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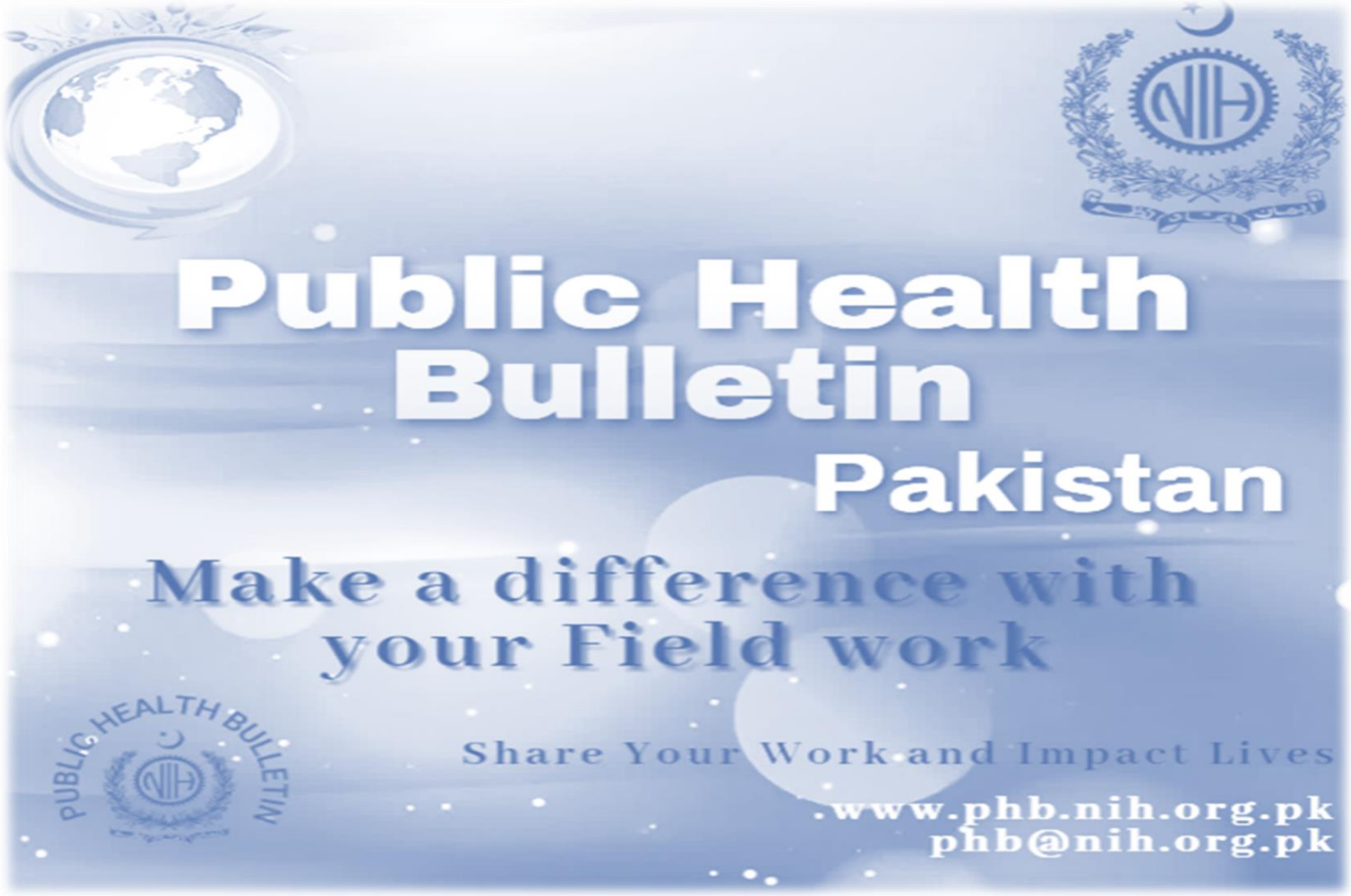
Integrated Disease Surveillance & Response (IDSR) Report

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 52, 2024

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;

- *Letter to Editor about Polio Eradication.*
- *Outbreak Investigation of Measles*
- *Knowledge review on HMPV*

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

- *During week 52, 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 cases of AFP reported from KP, thirteen from Punjab, seven from Sindh, three from Balochistan and one each from GB and ICT. All are suspected cases and need field verification.*
- *Thirty-four suspected cases of HIV/ AIDS reported from Punjab, seven from Balochistan, three from Sindh and two from KP. Field investigation required to verify the cases.*
- *Six suspected cases of Brucellosis reported from KP. Field investigation required to verify the cases.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts* is 82%
- *Gilgit Baltistan , Sindh are the top reporting regions with a compliance rate of 93%, followed by AJK 92% and KP 77%%.*
- *The lowest compliance rate was observed in ICT 75% and Balochistan 66%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2319	1791	77
Azad Jammu Kashmir	404	370	92
Islamabad Capital Territory	36	27	75
Balochistan	1307	866	66
Gilgit Baltistan	405	377	93
Sindh	2077	1934	93
National	6548	5365	82

Public Health Actions

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

Malaria

- **Improve Malaria Surveillance:** Strengthen malaria case surveillance and data reporting systems to identify and manage outbreaks.
- **Expand Distribution of Insecticide-Treated Nets (ITNs):** Distribute ITNs and ensure their use, particularly in malaria-endemic areas.
- **Strengthen Case Management:** Ensure malaria diagnosis and treatment are available, particularly at the community level.
- **Public Awareness:** Run health education and community awareness campaigns, especially targeting high-risk groups.

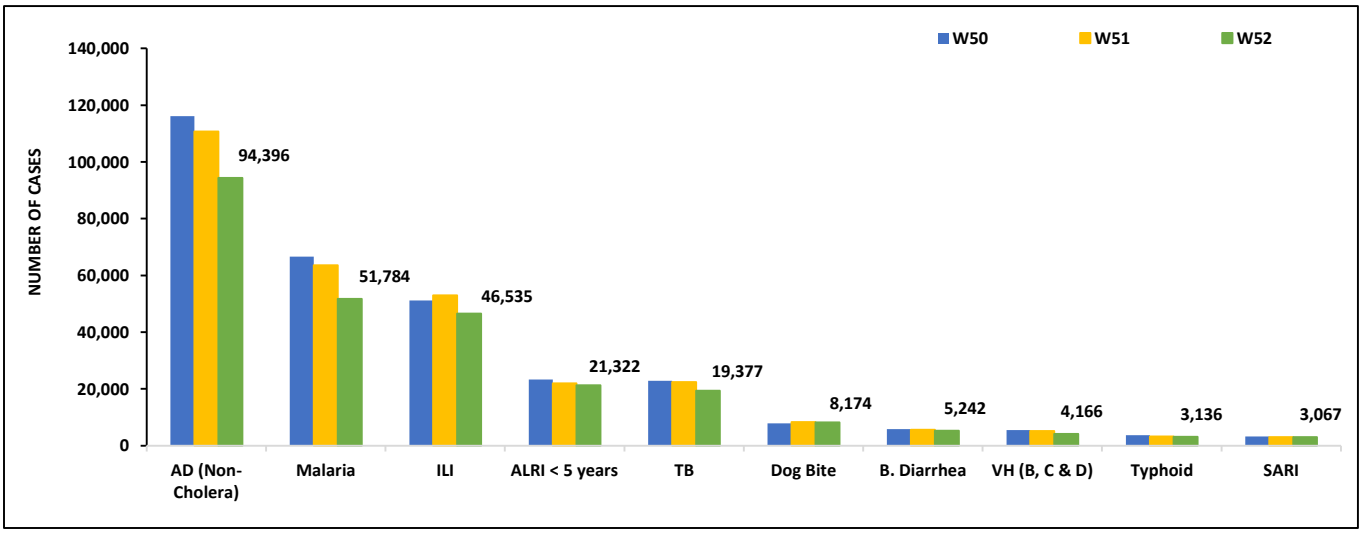
Influenza-Like Illness (ILI)

- **Enhance Surveillance:** Strengthen the surveillance of ILI cases at health facilities, especially during flu seasons.
- **Promote Hygiene Practices:** Launch health education campaigns on proper respiratory hygiene (covering coughs, frequent hand washing).
- **Strengthen Lab Systems:** Enhance the capacity of laboratory systems to easily detect the circulating strains in the population.
- **Enhance vaccination:** Vaccination in high-risk groups (elderly, asthmatics, children < 5) for ILI is advised.

