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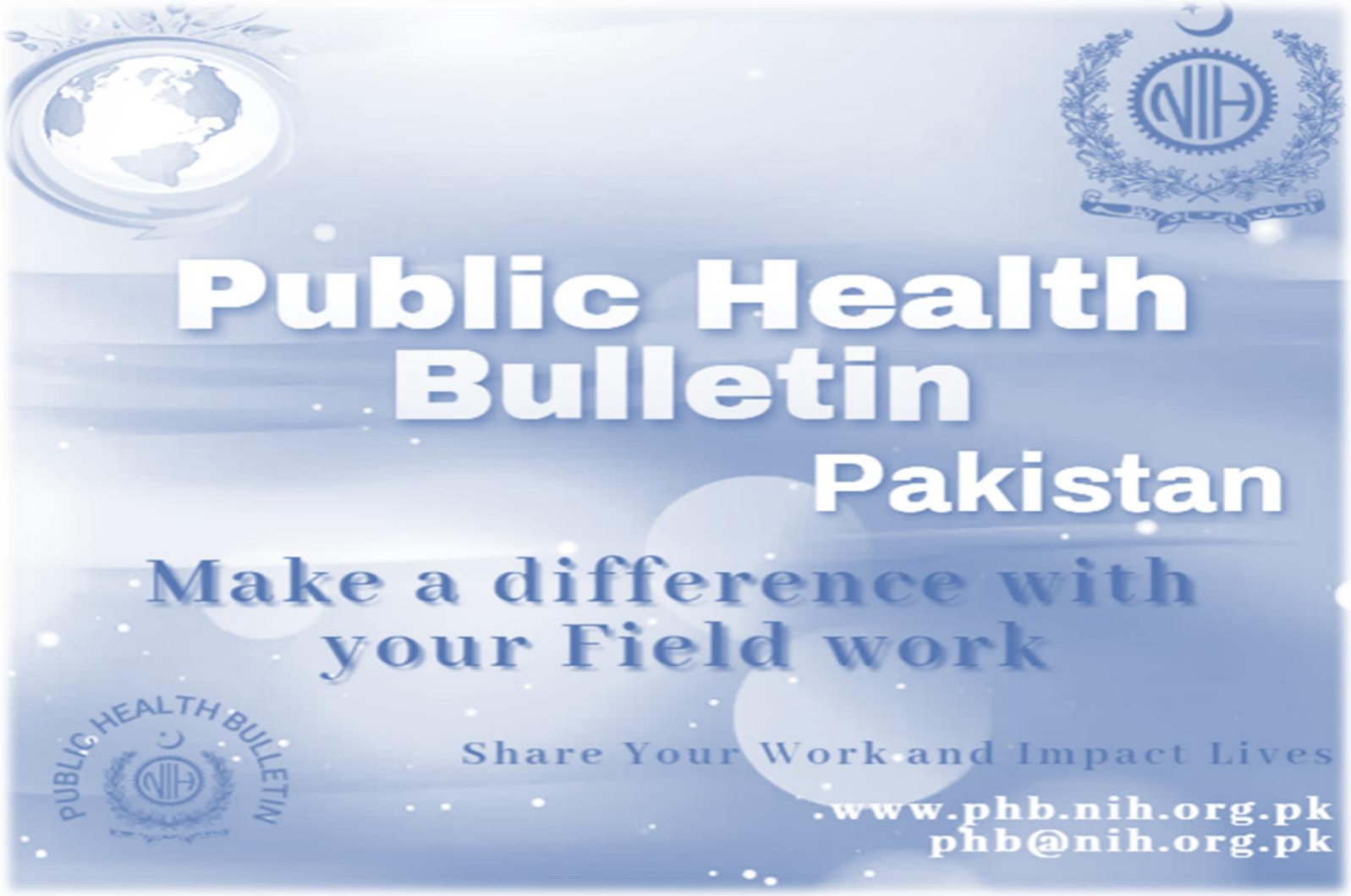
Integrated Disease Surveillance & Response (IDSR) Report

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.



Public Health Bulletin - Pakistan, Week 02, 2025

Evolving from a basic disease registry, Pakistan's Public Health Bulletin has become an indispensable tool for safeguarding public health. By meticulously tracking disease trends, the Bulletin serves as an early warning system, enabling timely interventions to prevent outbreaks.

This Weeks Highlights include;

- *12th Steering Committee Meeting of the Field Epidemiology Training Program (FETP) at the National Institute of Health*
- *Outbreak Investigation of AWD in District Karak*
- *Knowledge review on Typhoid*

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 02, 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 and SARI.*
- *Twenty-one cases of AFP reported from KP, fifteen from Punjab, ten from Sindh, five from AJK and three from GB.*
- *Forty-five suspected cases of HIV/ AIDS reported from Punjab, three from Sindh and two from KP.*
- *Nine suspected cases of Brucellosis reported from KP.*
- *Among VPDs, there is an increase in number of cases of Measles, Chickenpox, Pertussis, AFP and NT this week.*
- *Among respiratory diseases, there is an increase in number of cases of ILI, ALRI< 5 years and TB this week.*
- *Among water/food borne diseases, there is an increase in number of cases of Acute Diarrhea (Non-Cholera) this week.*
- *Among vector borne diseases, there is an increase in number of cases of Malaria this week.*
- *Among STDs, there is an increase in number of cases of HIV/AIDs this week.*
- *Among other diseases, there is an increase in number of cases of dog bite and VH (B, C & D) 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 80%*
- *Sindh is the top reporting regions with a compliance rate of 93%, followed by AJK 92% and GB 89%.*
- *The lowest compliance rate was observed in ICT and KP 78% and Balochistan 57%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2316	1800	78
Azad Jammu Kashmir	404	371	92
Islamabad Capital Territory	36	28	78
Balochistan	1307	749	57
Gilgit Baltistan	405	359	89
Sindh	2095	1947	93
National	6563	5254	80

Public Health Actions

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

Tuberculosis

- **Early Detection and Diagnosis:** Implement regular screening for high-risk groups and utilize rapid diagnostic tools to identify cases promptly.
- **Directly Observed Therapy, Short-course (DOTS):** Ensure optimal treatment adherence through supervised medication administration. Ensure Compliance to prevent future relapse of the disease.
- **Community Awareness:** Conduct community awareness campaigns on tuberculosis (TB) focusing on educational institutes i.e., schools for early symptom recognition, reducing stigma, and promoting free diagnosis and treatment services available through public health programs

Typhoid Fever

- **Safe Water and Sanitation: I**mprove access to clean water and adequate sanitation facilities.
- **Vaccination of High-Risk Population:** Vaccinate children under 15 with typhoid conjugate vaccine (TCV) in high-risk areas to prevent the spread of XDR Salmonella Typhi and reduce dependency on antibiotics
- **Food Safety:** Implement food safety practices, such as proper cooking and storage, to prevent foodborne transmission.
- **Community Awareness:** Leverage local health workers and community influencers to hold community awareness sessions.

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 02, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	926	4,375	453	254	15,360	60,248	30,405	112,021
Malaria	0	3,595	0	0	3,804	2,611	43,121	53,131
ILI	2,991	7,604	624	1,108	6,908	1	31,691	50,927
ALRI < 5 years	1,446	2,341	1,465	17	2,119	2,062	14,576	24,026
TB	38	133	65	8	392	10,390	11,098	22,124
Dog Bite	91	177	9	0	648	5,057	3,430	9,412
B. Diarrhea	22	918	50	3	972	393	2,677	5,035
VH (B, C & D)	25	38	8	0	94	0	4,851	5,016
Typhoid	9	383	54	0	564	1,705	773	3,488
SARI	217	691	296	2	1,543	0	209	2,958
Dengue	1	0	0	0	4	706	18	729
AWD (S. Cholera)	1	62	6	0	48	474	3	594
Measles	4	38	3	0	250	129	63	487
AVH (A & E)	18	12	5	0	239	0	166	440
CL	0	35	0	0	371	3	0	409
Mumps	2	22	3	0	71	0	54	152
Chickenpox/ Varicella	7	5	15	2	58	18	36	141
Meningitis	1	0	2	0	10	71	5	89
AFP	5	0	3	0	21	15	10	54
Chikungunya	0	1	0	0	0	0	53	54
HIV/AIDS	0	0	0	0	2	45	3	50
Pertussis	0	27	11	0	7	0	0	45
Gonorrhea	0	10	0	0	15	0	12	37
Syphilis	0	0	0	0	0	0	15	15
NT	0	0	0	0	13	0	1	14
Diphtheria (Probable)	0	1	0	0	9	0	3	13
Brucellosis	0	0	0	0	9	0	0	9
Leprosy	0	0	0	0	1	0	0	1

Figure 1: Most frequently reported suspected cases during Week 02, Pakistan.

Sindh

- Malaria cases were maximum followed by ILI, AD (Non-Cholera), ALRI<5 Years, TB, VH (B, C, D), dog bite, B. Diarrhea, Typhoid and SARI.
- Malaria cases are mostly from Larkana, Dadu and Khairpur whereas ILI cases are from Khairpur, Karachi Malir and Thatta.
- Ten cases of AFP reported from Sindh. All are suspected cases and need field verification.
- Three suspected cases of HIV/ AIDS reported from Sindh. Field investigation required to verify the case.
- There is an increase in number of cases of Malaria, ILI, AD (Non-Cholera), ALRI<5 Years, TB, VH (B, C, D) and dog bite this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 02, Sindh

