PUBLIC HEALTH BULLETIN-PAKISTAN

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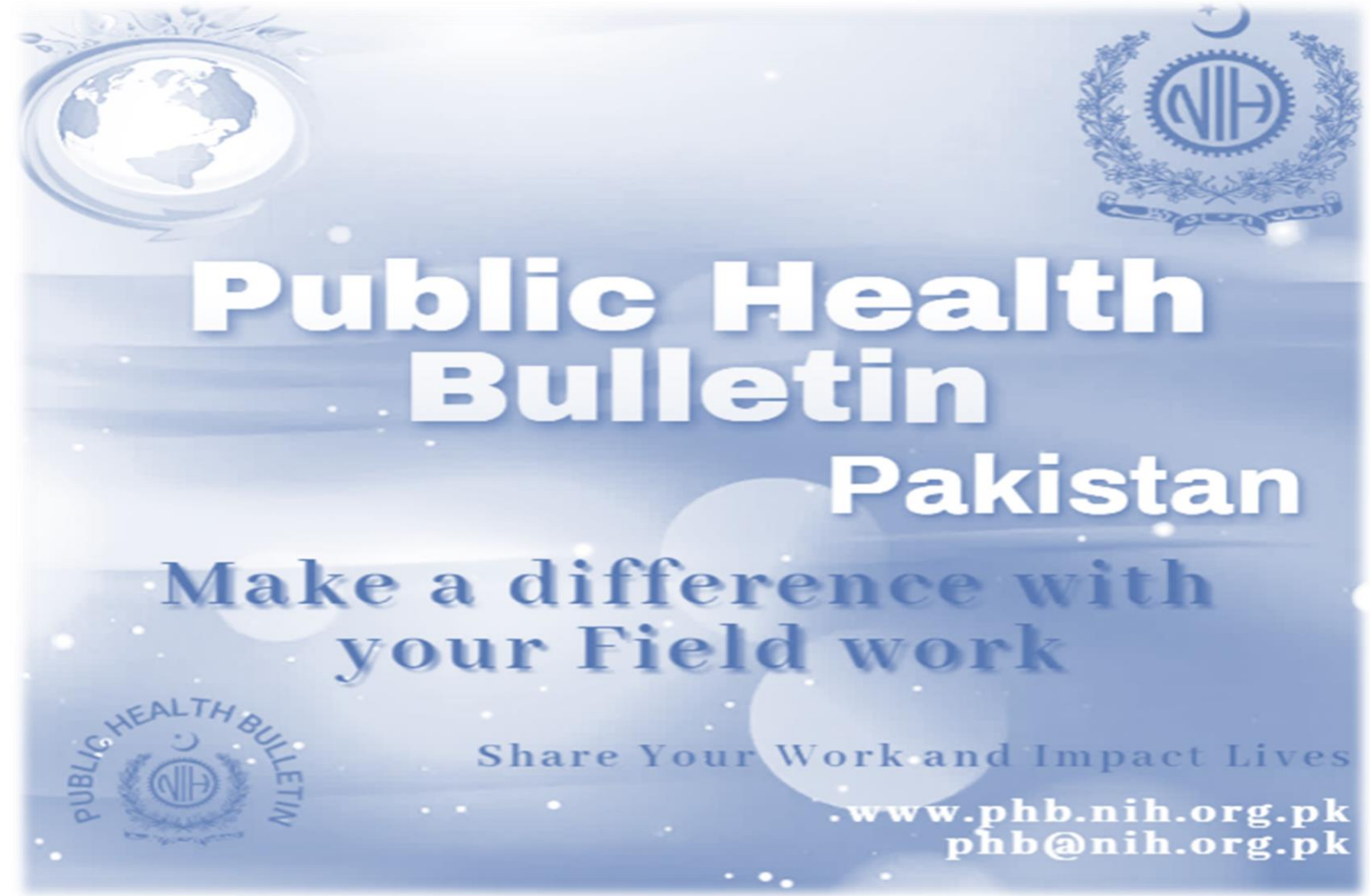
Integrated Disease Surveillance & Response (IDSR) Report

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 24, 2024

Overview

IDSR Reports

Ongoing Events

Field Reports

Pakistan's Public Health Bulletin is no longer just a list of illnesses; it's a game-changer for public health information. This comprehensive resource empowers both healthcare professionals and citizens.

Detailed analyses delve deep into common diseases like malaria, influenza, tuberculosis, and childhood respiratory infections. The Bulletin doesn't stop there, keeping a watchful eye on diarrhea, dog bites, hepatitis, typhoid, and even potential cholera outbreaks. This invaluable data empowers stakeholders to design targeted prevention plans and proactively address emerging health threats before they escalate.

Think of the Bulletin as an early warning system for diseases. By meticulously tracking disease prevalence, it identifies trends that might otherwise go unnoticed. This allows for swift public health interventions, potentially stopping the spread of illnesses like polio and brucellosis in their tracks.

Craving in-depth information beyond the numbers? Look no further. This week's edition exemplifies the Bulletin's commitment to comprehensive reporting. It features a diverse range of insightful reports, from "Pakistan's Fight Against Polio" to "Surveillance Summary: Curbing Neonatal Tetanus in Rawalpindi." The Bulletin even serves as a platform for open communication, as evidenced by the "Letter to Editor" section addressing dengue control efforts in Rawalpindi

Knowledge is power, and the Public Health Bulletin equips everyone with the tools to build a healthier Pakistan. By staying informed with its insights, we can all play a vital role in safeguarding public health and creating a safer, healthier future for the nation.

Sincerely,
The Chief Editor

- *During week 25, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, TB, ALRI <5 years, B. Diarrhea, dog bite, VH (B, C & D), Typhoid and AWD (S. Cholera).*
- *Thirteen cases of AFP reported from KP, five from Sindh and three from Punjab. All are suspected cases and need field verification.*
- *Five suspected cases of HIV/ AIDS reported from Sindh, two from KP and one from AJK. Field investigation required to verify the cases.*
- *Three cases of Brucellosis reported from KP and one from Sindh. These are suspected cases and require field verification.*
- *Eight suspected cases of CCHF reported from Sindh. It requires urgent field verification.*
- *There is a decreasing trend observed for AD (Non-cholera), Malaria, ILI, TB, ALRI <5 years, B. Diarrhea, dog bite, VH (B, C & D), Typhoid and AWD (S. Cholera) cases this week.*

IDSR compliance attributes

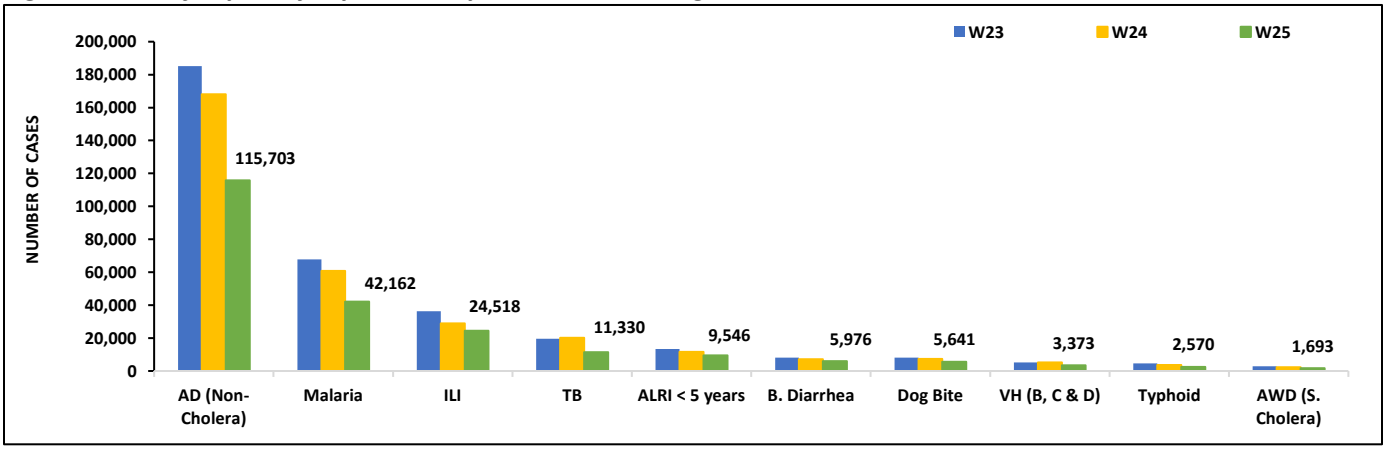
- *The national compliance rate for IDSR reporting in 149 implemented districts* is 78%
- *Gilgit Baltistan and AJK are the top reporting regions with a compliance rate of 99%, followed by Sindh 95% and ICT 80%*
- *The lowest compliance rates were observed in KPK.*