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 52, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	857	4,462	457	264	14,058	47,471	26,827	94,396
Malaria	0	4,664	0	0	4,190	2,462	40,468	51,784
ILI	2,523	8,866	425	1,163	7,824	1	25,733	46,535
ALRI < 5 years	1,214	2,187	1,367	10	2,116	1,531	12,897	21,322
TB	41	129	76	1	388	8,302	10,440	19,377
Dog Bite	103	127	3	0	963	4,077	2,901	8,174
B. Diarrhea	29	1,186	50	1	866	406	2,704	5,242
VH (B, C & D)	13	111	1	0	84	0	3,957	4,166
Typhoid	10	462	40	0	566	1,317	741	3,136
SARI	249	686	417	5	1,463	0	247	3,067
AVH (A & E)	12	7	3	0	275	0	446	743
AWD (S. Cholera)	11	107	3	0	178	337	8	644
Dengue	0	10	0	0	22	565	47	644
Measles	4	11	3	0	239	126	53	436
CL	0	69	0	0	324	1	0	394
Mumps	3	41	6	0	91	1	48	190
Chickenpox/ Varicella	6	7	14	1	53	6	14	101
Chikungunya	0	0	0	0	0	0	96	96
Gonorrhea	0	42	0	0	22	0	22	86
Meningitis	0	3	0	0	11	43	15	72
Pertussis	0	42	11	0	15	0	1	69
HIV/AIDS	0	7	0	0	2	34	3	46
AFP	0	3	1	1	20	13	7	45
Diphtheria (Probable)	0	0	0	0	6	4	10	20
Rubella (CRS)	0	0	0	0	0	10	0	10
Syphilis	0	0	0	0	0	0	9	9
Brucellosis	0	0	0	0	6	0	0	6
NT	0	0	0	0	5	0	0	5

Figure 1: Most frequently reported suspected cases during Week 52, Pakistan.



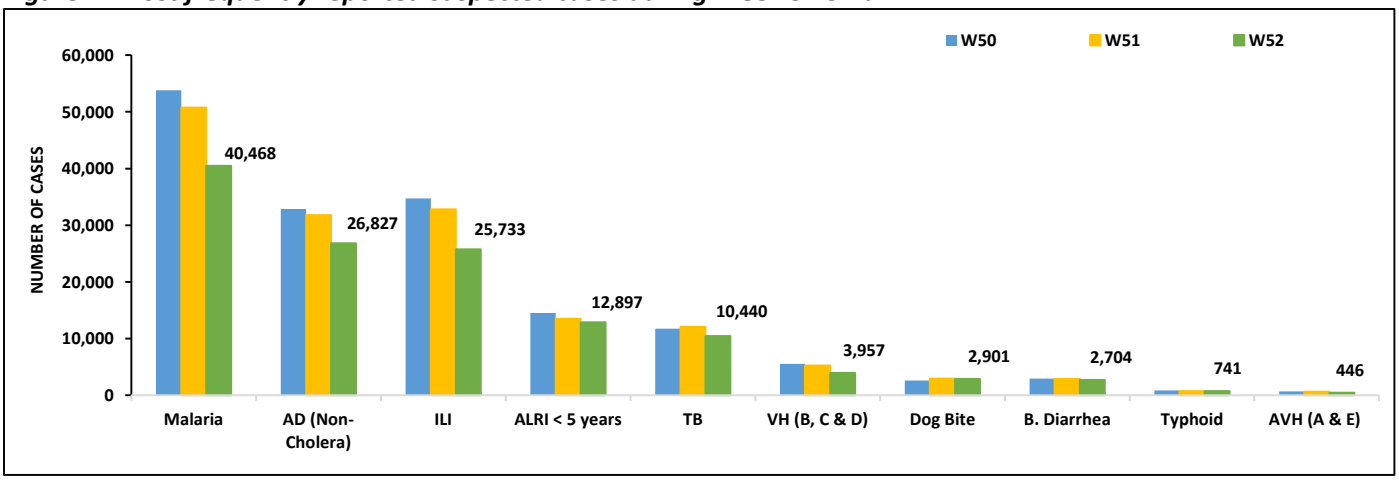
Sindh

- Malaria cases were maximum followed by AD (Non-Cholera), ILI, ALRI<5 Years, TB, VH (B, C, D), dog bite, B. Diarrhea, Typhoid and AVH (A & E).
- Malaria cases are mostly from Khairpur, Larkana and Dadu whereas AD (Non-Cholera) cases are from Dadu, Khairpur and Tharparkar.
- Seven 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.

Table 2: District wise distribution of most frequently reported suspected cases during Week 52, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	1,167	1,263	2,988	428	767	174	68	158	45	4
Dadu	4,048	1,906	503	1,600	454	34	335	485	105	49
Ghotki	928	592	50	406	269	202	237	60	3	4
Hyderabad	174	740	5	13	63	29	0	0	6	0
Jacobabad	1,263	588	942	512	126	139	191	83	47	1
Jamshoro	2,086	917	98	472	482	204	81	85	55	7
Kamber	2,266	1,195	0	339	713	120	212	95	13	0
Karachi Central	1	302	655	0	4	4	0	1	11	0
Karachi East	30	261	558	42	15	0	12	17	1	0
Karachi Keamari	1	279	276	50	1	0	3	2	3	1
Karachi Korangi	66	220	1	2	3	0	0	1	0	0
Karachi Malir	179	880	2,703	214	108	16	45	32	10	1
Karachi South	12	60	3	0	0	0	0	0	0	0
Karachi West	225	795	1,063	152	137	81	35	23	22	3
Kashmore	2,726	387	559	260	437	30	167	40	4	0
Khairpur	4,124	1,728	5,880	1,144	986	151	195	265	138	0
Larkana	4,094	1,256	0	640	888	51	36	289	15	3
Matiari	1,189	888	2	402	444	108	76	40	7	5
Mirpurkhas	1,386	1,537	2,766	582	589	98	100	93	6	1
Naushero Feroze	1,744	945	896	376	422	41	197	100	53	0
Sanghar	2,776	1,359	89	654	899	1,233	267	75	36	2
Shaheed Benazirabad	1,282	1,177	7	297	307	71	144	46	87	0
Shikarpur	2,508	1,074	0	287	264	644	158	197	5	0
Sujawal	666	1,007	6	594	183	74	66	78	3	35
Sukkur	1,852	813	1,797	666	416	68	109	98	4	0
Tando Allahyar	736	605	931	348	395	207	42	113	3	0
Tando Muhammad Khan	294	453	35	268	424	22	16	42	0	1
Tharparkar	1,003	1,583	1,586	1,015	292	54	4	70	13	20
Thatta	713	987	1,334	461	39	84	105	43	19	306
Umerkot	929	1,030	0	673	313	18	0	73	27	3
Total	40,468	26,827	25,733	12,897	10,440	3,957	2,901	2,704	741	446