Districts	Malaria	ILI	AD (Non-Cholera)	ALRI < 5 years	TB	VH (B, C & D)	Dog Bite	B. Diarrhea	Typhoid	SARI
Badin	1,488	1,991	1,594	484	705	220	216	111	22	25
Dadu	4,541	714	1,991	1,680	472	46	428	411	125	6
Ghotki	778	71	538	591	252	209	210	56	3	0
Hyderabad	236	4	898	14	77	46	0	0	9	0
Jacobabad	927	1,118	529	418	109	176	238	82	50	53
Jamshoro	1,768	232	986	468	613	252	70	77	53	0
Kamber	2,755	0	1,283	422	773	129	226	92	17	0
Karachi Central	6	2,100	654	46	11	15	0	11	25	24
Karachi East	52	490	400	32	13	1	10	5	1	0
Karachi Keamari	2	385	450	50	0	0	0	5	8	0
Karachi Korangi	67	10	322	3	14	0	0	0	0	0
Karachi Malir	173	3,320	1,183	255	76	27	29	28	24	0
Karachi South	10	5	99	0	0	0	0	0	0	0
Karachi West	302	1,258	857	194	172	68	35	29	30	3
Kashmore	2,033	652	259	266	255	34	74	50	6	0
Khairpur	4,062	6,743	1,872	1,179	1019	186	247	302	139	18
Larkana	4,751	16	1,457	740	935	84	51	309	7	0
Matiari	1,852	4	995	578	560	314	87	49	0	0
Mirpurkhas	1,394	2,531	1,755	678	597	162	236	82	8	0
Naushero Feroze	1,958	1,424	1,010	522	487	47	266	109	33	35
Sanghar	3,675	177	1,593	1,005	1186	1,586	240	115	42	9
Shaheed Benazirabad	1,369	14	1,337	264	273	85	178	60	88	0
Shikarpur	2,142	2	931	279	332	680	227	178	8	4
Sujawal	382	5	941	699	169	70	62	54	7	0
Sukkur	1,731	2,138	933	780	400	104	133	110	4	0
Tando Allahyar	937	1,490	769	338	503	118	49	100	3	0
Tando Muhammad Khan	339	99	524	202	380	6	21	28	0	0
Tharparkar	1,260	2,111	1,755	1,359	375	33	0	90	19	27
Thatta	910	2,587	1,326	457	54	61	97	59	13	3
Umerkot	1,221	0	1,164	573	286	92	0	75	29	2
Total	43,121	31,691	30,405	14,576	11,098	4,851	3,430	2,677	773	209

Figure 2: Most frequently reported suspected cases during Week 02 Sindh

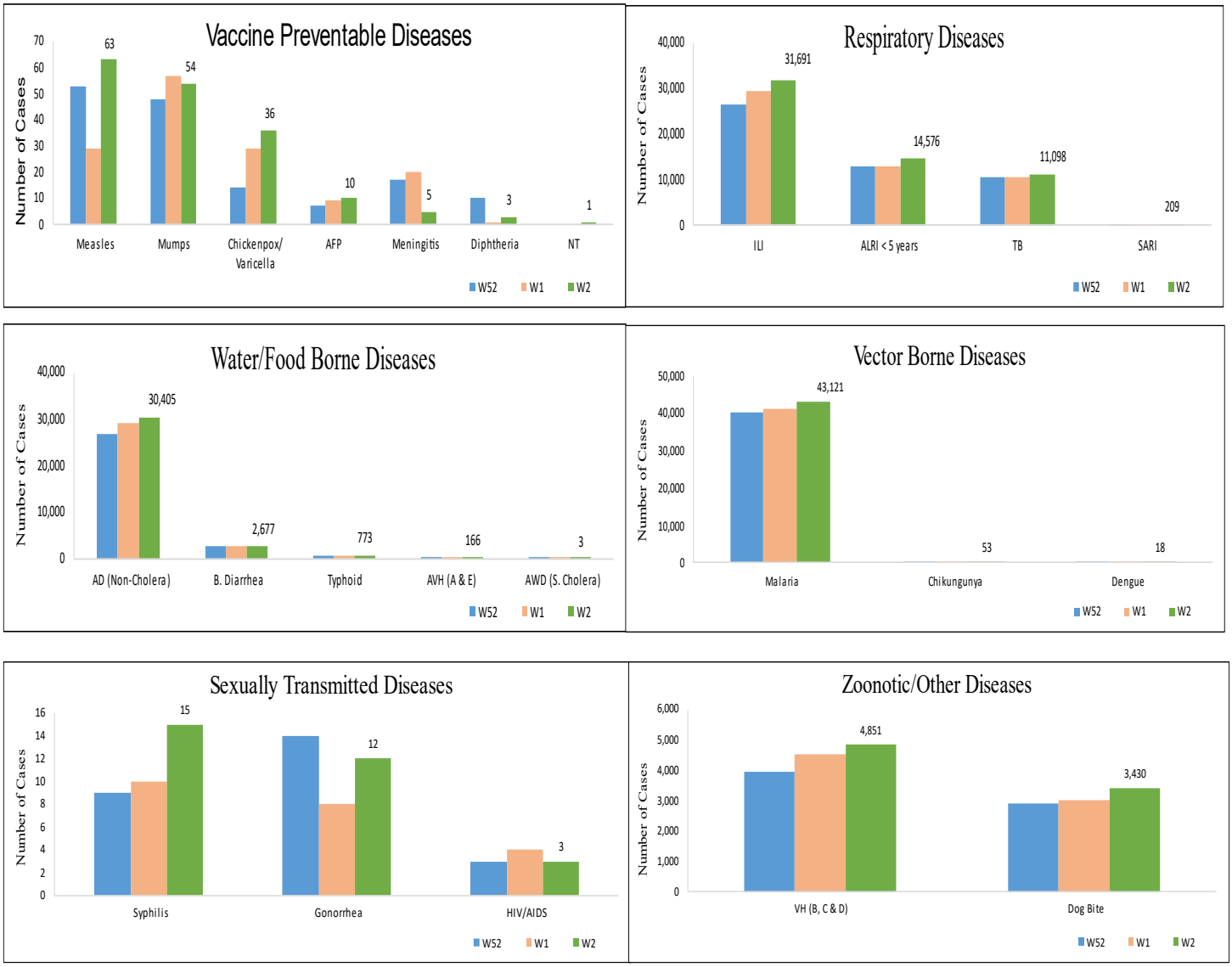
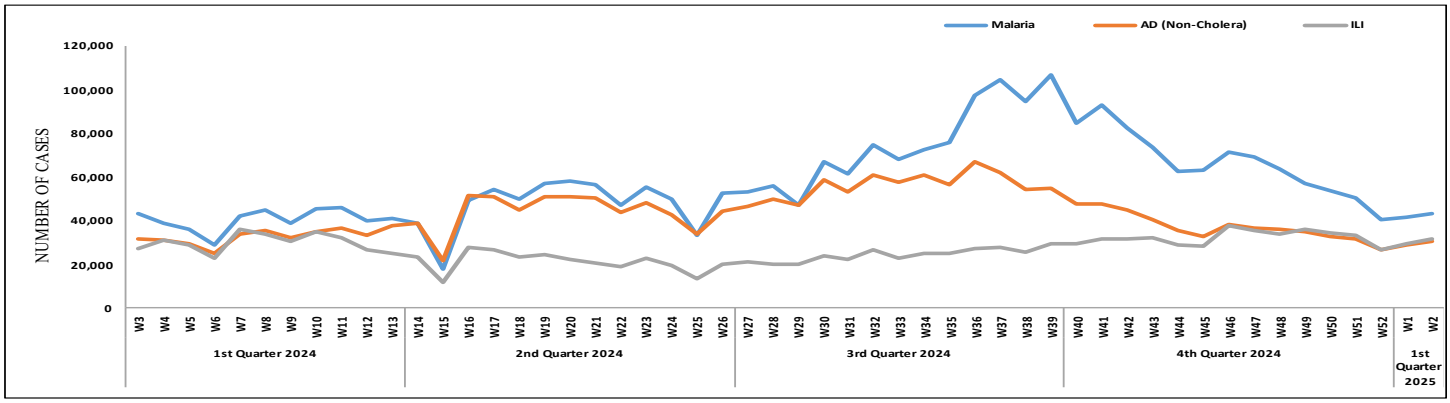


Figure 3: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Sindh



- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, dog bite, TB and AWD (S. Cholera) cases were the most frequently reported diseases from Balochistan province.
- ILI cases are mostly reported from Kech (Turbat), Quetta and Gwadar while AD (Non-Cholera) cases are mostly reported from Gwadar, Kech (Turbat) and Quetta.
- ILI, AD (Non-Cholera), ALRI <5 years, SARI and dog bite showed an increase in cases while an decline in cases observed for Malaria and B. Diarrhea this week.

Table 3: District wise distribution of most frequently reported suspected cases during Week 02, Balochistan

Districts	ILI	AD (Non-Cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	Dog Bite	TB	AWD (S. Cholera)
Barkhan	60	59	27	29	3	18	27	8	9	1
Chagai	300	66	30	0	32	0	9	0	0	7
Dera Bugti	72	42	59	63	14	4	0	1	0	0
Gwadar	608	461	198	8	41	1	35	NR	NR	NR
Harnai	22	106	59	190	54	0	4	4	0	0
Jaffarabad	215	187	275	38	31	2	4	1	45	0
Jhal Magsi	420	229	333	273	1	2	14	20	10	0
Kalat	8	8	5	8	5	1	4	0	0	0
Kech (Turbat)	1,257	457	791	176	56	4	1	NR	NR	NR
Kharan	525	109	23	0	64	33	3	0	0	1
Khuzdar	428	211	84	2	99	19	24	1	0	9
Killa Saifullah	0	81	83	218	43	38	10	0	0	0
Kohlu	473	154	76	41	70	135	37	NR	1	NR
Lasbella	56	303	292	202	33	4	9	32	0	0
Loralai	508	132	38	54	31	118	17	5	0	0
Naseerabad	35	298	330	39	15	27	84	88	0	0
Nushki	12	140	3	0	43	0	0	0	0	0
Panjgur	117	69	57	67	15	0	1	0	0	0
Pishin	193	50	4	10	44	8	4	0	0	20
Quetta	1,104	421	11	177	33	79	38	6	3	18
Sherani	17	0	0	0	0	27	0	0	0	0
Sibi	93	10	12	3	9	4	2	0	0	4
Sohbat pur	11	162	330	119	34	20	22	2	4	0
Surab	122	32	3	0	0	0	0	0	0	0
Usta Muhammad	233	361	338	229	66	23	8	9	0	0
Washuk	441	151	119	14	67	28	21	0	1	2
Zhob	274	76	15	381	15	96	5	0	60	0
Total	7,604	4,375	3,595	2,341	918	691	383	177	133	62