Region	**Expected Reports**	**Received Reports**	**Compliance (%)**
Khyber Pakhtunkhwa	*2740*	*1585*	*58*
Azad Jammu Kashmir	*382*	*375*	*99*
Islamabad Capital Territory	*35*	*28*	*80*
Balochistan	*1206*	*961*	*80*
Gilgit Baltistan	*374*	*370*	*99*
Sindh	*2085*	*1978*	*95*
National	*6822*	*5297*	*78*

Table 1: Province/Area wise distribution of most frequently reported suspected cases during week 25, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	1704	5,499	1187	208	21,049	52,190	33,866	115,703
Malaria	20	3,339	1	0	3,902	1,527	33,373	42,162
ILI	4197	4,073	216	301	2,339	2	13,390	24,518
TB	38	68	45	1	275	3,935	6,968	11,330
ALRI < 5 years	711	1009	380	0	1,134	358	5,954	9,546
B.Diarrhea	77	1565	94	4	1,153	471	2,612	5,976
Dog Bite	75	80	6	0	615	3,264	1,601	5,641
VH (B, C & D)	7	72	2	0	87	0	3,205	3,373
Typhoid	18	530	74	1	536	634	777	2,570
AWD (S. Cholera)	83	187	126	0	78	1,058	161	1,693
SARI	136	426	206	0	826	0	71	1,665
Measles	16	36	6	1	229	968	103	1,359
AVH (A&E)	17	5	0	0	180	0	401	603
CL	1	111	0	0	176	1	2	291
Dengue	1	25	0	0	14	178	47	265
Mumps	2	26	6	0	44	0	186	264
Chickenpox/ Varicella	1	23	8	5	47	36	47	167
Gonorrhea	0	70	0	0	12	0	6	88
Pertussis	2	63	2	0	14	0	2	83
Meningitis	0	2	0	0	4	43	12	61
Chikungunya	0	0	0	0	0	0	53	53
AFP	0	0	0	0	13	3	5	21
Diphtheria (Probable)	0	6	0	0	5	1	0	12
Syphilis	0	0	0	0	0	0	10	10
CCHF	0	0	0	0	0	0	8	8
HIV/AIDS	1	0	0	0	2	0	5	8
VL	0	2	0	0	3	0	0	5
Brucellosis	0	0	0	0	3	0	1	4
NT	0	0	0	0	3	0	0	3

Figure 1: Most frequently reported suspected cases during week 25, Pakistan.



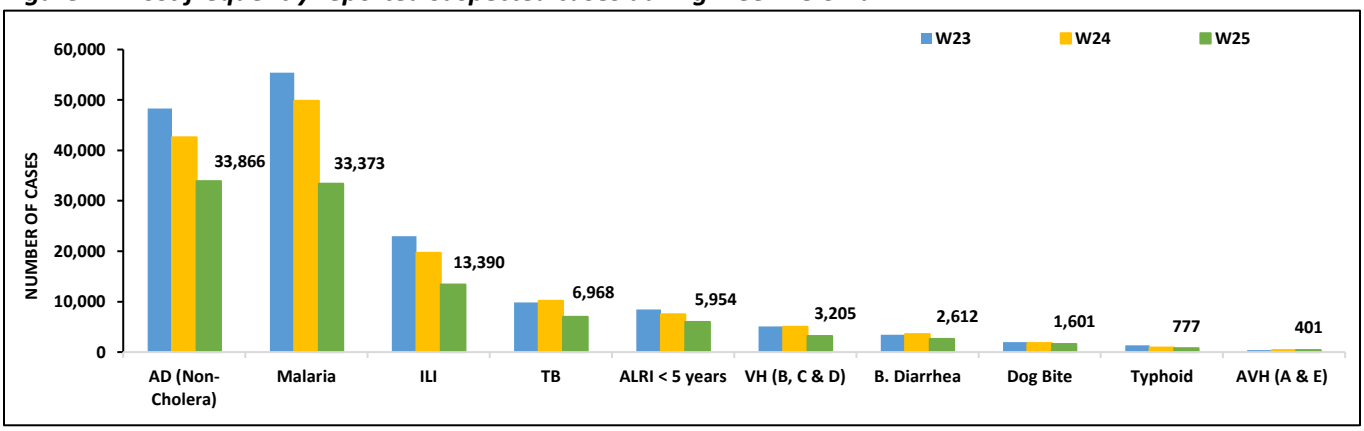
Sindh

- AD (non-cholera) cases were maximum followed by Malaria, ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, dog bite, Typhoid and AVH (A & E).
- AD (non-cholera) cases are mostly from Badin, Dadu and Jamshoro whereas Malaria cases are from Khairpur, Larkana and Dadu.
- Five cases of AFP, five suspected cases of HIV/ AIDS, eight suspected cases of CCHF n One case of Brucellosis reported from Sindh. All are suspected cases and need field verification.
- There is a decreasing trend observed for AD (Non-Cholera), Malaria, ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, dog bite and Typhoid cases this week

Table 2: District wise distribution of most frequently reported suspected cases during week 25, Sindh

Districts	AD (Non-Cholera)	Malaria	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	2,496	2,372	211	455	380	118	163	57	47	8
Dadu	2,318	2,498	58	295	660	10	359	131	113	33
Ghotki	1,171	1,022	0	157	262	247	151	152	0	10
Hyderabad	1,446	229	719	29	38	46	11	32	10	0
Jacobabad	537	533	276	80	257	96	70	96	47	0
Jamshoro	2,087	1,054	40	205	133	139	53	31	25	6
Kamber	1,358	2,464	0	628	233	151	158	108	21	0
Karachi Central	790	24	719	211	59	208	14	0	47	2
Karachi East	150	22	73	3	8	2	5	2	4	0
Karachi Keamari	138	0	49	0	9	0	0	0	0	0
Karachi Korangi	100	10	0	0	0	0	2	0	2	3
Karachi Malir	981	215	1,360	43	128	33	28	35	13	2
Karachi South	31	21	3	0	0	0	0	0	0	0
Karachi West	852	91	1,119	95	173	96	51	113	32	26
Kashmore	398	912	355	153	119	30	48	100	7	1
Khairpur	2,002	3,547	2,839	701	651	68	326	133	164	1
Larkana	1,040	3,069	0	570	157	42	219	12	1	1
Matiari	1,285	871	3	293	109	234	61	28	4	3
Mirpurkhas	1,607	1,665	1,057	351	343	70	54	32	14	5
Naushero Feroze	667	1,080	833	259	151	78	129	85	58	0
Sanghar	1,171	2,082	8	594	222	572	20	127	14	2
Shaheed Benazirabad	1,589	901	0	292	240	79	50	135	79	0
Shikarpur	860	1,132	1	124	81	307	90	39	2	0
Sujawal	1,188	1,279	0	47	103	45	30	15	0	51
Sukkur	1,105	1,045	802	260	133	62	96	13	4	0
Tando Allahyar	1,203	799	457	278	120	254	90	41	7	3
Tando Muhammad Khan	917	803	0	263	89	11	54	0	1	0
Tharparkar	1,497	1,570	909	272	354	89	63	1	29	23
Thatta	1,660	905	1,499	20	357	91	161	83	18	218
Umerkot	1,222	1,158	0	290	385	27	56	0	14	3
Total	33,866	33,373	13,390	6,968	5,954	3,205	2,612	1,601	777	401