Figure 2: Most frequently reported suspected cases during Week 52 Sindh

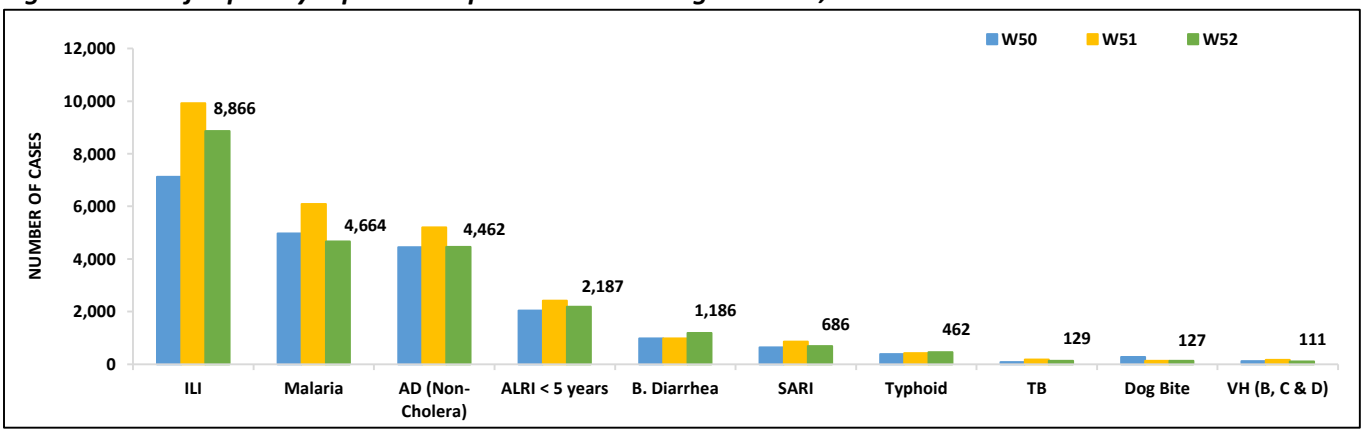


- ILI, Malaria, AD (Non-Cholera), ALRI <5 years, B. Diarrhea, SARI, Typhoid, TB, dog bite and VH (B, C & D) cases were the most frequently reported diseases from Balochistan province.
- ILI cases are mostly reported from Gwadar, Kech (Turbat) and Quetta while Malaria cases are mostly reported from Jhal Magsi, Kech (Turbat) and Lesbella.
- Seven suspected cases of HIV/ AIDS reported from Balochistan. Field investigation required to verify the cases.
- Three cases of AFP reported from Balochistan. They are suspected cases and need field verification.

Table 3: District wise distribution of most frequently reported suspected cases during Week 52, Balochistan

Districts	AD (Non-Cholera)	Malaria	ILI	B. Diarrhea	ALRI < 5 years	Typhoid	SARI	AWD (S.Cholera)	TB	CL
Barkhan	66	25	67	25	5	4	24	2	6	1
Chagai	222	27	105	0	36	0	8	0	1	0
Chaman	133	4	51	23	34	13	37	0	1	0
Dera Bugti	76	130	57	60	5	0	0	0	0	0
Gwadar	1,715	179	495	7	121	1	20	0	0	0
Harnai	19	71	70	211	77	0	0	2	2	2
Hub	38	125	57	0	8	0	2	0	0	0
Jaffarabad	124	284	190	6	63	4	3	40	0	0
Jhal Magsi	415	626	178	388	3	4	11	9	17	0
Kalat	8	14	21	26	13	13	19	0	0	0
Kech (Turbat)	1,126	543	195	44	38	7	NR	NR	NR	12
Kharan	463	19	87	9	36	11	2	0	0	0
Khuzdar	484	130	258	13	138	36	30	0	1	1
Killa Saifullah	0	68	100	179	37	0	4	0	0	0
Kohlu	369	65	158	20	49	41	27	0	NR	2
Lasbella	61	478	288	65	46	9	13	1	19	1
Loralai	326	24	101	35	24	63	13	0	5	0
Mastung	193	46	73	15	11	59	12	0	7	19
MusaKhel	39	33	30	8	5	3	3	0	0	0
Naseerabad	64	464	290	40	9	4	75	27	24	54
Nushki	37	10	66	0	14	0	0	0	0	0
Panjgur	54	12	35	34	13	0	7	0	0	0
Pishin	679	26	224	92	78	65	21	0	9	0
Quetta	889	10	314	90	46	70	18	1	0	2
Sibi	41	394	83	208	31	142	56	0	8	0
Sohbat pur	47	366	154	113	50	25	24	6	6	2
Surab	212	36	56	0	0	0	0	0	0	0
Usta Muhammad	188	294	376	164	50	5	6	0	16	15
Washuk	474	136	180	5	114	16	13	5	1	0
Zhob	191	21	70	284	11	85	9	36	0	0
Ziarat	113	4	33	23	21	6	5	0	4	0
Total	8,866	4,664	4,462	2,187	1,186	686	462	129	127	111

Figure 3: Most frequently reported suspected cases during Week 52, Balochistan

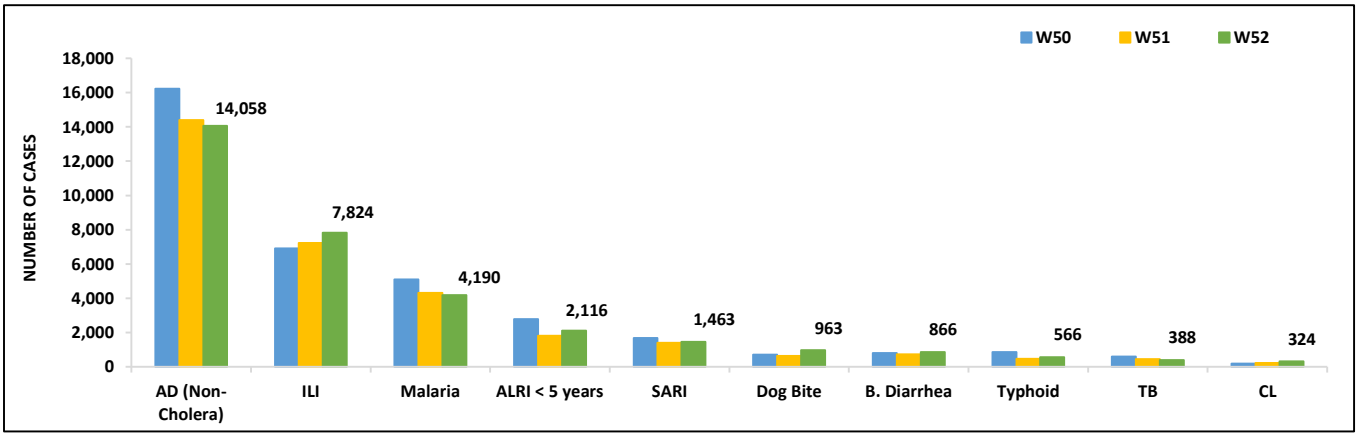


- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, SARI, dog bite, B. Diarrhea, Typhoid, TB and CL cases.
- Twenty cases of AFP reported from KP. All are suspected cases and need field verification.
- Two suspected cases of HIV/ AIDS reported from KP. Field investigation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

Districts	AD (Non-Cholera)	Malaria	ILI	B.Diarrhea	SARI	ALRI <5 Years	Typhoid	Dog Bite	TB	AVH (A&E)
Abbottabad	401	162	0	112	36	48	7	44	12	0
Bajaur	314	86	144	36	78	70	111	0	9	14
Bannu	644	6	1,309	14	6	3	6	97	26	1
Battagram	125	615	30	12	0	2	1	3	42	1
Buner	101	25	122	0	0	9	0	5	2	0
Charsadda	895	1,752	392	687	6	12	188	49	12	0
Chitral Lower	233	247	7	30	33	11	43	2	6	5
Chitral Upper	86	25	4	10	3	0	3	11	0	0
D.I. Khan	1,229	0	328	11	0	13	20	3	43	2
Dir Lower	884	2	171	135	0	32	108	34	13	1
Dir Upper	537	135	6	14	6	7	0	3	17	8
Hangu	108	274	220	4	16	8	4	1	2	25
Haripur	383	158	1	86	15	0	1	8	1	0
Karak	250	102	59	27	55	13	14	1	2	76
Khyber	341	100	130	38	27	30	74	76	8	46
Kohat	312	97	44	15	35	21	17	3	0	0
Kohistan Lower	67	0	0	0	0	1	5	0	0	0
Kohistan Upper	190	5	6	9	0	0	8	0	0	0
Kolai Palas	51	9	1	2	0	0	4	0	1	0
L & C Kurram	2	16	4	2	3	0	9	1	0	0
Lakki Marwat	416	25	228	28	0	23	19	4	7	2
Malakand	358	158	9	69	28	0	43	11	2	23
Mansehra	342	319	1	40	216	0	2	17	2	0
Mardan	524	0	11	62	0	62	12	12	10	0
Mohmand	106	182	159	15	202	19	23	4	3	94
North Waziristan	7	47	27	17	21	0	4	6	1	6
Nowshera	593	90	26	16	11	14	8	17	5	4
Orakzai	30	9	3	0	0	1	8	0	1	0
Peshawar	1,520	1,339	30	171	277	3	58	59	24	0
SD Tank	6	2	9	0	0	0	2	1	0	0
Shangla	639	1	164	30	0	70	2	15	76	0
SWA	18	4	11	4	23	0	1	0	0	0
South Waziristan (Lower)	11	228	18	10	56	6	2	8	3	0
Swabi	670	848	40	187	67	84	1	26	33	0
Swat	1,064	212	23	163	0	38	14	11	6	0
Tank	427	159	429	23	0	329	6	27	15	2
Tor Ghar	16	0	13	4	13	26	10	1	0	14
Upper Kurram	158	385	11	33	230	8	28	6	4	0
Total	14,058	7,824	4,190	2,116	1,463	963	866	566	388	324

Figure 4: Most frequently reported suspected cases during Week 52, KP



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and ALRI <5 years. One case of AFP reported from ICT. It is suspected case and needs field verification.

