25	5	112	NR	32	186
AWD (S.Cholera)	25	7	55	0	62	NR	17	166
Meningitis	6	0	8	0	18	NR	11	43
Gonorrhea	0	24	0	0	7	NR	9	40
AFP	3	0	0	0	22	NR	11	36
HIV/AIDS	0	9	0	0	12	NR	13	34
Pertussis	0	5	3	0	4	NR	10	22
Syphilis	0	0	0	0	0	NR	15	15
COVID-19	0	0	0	0	6	NR	0	6
Diphtheria (Probable)	1	0	0	0	0	NR	1	2
NT	0	0	0	0	1	NR	0	1

Figure 1: Most frequently reported suspected cases during Week 32, Pakistan.



- Malaria cases were maximum followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, B. Diarrhea, VH (B, C, D), dog bite, Typhoid and AVH (A & E).
- AD (non-cholera) cases are mostly from Karachi South, Mirpurkhas and Badin whereas Malaria cases are from Larkana, Badin and Khairpur
- Eleven 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, Chickenpox, AFP, Diphtheria, AD (Non-Cholera), Typhoid, Malaria, ILI, ALRI<5 Years, HIV and Gonorrhea while an increase in number of cases of VH (B, C & D), dog bite, Pertussis and Meningitis this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 32, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	B. Diarrhea	VH (B, C & D)	Dog Bite	Typhoid	AVH (A & E)
Badin	5,454	3,540	2,306	755	591	325	341	83	53	14
Dadu	3,717	2,941	545	365	780	582	62	427	142	34
Ghotki	3,706	1,425	8	509	557	151	310	295	0	0
Hyderabad	1,093	2,511	1,173	341	143	61	52	59	4	11
Jacobabad	1,167	761	610	120	455	117	179	179	24	0
Jamshoro	2,968	2,019	67	509	228	121	195	99	44	9
Kamber	3,885	1,995	0	729	187	122	102	168	16	0
Karachi Central	45	1,123	1,131	140	2	20	17	15	135	13
Karachi East	47	256	124	20	11	10	3	3	10	0
Karachi Keamari	42	658	273	8	17	5	0	0	3	0
Karachi Korangi	77	341	2	21	0	8	0	0	2	0
Karachi Malir	226	1,605	2,594	182	306	51	11	54	14	4
Karachi South	164	6,126	15	171	92	296	130	30	308	31
Karachi West	233	837	1,131	89	130	20	29	72	23	2
Kashmore	1,832	539	350	254	95	56	14	81	1	1
Khairpur	5,114	3,177	6,030	1,075	934	338	105	229	235	24
Larkana	5,511	1,822	0	676	182	258	65	30	2	1
Matlari	3,713	1,743	0	513	171	57	231	70	3	1
Mirpurkhas	3,998	3,575	2,477	622	302	127	204	146	7	5
Naushero Feroze	2,319	1,739	659	429	470	436	28	292	138	1
Sanghar	4,958	2,049	101	905	314	76	1,037	184	45	5
Shaheed Benazirabad	2,617	1,858	13	309	175	73	92	132	83	0
Shikarpur	2,007	1,077	5	201	121	156	119	153	4	0
Sujawal	1,103	3,405	8	62	234	34	63	60	11	16
Sukkur	2,173	1,485	1,738	315	950	111	129	85	2	0
Tando Allahyar	3,471	1,853	804	383	128	133	87	60	8	1
Tando Muhammad Khan	3,240	1,964	75	472	154	159	103	59	0	0
Tharparkar	3,745	2,903	1,127	482	564	215	48	0	22	20
Thatta	2,191	2,163	2,019	51	638	68	205	91	17	62
Umerkot	2,607	1,802	0	269	339	99	68	0	9	0
Total	73,423	59,292	25,385	10,977	9,270	4,285	4,029	3,156	1,365	255

Figure 2: Most frequently reported suspected cases during Week 32 Sindh

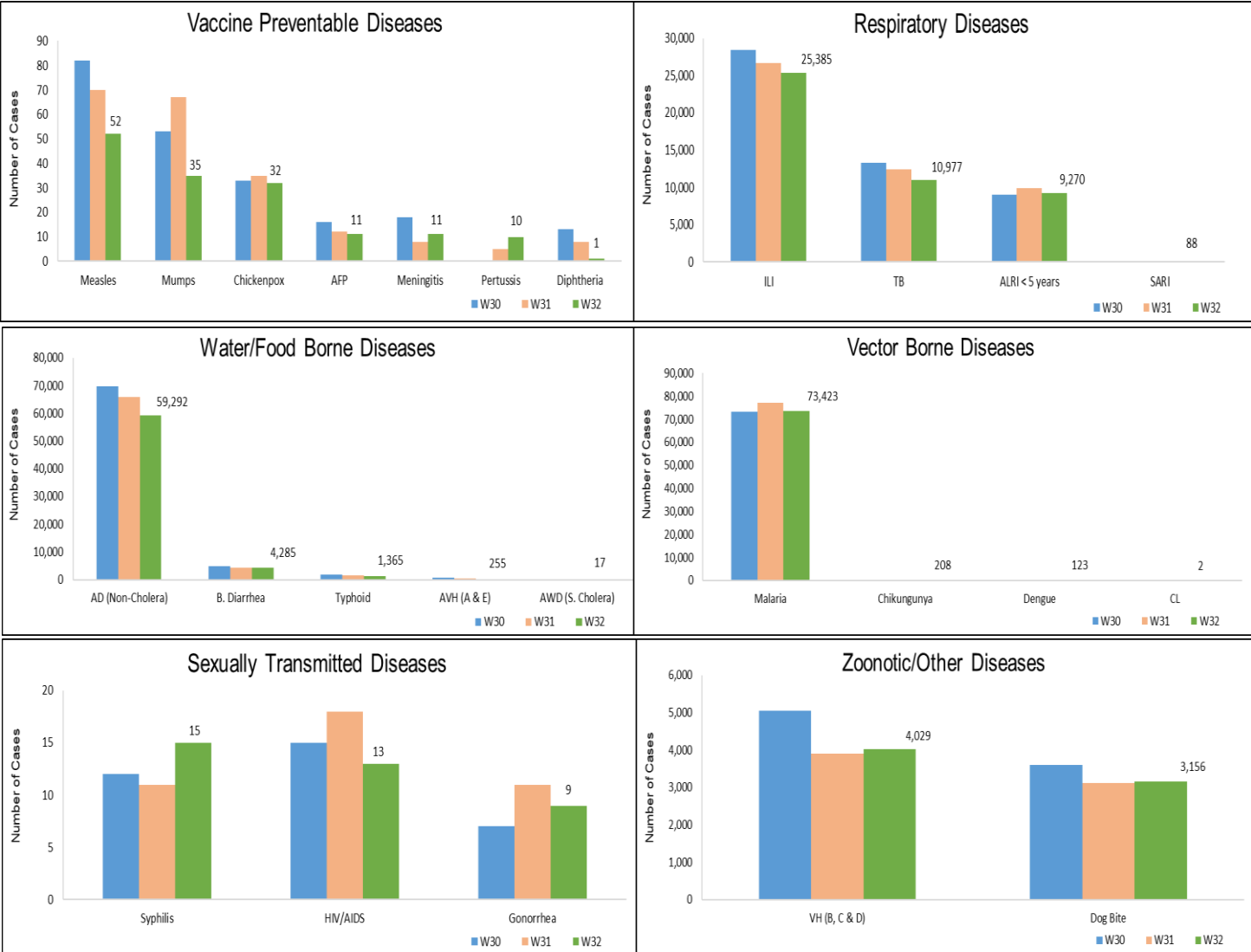
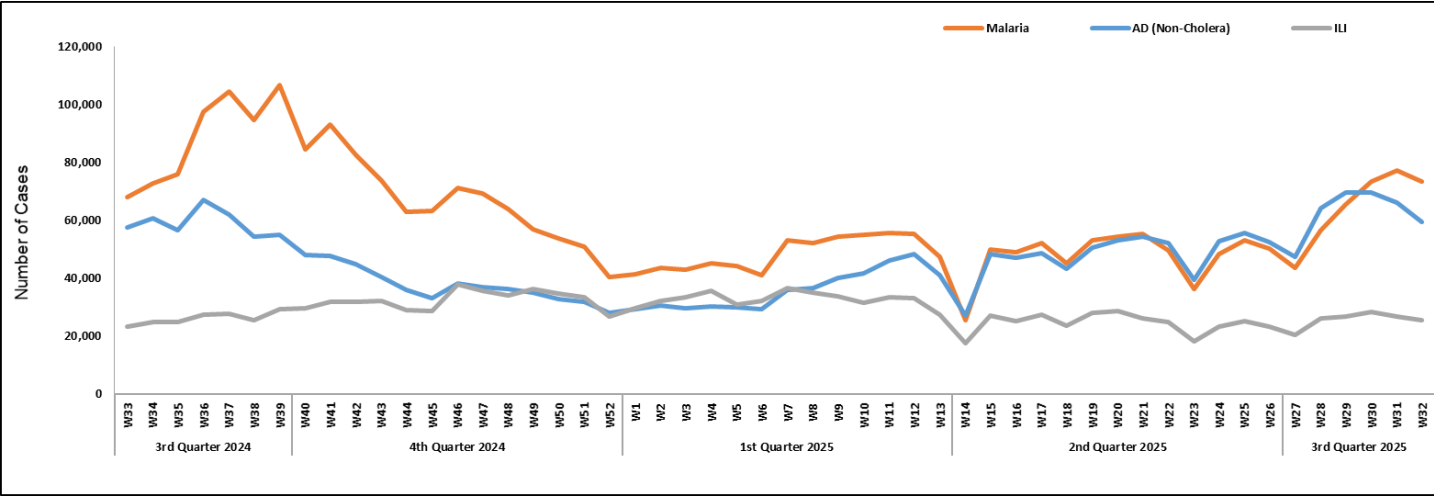