Figure 2: Most frequently reported suspected cases during week 25 Sindh



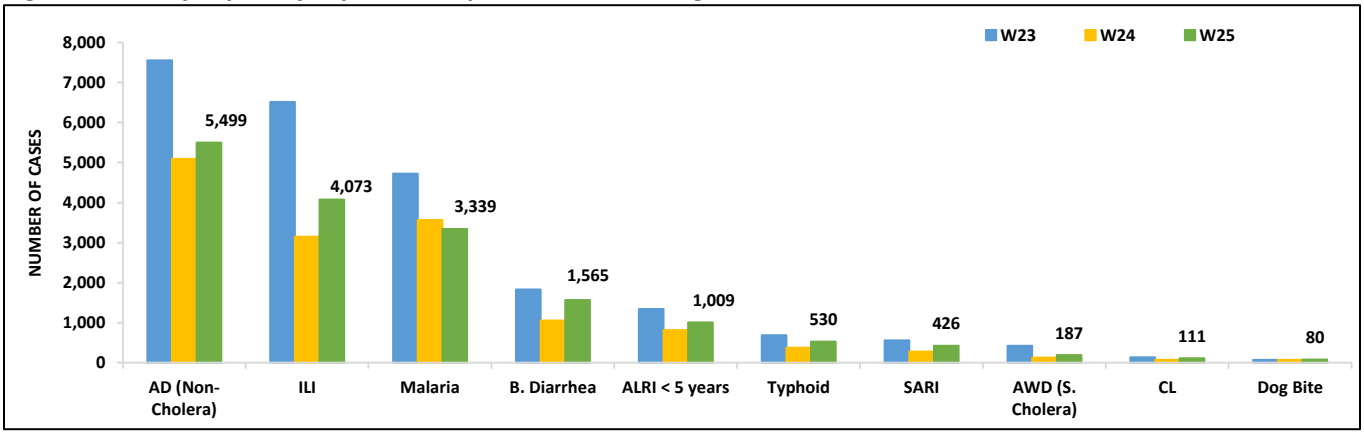
Balochistan

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

Table 3: District wise distribution of most frequently reported suspected cases during week 25, Balochistan

Districts	AD Non-Cholera)	ILI	Malaria	B. Diarrhea	ALRI < 5 years	Typhoid	SARI	AWD (S.Cholera)	CL	Dog Bite
Awaran	9	43	37	8	1	2	2	8	0	0
Barkhan	108	27	48	6	21	47	0	2	0	12
Chagai	101	155	35	60	3	15	4	16	0	2
Chaman	66	102	22	60	0	34	21	11	2	0
Dera Bugti	68	22	112	39	17	22	10	0	0	0
Duki	123	58	13	64	15	5	15	15	1	6
Gwadar	248	396	120	35	NR	20	NR	NR	NR	NR
Harnai	62	11	31	62	86	2	0	3	0	2
Hub	291	43	134	36	6	3	0	0	0	0
Jaffarabad	161	36	244	40	17	2	6	0	0	0
Jhal Magsi	154	131	307	4	27	1	7	0	0	7
Kalat	52	1	30	13	12	15	4	0	2	0
Kech (Turbat)	320	537	351	83	37	3	7	2	2	NR
Kharan	113	187	28	63	0	1	0	9	0	0
Khuzdar	266	243	205	92	11	22	15	17	14	7
Killa Abdullah	130	67	44	95	25	42	10	0	32	0
Killa Saifullah	153	0	119	72	72	16	0	1	0	1
Kohlu	169	187	92	103	20	38	48	3	0	0
Lasbella	259	38	202	18	37	3	2	0	0	12
Loralai	179	198	39	44	28	14	64	4	0	6
Mastung	252	108	74	56	28	14	18	7	3	7
Naseerabad	205	0	134	5	3	26	15	0	1	7
Panjgur	141	57	127	46	67	1	10	19	0	0
Pishin	282	209	19	153	84	42	20	39	12	0
Quetta	343	544	33	77	34	32	19	5	23	0
Sherani	17	68	16	14	7	8	23	2	13	0
Sibi	86	94	31	7	3	7	9	1	3	1
Sohbat pur	185	10	198	40	71	21	18	1	3	5
Surab	59	187	56	0	0	39	0	0	0	0
Usta Muhammad	605	55	336	47	73	11	3	0	0	3
Washuk	32	28	7	20	0	0	0	0	0	0
Zhob	168	121	57	55	188	9	70	0	0	0
Ziarat	92	110	38	48	16	13	6	22	0	2
Total	5,499	4,073	3,339	1,565	1,009	530	426	187	111	80

Figure 3: Most frequently reported suspected cases during week 25, Balochistan



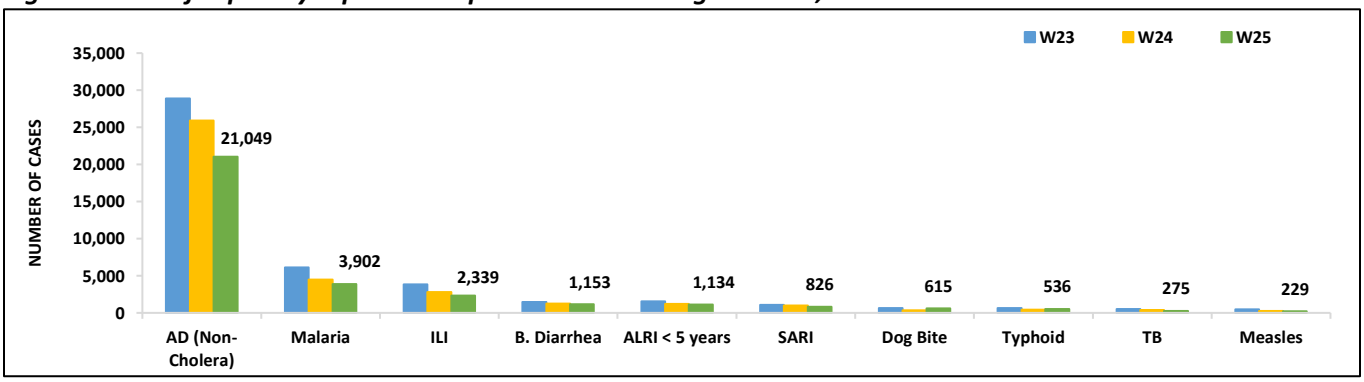
Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, B. Diarrhea, ALRI<5 Years, SARI, dog bite, Typhoid, TB and Measles cases.
- AD (Non-Cholera), Malaria, ILI, B. Diarrhea, ALRI<5 Years, SARI, TB and Measles cases showed a decreasing trend this week.
- Thirteen cases of AFP, Two suspected cases of HIV/ AIDS, Three suspected cases of Brucellosis reported from KP. All are suspected cases and need field verification.