AJK: ILI cases were maximum followed by ALRI < 5years, AD (Non-Cholera), SARI, dog bite, TB, B. Diarrhea, VH (B, C & D), AVH (A & E) and AWD (S. Cholera) cases.

GB: ALRI <5 Years cases were the most frequently reported diseases followed by AD (Non-Cholera), ILI, SARI, TB, B. Diarrhea and Typhoid cases.

Figure 5: Most frequently reported suspected cases during Week 52, ICT

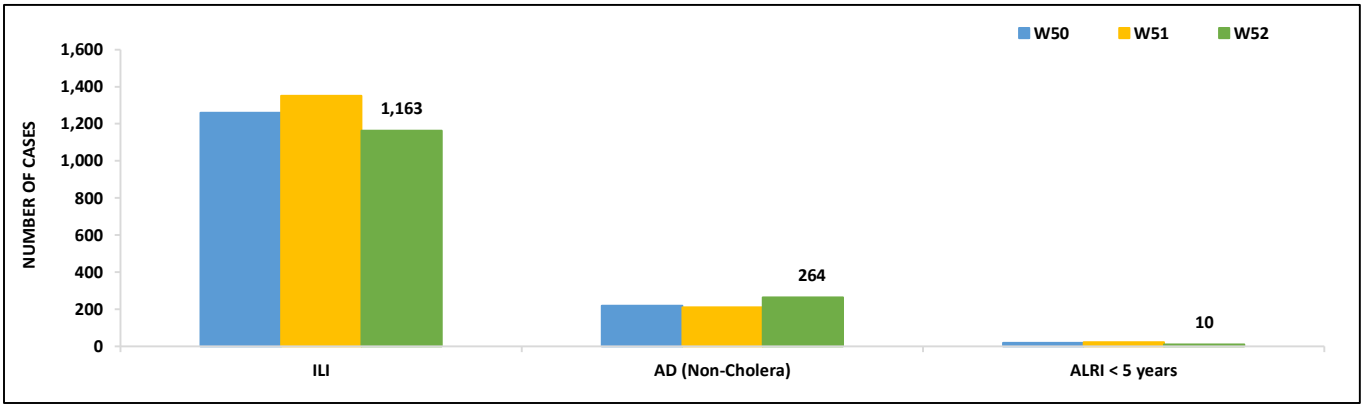


Figure 6: Week wise reported suspected cases of ILI, ICT

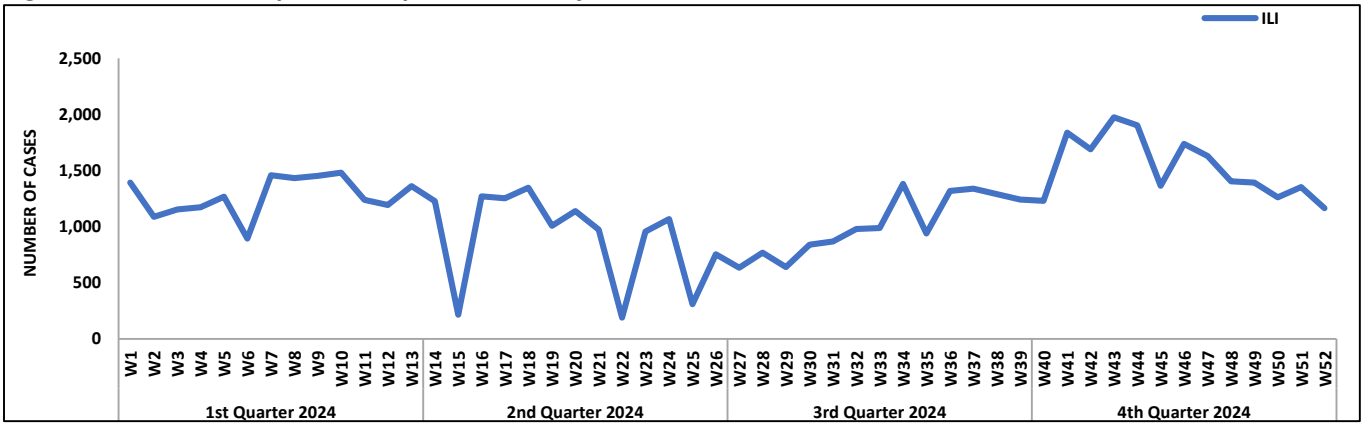


Figure 7: Most frequently reported suspected cases during Week 52, AJK

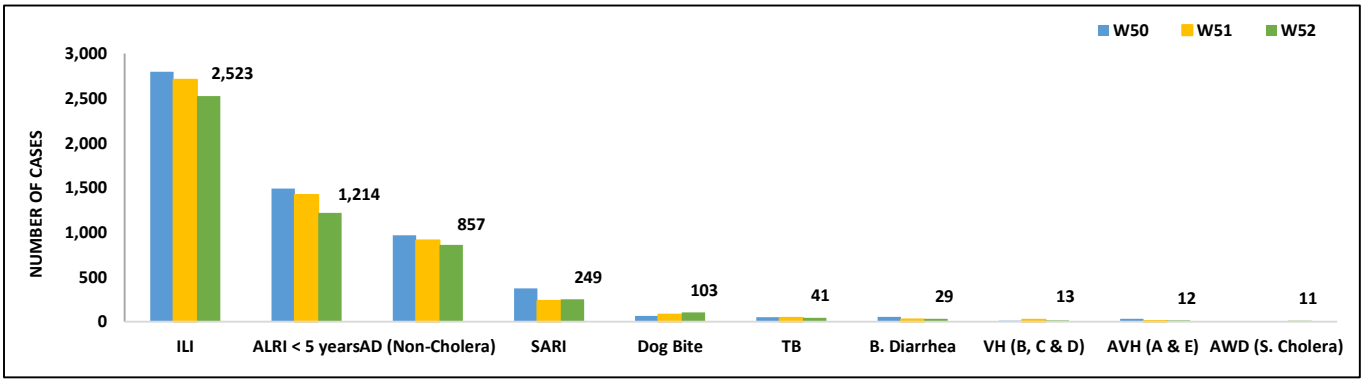


Figure 8: Week wise reported suspected cases of ILI and AD (Non-Cholera) AJK

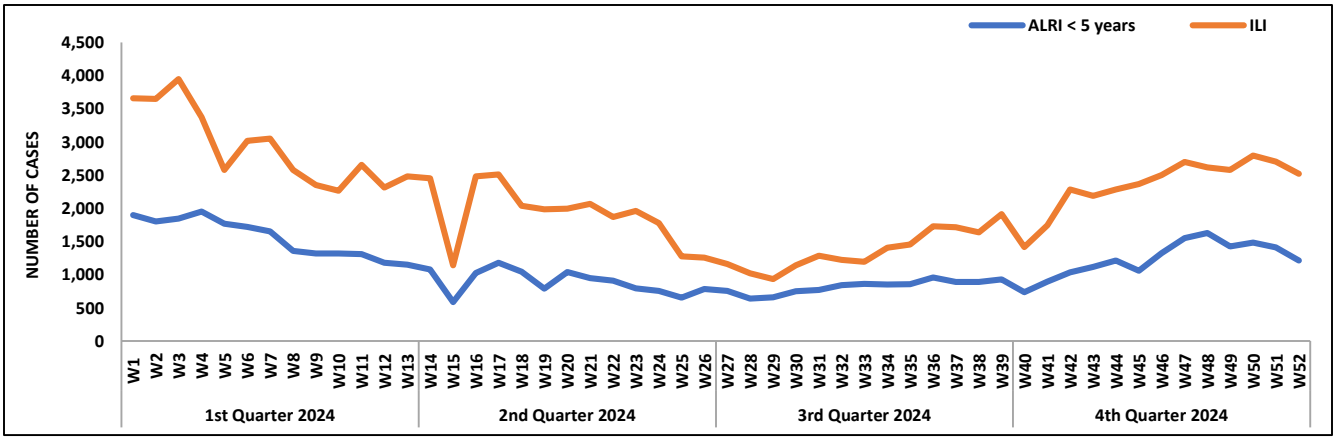