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh



- AD (Non-Cholera), Malaria, ILI, 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 Lasbella and Usta Muhammad while ILI cases are mostly reported from Kharan, Sibbi and Quetta
- Nine cases of HIV/AIDs reported from Balochistan. Field investigation is required to confirm the cases.
- Measles and dog bite cases showed an increase in number while AD (Non-Cholera), ILI, Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, AWD (S. Cholera), TB, Mumps, Pertussis and Chickenpox showed decrease in number of cases this week.

Table 3: District wise distribution of most frequently reported suspected cases during Week 32, Balochistan

Districts	AD (Non-Cholera)	Malaria	ILI	ALRI < 5 years	B. Diarrhea	Typhoid	SARI	Dog Bite	CL	TB
Barkhan	88	56	28	15	2	21	0	1	0	0
Chagai	34	12	71	0	14	6	0	0	0	0
Chaman	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Gwadar	0	0	0	0	0	0	0	0	0	0
Harnai	175	117	0	127	76	0	0	1	0	0
Hub	75	155	22	0	8	0	0	0	0	0
Jaffarabad	377	603	78	7	36	7	20	85	94	30
Jhal Magsi	372	265	213	48	1	12	2	5	0	7
Kachhi (Bolan)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Kalat	47	35	1	4	9	28	2	0	0	1
Kech (Turbat)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Kharan	206	49	421	14	118	10	0	0	0	0
Khuzdar	224	131	167	0	25	35	41	1	0	0
Killa Abdullah	24	0	6	13	4	4	0	2	0	0
Killa Saifullah	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Kohlu	29	32	45	3	21	9	NR	NR	NR	NR
Lasbella	586	323	51	175	28	6	0	8	9	3
Loralai	140	38	155	19	19	15	12	4	0	0
Mastung	105	40	105	1	11	9	65	0	0	0
MusaKhel	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naseerabad	234	96	0	21	9	44	17	59	2	9
Nushki	175	7	2	0	66	0	0	0	0	0
Panjgur	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Quetta	189	8	273	46	22	12	9	2	1	0
Sherani	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sibi	288	19	299	38	12	7	66	1	6	0
Sohbat pur	314	94	13	159	81	15	4	7	0	0
Surab	29	8	95	0	0	0	0	0	0	0
Usta Muhammad	576	200	115	79	60	3	0	19	0	0
Washuk	65	45	103	3	19	1	0	0	0	0
Zhob	9	6	30	1	0	0	2	0	0	0
Ziarat	0	NR	0	NR	0	NR	NR	NR	0	NR
Total	4,361	2,339	2,293	773	641	244	240	195	112	50

Figure 4: Most frequently reported suspected cases during Week 32, Balochistan

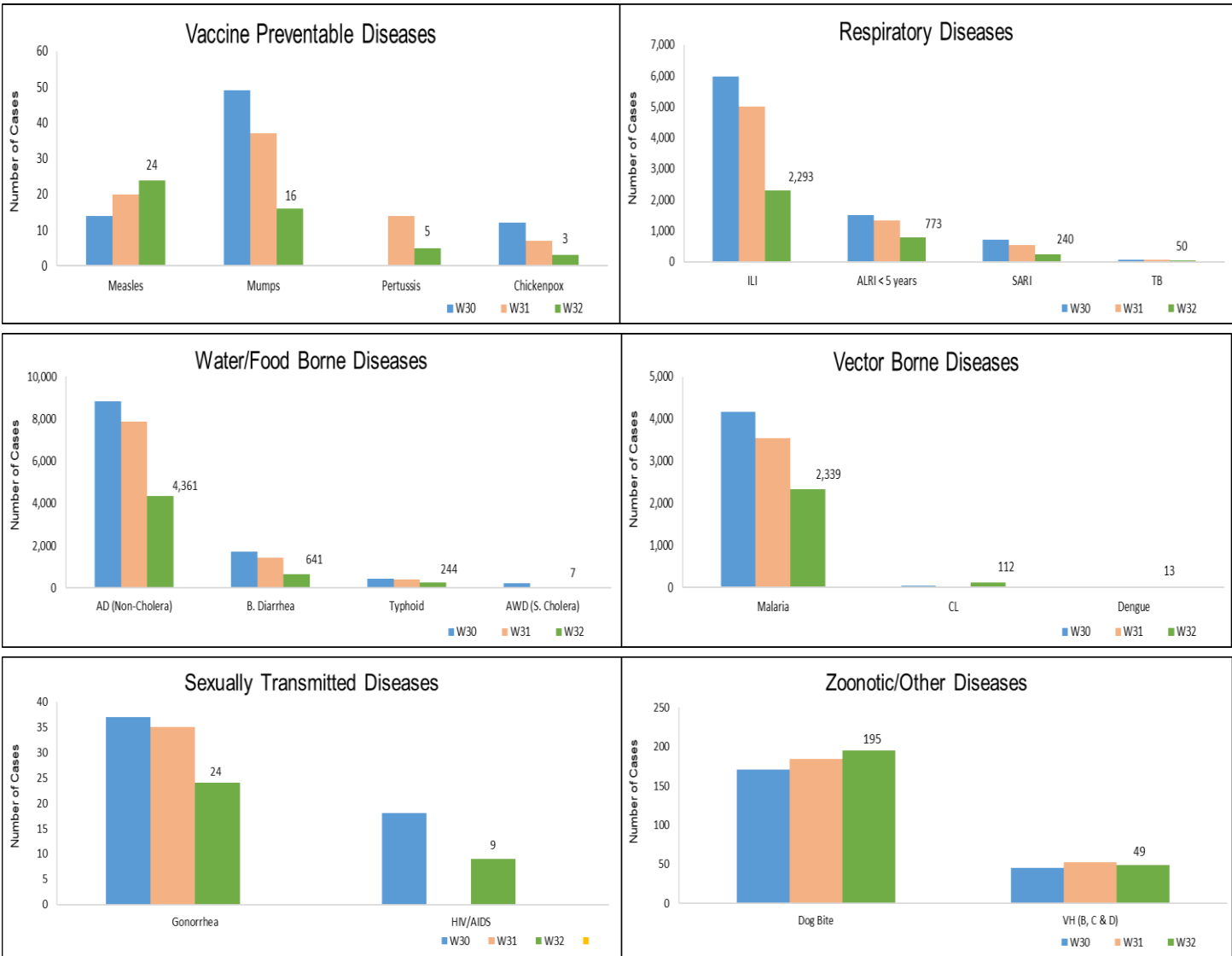
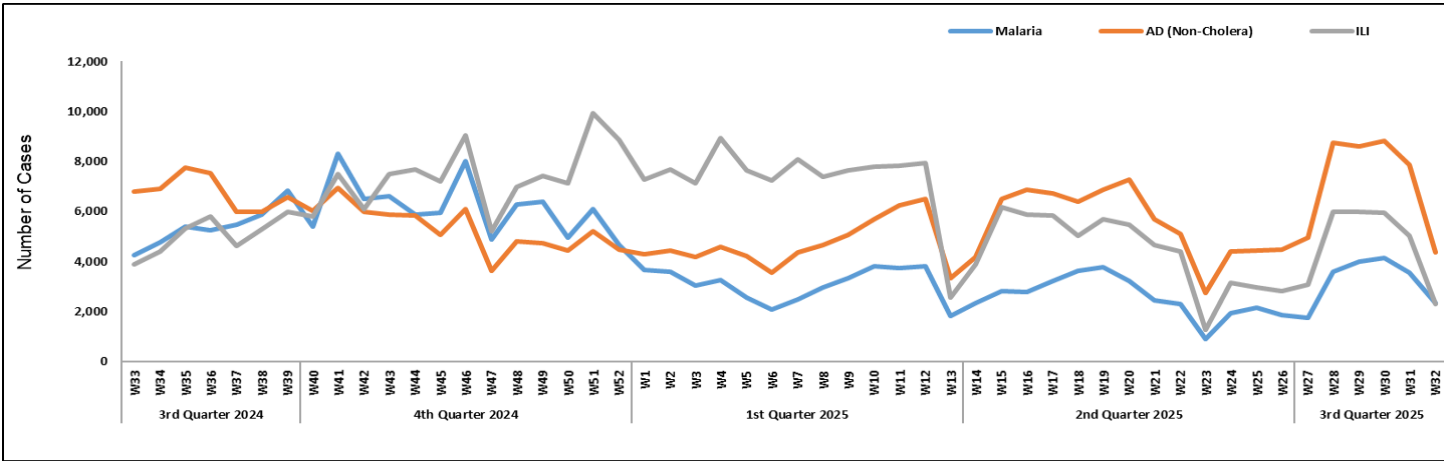