Table 4: District wise distribution of most frequently reported suspected cases during week 25, KP

Districts	AD (Non-Cholera)	Malaria	ILI	B.Diarrhea	ALRI <5 Years	SARI	Dog Bite	Typhoid	TB	Measles
Abbottabad	647	17	35	5	13	1	4	18	20	4
Bajaur	611	197	34	94	210	35	25	8	22	19
Bannu	626	1,039	1	31	20	5	2	50	7	7
Battagram	48	0	29	0	0	0	0	0	0	0
Buner	534	254	0	0	0	0	15	19	1	0
Charsadda	706	119	181	59	41	1	7	34	0	28
Chitral Lower	444	15	24	20	9	17	17	8	7	2
Chitral Upper	129	3	4	9	4	5	0	11	1	0
D.I. Khan	831	195	0	24	9	4	4	11	28	20
Dir Lower	1,204	116	0	87	97	0	12	45	5	11
Dir Upper	725	23	49	8	1	0	0	13	15	5
Hangu	2	13	0	0	0	0	0	0	0	0
Haripur	962	22	114	8	51	15	5	26	19	9
Karak	254	109	26	0	14	0	7	2	7	5
Khyber	196	132	2	45	17	10	23	15	4	1
Kohistan Lower	112	1	5	2	3	0	0	0	0	1
Kohistan Upper	262	18	11	31	30	0	0	5	0	0
Kolai Palas	50	5	0	7	1	0	0	2	0	0
L & C Kurram	26	13	28	14	4	20	0	1	0	1
Lakki Marwat	437	139	7	9	1	0	37	8	3	2
Malakand	1,446	37	41	186	21	11	0	18	4	12
Mansehra	783	0	131	5	12	27	0	19	4	0
Mardan	729	23	0	16	210	0	1	0	4	0
Mohmand	101	124	24	48	7	28	3	3	0	1
NWA	27	5	0	0	0	0	0	3	0	9
Nowshera	1,086	53	0	34	45	15	6	16	4	12
Orakzai	121	8	0	24	0	0	2	0	1	0
Peshawar	1,937	28	428	104	27	42	46	25	20	32
SD Peshawar	0	0	0	0	0	0	0	0	0	0
SD Tank	17	21	0	3	0	0	0	0	0	0
Shangla	887	401	0	3	8	0	52	13	46	4
SWA	103	184	397	23	76	99	25	60	2	0
Swabi	1,617	59	392	26	144	77	199	20	29	29
Swat	2,820	41	101	129	40	81	114	23	15	3
Tank	250	380	61	3	19	0	0	50	5	10
Tor Ghar	118	83	0	25	0	8	0	3	0	0
Upper Kurram	201	25	214	71	0	325	9	7	2	2
Total	21,049	3,902	2,339	1,153	1,134	826	615	536	275	229

Figure 4: Most frequently reported suspected cases during week 25, KP



ICT, AJK & GB

ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and Chickenpox/ Varicella. ILI and AD (Non-Cholera) cases showed a decreasing trend while Chickenpox/ Varicella cases showed an increasing trend this week..

AJK: ILI cases were maximum followed by AD (Non-Cholera), ALRI <5 years, SARI, AWD (S. Cholera), B. Diarrhea, dog bite, TB, Malaria and Typhoid cases. Cases of ILI showed a sudden increase while a decreasing trend observed for AD (Non-Cholera), ALRI <5 years, SARI, AWD (S. Cholera), B. Diarrhea, dog bite, TB, Malaria and Typhoid cases this week. One suspected case of HIV/AIDs reported from AJK. It needs field verification.