Figure 9: Most frequent cases reported during Week 52, GB

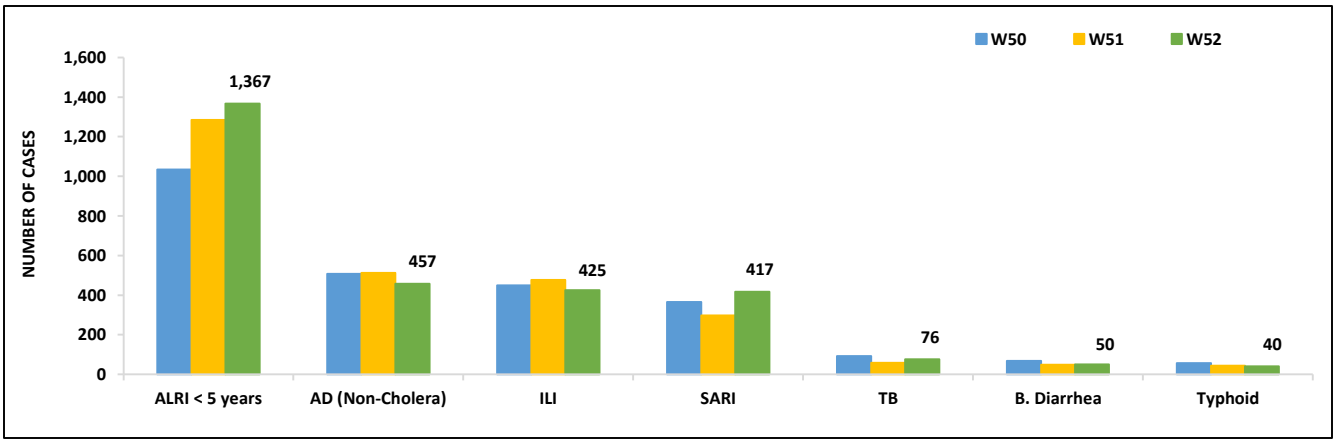
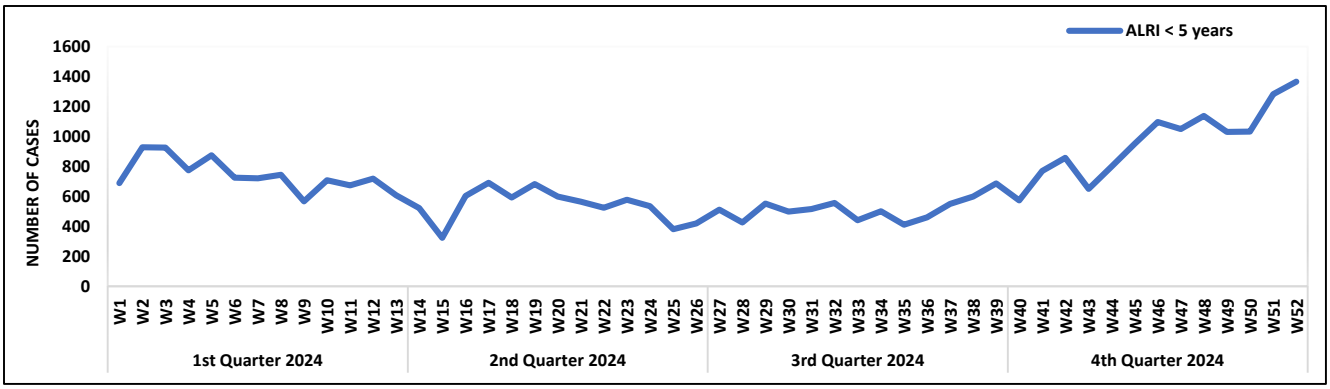


Figure 10: Week wise reported suspected cases of ALRI <5 years, GB



Punjab

- AD (Non-Cholera) cases were maximum followed by TB, dog bite, Malaria, ALRI<5 Years, Typhoid, B.Diarrhea , AWD (S. Cholera) and Measles cases.
- Thirty-four suspected cases of HIV/ AIDS reported from Punjab. Field investigation required to verify the cases.
- Thirteen cases of AFP reported from Punjab. All are suspected cases and need field verification.

Figure 11: Most frequently reported suspected cases during Week 52, Punjab.

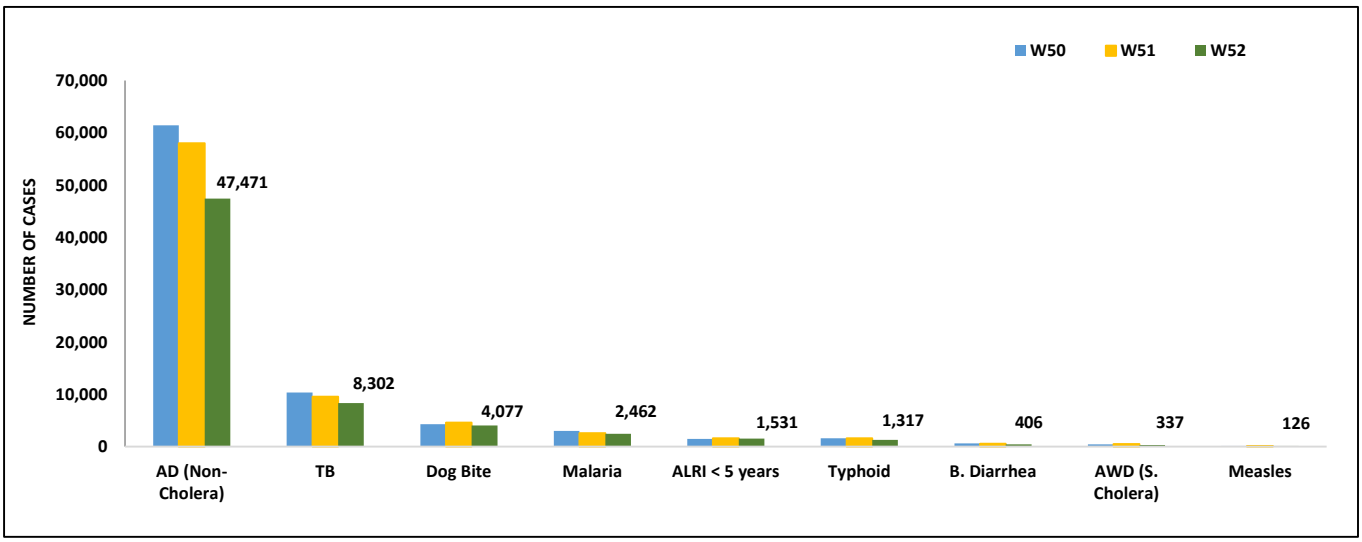


Figure 12: Week wise reported suspected cases of AD (Non-Cholera), Punjab.