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, SARI, B.Diarrhea, dog bite, ALRI<5 Years, Typhoid, TB and CL
- AD (Non-Cholera), chickenpox and dog bite cases showed a decline in number while Measles, mumps, AFP, meningitis, ILI, SARI, ALRI<5 years, TB, Malaria, VH(B,C & D) and HIV/AIDs showed an increase in number this week.
- Twenty-two cases of AFP reported from KP. All are suspected cases and need field verification.
- Twelve cases of HIV/AIDs reported from KP. Field investigation is required.

Table 4: District wise distribution of most frequently reported suspected cases during Week 32, KP

Districts	AD (Non-Cholera)	Malaria	ILI	SARI	B. Diarrhea	Dog Bite	ALRI < 5 years	Typhoid	TB	CL
Abbottabad	2,057	1	84	5	29	15	16	13	18	0
Bajaur	998	375	0	34	77	56	5	0	10	7
Bannu	1,013	1,827	0	0	19	5	6	78	12	0
Battagram	768	130	671	4	8	13	NR	2	39	NR
Buner	497	345	0	0	0	10	0	6	2	0
Charsadda	2,882	516	1,366	190	101	22	308	60	14	0
Chitral Lower	1,112	25	14	14	21	17	18	7	3	8
Chitral Upper	280	9	40	10	10	6	7	17	2	2
D.I. Khan	2,169	1,045	0	0	48	58	2	5	13	2
Dir Lower	2,461	104	0	0	114	33	8	38	1	4
Dir Upper	2,468	12	17	0	34	11	81	12	3	3
Hangu	205	87	76	0	0	0	43	10	0	18
Haripur	1,391	0	11	0	0	29	14	0	0	0
Karak	949	362	58	0	16	85	14	7	10	201
Khyber	876	833	50	437	142	38	115	133	45	39
Kohat	1,288	310	8	3	33	35	3	16	0	9
Kohistan Lower	211	7	0	0	9	3	0	0	1	4
Kohistan Upper	282	9	0	0	23	2	0	3	0	0
Kolai Palas	114	0	0	0	6	0	0	0	2	0
L & C Kurram	38	23	17	71	11	0	3	11	0	0
Lakki Marwat	1,053	565	0	0	8	76	2	18	5	0
Malakand	1,364	45	30	0	0	0	0	20	3	3
Mansehra	1,113	7	111	0	0	0	0	0	1	0
Mardan	1,397	149	3	0	22	10	9	15	6	0
Mohmand	239	353	107	187	31	18	2	6	3	42
North Waziristan	109	149	0	11	19	1	9	19	3	14
Nowshera	3,237	369	47	3	30	17	3	31	22	13
Orakzai	164	44	10	0	8	7	0	0	0	0
Peshawar	5,213	112	465	0	109	22	24	170	24	2
SD Tank	22	13	3	0	7	0	0	3	0	0
Shangla	2,727	583	0	0	19	79	7	25	73	0
South Waziristan (Lower)	68	87	89	8	0	10	26	10	8	7
South Waziristan (Upper)	66	122	19	5	9	0	6	10	0	0
Swabi	2,033	86	515	60	31	207	57	60	35	0
Swat	5,118	83	121	0	24	146	112	5	19	0
Tank	718	273	43	0	10	4	10	5	6	0
Tor Ghar	157	81	4	27	38	8	2	6	2	2
Upper Kurram	264	21	103	42	38	7	5	10	5	0
Total	47,121	9,162	4,082	1,111	1,104	1,050	917	831	390	380