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

Figure 5: Most frequently reported suspected cases during week 25, ICT

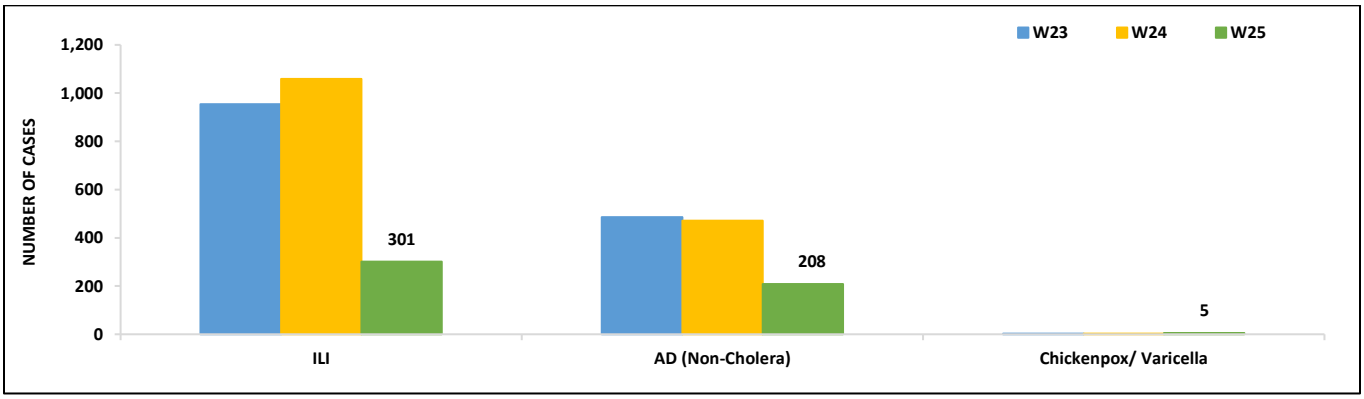


Figure 6: Week wise reported suspected cases of ILI, ICT

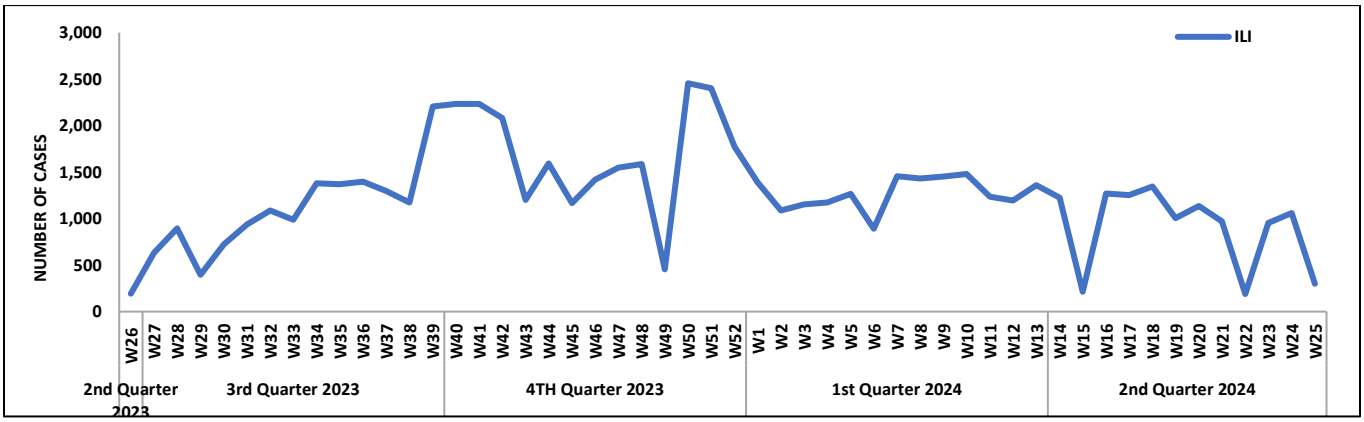


Figure 7: Most frequently reported suspected cases during week 25, AJK

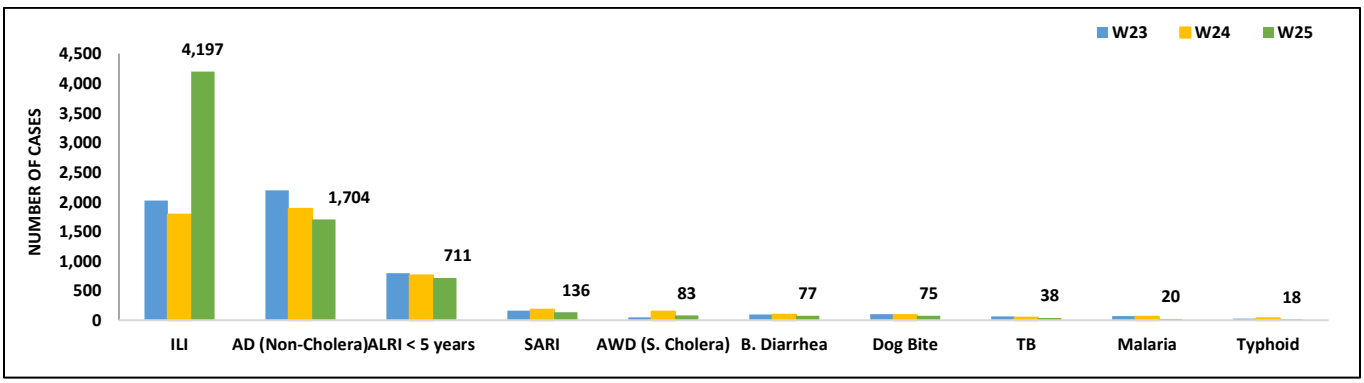


Figure 8: Week wise reported suspected cases of ILI and AD (Non-Cholera) AJK

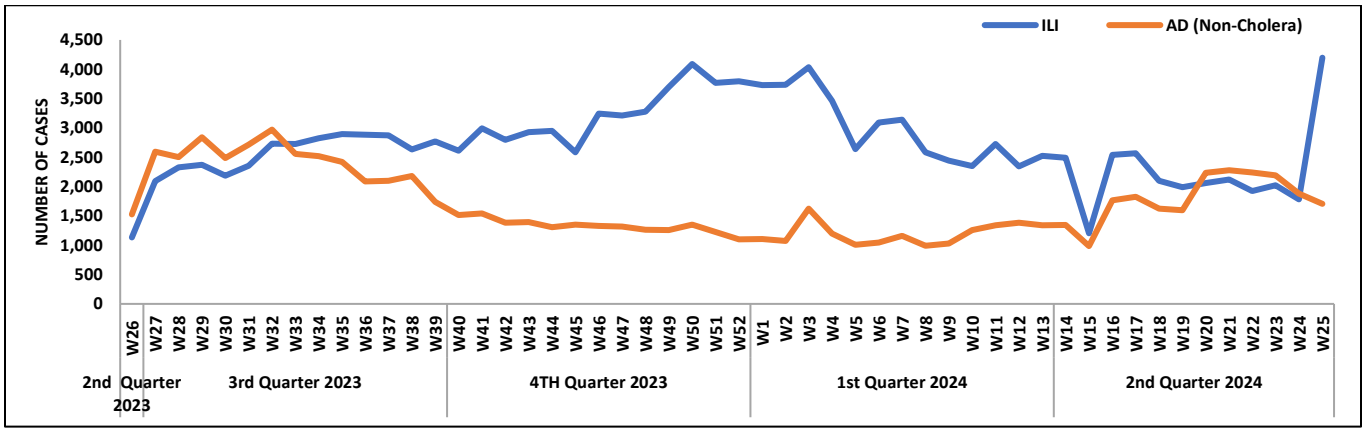


Figure 9: Most frequent cases reported during Week 25, GB

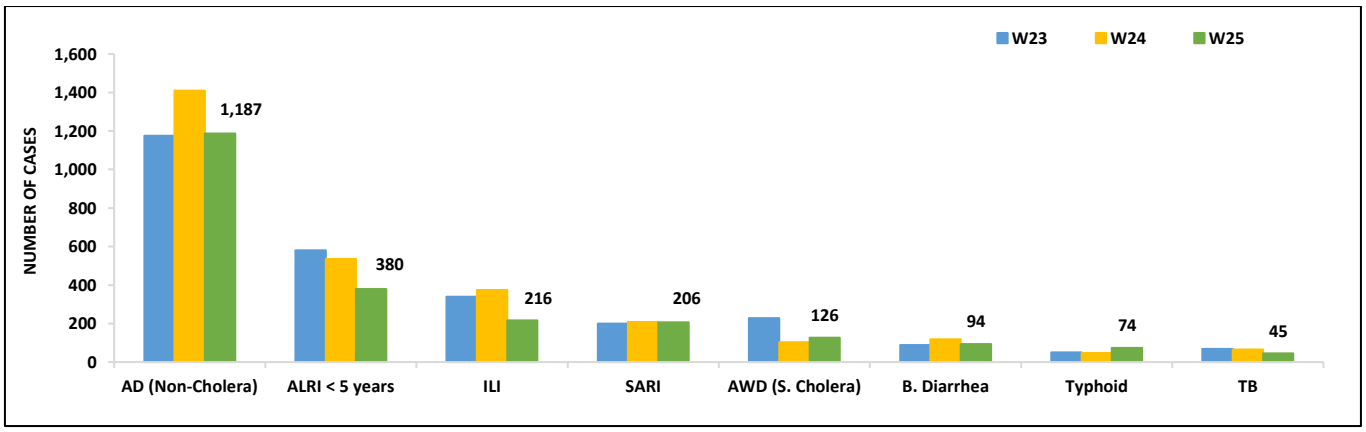
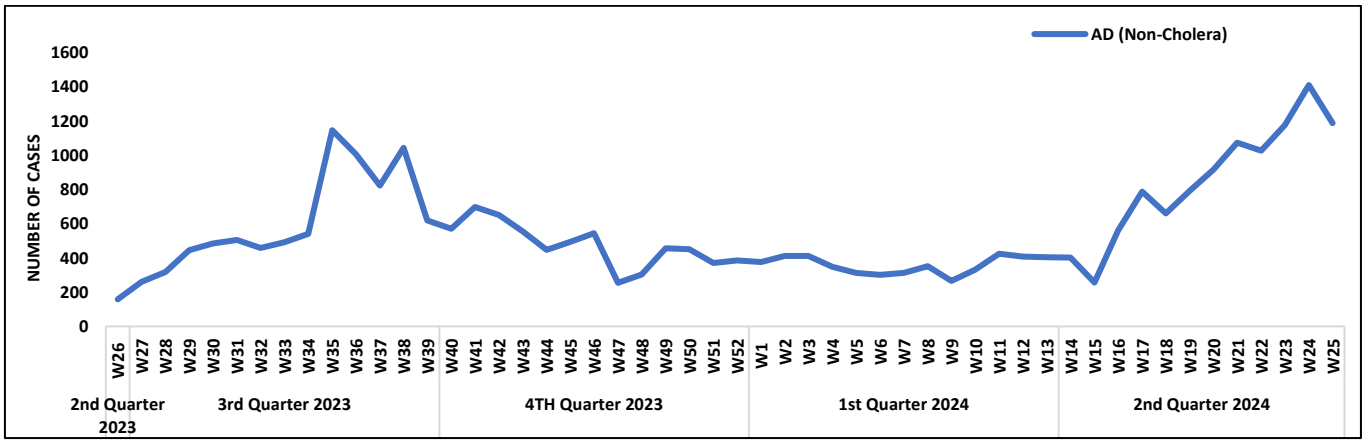


Figure 10: Week wise reported suspected cases of AD (Non-Cholera), GB



Punjab

- AD (Non-Cholera) cases were maximum followed by TB, dog bite, Malaria, AWD (S. Cholera), Measles, Typhoid, B. Diarrhea, ALRI<5 Years and Dengue cases.
- AD (Non-Cholera by TB, dog bite, Malaria, AWD (S. Cholera), Measles, Typhoid, B. Diarrhea, ALRI<5 Years and Dengue cases showed a decreasing trend this week.
- Three cases of AFP reported from Punjab. All are suspected cases and need field verification.

Figure 11: Most frequently reported suspected cases during week 25, Punjab.