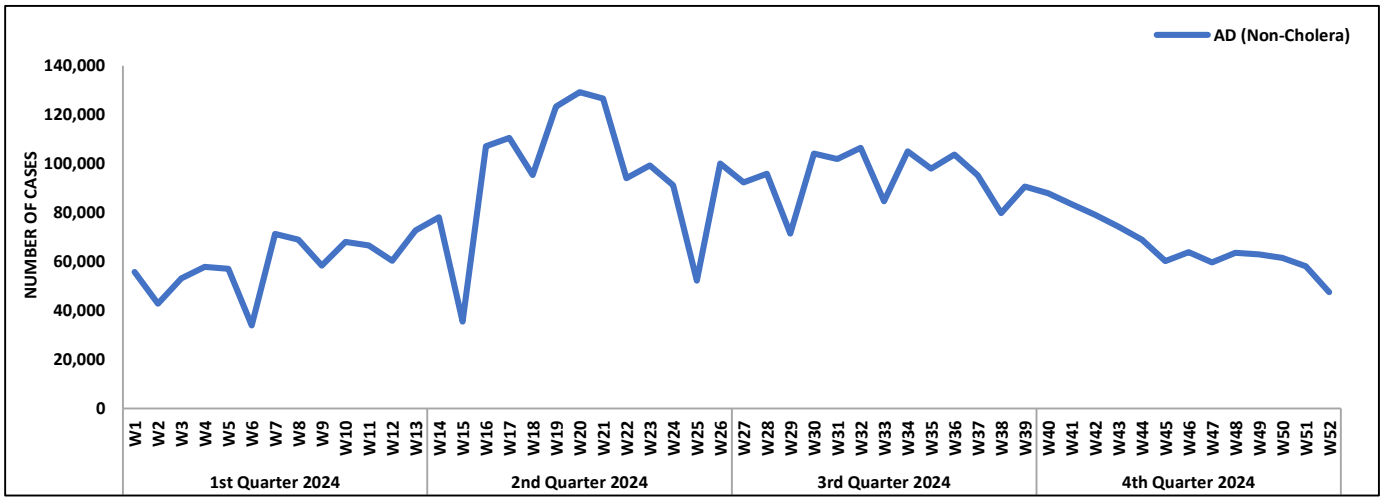


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 52

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)		20	2	-	-	-	-	-	-	-	-	-	-	15	0
AD (Non-Cholera)		61	0	-	-	1	0	-	-	-	-	-	-	45	0
Malaria		584	25	-	-	409	21	-	-	-	-	-	-	33	1
CCHF		-	-	2	0	7	0	-	-	-	-	-	-	0	0
Dengue		401	4	-	-	176	4	-	-	-	-	-	-	0	0
VH (B)		2,104	67	69	51	1,967	24	-	-	0	0	-	-	229	0
VH (C)		2,086	208	0	0	2,222	31	-	-	0	0	-	-	234	1
VH (A & E)		-	-	-	-	-	-	-	-	-	-	-	-	155	2
Covid-19		-	-	1	0	73	0	-	-	-	-	-	-	11	0
Chikungunya		-	-	-	-	-	-	-	-	-	-	-	-	0	0
TB		-	-	-	-	115	15	-	-	-	-	-	-	63	5
HIV/ AIDS		-	-	-	-	1,491	0	-	-	-	-	-	-	49	0
Syphilis		-	-	-	-	61	0	-	-	-	-	-	-	0	0
B. Diarrhea		-	-	-	-	-	-	-	-	-	-	-	-	25	0
Typhoid		403	6	-	-	203	9	-	-	-	-	-	-	1	0
Diptheria (Probabale)		-	-	-	-	-	-	-	-	-	-	-	-	0	0
Pertussis		-	-	-	-	-	-	-	-	-	-	-	-	0	0
M-POX		-	-	-	-	4	0	-	-	-	-	-	-	0	0
Leishmaniansis (cutaneous)		-	-	-	-	74	36	-	-	-	-	-	-	0	0
Meningitis		-	-	-	-	-	-	-	-	-	-	-	-	0	0
Pneumonial (ALRI)		-	-	-	-	-	-	-	-	-	-	-	-	0	0
Brucellosis		-	-	-	-	16	0	-	-	-	-	-	-	0	0
Measles		122	58	14	11	199	96	9	4	10	4	106	22	8	3
Rubella		122	0	14	1	199	0	9	0	10	0	106	2	8	0
Covid-19	Out of SARI	12	0	0	0	15	0	92	0	0	0	203	0	0	0
	Out of ILI	10	0	0	0	4	0	54	0	0	0	105	0	0	0
Influenza A	Out of SARI	12	1	0	0	15	0	92	9	0	0	203	23	0	0
	Out of ILI	10	1	0	0	4	1	54	4	0	0	105	19	0	0
Influenza B	Out of SARI	12	0	0	0	15	1	92	4	0	0	203	20	0	0
	Out of ILI	10	0	0	0	4	1	54	2	0	0	105	16	0	0
RSV	Out of SARI	12	0	0	0	15	0	92	31	0	0	203	0	0	0
	Out of ILI	10	0	0	0	4	0	54	4	0	0	105	0	0	0

Table 6: IDSR reporting districts Week 52, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	103	93%
	Bannu	238	135	57%
	Battagram	62	35	56%
	Buner	34	34	100%
	Bajaur	44	42	95%
	Charsadda	59	59	100%
	Chitral Upper	34	27	79%
	Chitral Lower	35	35	100%
	D.I. Khan	114	113	99%
	Dir Lower	74	74	100%
	Dir Upper	37	30	81%
	Hangu	22	17	77%
	Haripur	72	68	94%
	Karak	36	35	97%
	Khyber	53	30	57%
	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	9	21%
	Upper Kurram	41	29	71%
	Malakand	42	30	71%
	Mansehra	136	107	79%
	Mardan	80	75	94%
	Nowshera	55	53	96%
	North Waziristan	13	7	54%
	Peshawar	152	133	88%
	Shangla	37	27	73%
	Swabi	64	62	97%
	Swat	77	73	95%
	South Waziristan (Upper)	93	36	39%
	South Waziristan (Lower)	42	20	48%
	Tank	34	32	94%
	Torghar	14	13	93%
	Mohmand	68	62	91%
	SD Peshawar	5	0	0%
	SD Tank	58	5	9%
	Orakzai	69	10	14%
	Mirpur	37	37	100%
	Bhimber	42	20	48%

Azad Jammu Kashmir	Kotli	60	60	100%
	Muzaffarabad	45	43	96%
	Poonch	46	46	100%
	Haveli	39	39	100%
	Bagh	40	40	100%
	Neelum	39	29	74%
	Jhelum Vellay	29	29	100%
Islamabad Capital Territory	Sudhnooti	27	27	100%
	ICT	21	19	90%
Balochistan	CDA	15	8	53%
	Gwadar	25	25	100%
	Kech	44	21	48%
	Khuzdar	74	64	86%
	Killa Abdullah	26	0	0%
	Lasbella	55	55	100%
	Pishin	69	43	62%
	Quetta	55	37	67%
	Sibi	36	14	39%
	Zhob	39	28	72%
	Jaffarabad	16	16	100%
	Naserabad	32	31	97%
	Kharan	30	26	87%
	Sherani	15	0	0%
	Kohlu	75	44	59%
	Chagi	36	23	64%
	Kalat	41	40	98%
	Harnai	17	16	94%
	Kachhi (Bolan)	35	0	0%
	Jhal Magsi	28	18	64%
	Sohbat pur	25	25	100%
	Surab	32	29	91%
	Mastung	45	45	100%
	Loralai	33	29	88%
	Killa Saifullah	28	26	93%
	Ziarat	29	10	34%
	Duki	31	0	0%
	Nushki	32	29	91%
	Dera Bugti	45	29	64%
	Washuk	46	36	78%
	Panjgur	38	7	18%
	Awaran	23	0	0%
	Chaman	24	24	100%
	Barkhan	20	20	100%
	Hub	33	14	42%
	Musakhel	41	8	20%
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	62	100%
	Astore	54	54	100%
	Shigar	27	25	93%
	Skardu	52	52	100%
	Ganche	29	29	100%
Sindh	Kharmang	46	25	54%
	Hyderabad	72	24	33%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	96	95	99%
	Tharparkar	276	226	82%
	Shikarpur	59	59	100%
	Thatta	52	51	98%
	Larkana	67	66	99%
	Kamber Shadadkot	71	71	100%
	Karachi-East	21	18	86%
	Karachi-West	20	20	100%
	Karachi-Malir	37	25	68%
	Karachi-Kemari	18	16	89%
	Karachi-Central	11	7	64%
	Karachi-Korangi	18	17	94%
	Karachi-South	4	4	100%
	Sujawal	55	55	100%
	Mirpur Khas	106	102	96%
	Badin	123	123	100%
	Sukkur	63	63	100%
	Dadu	88	87	99%
	Sanghar	100	99	99%
	Jacobabad	44	44	100%
	Khairpur	169	166	98%
	Kashmore	59	59	100%
	Matiari	42	42	100%
	Jamshoro	81	73	90%
	Tando Allahyar	55	53	96%
	Tando Muhammad Khan	41	41	100%
	Shaheed Benazirabad	122	121	99%

Table 7: IDSR reporting Tertiary care hospital Week 52, 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%

Letter to Editor

Polio Cases in Pakistan: Advancing the Polio Eradication Initiative in 2024

Dear Editor,

Polio continues to challenge Pakistan's public health system in 2024, with **73 wild poliovirus (WPV1) cases reported nationwide in 2024**. While this represents progress from earlier years when cases numbered in the hundreds, it also highlights persistent gaps that need immediate attention. Pakistan remains one of the last two polio-endemic countries globally, alongside Afghanistan.