Figure 6: Most frequently reported suspected cases during Week 32, KP

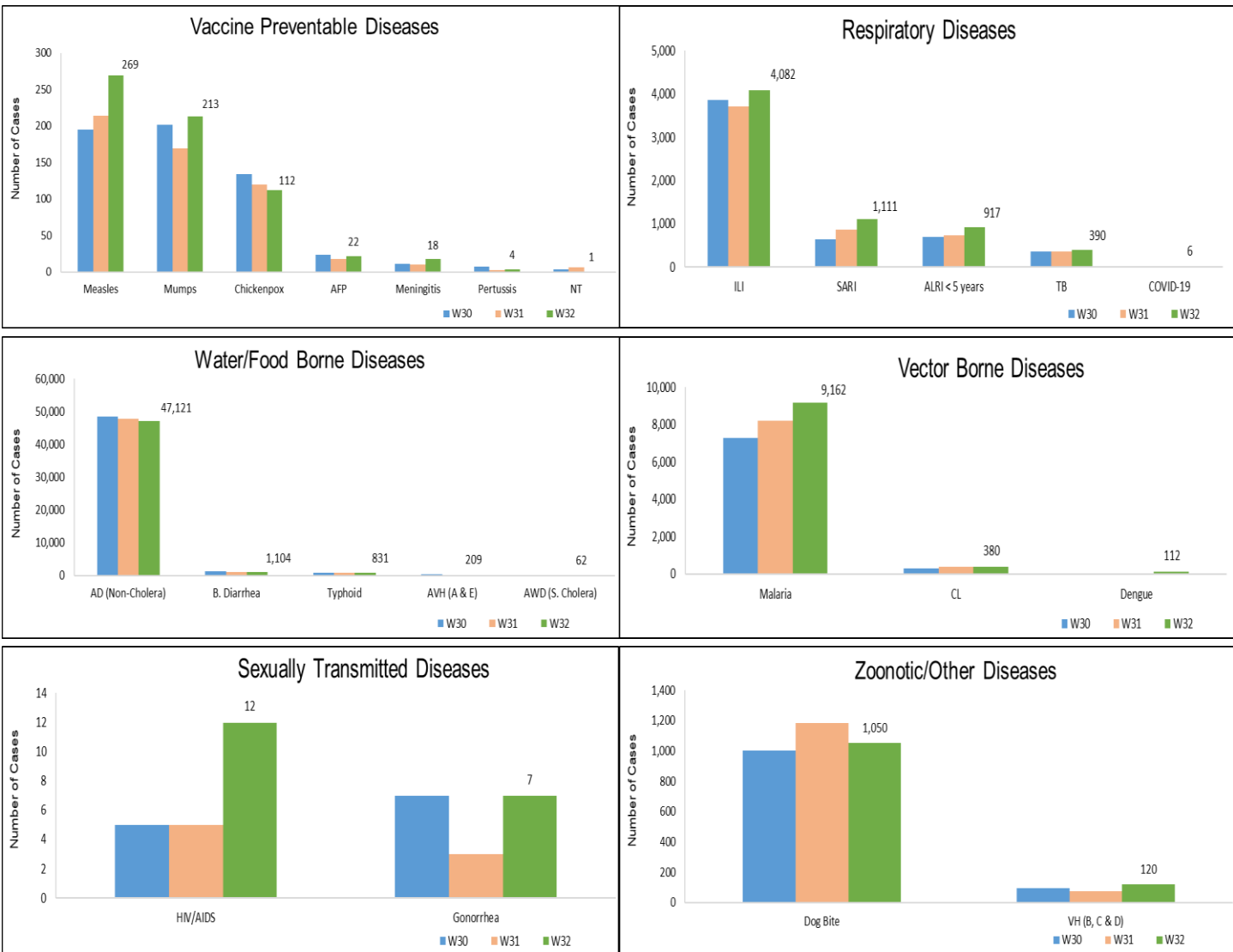
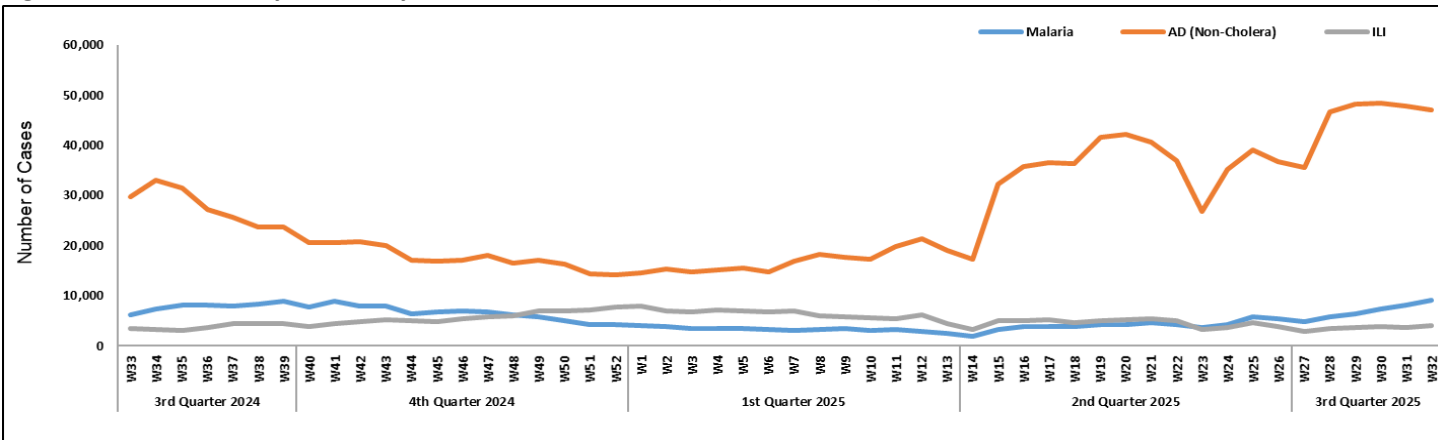


Figure 7: Week wise reported suspected cases Malaria, AD (Non-Cholera) & ILI, KP



- 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

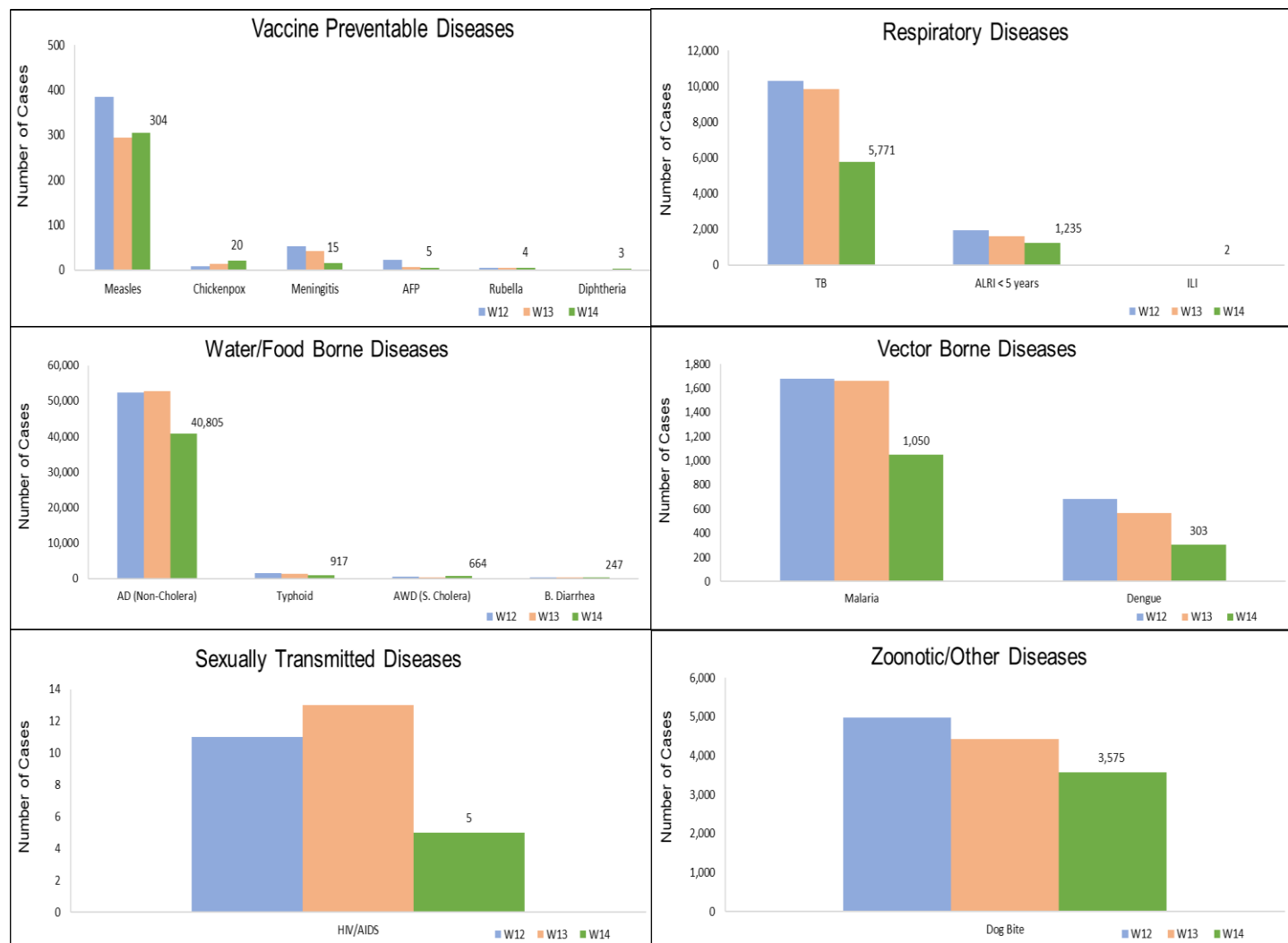
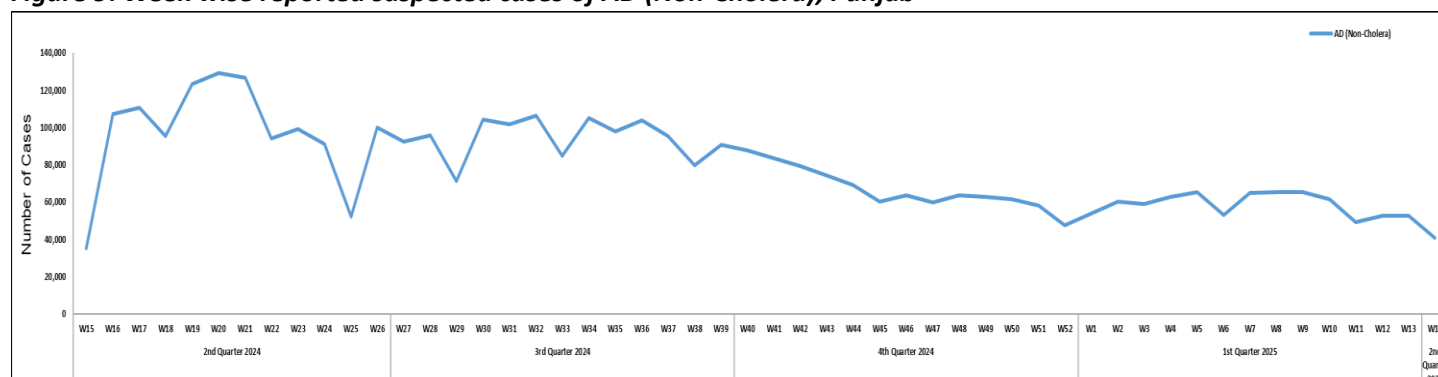