Figure 4: Most frequently reported suspected cases during Week 02, Balochistan

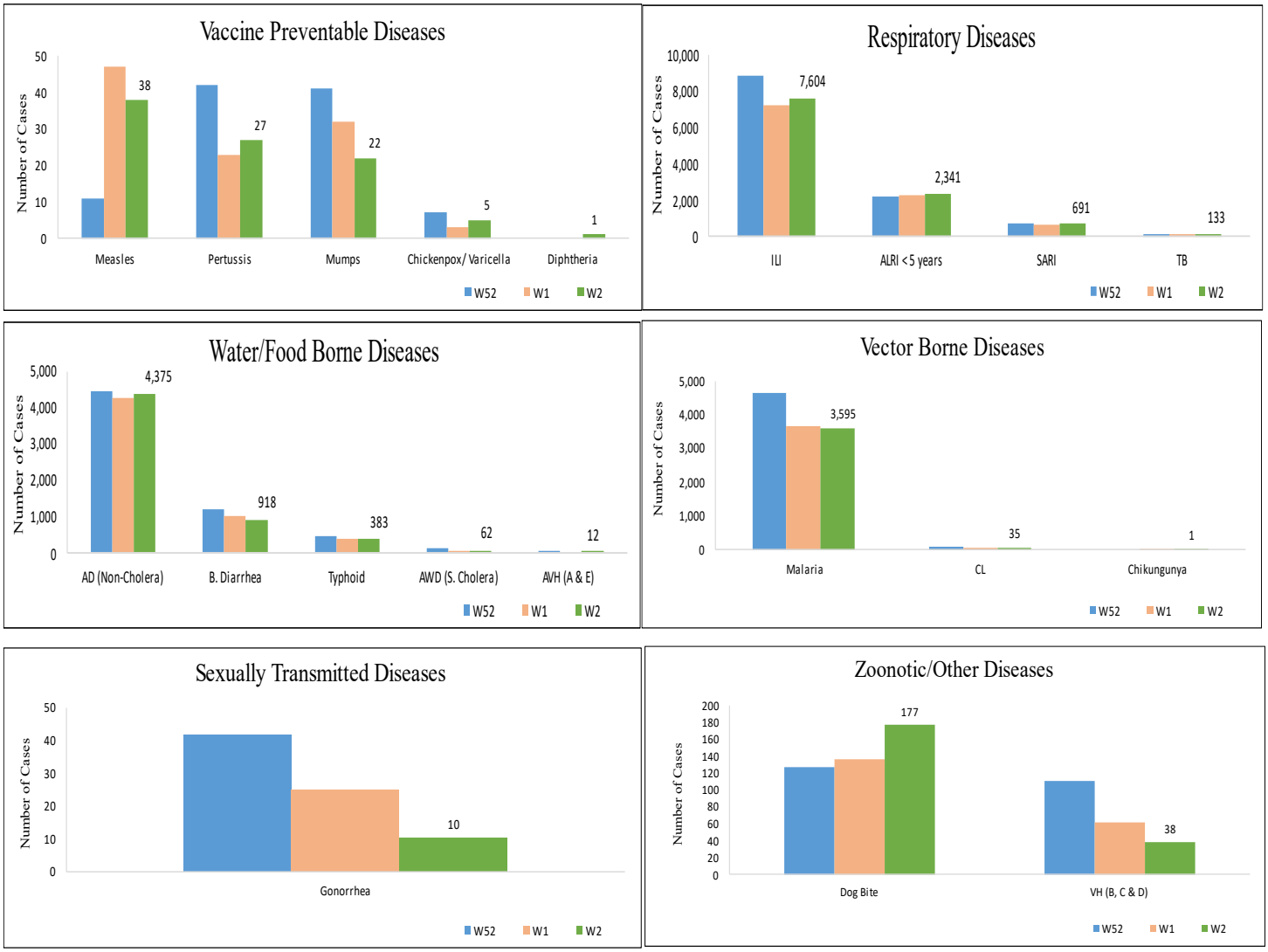
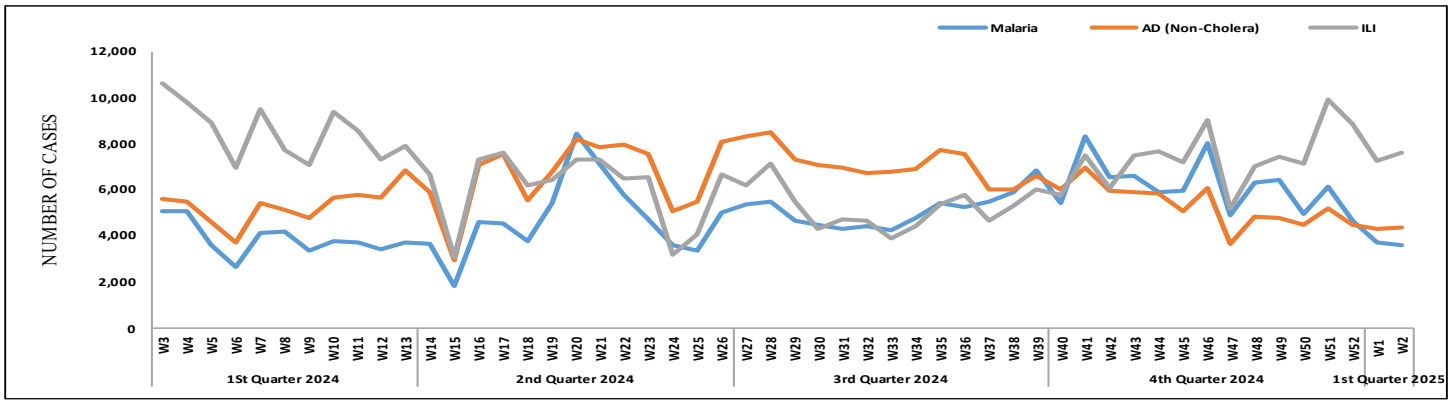


Figure 5: Week wise reported suspected cases of Malaria, AD (Non-Cholera) & ILI, Balochistan



Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, SARI, B. Diarrhea, dog bite, Typhoid, TB and CL cases.
- ILI, Malaria, ALRI<5 Years, SARI, dog bite, TB and CL cases showed a decline in number while AD (Non-Cholera) cases showed an increase in number this week.
- Twenty-one cases of AFP reported from KP. All are suspected cases and need field verification.
- Two suspected cases of HIV/ AIDS reported from KP. Field investigation required to verify the cases.

Table 4: District wise distribution of most frequently reported suspected cases during Week 02, KP

Districts	AD (Non-Cholera)	ILI	Malaria	ALRI <5 Years	SARI	B.Diarrhea	Dog Bite	Typhoid	TB	CL
Abbottabad	360	140	0	97	25	7	29	10	12	0
Bajaur	360	10	123	32	93	74	52	2	6	12
Bannu	662	11	1,403	23	2	33	3	92	27	0
Battagram	133	578	24	1	1	NR	1	NR	36	NR
Buner	184	0	159	0	0	1	13	1	2	0
Charsadda	1,076	1,481	385	653	34	209	23	52	10	0
Chitral Lower	166	200	9	24	47	3	9	9	3	11
Chitral Upper	50	4	5	1	1	2	5	7	1	0
D.I. Khan	1,105	0	213	19	0	18	14	3	44	1
Dir Lower	877	6	153	130	0	54	26	35	15	2
Dir Upper	427	158	4	21	0	1	15	2	25	7
Hangu	60	180	48	0	0	0	0	0	2	2
Haripur	453	380	0	58	0	0	8	5	53	0
Karak	343	26	58	8	88	15	18	3	1	93
Khyber	453	248	447	108	13	169	56	97	31	90
Kohat	337	75	10	8	33	18	11	2	0	3
Kohistan Lower	58	0	2	0	0	3	1	0	0	0
Kohistan Upper	365	8	14	24	0	19	4	1	0	0
Kolai Palas	62	12	2	5	13	6	0	1	1	0
L & C Kurram	1	17	6	0	12	8	1	1	0	0
Lakki Marwat	498	35	181	54	0	12	42	11	7	1
Malakand	446	168	10	63	36	45	0	18	2	33
Mansehra	464	339	0	14	298	0	0	5	2	0
Mardan	577	0	10	65	0	18	47	18	13	0
Mohmand	99	203	109	7	187	19	15	2	1	78
North Waziristan	0	0	8	10	32	12	0	0	0	0
Nowshera	988	57	24	13	5	23	12	7	11	5
Orakzai	11	16	7	0	0	7	8	0	0	0
Peshawar	1,845	865	34	224	188	111	5	57	20	0
SD Tank	9	3	11	0	0	1	0	1	0	0
Shangla	363	3	163	22	5	6	23	15	4	0
South Waziristan (Lower)	26	238	7	6	64	0	5	13	2	0
SWU	9	6	16	3	17	2	0	0	0	14
Swabi	773	798	27	198	41	10	149	23	32	0
Swat	1,015	168	26	178	14	21	21	28	7	0
Tank	496	145	93	22	0	13	0	38	15	2
Tor Ghar	112	0	6	6	85	15	25	1	3	17
Upper Kurram	96	330	7	22	209	17	7	4	4	0
Total	15,360	6,908	3,804	2,119	1,543	972	648	564	392	371