The majority of polio cases in 2024 were concentrated in high-risk districts of Balochistan, particularly in regions where vaccine coverage remains low due to security issues and in Sindh due to vaccine hesitancy. According to Pakistan's National Emergency Operations Centre (NEOC), over **3 million children remain at risk of poliovirus due to inaccessibility and refusals** during immunization campaigns (NEOC, 2023). Surveillance data also shows silent transmission in sewage samples from major urban centres, such as Karachi and Peshawar, where migratory populations and urban slums create pockets of vulnerability.

WPV Polio Cases Across Pakistan's Provinces

PROVINCE	2019	2020	2021	2022	2023	2024
PUNJAB	12	14	0	0	0	1
SINDH	30	22	0	0	2	22
KHYBER PAKHTUNKHWA	93	22	0	20	4	22
BALOCHISTAN	12	26	1	0	0	27
GILGIT-BALTISTAN	0	0	0	0	0	0
AJ&K	0	0	0	0	0	0
ICT	0	0	0	0	0	1
TOTAL POLIO CASES	147	84	1	20	6	73

Eradicating polio from its last strongholds is as much about overcoming social and operational hurdles as it is about administering vaccines. In public health, the battle against polio in Pakistan is as much about people and perceptions as it is about science and vaccines. Over the years, some incredible progress has been made, but there are a few stubborn challenges that continue to hold Pakistan back:

1. **Misinformation and Vaccine Hesitancy**
   Persistent myths about the vaccine, such as unfounded claims linking it to infertility, deter parents from immunizing their children
2. **Reaching Remote and Conflict-Affected Areas**
   Tribal regions and conflict zones remain inaccessible, leaving pockets where the virus thrives.
3. **Operational Gaps**
   Inefficiencies in campaign planning and execution result in missed children, particularly in urban slums and among migratory populations.
4. **Cross-Border Transmission**: The porous border with Afghanistan is another big challenge. People move back and forth regularly, and so does the virus. Unless both countries are polio-free, it's like trying to plug a leak while water keeps pouring in.

These barriers are frustrating, but they're not insurmountable. The solutions are within reach—we just need the resources, coordination, and willpower to make them happen.

To eradicate polio from Pakistan, a comprehensive and multi-pronged approach is required:

1. **Strengthen Routine Immunization** Routine immunization coverage in Pakistan remains low, with only **83% of children receiving the third dose of the polio vaccine** (UNICEF, 2023). Increasing this rate through health system strengthening, integrating polio services with broader health programs, and improving supply chain management is crucial.
2. **Enhance Community Engagement** Misinformation must be countered with tailored community-based interventions. Engaging religious leaders, local influencers, and female health workers can help build trust and dispel myths about the vaccine. The "Sehat Kahani" telemedicine initiative, for example, can be expanded to address vaccine concerns in hard-to-reach areas.
3. **Data-Driven Targeting and planning** Using geographic information systems (GIS) and real-time data, micro plans should focus on identifying and vaccinating missed children. Special attention must be paid to migratory populations and urban slums where surveillance data highlights silent transmission.
4. **Ensure Safe Access in Conflict Zones** Collaboration with local leaders and law enforcement agencies is essential to provide safe access for health workers in areas affected by insecurity. Establishing vaccination points at transit locations, such as bus terminals and borders, can also help reach inaccessible populations.
5. **Strengthen Cross-Border Coordination** A robust partnership with Afghanistan is critical to stopping cross-border transmission. Joint vaccination campaigns and synchronized efforts can cut off the virus's circulation along the shared corridor.
6. **Scale Up Surveillance** Environmental surveillance in urban centres and high-risk districts must be expanded. Early detection of poliovirus in sewage samples can guide targeted immunization responses.

Eradicating polio is a moral and public health imperative. It's also an economic one—polio eradication could save Pakistan **$1.5 billion annually** in healthcare costs (GPEI, 2023). Pakistan's commitment to the Global Polio Eradication Initiative (GPEI) must be matched with sustained funding, innovative strategies, and community-level action.

The road to eradication is arduous, but it is achievable. If Pakistan accelerates its efforts and focuses on closing these last gaps, 2025 could become the year the country finally rids itself—and the world—of this crippling disease.

Sincerely,

Dr. Hamza Ikram

Scientific Officer, CDC-NIH.

References:

1. WHO (2023). Polio Weekly Surveillance Reports.
2. National Emergency Operations Centre (NEOC), Pakistan (2023). Annual Report on Polio Eradication.
3. UNICEF (2023). Immunization Coverage Estimates for Pakistan.
4. Global Polio Eradication Initiative (GPEI, 2023). Economic Benefits of Polio Eradication.

Notes from the field:

MEASLES CASE INVESTIGATION-IN TEHSIL LAL QILA, KUMBAR, DISTRICT DIR – LOWER ON 01-JANUARY-2025.

DR. WALI KHAN DISTRICT SURVEILLANCE COORDINATOR, DIR LOWER.

Introduction:

Measles, a highly contagious viral disease, has experienced a significant global resurgence, with inadequate immunization coverage being a major contributing factor. In 2023, an estimated 10.3 million measles cases were reported worldwide, reflecting a 20% increase compared to 2022. This alarming trend highlights the critical role of vaccination in preventing the

disease, as low coverage rates continue to leave many children vulnerable.

In Pakistan, measles remains a pressing public health challenge. According to the Measles-Rubella Partnership, as of April 10, 2024, the target population for outbreak response efforts in the country was 3,806,630 individuals. Despite these efforts, vaccination coverage remains suboptimal. In 2023, only 84% of children aged 9–12 months received the first dose of the Measles-Containing Vaccine (MCV-I), leaving approximately 1,056,000 children unprotected. Similarly, coverage for the second dose (MCV-II), intended for children aged 18 months to 5 years, stagnated at 80%.

In January 2025, a suspected measles outbreak was reported in Kumbar, Maidan, where a tragic case of an 8-month-old child resulted in death due to measles complications. Another child from the same household, 3-year-old, was admitted to DHQ Hospital Timergara with similar symptoms.

In response, an immediate outbreak investigation and case response were initiated on January 1, 2025. The objectives were to contain the outbreak, identify additional cases, and strengthen immunization coverage in the affected community.

Methods:

A measles case investigation was conducted on January 1, 2025, in response to a suspected outbreak in UC-Lalqila. The investigation included a review of health facility records and active case finding within the community. A suspected case was defined as any resident of UC-Lalqila presenting with an acute onset of fever and a maculopapular (non-vesicular) rash between December 20, 2024, and January 1, 2025. A probable case was defined as a suspected case epidemiologically linked to a confirmed case, while a confirmed case was defined as a suspected case with laboratory confirmation. Data were collected using a pretested questionnaire that covered detailed medical history, immunity profiling to assess vaccination status, and active case search within the community. To evaluate community immunity, cluster sampling was conducted in 30 households, assessing a total of 30 children. Although two laboratory-confirmed cases were identified based on existing records, no additional samples were sent for laboratory confirmation due to the absence of active cases during the investigation.

RESULTS:

Both the deceased and the admitted child were fully immunized, as confirmed through their EPI cards. An active case search conducted in the designated area found no active cases of measles. Simultaneously, vaccination campaigns were carried out in the targeted communities. The assessment identified four children as defaulters or having significant delays in their immunization schedules. During the vaccination campaigns conducted in response to the outbreak, a total of 48 doses were administered to children in the affected community. These included 9 doses of the pentavalent vaccine, 10 doses of the first measles-containing vaccine (MCV-1), and 29 doses of the second measles-containing vaccine (MCV-2). Data analysis highlighted that the primary barrier to vaccination was a lack of parental awareness.

DISCUSSION:

This investigation underscores the critical importance of maintaining high vaccination coverage to prevent measles outbreaks, even in communities with established immunization programs. While no additional cases were detected, deaths and hospitalizations highlight the potential for sporadic cases, even among fully immunized individuals, due to waning immunity or vaccine effectiveness. The identification of immunization defaulters and delayed schedules reflects persistent gaps, consistent with global evidence linking incomplete immunization to outbreaks. Addressing barriers such as parental awareness through education, along with strengthening routine immunization and community

engagement, is essential for sustained measles control.