Figure 9: Week wise reported suspected cases of AD (Non-Cholera), Punjab



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

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

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

Figure 10: Most frequently reported suspected cases during Week 32, AJK

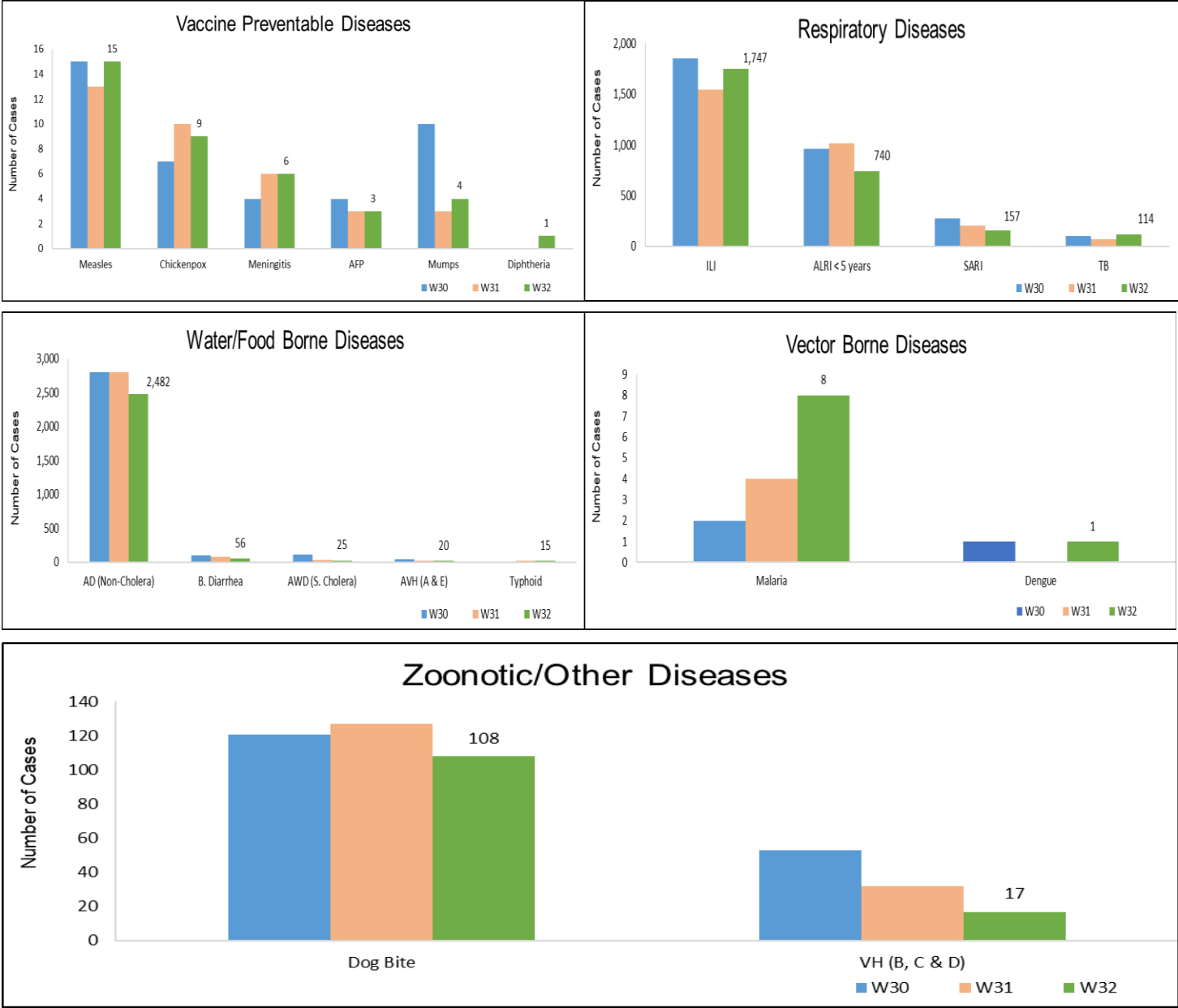


Figure 11: Week wise reported suspected cases of ILI and AD (Non-Cholera)