Figure 6: Most frequently reported suspected cases during Week 02, KP

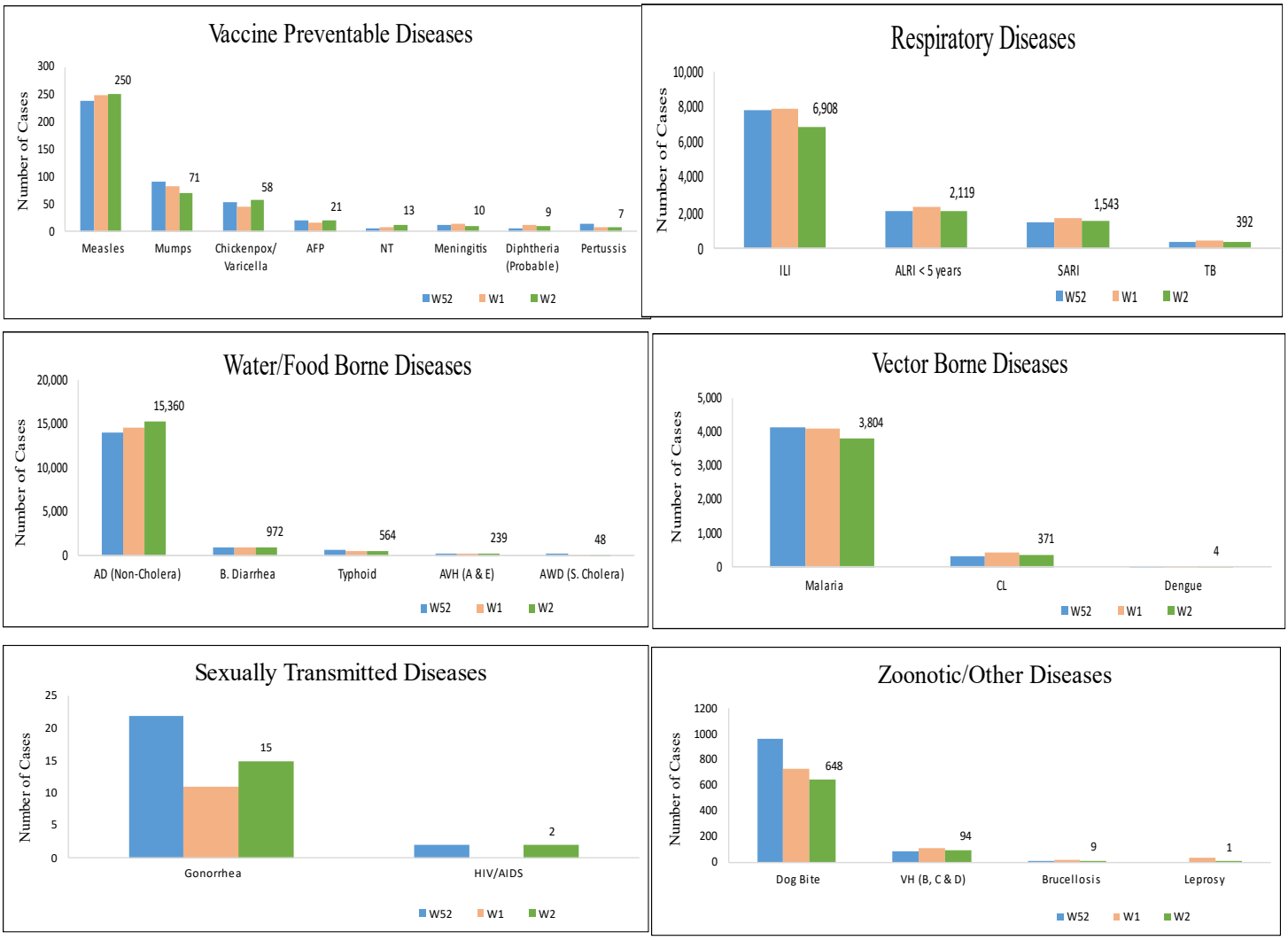
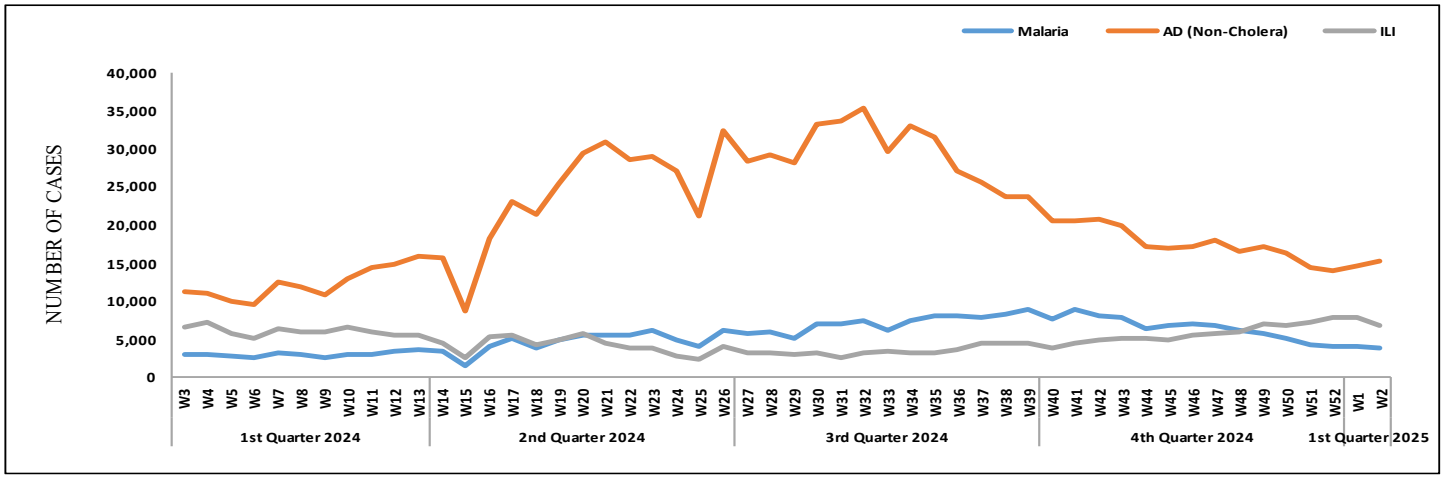


Figure 7: Week wise reported suspected cases Malaria, AD (Non-Cholera) & ILI, KP



Punjab

- AD (Non-Cholera) cases were maximum followed by TB, dog bite, Malaria, ALRI<5 Years, Typhoid, Dengue, AWD (S. Cholera) and B. Diarrhea cases.
- AD (Non-Cholera), TB, dog bite, ALRI<5 Years and Dengue showed an increase in number of cases this week.
- Forty-five suspected cases of HIV/ AIDS reported from Punjab. Field investigation required to verify the cases.
- Fifteen cases of AFP reported from Punjab. All are suspected cases and need field verification.

Figure 8: Most frequently reported suspected cases during Week 02, Punjab

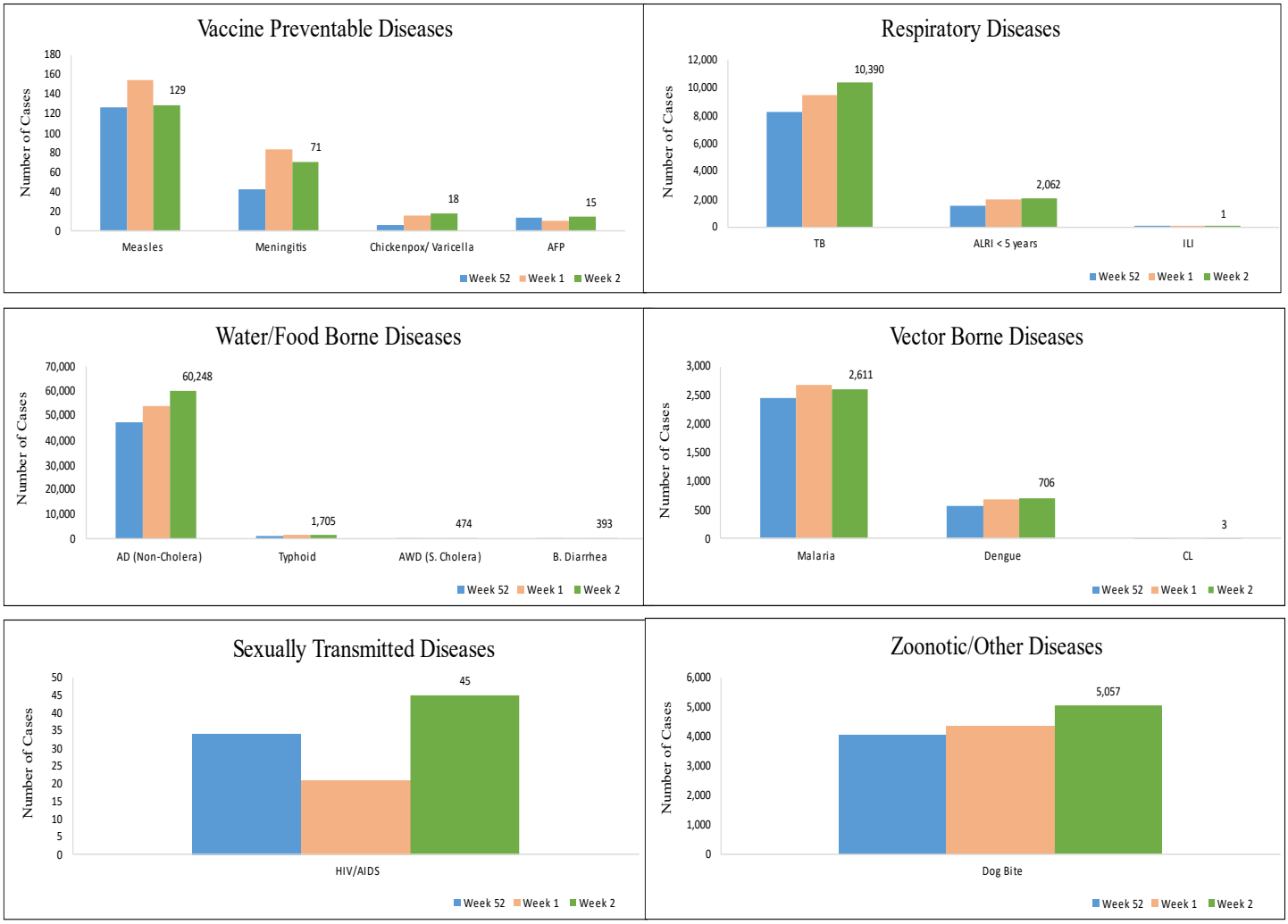
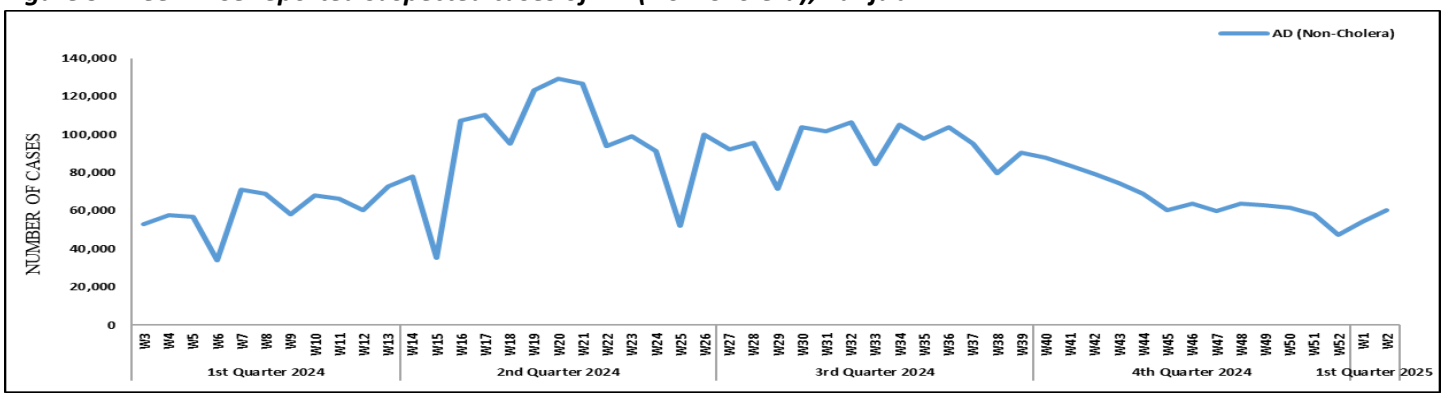


Figure 9: Week wise reported suspected cases of AD (Non-Cholera), Punjab



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and ALRI <5 years. ILI cases showed a decline in number while AD (Non-Cholera) cases showed an increase in number this week

AJK: ILI cases were maximum followed by ALRI < 5years, AD (Non-Cholera), SARI, dog bite, TB, B. Diarrhea, VH (B, C & D), B. Diarrhea and AVH (A & E) cases. An increase in cases observed for ILI, AD (Non-Cholera), dog bite, VH (B, C & D) and B. Diarrhea this week. Five cases of AFP reported from AJK. All are suspected cases and need field verification.