CONCLUSION:

Based on the findings of this investigation, it is concluded that a combination of low vaccination coverage and insufficient public awareness about immunization contributed to the measles case in Kumbar, Maidan.

RECOMMENDATIONS:

Additionally, the following long-term strategies are recommended:

Strengthen Surveillance System: Strengthen measles surveillance within IDSR by ensuring accurate case identification, laboratory confirmation, and timely reporting.

Strengthening Case Management: Establish well-equipped isolation wards and enforce standardized infection prevention and control protocols in healthcare facilities.

Mass Vaccination Campaigns: Conduct regular and sustained vaccination campaigns to ensure high and equitable immunization coverage across the target population.

Public Awareness and Education: Implement ongoing public health education programs to address vaccine hesitancy, provide accurate information on vaccine preventable diseases, and promote the significance of immunization.

Robust Monitoring and Evaluation: Establish regular monitoring and evaluation of immunization programs to assess their effectiveness, identify gaps, and make timely adjustments to enhance the immunization strategy.

REFRENCES:

World Health Organization. Measles overview and WHO response: Measles. Available from: https://www.who.int/news-room/fact-sheets/detail/measles

Minta AA, Ferrari M, Antoni S, et al. Progress Toward Measles Elimination — Worldwide, 2000–2023. MMWR Morb Mortal Wkly Rep. 2024;73:1036–42. doi:10.15585/mmwr.mm7345a4.

Expanded Program on Immunization (EPI), Pakistan. Measles outbreak in Swansea a warning. 2016. Available from: http://www.epi.gov.pk/vpd-surveillancereport-january-march-2016/

Centers for Disease Control and Prevention (CDC). Infection control: Measles. Available from: https://www.cdc.gov/infection-control/hcp/measles/index.html

World Health Organization Eastern Mediterranean Regional Office (WHO EMRO). Measles-rubella campaign undertaken to prevent disease outbreaks in Pakistan. Available from: https://www.emro.who.int/pakistan/news/measles-rubella-campaign-undertaken-to-prevent-disease-outbreaks-in-pakistan.html

Knowledge Hub

Human Metapneumovirus (hMPV)

Human Metapneumovirus (hMPV) is a respiratory pathogen first identified in 2001 by researchers in the Netherlands. It belongs to the Pneumoviridae family, closely related to the respiratory syncytial virus (RSV). hMPV is a significant cause of respiratory infections across all age groups, particularly affecting young children, older adults, and individuals with weakened immune systems.

Recent Epidemiological Trends

As of early 2025, there has been an observed increase in hMPV cases in China, with the virus accounting for a notable percentage of respiratory infections. Despite this rise, the World Health Organization (WHO) indicates that current infection levels are within expected seasonal patterns and do not pose a significant global health concern

Transmission and Seasonality

hMPV spreads through respiratory droplets when an infected person coughs or sneezes, close personal contact, or by touching contaminated surfaces and then touching the face. In temperate regions, hMPV infections typically occur in late winter and spring, coinciding with other respiratory viruses like influenza and RSV. (WHO)

Clinical Manifestations

Infections with hMPV often result in symptoms akin to the common cold, including cough, fever, nasal congestion, and shortness of breath. While many cases are mild, hMPV can lead to severe lower respiratory tract diseases (CDC).

Diagnosis and Treatment

Diagnosis of hMPV is confirmed through polymerase chain reaction (PCR) testing of respiratory specimens. Currently, there is no specific antiviral treatment or vaccine for hMPV. Management focuses on supportive care,

including rest, hydration, and over-the-counter medications to alleviate symptoms.

Prevention Strategies

Preventive measures to reduce hMPV transmission are similar to those for other respiratory viruses and include:

- Regular hand washing with soap and water for at least 20 seconds.
- Avoiding touching the face with unwashed hands.
- Maintaining distance from individuals exhibiting symptoms of respiratory illness.
- Disinfecting frequently touched surfaces.
- Wearing masks in crowded or poorly ventilated spaces.
- Staying home when experiencing symptoms to prevent spreading the virus to others.

Adhering to standard preventive measures and seeking medical attention when severe symptoms occur are key steps in managing and controlling hMPV infections.

Current Situation and Public Health Response

As of January 2025, the National Institute of Health (NIH) in Islamabad has confirmed the continued presence of hMPV in Pakistan. Health authorities emphasize that Pakistan has the capacity to detect and manage hMPV cases, possessing the necessary kits and expertise to identify all hMPV genotypes. The public is advised to remain calm and focus on preventive measures such as regular hand-washing and proper coughing etiquette to avoid contracting viral illnesses.

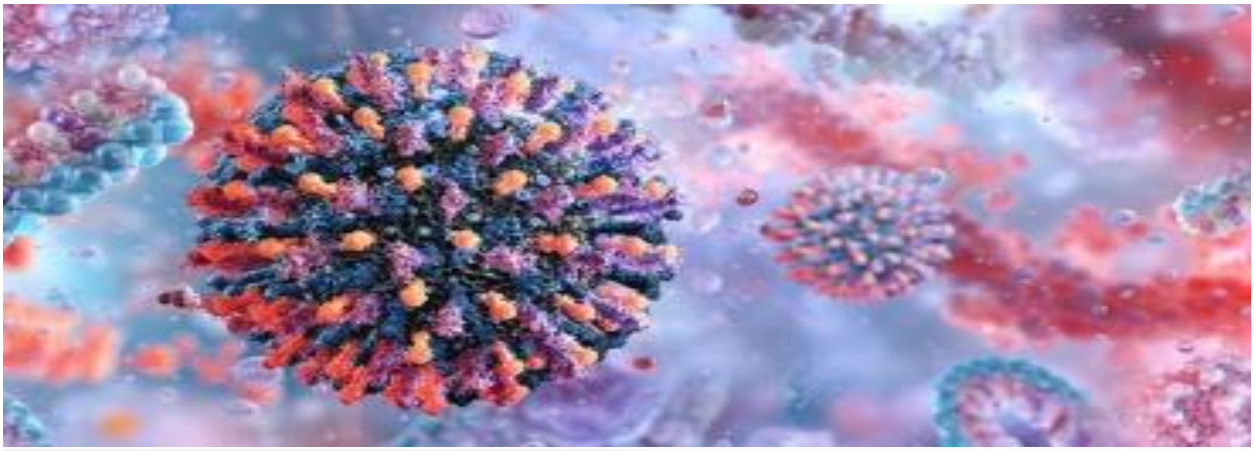
Public Health Resources

For additional information and updates, the following organizations provide valuable resources:

- **Centers for Disease Control and Prevention (CDC)**: https://www.cdc.gov/
- **World Health Organization (WHO)**: https://www.who.int/
- **Public Health Agency of Canada (PHAC)**: https://www.canada.ca/en/public-health.html

References:

- World Health Organization. Human Metapneumovirus (hMPV) infection: Questions and answers. Geneva: WHO; 2023. Available from: https://www.who.int.
- Centers for Disease Control and Prevention. Human Metapneumovirus: About hMPV. Atlanta: CDC; 2023. Available from: https://www.cdc.gov.
- CDC. Laboratory Testing for Human Metapneumovirus. Atlanta: CDC; 2023. Available from: https://www.cdc.gov.
- Van den Hoogen BG, de Jong JC, Groen J, et al. A newly discovered human pneumovirus isolated from young children with respiratory tract disease. *Nat Med*. 2001;7(6):719–24.



What is Metapneumovirus hMPV

hMPV stands for **Human Metapneumovirus**, a virus that affects the respiratory system. It often causes **cold-like symptoms** and is similar to the flu.

Symptoms hMPV

- Persistent **coughing**
- A spike in **body temperature**
- **Sore throat** that feels painful
- Breathing difficulties or **wheezing**
- Feeling excessively **tired**
- **Shortness of breath**

Groups at Higher Risk

- Young children (under 5 years)
- Older adults (over 65 years)
- Those with a weakened immune system due to other conditions

How Does hMPV Spread?

- Coughing or sneezing droplets
- Contaminated surfaces
- Close contact

Complications

- Bronchitis
- Pneumonia

Prevention

Wash Hand

Sanitizer

Wear Mask