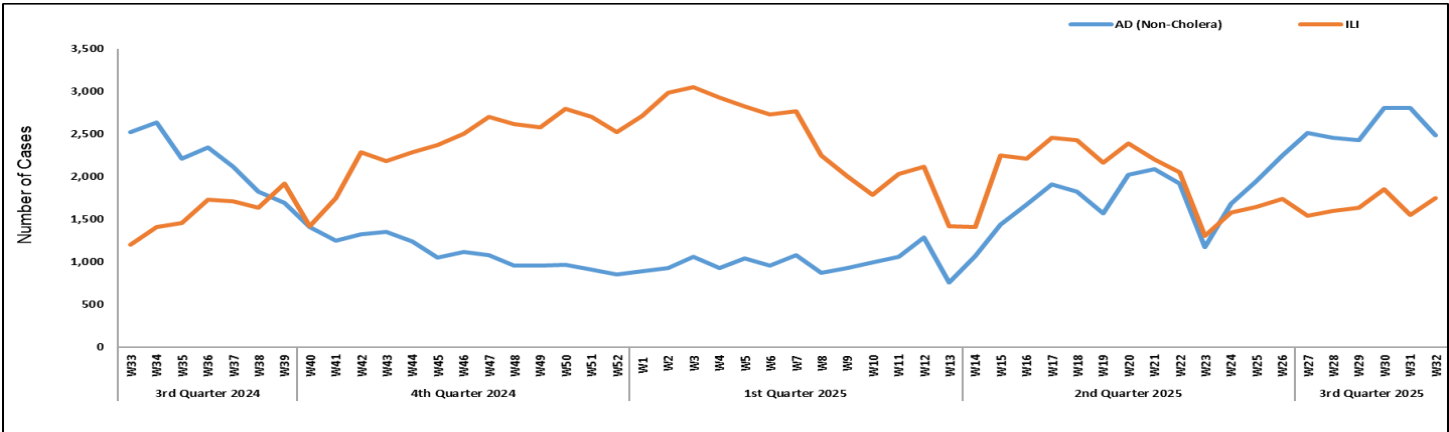


Figure 12: Most frequently reported suspected cases during Week 32, ICT

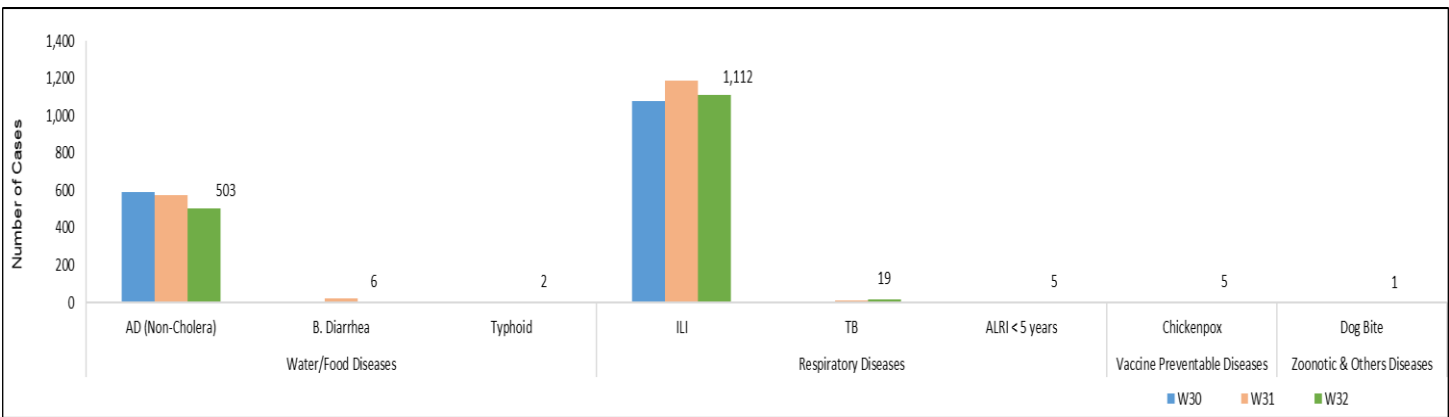


Figure 13: Week wise reported suspected cases of ILI, ICT

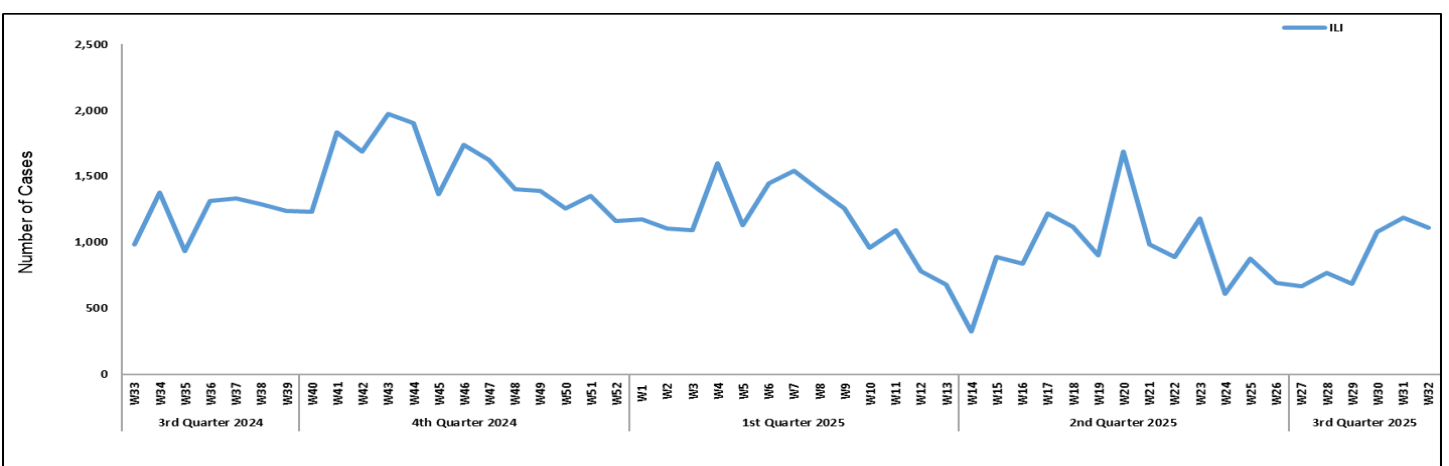


Figure 14: Most frequent cases reported during Week 32, GB

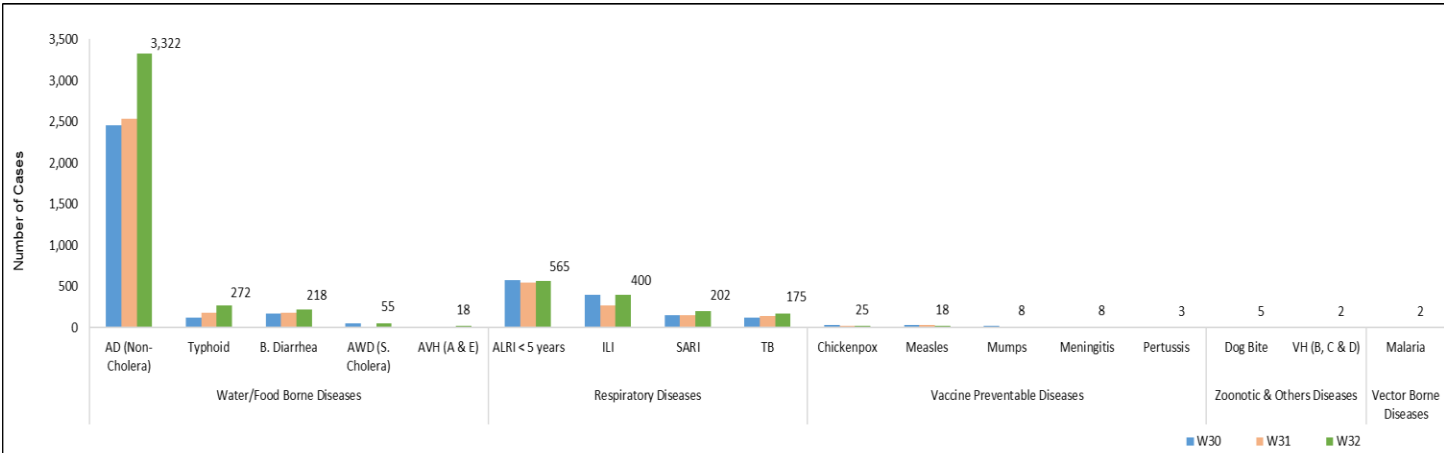


Figure 15: Week wise reported suspected cases of AD (Non-Cholera), GB

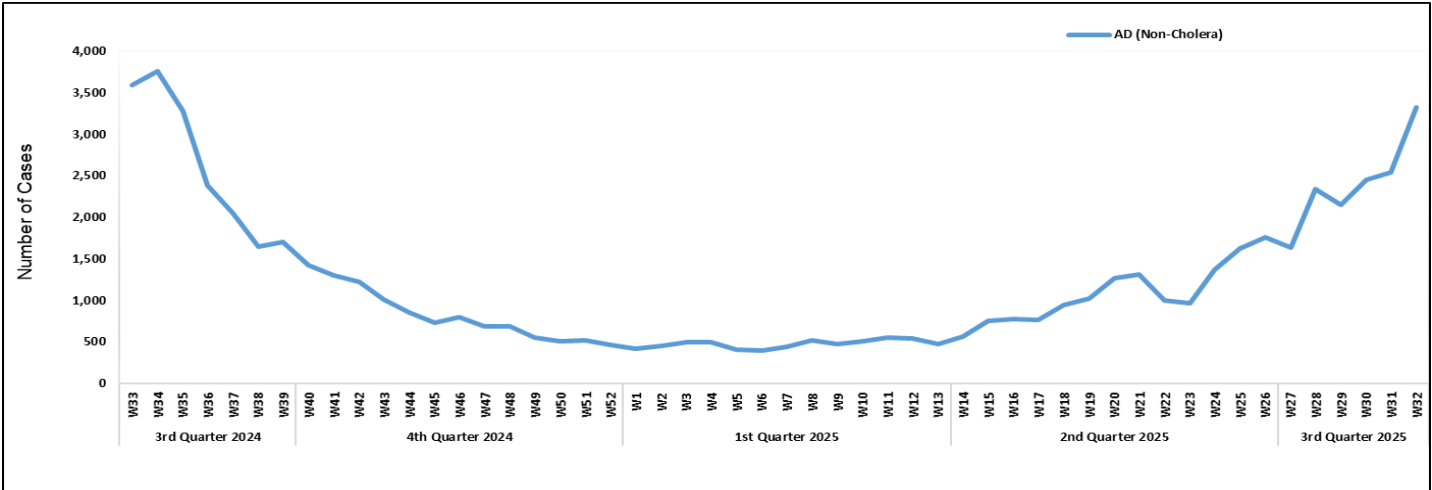


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 32

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)	274	1	-	-	0	0	-	-	0	0	-	-	0	0
Stool culture & Sensitivity	409	1	-	-	0	0	-	-	0	0	-	-	0	0
Malaria	15,320	1,130	-	-	24	15	-	-	130	1	-	-	16	4
CCHF	0	0	20	5	0	0	-	-	0	0	-	-	-	-
Dengue	3,489	521	3	0	0	0	-	-	0	0	-	-	24	0
VH (B)	16,440	494	151	115	2	0	-	-	1,073	24	-	-	452	1
VH (C)	15,719	1,105	114	43	2	0	-	-	1,065	5	-	-	452	3
VH (D)	128	24	48	4	0	0	-	-	-	-	-	-	0	0
VH (A)	190	53	-	-	0	0	-	-	8	2	-	-	0	0
VH (E)	131	22	-	-	0	0	-	-	0	0	-	-	0	0
Covid-19	36	1	2	0	0	0	-	-	4	0	-	-	18	0
TB	630	63	-	-	0	0	-	-	31	0	-	-	121	15
HIV/ AIDS	7,375	45	-	-	0	0	-	-	295	0	-	-	442	0
Syphilis	3,660	52	-	-	0	0	-	-	124	0	-	-	0	0
Typhoid	2,145	44	-	-	0	0	-	-	100	4	-	-	0	0
Diphtheria	7	2	1	0	1	1	-	-	0	0	-	-	0	0
ILI	14	0	-	-	0	0	-	-	0	0	-	-	0	0
Pneumonia (ALRI)	346	84	-	-	0	0	-	-	0	0	-	-	0	0
Meningitis	34	1	-	-	0	0	-	-	0	0	-	-	0	0
Measles	156	74	11	6	177	81	8	4	5	2	197	43	10	3
Rubella	156	0	11	1	177	9	8	0	5	0	197	1	10	2
Rubella (CRS)	12	4	-	-	0	0	-	-	0	0	-	-	0	0
Leishmaniasis (cutaneous)	28	4	-	-	0	0	-	-	0	0	-	-	0	0
Chikungunya	10	3	3	0	0	0	-	-	0	0	-	-	0	0
Brucellosis	1	0	-	-	0	0	-	-	0	0	-	-	0	0
Gonorrhea	123	0	-	-	0	0	-	-	0	0	-	-	0	0
Covid-19	Out of SARI	-	-	-	-	-	-	-	-	-	-	-	-	-
	Out of ILI	-	-	-	-	-	-	-	-	-	-	-	-	-
Influenza A	Out of SARI	-	-	-	-	-	-	-	-	-	-	-	-	-
	Out of ILI	-	-	-	-	-	-	-	-	-	-	-	-	-
Influenza B	Out of SARI	-	-	-	-	-	-	-	-	-	-	-	-	-
	Out of ILI	-	-	-	-	-	-	-	-	-	-	-	-	-
RSV	Out of SARI	-	-	-	-	-	-	-	-	-	-	-	-	-

Out of ILI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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IDSR Reports Compliance

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

Table 6: IDSR reporting districts Week 32, 2025

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	105	95%
	Bannu	238	128	54%
	Battagram	59	39	66%
	Buner	34	21	62%
	Bajaur	44	35	80%
	Charsadda	59	59	100%
	Chitral Upper	34	30	88%
	Chitral Lower	35	34	97%
	D.I. Khan	114	113	99%
	Dir Lower	74	62	84%
	Dir Upper	37	30	81%
	Hangu	22	12	55%
	Haripur	72	69	96%
	Karak	36	36	100%
	Khyber	53	48	91%
	Kohat	61	61	100%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	15	75%
	Kolai Palas	10	9	90%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	6	14%
	Upper Kurram	41	31	76%
	Malakand	42	24	57%
	Mansehra	133	82	62%
	Mardan	80	51	64%
	Nowshera	56	54	96%
	North Waziristan	13	9	69%
	Peshawar	156	134	86%
	Shangla	37	36	97%
	Swabi	64	63	98%
	Swat	77	77	100%

	South Waziristan (Upper)	93	37	40%
	South Waziristan (Lower)	42	22	52%
	Tank	34	32	94%
	Torghar	14	14	100%
	Mohmand	68	59	87%
	SD Peshawar	5	0	0%
	SD Tank	58	5	9%
	Orakzai	69	12	17%
Azad Jammu Kashmir	Mirpur	37	37	100%
	Bhimber	71	71	100%
	Kotli	60	60	100%
	Muzaffarabad	45	22	49%
	Poonch	46	46	100%
	Haveli	39	39	100%
	Bagh	40	1	3%
	Neelum	39	39	100%
	Jhelum Valley	29	28	97%
	Sudhnooti	27	26	96%
Islamabad Capital Territory	ICT	23	22	96%
	CDA	15	6	40%
Balochistan	Gwadar	26	1	4%
	Kech	44	0	0%
	Khuzdar	74	20	27%
	Killa Abdullah	26	6	23%
	Lasbella	55	55	100%
	Pishin	69	0	0%
	Quetta	55	12	22%
	Sibi	36	21	58%
	Zhob	39	3	8%
	Jaffarabad	16	16	100%
	Naserabad	32	21	66%
	Kharan	30	30	100%
	Sherani	15	0	0%
	Kohlu	75	8	11%
	Chagi	36	5	14%
	Kalat	41	40	98%