GB: ALRI <5 Years cases were the most frequently reported diseases followed by ILI, AD (Non-Cholera), SARI, TB, Typhoid and B. Diarrhea cases. An increase in cases observed for ALRI <5 years, ILI, AD (Non-Cholera), SARI, TB, Typhoid and B. Diarrhea this week. Three cases of AFP reported from GB. All are suspected cases and need field verification.

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Figure 10: Most frequently reported suspected cases during Week 02, AJK

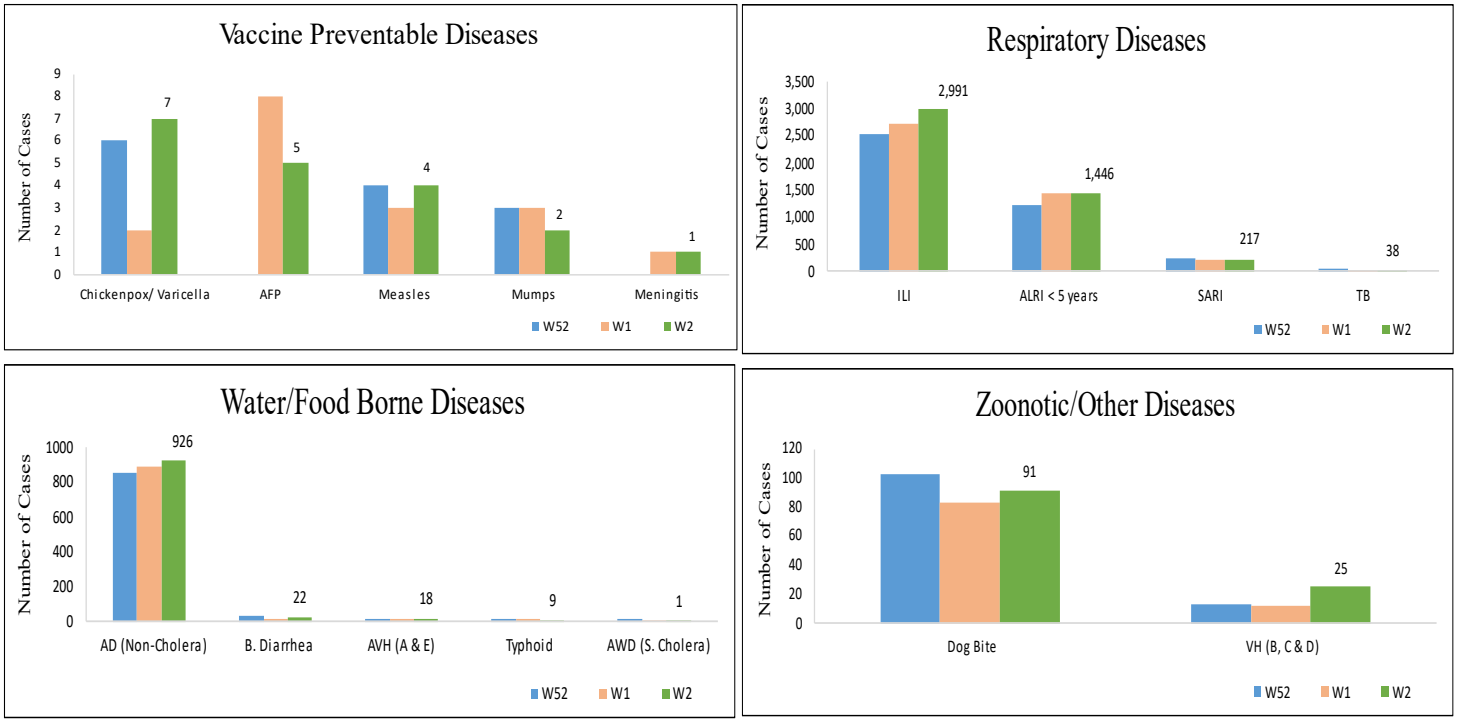


Figure 11: Week wise reported suspected cases of ILI and ARI <5 years, AJK

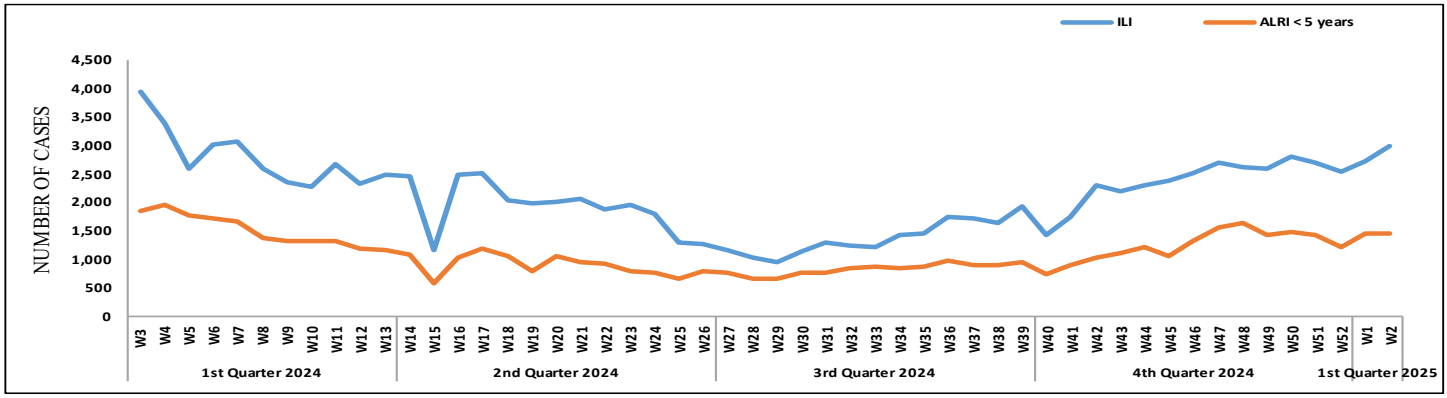


Figure 12: Most frequently reported suspected cases during Week 02, ICT

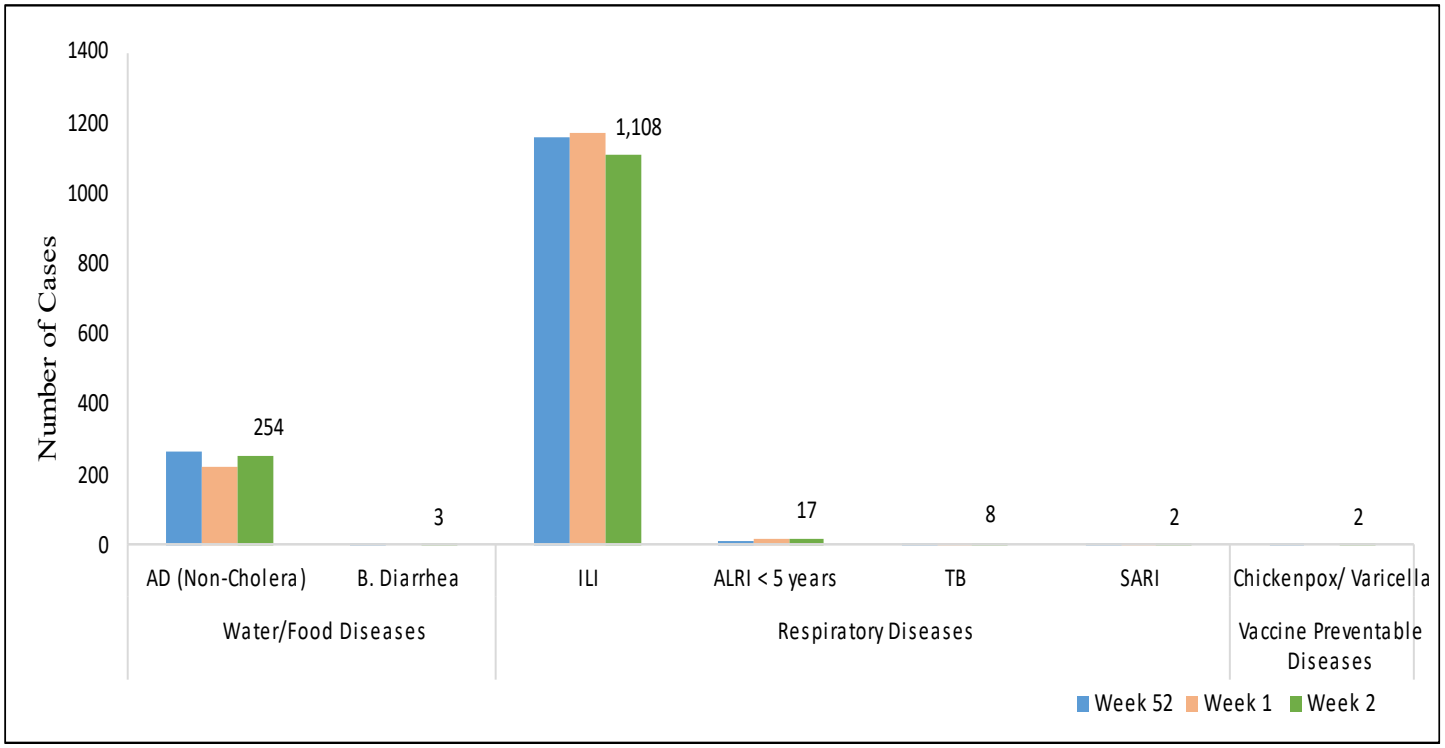


Figure 13: Week wise reported suspected cases of ILI, ICT

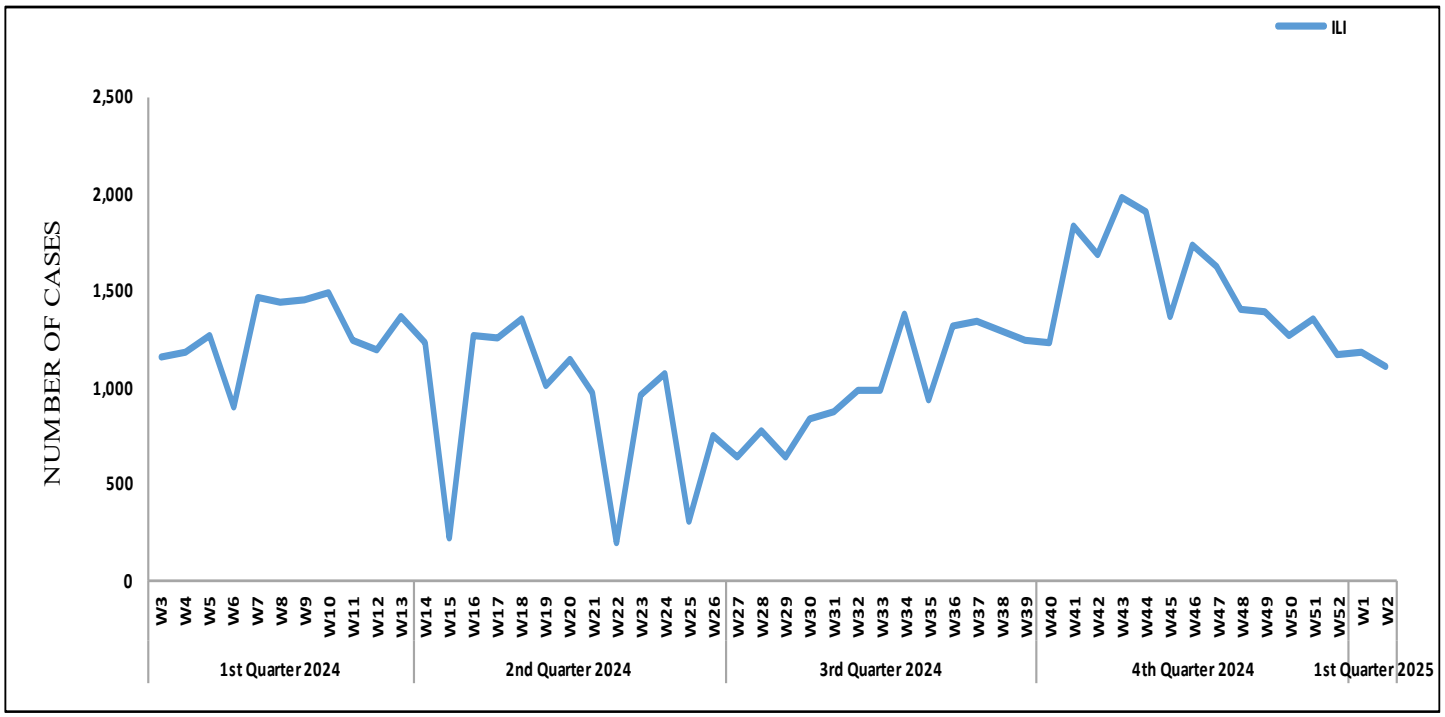


Figure 14: Most frequent cases reported during Week 02, GB

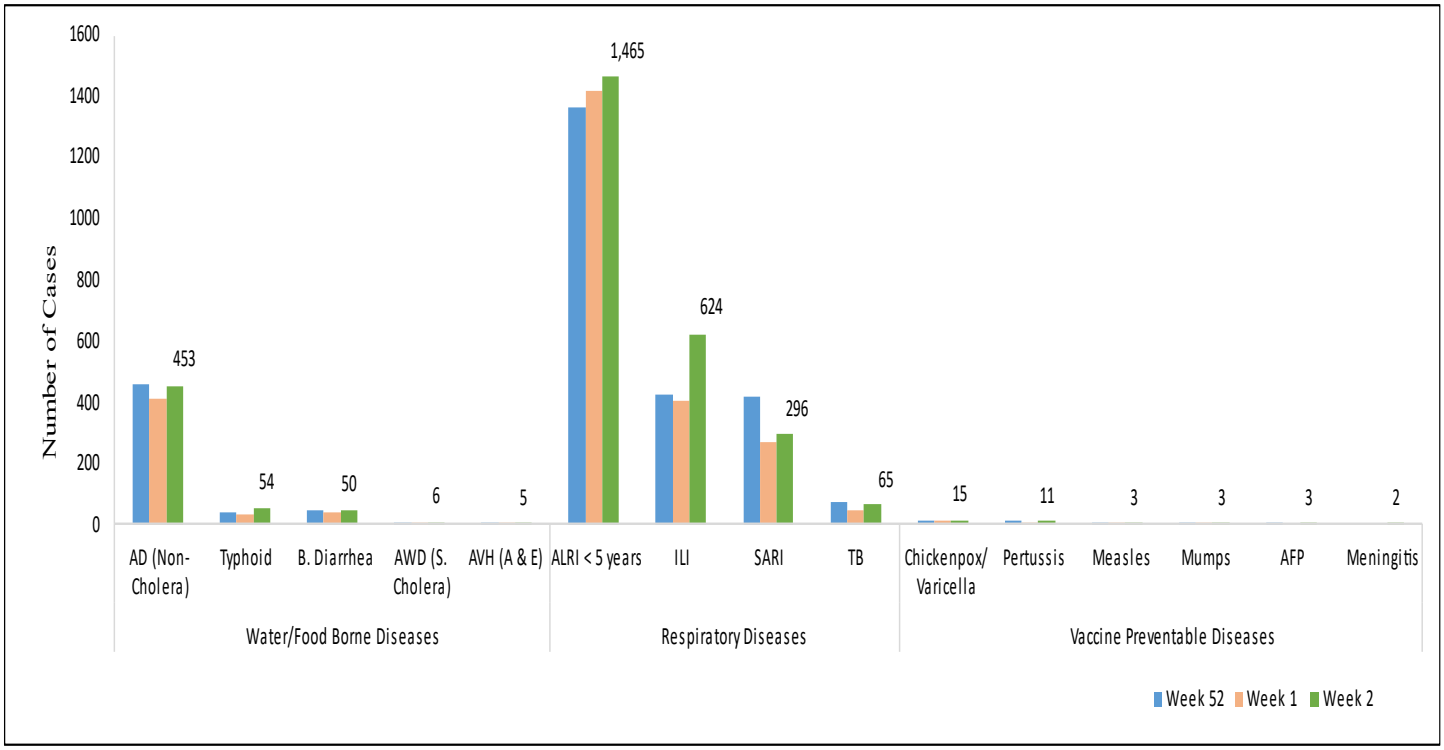


Figure 15: Week wise reported suspected cases of ALRI <5 years, GB

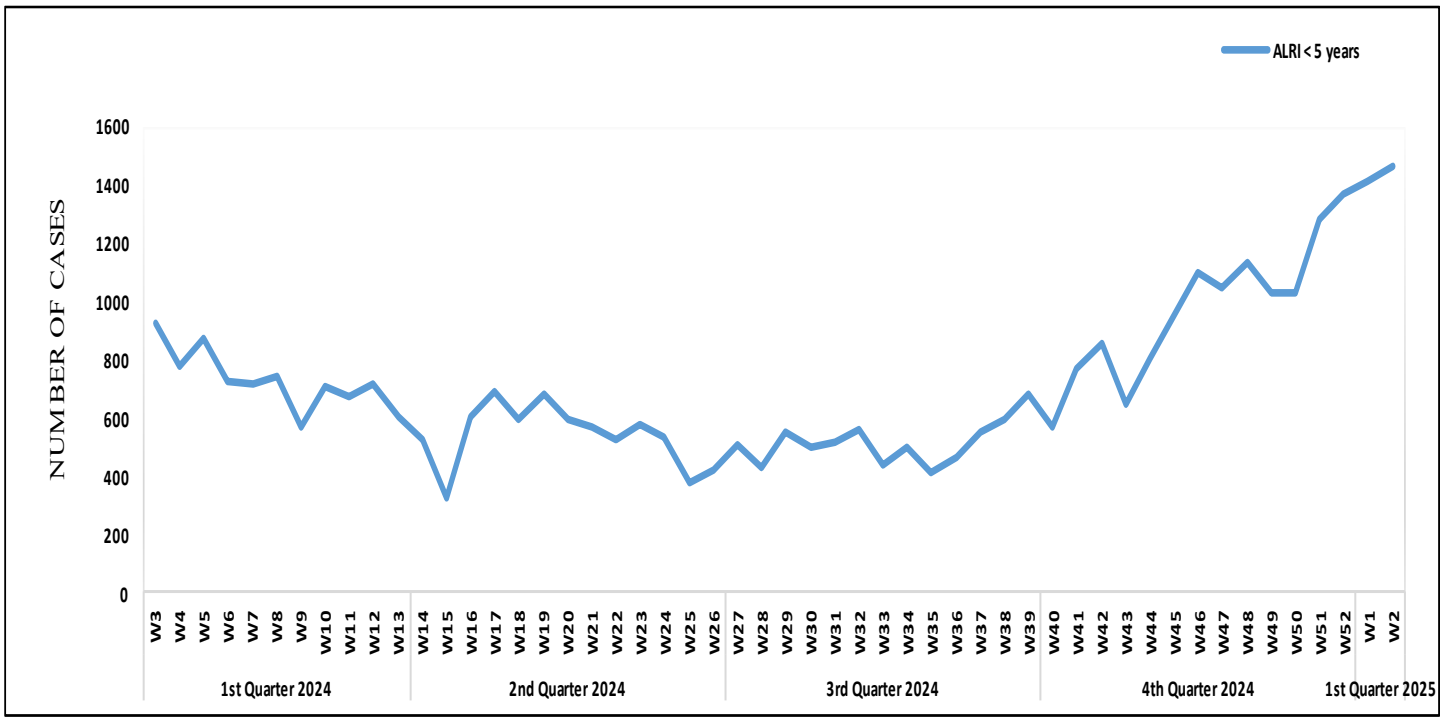


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 02

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
AD (non-cholera)		8	4	-	-	2	0	-	-	-	-	-	-	35	0
Malaria		13	6	-	-	954	10	-	-	-	-	-	-	32	0
CCHF		-	-	3	1	-	-	-	-	-	-	-	-	-	-
Dengue		13	5	-	-	253	3	-	-	-	-	-	-	18	0
VH (B)		16	9	78	68	1,328	31	-	-	23	3	-	-	947	2
VH (C)		16	7	41	13	1,672	42	-	-	-	-	-	-	932	3
VH (A & E)		-	-	-	-	-	-	-	-	-	-	-	-	235	0
Covid-19		10	2	6	0	104	2	-	-	-	-	-	-	-	-
Chikungunya		-	-	-	-	-	-	-	-	-	-	-	-	-	-
TB		-	-	-	-	98	8	-	-	-	-	-	-	59	5
HIV/ AIDS		-	-	-	-	1,377	1	-	-	-	-	-	-	545	0
Syphilis		-	-	-	-	333	0	-	-	-	-	-	-	-	-
B. Diarrhea		4	1	-	-	-	-	-	-	-	-	-	-	13	0
Typhoid		-	-	-	-	180	5	-	-	-	-	-	-	1	0
Leishmaniansis (Visceral)		-	-	-	-	3	0	-	-	-	-	-	-	-	-
Pneumonial (ALRI)		-	-	-	-	53	12	-	-	-	-	-	-	-	-
Brucellosis		-	-	-	-	5	0	-	-	-	-	-	-	-	-
Meningitis		-	-	-	-	25	2	-	-	-	-	-	-	-	-
Measles		215	102	52	31	188	107	12	7	8	3	201	44	14	5
Rubella		215	3	52	2	188	1	12	0	8	0	201	4	14	0
Covid-19	Out of SARI	5	0	0	0	30	1	142	0	34	0	186	0	0	0
	Out of ILI	2	0	0	0	13	0	60	0	0	0	110	0	0	0
Influenza A	Out of SARI	5	0	0	0	30	2	142	13	34	2	186	30	0	0
	Out of ILI	2	0	0	0	13	0	60	5	0	0	110	19	0	0
Influenza B	Out of SARI	5	0	0	0	30	4	142	12	34	1	186	19	0	0
	Out of ILI	2	0	0	0	13	3	60	8	0	0	110	22	0	0
RSV	Out of SARI	5	0	0	0	30	0	142	47	34	0	186	0	0	0
	Out of ILI	2	0	0	0	13	0	60	0	0	0	110	0	0	0

Table 6: IDSR reporting districts Week 02, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	100	90%
	Bannu	238	138	58%
	Battagram	59	32	54%
	Buner	34	34	100%
	Bajaur	44	40	91%
	Charsadda	59	57	97%
	Chitral Upper	34	26	76%
	Chitral Lower	35	34	97%
	D.I. Khan	114	112	98%
	Dir Lower	74	74	100%
	Dir Upper	37	26	70%
	Hangu	22	15	68%
	Haripur	72	71	99%
	Karak	36	36	100%
	Khyber	53	41	77%
	Kohat	61	61	100%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	69	99%
	Lower & Central Kurram	42	8	19%
	Upper Kurram	41	24	59%
	Malakand	42	38	90%
	Mansehra	136	112	82%
	Mardan	80	76	95%
	Nowshera	55	53	96%
	North Waziristan	13	1	8%
	Peshawar	152	134	88%
	Shangla	37	29	78%
	Swabi	64	63	98%