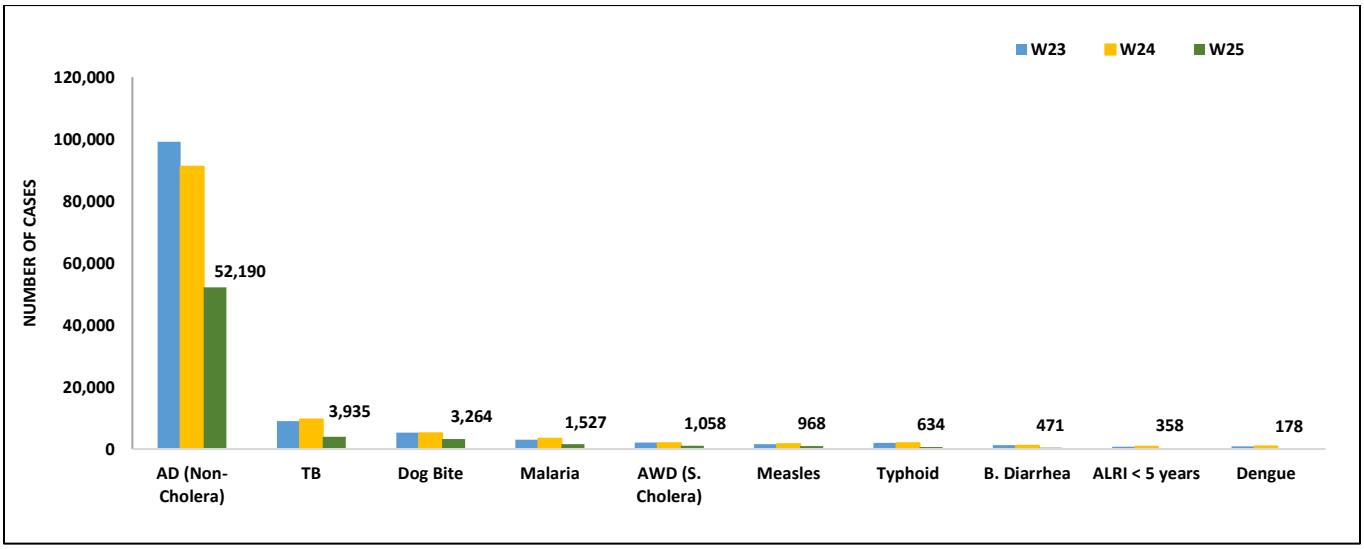


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 25

Diseases	Sindh		Balochistan		KPK		ISL		GB	
	Total Test	Total Positive	Total Test	Total Positive	Total Test	Total Positive	Total Test	Total Positive	Total Test	Total Positive
AWD (S. Cholera)	5	0	-	-	1	0	0	0		
AD (Non-Cholera)	66	1	-	-	-	-	-	-	-	-
Malaria	1,940	97	-	-	-	-	-	-	-	-
CCHF	-	-	16	6	-	-	2	0	-	-
Dengue	891	29	-	-	-	-	2	0	-	-
VH (B)	2,149	45	91	31	-	-	-	-	56	17
VH (C)	2,173	176	133	81	-	-	-	-	-	-
VH (A&E)	-	-	-	-	-	-	-	-	-	-
Covid-19	-	-	29	0	1	0	0	0	35	0
HIV	81	0	-	-	-	-	-	-	-	-
Diphtheria	-	-	-	-	-	-	6	0	-	-
Influenza A	0	0	0	0	0	0	10	0	0	0
TB	32	0	-	-	-	-	-	-	-	-
Syphilis	25	0	-	-	-	-	-	-	-	-
Pertussis	-	-	-	-	-	-	0	0	-	-
Typhoid	466	9	-	-	-	-	1	0	-	-

IDSR Reports Compliance

- Out OF 158 IDSR implemented districts, compliance is low from KPK. Green color showing >50% compliance while red color is <50% compliance

Table 6: IDSR reporting districts Week 25, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	104	94%
	Bannu	234	127	54%
	Battagram	63	15	24%
	Buner	34	29	85%
	Bajaur	44	26	59%
	Charsadda	59	54	92%
	Chitral Upper	34	26	76%
	Chitral Lower	35	35	100%
	D.I. Khan	114	105	92%
	Dir Lower	74	74	100%
	Dir Upper	53	44	83%
	Hangu	22	2	9%
	Haripur	72	68	94%
	Karak	35	35	100%
	Khyber	52	15	29%
	Kohat	61	0	0%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	70	100%
	Lower & Central Kurram	42	7	17%
	Upper Kurram	41	18	44%
	Malakand	42	35	83%
	Mansehra	136	88	65%
	Mardan	80	74	93%
	Nowshera	55	53	96%
	North Waziristan	380	1	0%
	Peshawar	151	128	85%
	Shangla	65	14	22%
	Swabi	63	62	98%
	Swat	77	75	97%
	South Waziristan	134	52	39%
	Tank	34	31	91%
	Torghar	14	14	100%
	Mohmand	86	41	48%
	SD Peshawar	5	1	20%
	SD Tank	58	4	7%
	Orakzai	68	15	22%
	Mirpur	37	37	100%
	Bhimber	20	20	100%
	Kotli	60	57	95%
	Muzaffarabad	45	45	100%
	Poonch	46	46	100%
	Haveli	39	39	100%

Azad Jammu Kashmir	Bagh	40	36	90%
	Neelum	39	39	100%
	Jhelum Vellay	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	21	21	100%
	CDA	14	8	57%
Balochistan	Gwadar	25	25	100%
	Kech	40	37	93%
	Khuzdar	74	70	95%
	Killa Abdullah	24	17	71%
	Lasbella	55	55	100%
	Pishin	69	29	42%
	Quetta	43	30	70%
	Sibi	36	20	56%
	Zhob	39	30	77%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	14	93%
	Kohlu	75	44	59%
	Chagi	35	24	69%
	Kalat	41	40	98%
	Harnai	17	16	94%
	Kachhi (Bolan)	35	35	100%
	Jhal Magsi	26	24	92%
	Sohbat pur	25	25	100%
	Surab	32	32	100%
	Mastung	45	45	100%
	Loralai	33	26	79%
	Killa Saifullah	28	27	96%
	Ziarat	29	19	66%
	Duki	31	29	94%
	Nushki	32	0	0%
	Dera Bugti	45	22	49%
	Washuk	46	8	17%
	Panjgur	38	23	61%
	Awaran	23	7	30%
	Chaman	25	23	92%
	Barkhan	20	20	100%
	Hub	33	33	100%
	Musakhel	41	0	0%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	31	97%
	Nagar	20	20	100%
	Ghizer	40	40	100%
	Gilgit	40	39	98%
	Diamer	62	61	98%
	Astore	54	54	100%

	Shigar	27	27	100%
	Skardu	52	52	100%
	Ganche	29	28	97%
	Kharmang	18	18	100%
Sindh	Hyderabad	73	58	79%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	107	87	81%
	Tharparkar	282	252	89%
	Shikarpur	59	59	100%
	Thatta	52	52	100%
	Larkana	67	64	96%
	Kamber Shadadkot	71	70	99%
	Karachi-East	23	18	78%
	Karachi-West	20	20	100%
	Karachi-Malir	37	37	100%
	Karachi-Kemari	18	11	61%
	Karachi-Central	11	10	91%
	Karachi-Korangi	18	15	83%
	Karachi-South	4	4	100%
	Sujawal	54	50	93%
	Mirpur Khas	106	105	99%
	Badin	124	121	98%
	Sukkur	63	63	100%
	Dadu	88	85	97%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	169	162	96%
	Kashmore	59	56	95%
	Matiari	42	42	100%
	Jamshoro	70	70	100%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	40	40	100%
	Shaheed Benazirabad	122	122	100%

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A Shadow Looms: Pakistan's Fight Against Polio Persists.

Pakistan's tireless fight against polio faces a renewed challenge. The recent confirmation of a sixth polio case in Balochistan, a 1.5-year-old child from Killa Abdullah district, serves as a stark reminder that the battle is far from over. This case, along with the positive environmental samples detected in Sindh, highlights the critical need for continued vigilance and unwavering commitment to eradication efforts.