	Harnai	17	14	82%
	Kachhi (Bolan)	35	0	0%
	Jhal Magsi	28	25	89%
	Sohbat pur	25	25	100%
	Surab	32	16	50%
	Mastung	45	45	100%
	Loralai	33	13	39%
	Killa Saifullah	28	0	0%
	Ziarat	29	1	3%
	Duki	31	0	0%
	Nushki	32	26	81%
	Dera Bugti	45	0	0%
	Washuk	46	12	26%
	Panjgur	38	0	0%

	Awaran	23	0	0%
	Chaman	24	0	0%
	Barkhan	20	19	95%
	Hub	33	7	21%
	Musakhel	41	0	0%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	38	100%
	Gilgit	42	39	93%
	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	72	100%
	Ghotki	64	64	100%
	Umerkot	62	62	100%
	Naushahro Feroze	107	102	95%
	Tharparkar	276	252	91%
	Shikarpur	60	59	98%
	Thatta	52	52	100%
	Larkana	67	66	99%
	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	11	92%
	Karachi-Korangi	18	18	100%
	Karachi-South	6	4	67%
	Sujawal	55	22	40%
	Mirpur Khas	106	105	99%
	Badin	124	124	100%
	Sukkur	64	62	97%
	Dadu	90	90	100%
	Sanghar	100	98	98%
	Jacobabad	44	44	100%
	Khairpur	170	167	98%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	41	41	100%
	Shaheed Benazirabad	122	122	100%

Table 7: IDSR reporting Tertiary care hospital Week 32, 2025

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

Notes from the field:

Malaria Outbreak Investigation in UC Qasim, District Mardan, Khyber Pakhtunkhwa - July 2025

Saad Hussain Shah

Asad khan

Fatima Khan

FETP Frontline Fellows 23rd Cohort

Introduction

Malaria is a life-threatening disease caused by protozoan parasites of the genus *Plasmodium*, transmitted to humans by the bite of infected female *Anopheles* mosquitoes. Globally, malaria remains a major public health concern, with an estimated 249 million cases and approximately 608,000 deaths reported in 2023 [1]. Sub-Saharan Africa accounts for about 95% of these cases and deaths, primarily due to *Plasmodium falciparum*, the most lethal species [1]. In South Asia, including Pakistan, *Plasmodium vivax* is the predominant species, responsible for approximately 80–90% of malaria cases, while *P. falciparum* contributes to 10–20% [2].

Pakistan reports between 300,000 and 400,000 confirmed malaria cases annually, with seasonal surges following the monsoon rains [2]. The Khyber Pakhtunkhwa (KP) province, particularly rural districts like Mardan, is endemic for malaria due to favorable ecological and climatic conditions. The persistence of transmission is exacerbated by stagnant water, poor vector control, and limited community awareness [3].

On July 8, 2025, a suspected malaria outbreak was reported from UC Qasim, District Mardan. The outbreak was not reflected in routine

surveillance, prompting verification and field investigation:

- To confirm the existence of a malaria outbreak.
- To determine its magnitude and demographic distribution.
- To identify associated environmental and behavioral risk factors.
- To recommend control and prevention measures.

Methods

A descriptive outbreak investigation was conducted in Union Council (UC) Qasim, District Mardan, from June 1 to July 7, 2025, to assess the extent and cause of a suspected malaria outbreak. The study population included all residents of the area. A suspected case was defined as “any individual residing in UC Qasim during the study period who presented with an acute fever ($\geq 37.5^{\circ}\text{C}$) with or without chills, sweating, headache, or malaise, and without another confirmed cause of fever”. A confirmed case was “any suspected case with a positive Rapid Diagnostic Test (RDT) for *Plasmodium* species”. Data were collected on structures questionnaire, one-on-one field interviews, record reviews at Basic Health Unit (BHU) Qasim and a nearby private clinic, and environmental observations. Active case finding was conducted through door-to-door visits and one on one interviews.