	Swat	77	75	97%
	South Waziristan (Upper)	93	36	39%
	South Waziristan (Lower)	42	19	45%
	Tank	34	32	94%
	Torghar	14	14	100%
	Mohmand	68	64	94%
	SD Peshawar	5	0	0%
	SD Tank	58	6	10%
	Orakzai	69	9	13%
	Mirpur	37	37	100%
	Bhimber	42	19	45%
	Kotli	60	60	100%

Azad Jammu Kashmir	Muzaffarabad	45	43	96%
	Poonch	46	46	100%
	Haveli	39	39	100%
	Bagh	40	40	100%
	Neelum	39	31	79%
	Jhelum Vellay	29	29	100%
Islamabad Capital Territory	Sudhnooti	27	27	100%
	ICT	21	20	95%
Balochistan	CDA	15	8	53%
	Gwadar	25	25	100%
	Kech	44	36	82%
	Khuzdar	74	49	66%
	Killa Abdullah	26	0	0%
	Lasbella	55	55	100%
	Pishin	69	13	19%
	Quetta	55	37	67%
	Sibi	36	20	56%
	Zhob	39	29	74%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	4	27%
	Kohlu	75	48	64%
	Chagi	36	18	50%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	0	0%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	18	56%
	Mastung	45	0	0%
	Loralai	33	30	91%
	Killa Saifullah	28	27	96%
	Ziarat	29	0	0%
	Duki	31	0	0%
	Nushki	32	29	91%
	Dera Bugti	45	25	56%
	Washuk	46	34	74%
	Panjgur	38	10	26%
	Awaran	23	0	0%
	Chaman	24	0	0%
	Barkhan	20	20	100%
	Hub	33	0	0%
	Musakhel	41	0	0%
Gilgit Baltistan	Usta Muhammad	34	34	100%
	Hunza	32	32	100%
	Nagar	25	20	80%
	Ghizer	38	38	100%
	Gilgit	40	40	100%

	Diamer	62	44	71%
	Astore	54	54	100%
	Shigar	27	25	93%
	Skardu	52	52	100%
	Ganche	29	29	100%
Sindh	Kharmang	46	25	54%
	Hyderabad	74	25	34%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	107	96	90%
	Tharparkar	276	230	83%
	Shikarpur	61	60	98%
	Thatta	52	52	100%
	Larkana	67	66	99%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	19	83%
	Karachi-West	20	20	100%
	Karachi-Malir	37	23	62%
	Karachi-Kemari	18	15	83%
	Karachi-Central	11	8	73%
	Karachi-Korangi	18	17	94%
	Karachi-South	4	4	100%
	Sujawal	55	54	98%
	Mirpur Khas	106	103	97%
	Badin	124	124	100%
	Sukkur	64	63	98%
	Dadu	90	88	98%
	Sanghar	100	99	99%
	Jacobabad	44	44	100%
	Khairpur	170	167	98%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	75	74	99%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	41	41	100%
	Shaheed Benazirabad	125	122	98%

Table 7: IDSR reporting Tertiary care hospital Week 02, 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	0	0%
	Sukkur	1	0	0%
	Shaheed Benazirabad	1	1	100%
	Karachi-East	1	1	100%
	Karachi-Central	1	0	0%

12th Steering Committee Meeting of the Field Epidemiology Training Program (FETP) at the National Institute of Health

The 12th Steering Committee Meeting of the Field Epidemiology Training Program (FETP) at the National Institute of Health (NIH) convened to review the program's progress, discuss key technical and training aspects, and chart a roadmap for its continued success.

Chaired by Special Secretary, Ministry of National Health Services, Regulations & Coordination, the meeting brought together key stakeholders dedicated to strengthening Pakistan's public health infrastructure.

The FETP serves as a cornerstone of Pakistan's disease surveillance and outbreak response efforts. By equipping epidemiologists with essential investigative and analytical skills, the program enhances the country's ability to detect, assess, and respond to public health threats, including emerging infectious diseases, antimicrobial resistance, and other critical health challenges.