The geographic concentration of cases in Balochistan is particularly concerning. Five out of the six cases this year originate from this province, with Killa Abdullah itself bearing the brunt of two infections. This geographical concentration underscores the need for targeted interventions in the province with emphasizing the importance of community engagement. Eradicating polio requires a collective effort; parents must ensure their children receive all recommended vaccinations, and healthcare workers need unhindered access to deliver these life-saving drops.

The National Emergency Operations Centre for Polio Eradication acknowledges these challenges and emphasizes the importance of collaboration with law enforcement agencies to ensure uninterrupted vaccination drives. Every missed opportunity for vaccination creates a window of vulnerability, potentially impacting the success of the entire program.

While five vaccination campaigns have been conducted this year, with impressive outreach reaching over 40 million children, the upcoming July campaign is crucial. Targeting high-risk districts and ensuring all children under five receive the vaccine is paramount. The virus knows no borders, and protecting one child safeguards the entire community.

The devastating consequences of polio – lifelong paralysis – cannot be overstated. This crippling disease steals a child's future and burdens families with immense emotional and financial strain. Repeated vaccination is the only proven defense against this debilitating virus. Parents and caregivers have a vital role to play. Completing all routine vaccinations protects children from not just polio but 12 other vaccine-preventable diseases.

Pakistan has come a long way in its fight against polio. However, the recent cases and positive environmental samples serve as a wake-up call. Continued vigilance, unwavering community engagement, and a relentless pursuit of complete eradication are essential. Let us learn from the setbacks, strengthen the program, and ensure that no child in Pakistan ever suffers from this preventable disease. The fight for a polio-free Pakistan continues. We must all play our part to ensure a brighter, healthier future for generations to come.

A Unified Front Against AMR: The NIH and WHO Collaborate on Pakistan's National Action Plan

Antimicrobial resistance (AMR) – the ability of microbes to resist the drugs designed to kill them – poses a growing threat to global health. In Pakistan, where infectious diseases remain a significant challenge, tackling AMR is critical. Recognizing this urgency, the National Institute of Health (NIH) recently joined forces with the World Health Organization (WHO) to convene a technical working group meeting. This collaborative effort aims to review and update the National Action Plan for Antimicrobial Resistance for the period 2024-2028.

This meeting signifies a crucial step forward in Pakistan's fight against AMR. The National Action Plan, serves as a comprehensive roadmap for national efforts to combat this public health threat. By collaborating with the WHO, the NIH leverages the organization's global expertise in AMR surveillance, stewardship, and research. This combined knowledge will inform the revision of the National Action Plan, ensuring its alignment with the latest scientific advancements and best practices.

The updated National Action Plan is expected to address several key areas. One focus will be on strengthening antimicrobial stewardship programs within healthcare settings. This will involve promoting the rational use of antibiotics and other antimicrobials, thereby minimizing the emergence of resistant strains. The plan will also likely address the need for enhanced surveillance of AMR trends in both humans and animals. This vital data collection will inform targeted interventions and guide the use of available resources.

Furthermore, the plan emphasizes public education campaigns to raise awareness about the dangers of AMR and promote responsible antibiotic use among the public. Collaboration with veterinarians and the agriculture sector is also crucial. Antibiotic misuse in animals can contribute to the development of resistant bacteria that can then spread to humans through the food chain. A comprehensive approach that addresses AMR across all sectors is essential.

The NIH-WHO collaboration on the National Action Plan for AMR is a testament to Pakistan's commitment to tackling this critical public health challenge. By leveraging international expertise and developing a comprehensive national strategy, Pakistan can significantly reduce the threat of AMR and ensure the continued effectiveness of life-saving antibiotics for generations to come. This collaborative effort sets a strong example for other nations facing the growing challenge of antimicrobial resistance.

Surveillance Summary.

Curbing Neonatal Tetanus in Rawalpindi: A Surveillance-Based Analysis, Rawalpindi-Punjab, 2023

Dr. Hannan
DSC, Rawalpindi

Dr Ehsan Ghani
DHO, (Preventive), Rawalpindi

Introduction

Neonatal tetanus, a severe and potentially fatal illness in newborns, is caused by the bacterium Clostridium tetani. This gram-positive, spore-forming bacterium resides in soil and dust, entering the body through breaks in the skin during childbirth. The bacteria produce a toxin that triggers muscle spasms, often leading to death.

A surge in neonatal tetanus cases in Rawalpindi prompted an investigation to understand the outbreak's scope and identify contributing factors. This report summarizes the findings.

Methods

This study examined babies diagnosed with neonatal tetanus in Rawalpindi during 2023. Confirmed cases were defined as newborns who could suck and cry normally in the first two days of life, but developed difficulty sucking and muscle stiffness or spasms between 3 and 28 days old. A retrospective analysis was conducted using data from 20 clinically compatible or confirmed cases. Information collected included demographics (age, sex), mortality outcome, attending healthcare provider (doctor or traditional birth attendant), delivery location (hospital or home), instrument used for umbilical cord cutting (blade or scissors), and maternal tetanus vaccination status.

Results

The mean age of affected neonates was 7 days (SD ± 2.26 days). Male neonates exhibited a higher prevalence 75%, (n=15) compared to females

25%, (n=5). Mortality reached a critical level, with 70% (n=14) of cases resulting in death.

Delivery by traditional birth attendants (dais) was significantly more frequent 75%, (n=15) compared to deliveries by medical doctors 25%, (n=5). This trend correlated with the predominance of home deliveries 70%, (n=14) as opposed to hospital deliveries 30%, (n=6). Notably, unsterilized blades were the primary instrument used for umbilical cord cutting in most cases 70%, (n=14), with scissors used in a smaller proportion 30%, (n=6).

Alarmingly low rates of maternal tetanus vaccination were identified. Only 3 mothers (15%) reported being vaccinated, while the remaining 17 mothers (85%) lacked tetanus immunization. These findings suggest a potential association between inadequate maternal vaccination coverage, unhygienic delivery practices, and the increased risk of neonatal tetanus observed in this outbreak.

Discussion

The investigation identified a convergence of factors that likely played a critical role in the neonatal tetanus outbreak:

Inadequate Maternal Tetanus Vaccination Coverage: Low maternal immunization rates for tetanus leave both mothers and their newborns susceptible to infection by Clostridium tetani bacteria. This bacterium is ubiquitous in the environment, and inadequate vaccination creates a vulnerability window for newborns.

Unsanitary Childbirth Practices: The use of unsterilized blades for umbilical cord cutting significantly elevates the risk of contracting tetanus. Spores of C. tetani are prevalent in the environment, and unsterile blades can introduce these spores directly into the newborn's bloodstream during the cutting process.

Home Deliveries with Untrained Birth Attendants: Deliveries attended by traditional birth attendants (dais) who might lack proper hygiene or sterilization protocols can significantly increase the risk of neonatal tetanus exposure. In the absence of adequate training on safe delivery practices, these attendants may inadvertently introduce C. tetani spores into the birthing environment or during umbilical cord care.

Recommendations

To prevent future outbreaks and protect newborns, several crucial measures are needed:

Increase maternal tetanus vaccination coverage: Enhancing tetanus vaccination programs for women of childbearing age is essential.

Promote safe delivery practices: Public health campaigns should emphasize handwashing with soap and water before and after delivery, along with using sterile instruments for umbilical cord cutting.

Train traditional birth attendants: Providing dais with comprehensive training on safe delivery practices, hygiene protocols, and the importance of timely medical referrals can significantly reduce the risk of infections.

Conclusion

This investigation identified critical factors contributing to the neonatal tetanus outbreak in Rawalpindi. By implementing the recommended measures, we can effectively prevent future outbreaks and safeguard the lives of newborns in the region.