To validate RDT results, seven representative samples from RDT-positive individuals were collected for blood smear microscopy, which confirmed the presence and species of malaria parasites. The data analysis included demographic, clinical, temporal, and spatial trends, as well as identification of potential environmental and behavioral risk factors

Results



A total of 509 suspected malaria cases were reported in UC Qasim during the investigation period, out of these suspected cases, 141 were confirmed positive by RDT. Males accounted for 56% of cases and females 44%. Detailed analysis of cases revealed a median age of 5 years (age range: 2–32 years), with children under five comprising the most affected group (44%). The overall attack rate was 6.8 %, with a slightly higher rate among females 7.1% compared to males 6.6%. The Barata and Laga Tiga areas reported the highest concentration of cases, suggesting possible localized transmission. Clinically, all cases presented with fever, 89% had chills, 66% reported muscle pain, and 33% experienced vomiting.

Environmental risk factors identified included stagnant water in rice fields, open drains, graveyards, and animal shelters near homes. Behavioral risks included low use of insecticide-treated nets, sleeping outdoors, and delayed health-seeking. Laboratory testing of seven RDT-positive samples confirmed malaria parasites in all, with *Plasmodium vivax* identified in six cases and *Plasmodium falciparum* in one.

Heat Map Qasim Village, District Mardan 8th July 2025



Discussion

The investigation confirmed an outbreak of malaria in UC Qasim, Mardan, following a period of heavy rainfall and favorable environmental conditions for mosquito breeding. The epidemic

curve revealed a rising trend in cases after late June rainfall, peaking in early July, which is consistent with the known incubation period of 10–15 days for malaria [1]. These findings support the evidence that climatic factors such as rainfall, temperature, and humidity significantly influence mosquito density and parasite development [4,5].

The predominance of *Plasmodium vivax* (6 out of 7 laboratory-confirmed cases) is consistent with national trends where *P. vivax* accounts for the majority of malaria cases [2]. However, the detection of *P. falciparum* in one case is clinically significant, given its association with severe disease and increasing reports of drug resistance [6]. Children under five years of age were the most affected age group, reflecting their higher biological susceptibility due to immature immune systems and increased exposure in rural environments [7].

The concentration of cases in specific localities, such as Barata and Laga Tiga, suggests localized transmission driven by environmental factors including water locking in rice fields, open drains, graveyards, and animal shelters close to homes. These conditions are known to promote mosquito breeding and facilitate transmission in similar endemic settings [8,9].

Behavioral risk factors such as low use of insecticide-treated nets (ITNs), sleeping outdoors, and delayed care-seeking behavior further contributed to the outbreak. These behaviors are consistent with findings from other rural Pakistani communities where awareness and access to preventive measures remain low [10,11].

The laboratory confirmation of *Plasmodium* species in all seven RDT-positive cases supports the reliability of RDTs in field settings, although microscopy remains essential for quality assurance and species identification [13].

Conclusion

This outbreak of malaria in UC Qasim was confirmed to be associated with environmental exposures, inadequate vector control, and behavioral vulnerabilities. The highest burden was observed in children under five and in specific localities with stagnant water and poor drainage. Immediate containment was necessary to halt further spread.

Recommendations

Short-Term Public Health Actions (communicated to DHO):

- Initiate **larviciding and fogging** in affected areas
- Ensure **availability of RDT kits and antimalarial medications**
- Launch **community awareness campaigns** on:
 - Use of mosquito nets
 - Dangers of indoor animal rearing
 - Sanitation and hygiene

Environmental Control Measures (advised to Tehsil Municipal Administration):

- Drain stagnant water around homes and graveyards
- Conduct **post-harvest cleanup** of rice fields
- Clear vegetation and fill water pools around cemeteries

Long-Term Preventive Measures:

- Strengthen **Integrated Disease Surveillance and Response (IDSR)** and **DHIS2** data reporting
- Promote **community-based vector control** programs
- Conduct **seasonal entomological surveillance** ahead of monsoon seasons
- Distribute **ITNs** to vulnerable households

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Knowledge Hub

Understanding HIV/AIDS: A Public Health Priority

Introduction

Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) remain major global public health challenges. Despite advances in medical science, the epidemic continues to affect millions of people worldwide, with significant social, economic, and health consequences. This article provides an overview of HIV/AIDS, including its transmission, prevention, treatment, and the global and regional response.

What is HIV?

HIV is a virus that attacks the body's immune system, specifically the **CD4+ T cells**, which are



crucial for fighting infections. If left untreated, HIV reduces the number of these cells, weakening the immune system and making the person more vulnerable to opportunistic infections and certain cancers.

What is AIDS?

AIDS is the most advanced stage of HIV infection, defined by the occurrence of specific diseases or conditions related to severe immunodeficiency. Not everyone with HIV will develop AIDS, especially with early diagnosis and proper treatment.

How is HIV Transmitted?

HIV is transmitted through:

- Unprotected sexual contact with an infected person
- Sharing of needles or syringes
- Transfusion of contaminated blood products
- From mother to child during pregnancy, childbirth, or breastfeeding

HIV is not transmitted through casual contact such as hugging, shaking hands, or sharing utensils.

Symptoms of HIV

HIV infection typically progresses through three stages:

1. **Acute HIV Infection** (2-4 weeks post-infection): flu-like symptoms such as fever, sore throat, rash, or fatigue
2. **Chronic HIV Infection**: virus multiplies at low levels, often asymptomatic
3. **AIDS**: severe immune damage, with symptoms such as weight loss, recurrent fever, persistent diarrhea, and opportunistic infections

Diagnosis

HIV can be diagnosed through:

- **Rapid diagnostic tests (RDTs)** that detect antibodies and/or antigens
- **Enzyme-linked immunosorbent assay (ELISA)**

- **PCR tests** to detect viral RNA, especially in early infection or infants

Early testing enables timely treatment and reduces the risk of onward transmission.

Treatment

There is no cure for HIV, but it can be effectively managed with **antiretroviral therapy (ART)**. ART suppresses viral replication, improves immune function, and prevents the progression to AIDS. With consistent treatment, people living with HIV can lead long, healthy lives.

Key benefits of ART:

- Reduces viral load to undetectable levels
- Prevents transmission (U=U: Undetectable = Untransmittable)
- Improves quality of life

Prevention Strategies

Effective HIV prevention includes:

- **Consistent use of condoms**
- **HIV testing and counseling**
- **Pre-exposure prophylaxis (PrEP)** for high-risk populations
- **Post-exposure prophylaxis (PEP)** after potential exposure
- **Harm reduction** strategies for people who inject drugs (e.g., needle exchange programs)
- **Safe blood transfusion practices**
- **Mother-to-child transmission prevention** through ART

Global and Regional Response

Global Snapshot:

- As of 2023, **39 million** people were living with HIV
- Over **29 million** were receiving ART
- Sub-Saharan Africa remains the most affected region

Progress:

- New infections have declined by 59% since the peak in 1995
- AIDS-related deaths have declined by 69% since 2004



Remaining Challenges:

- Stigma and discrimination
- Inequitable access to services
- Vulnerability of key populations (e.g., sex workers, MSM, people who inject drugs)

HIV/AIDS in Pakistan

- Approximately **190,000 people** are living with HIV
- Concentrated epidemic among **key populations**, especially **injecting drug users**
- Ongoing efforts led by **National AIDS Control Programme (NACP)** with support from global partners
- Integration with **One Health**, TB, and hepatitis programs is being explored

Looking Forward: Ending the Epidemic

The **UNAIDS 95-95-95** targets aim for:

- 95% of people living with HIV to know their status
- 95% of diagnosed individuals to receive ART
- 95% of those on ART to achieve viral suppression

To reach these goals, a combination of biomedical, behavioral, and structural interventions is essential. Addressing social determinants of health and ensuring the inclusion of marginalized groups is key to ending AIDS as a public health threat by 2030.

Key Takeaways

- HIV is preventable and manageable with early diagnosis and consistent treatment.
- ART transforms HIV from a life-threatening condition to a chronic manageable illness.
- Public awareness, testing, and stigma reduction are essential to curbing the epidemic.

- Strong health systems, international cooperation, and community engagement are vital.

Further Resources

- [UNAIDS](#)
- [WHO – HIV/AIDS](#)
- [CDC – HIV](#)
- [Pakistan National AIDS Control Programme](#)

Reduce your risk of getting HIV by:



Using condoms



Ensuring that your partners who are living with HIV are taking treatment



Using PrEP to prevent getting HIV if you have ongoing risk, including during pregnancy



Using sterile needles and syringes for all injections



Getting tested and treated for sexually transmitted infections

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