Discussions during the meeting emphasized capacity building, strategic partnerships, and innovations in field epidemiology training to align the program with global best practices. The committee reaffirmed its commitment to ensuring that FETP graduates continue to play a pivotal role in safeguarding public health in Pakistan.

As the program moves forward, stakeholders remain dedicated to expanding training opportunities, integrating One Health approaches, and fostering regional and international collaborations to further enhance public health security.

Notes from the field:

ACUTE WATERY DIARRHEA (CHOLERA) OUTBREAK INVESTIGATION THOR DAND DISTRICT KARAK

Dr. Arsalan Khan, Fellow of the Field Epidemiology Training Program (FETP)
Dr. Qudrat Ullah, Public Health Coordinator of District Karak

Introduction:

Acute Watery Diarrhea (AWD), commonly associated with cholera, is defined as the occurrence of three or more episodes of watery stools within a 24-hour period, with or without dehydration. According to the World Health Organization (WHO), cholera affects an estimated 1.3 to 4 million people annually, resulting in up to 143,000 deaths worldwide. Outbreaks of AWD are frequently reported in developing countries, where access to safe drinking water and adequate sanitation remains a challenge.

On September 26, 2024, the District Health Officer (DHO) of Karak, Khyber Pakhtunkhwa, reported a confirmed case of AWD (cholera) through a Rapid Diagnostic Test (RDT) and over 200

suspected cases from Village Thor Dand, South Karak, via the Integrated Disease Surveillance and Response System (IDSRS) during epidemiological weeks 38–40. Given the severity of the situation, an outbreak investigation was initiated to assess the extent of the outbreak, identify potential sources, and implement necessary control measure.

Objectives:

The primary objectives of this outbreak investigation were to quantify the magnitude of the outbreak, assess the possible risk factors contributing to its occurrence, and provide informed recommendations for preventive strategies in future outbreaks.

Methods:

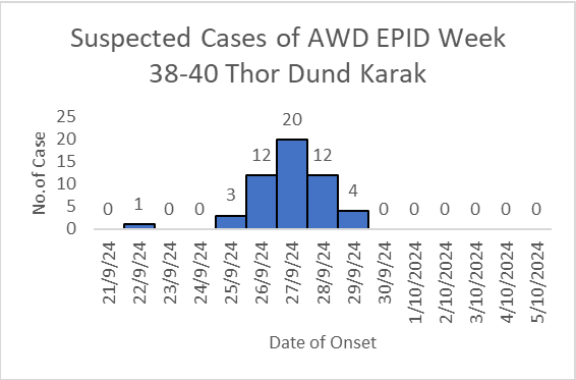
A descriptive study was conducted in Village Thoor Dand, South Karak during epidemiological weeks 38–40, spanning from September 15, 2024, to October 5, 2024. A suspected case was defined as any resident of Village Thoor Dand, South District Karak, who presented with acute diarrhea, with or without dehydration, during epidemiological weeks 38 to 40. Data collection involved an active case search and structured household surveys from residents using a pre-designed questionnaire and face-to-face interviews. Stool samples were collected from suspected cases for laboratory investigation to confirm or rule out cholera. The collected data were analyzed using Microsoft Excel. Descriptive statistics, including gender distribution, attack rates, and risk factor identification, were performed to assess the outbreak characteristics and potential determinants.

Results:

The descriptive study of 52 suspected cases revealed a mean age of 17 years (range: 3–64 years). The male-to-female ratio was 4:1. The highest attack rate was observed in the age group of 1–10 years. Among the total suspected cases, 79% of individuals had attended a repast funeral held on September 24, 2024, in the same village. Furthermore, 86% of the suspected cases had access to a proper sanitation system (latrines), but only 17% of individuals reported using soap before handwashing. The village lacked a proper piped water supply for drinking purposes, with 94% of individuals relying on water from pumps or tube wells for their drinking needs.

Following laboratory investigations, no Vibrio cholerae bacteria were isolated from the stool samples of suspected cases, confirming that the outbreak was due to acute watery diarrhea of non-cholera origin. Further assessment indicated that the outbreak was likely caused by the consumption of contaminated water, while a subset of cases was linked to the ingestion of contaminated food served at the funeral repast.

Time and date wise ditribution of cases



Discussion

The outbreak investigation in Village Thoor Dand, South Karak, confirmed an acute watery diarrhea outbreak of non-cholera origin, primarily attributed to contaminated water sources and food consumption during a funeral repast. The findings align with previous studies indicating that contaminated drinking water is a major risk factor for diarrheal outbreaks in low-resource settings [2]. The high proportion of cases linked to water obtained from pumps and tube wells suggests possible fecal contamination, a well-documented cause of diarrheal diseases [3].

Additionally, poor hygiene practices were observed, with only 17% of affected individuals reporting handwashing with soap. Hand hygiene plays a critical role in preventing diarrheal diseases, as emphasized by WHO and UNICEF in their global initiatives promoting handwashing [4]. The findings also highlight the significance of foodborne transmission in diarrheal outbreaks, with nearly 79% of cases attending the funeral repast, reinforcing the role of contaminated food as a vehicle for disease spread [5].

The highest attack rate in children aged 1–10 years suggest that exposure patterns may differ based on age-related activities. Similar studies have reported higher attack rates among children, as they are more vulnerable to infections due to immature immune systems and increased exposure to environmental contaminants [6].

This investigation highlights the urgent need for improved water supply infrastructure, hygiene promotion, and food safety measures in outbreak-prone areas. Immediate public health interventions, including safe water provision, hygiene education, and community engagement, are essential to mitigating future outbreaks and reducing the burden of diarrheal diseases in resource-limited settings [7].

Conclusion

The outbreak of acute watery diarrhea in Village Thoor Dand, South Karak, was not caused by cholera but was instead attributed to contaminated water and food. The investigation highlighted poor hygiene practices and inadequate access to safe drinking water as key contributing factors.

Recommendations

To prevent and control future outbreaks of acute watery diarrhea, community education on proper handwashing practices before eating

and after defecation should be prioritized. The public health engineering department should be informed to inspect all water supplies for potential pipeline leaks. Water samples should be collected regularly and tested at public health reference laboratories or the Water and Sanitation Authority (WASA) to detect microbial contamination. Additionally, safe food handling practices should be promoted, particularly during large communal gatherings, to reduce the risk of foodborne illness.

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Knowledge Hub

Understanding Typhoid – A Public Health Concern

Introduction

Typhoid fever remains a significant public health challenge, particularly in low- and middle-income countries, including Pakistan. Caused by the bacterium *Salmonella Typhi*, this life-threatening illness spreads primarily through contaminated food and water. Despite advances in medical science, typhoid continues to affect millions worldwide, underscoring the need for strong public health interventions.

Causes and Transmission

Typhoid fever is a bacterial infection that spreads through the **fecal-oral route**. Contaminated water, poor sanitation, and inadequate food hygiene contribute to its transmission. The bacterium *Salmonella Typhi* enters the body through ingestion, invades the intestines, and spreads via the bloodstream to multiple organs.

Individuals infected with typhoid can continue to shed bacteria in their stool, even after recovery, making **asymptomatic carriers** a major challenge in disease control.

Symptoms of Typhoid Fever

Typhoid symptoms typically develop **one to three weeks** after exposure and include:

- **High, prolonged fever** (often exceeding 39°C/102°F)
- **Weakness and fatigue**
- **Abdominal pain and constipation or diarrhea**
- **Loss of appetite and weight loss**
- **Headache and body aches**
- **Rose-colored spots** on the chest and abdomen in some cases

If left untreated, typhoid can lead to severe complications, such as intestinal perforation, sepsis, and multi-organ failure.

Diagnosis and Treatment

Diagnosing typhoid involves blood, stool, or bone marrow cultures to detect *Salmonella Typhi*. Widal tests and newer molecular methods may also be used, but blood cultures remain the gold standard.

Treatment includes:

- **Antibiotic therapy** (Ceftriaxone, Azithromycin, or Fluoroquinolones in non-resistant cases)
- **Hydration and supportive care**
- **Monitoring for complications**

However, the rise of antimicrobial-resistant (AMR) typhoid has made treatment

more challenging, particularly in South Asia. Extensively Drug-Resistant (XDR) Typhoid, resistant to multiple antibiotics, has been reported in Pakistan, highlighting the urgent need for alternative treatment strategies.

Prevention and Control

Typhoid prevention relies on vaccination, hygiene, and safe water practices:

1. Vaccination:

- **Typhoid Conjugate Vaccine (TCV):** Provides long-term immunity and is recommended for routine immunization.
- **Vi Polysaccharide and Live Oral Vaccines:** Used in certain populations but with shorter protection.
- Pakistan has incorporated TCV into its Expanded Program on Immunization (EPI), making it a global leader in typhoid prevention.

2. Safe Water and Sanitation:

- Access to clean drinking water and improved sanitation systems is crucial.
- Handwashing with soap, especially before eating and after using the toilet, can significantly reduce transmission.

3. Food Safety and Hygiene:

- Avoiding raw or undercooked food in high-risk areas.
- Boiling or treating water before consumption.

Public Health Efforts and Global Action

Pakistan has been at the forefront of combatting typhoid through:

- Mass vaccination campaigns to curb XDR typhoid outbreaks.
- Strengthening disease surveillance and laboratory capacity.
- Promoting WASH (Water, Sanitation, and Hygiene) initiatives to reduce disease burden.
- Collaborating with international organizations such as WHO, Gavi, and the CDC to tackle antimicrobial resistance in typhoid.

Conclusion

Typhoid fever remains a serious health threat, but prevention through vaccination, improved hygiene, and responsible antibiotic use can significantly reduce its burden. With continued public health efforts, Pakistan and the global community can work towards eliminating typhoid as a major public health concern.

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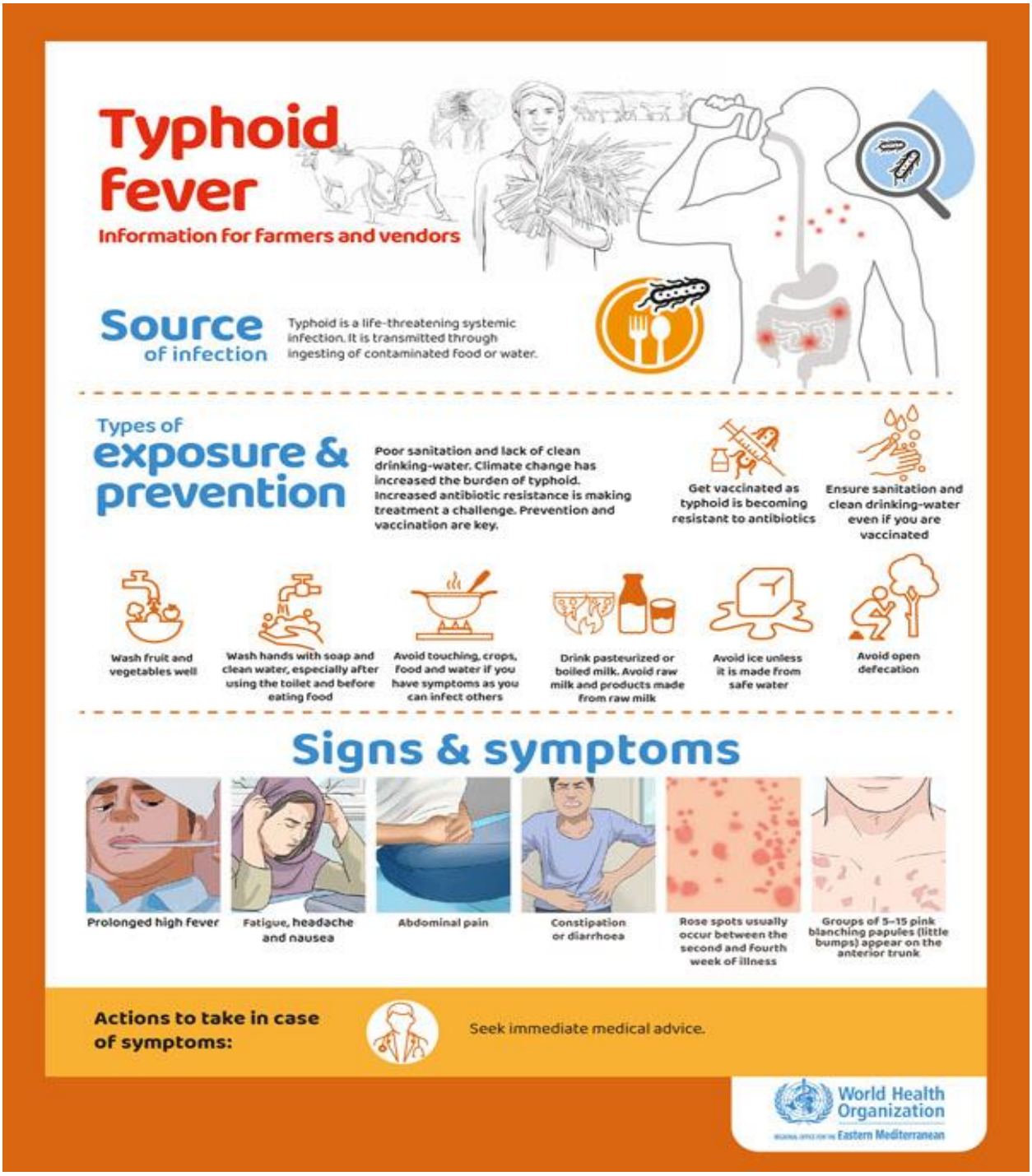

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UK Health Security Agency

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