Letter to Editor

Eliminating Dengue Breeding Grounds in Rawalpindi: The DHA's Surveillance Strategy

Dr. Muhammad Sajjad
DSC, (EP & CD)
Rawalpindi

The District Health Authority (DHA) in Rawalpindi takes public health protection very seriously. As part of this commitment, The DHA's

Department of Epidemics Prevention and Control (EP&CD) launched a comprehensive anti-dengue surveillance campaign as ongoing efforts to combat dengue fever. This campaign relies on dedicated teams specifically trained to identify and eliminate mosquito breeding grounds. These teams are divided into two forces: 788 personnel focus on meticulous inspections within homes and buildings, while an additional 211 personnel address potential breeding sites in outdoor public spaces.

The tireless efforts of these teams have yielded significant results. Through their extensive surveillance, successfully identified and eliminated mosquito larvae at a staggering 8,064 sites across Rawalpindi. This achievement is a major victory in disrupting the dengue transmission cycle, ultimately safeguarding the health and well-being of our residents.

The breakdown of these figures reveals a crucial aspect of dengue control – it requires a two-pronged approach. While our indoor teams discovered larvae at 6,735 homes, highlighting the importance of community participation, the detection of larvae at 1,361 outdoor locations underscores the necessity of our comprehensive surveillance efforts. This emphasizes that effectively controlling dengue demands vigilance in both private and public spaces.

The District Health Authority (DHA) is actively combatting dengue fever in Rawalpindi. Dedicated teams are eliminating mosquito larvae at breeding sites throughout the city. Educational campaigns empower residents to prevent mosquito breeding within their homes and surroundings. However, community collaboration is vital for complete success. Residents can significantly contribute by maintaining clean water tanks and eliminating stagnant water sources.

By working together, the DHA and the Rawalpindi community can create a healthier and safer environment for all.

Knowledge Hub

Protecting Pakistan from CCHF: Awareness and Action to Prevent Tick-Borne Illness.

Pakistan, a nation known for its vibrant agricultural sector and abundance of livestock, faces a particular threat from a tick-borne viral illness called Crimean-Congo hemorrhagic fever (CCHF). This serious disease, caused by the Crimean-Congo hemorrhagic fever virus (CCHFV), can be deadly.

The virus jumps from infected animals like sheep, goats, and cattle to humans through contact with their blood or tissues, often during birthing or slaughtering seasons. Ticks, common in many parts of Pakistan, can also pick up the virus by feeding on infected animals and then transmit it to humans through bites.

Symptoms of CCHF can appear within 2-14 days of exposure. Initially, they may mimic the flu, with fever, headache, muscle aches, fatigue, and sore throat. However, nausea, vomiting, and diarrhea can also occur, and in severe cases, bleeding from various orifices becomes a frightening sign.

Unfortunately, there's no specific cure for CCHF. Treatment focuses on supportive care, managing symptoms with fluids, oxygen, and medication to help the body fight the virus. The key lies in prevention. Here are some crucial steps Pakistanis can take:

- **Minimize contact with livestock, especially during high-risk periods:** Be extra cautious during birthing and slaughtering seasons when animal fluids are more readily accessible to the virus.
- **Protect yourself when working with animals or in tick-infested areas:** Wear proper clothing, like long sleeves and pants, to create a barrier between you and ticks and potentially infected animals.
- **Fight the bite:** Use insect repellents effectively when outdoors, especially in regions known for high tick activity.
- **Regular tick checks:** After spending time outdoors, conduct thorough body checks for

ticks and remove them promptly using proper techniques.

Spreading Awareness is Key:

CCHF is a serious public health concern in Pakistan. By understanding how the virus spreads, recognizing the symptoms, and taking preventive measures, Pakistanis can significantly reduce their risk of infection. Share these key messages with your community:

- CCHF is a viral illness transmitted through contact with infected animals, ticks, or infected human bodily fluids.
- Fever, headache, muscle aches, fatigue, and digestive issues can be early signs.
- There's no specific cure, but supportive care can help manage symptoms.
- To prevent CCHF, avoid close contact with livestock, wear protective clothing outdoors, use repellents, check for ticks regularly, and get vaccinated if available.
- Seek immediate medical attention if you suspect exposure to CCHF.

By working together and taking preventive measures, we can control the spread of CCHF and protect the health of our communities across Pakistan.

No.F.1-22/Advisory/CDC/2024
10 Jun 2024

Subject: Advisory for the Prevention and Control of Primary Amebic Meningo-encephalitis (PAM)/ Naegleriasis

Introduction:
The Primary Amoebic Meningoencephalitis (PAM) also called Naegleriasis is an infectious disease of the central nervous system caused by the free-living amoeba Naegleria fowleri. A rare but is almost invariably fatal disease that was very first detected in Australia in 1965. Deaths related to PAM have regularly been reported from tertiary care hospitals of Karachi during summers since 2008.
High temperatures associated with poor chlorinated water during early summer pose a risk of Naegleria Fowleri infection especially in areas where the cases have been reported previously. To mitigate the risks associated with the hot season ahead, it is imperative to undertake immediate and long-term preventive measures in mega cities particularly Karachi. Vigilant surveillance is also imperative to pick the suspected cases for early disease confirmation and ensuring aggressive measures to interrupt further transmission.

Objectives:
The objective of this advisory is to alert the public health authorities, water and sanitation agencies and other relevant stakeholders to undertake necessary steps for prevention and control of PAM across Pakistan especially areas where cases are being reported every year.

Background:
N. fowleri (also known as brain eating amoeba) is a single-celled, thermophilic, free-living pathogen found widely in freshwater environments i.e. warm bodies of fresh water, such as lakes, rivers, hot springs and even in soil. Despite lower incidence, the PAM disease is also widely distributed in tropical areas and mostly occurs during hot summer months. Most cases of PAM arise from freshwater sources (lakes, pools) but an increasing number are now linked to drinking water systems.
The infection results from water containing N. fowleri entering the nasal cavity, followed by migration of the amoebae to the brain via the olfactory nerve. Within the brain, N. fowleri causes extensive inflammation, hemorrhage, and necrosis, leading to death in 3 to 7 days.

Clinical presentation:
Incubation period ranges from 02 to 15 days with median 07 days, The Clinical features of PAM are quite similar to meningitis with initial presentation of sudden onset of frontal or temporal headache, high grade fever, nuchal rigidity, anorexia, vomiting, irritability and restlessness. Other symptoms such as photophobia, neurological abnormalities, including altered mental status, ataxia, cranial nerve palsy, hallucinations, delirium and coma usually occur late in the clinical course leading to death in 3-8 days.

Diagnosis:

The diagnosis is based on history, clinical examination, signs and symptoms. CSF sample may be collected for microscopy and advanced referral testing. Because of the rarity of the infection and difficulty in initial detection, about 75% of case diagnoses are made after the death of the patient.

Laboratory confirmation:

PAM infection can be confirmed the through below mentioned laboratory procedures:

Laboratory test	**Findings**
Direct Visualization	Naegleria fowleri organisms in cerebrospinal fluid (CSF), biopsy, or tissue specimens. Wet mount On CSP should be requested specifically
Antigen Detection	Naegleria fowleri antigen in CSF, biopsy, or tissue specimens through immunohistochemistry or indirect immunofluorescence
Polymerase Chain Reaction (PCR)	Amplification of DNA from the amoebae in CSF or tissue
Amoeba Culture	The amebae can be grown in culture to increase the likelihood of detecting the amoeba by direct visualization or PCR

Suspected environmental water can be tested by using above mentioned laboratory procedures for detection of Naegleria Fowleri.

Case Management:

- Suspected cases should immediately be reported to health authorities for respective measures.
- Rapid diagnosis and intensive supportive care may provide the likelihood of survival. In few such documented cases, the combination of 3 drugs; **Amphotericin B** (IV/Intrathecal), Rifampicin (Oral 10 mg/ Kg/day) and **Fluconazole** (IV/ oral 10 mg/ kg/ day) was used along with **steroids**.

- Azithromycin has both in vitro and in vivo efficacy against Naegleria fowleri and may be tried as an adjunct to Amphotericin B. Recently, Miltefosine has also shown some in vitro ameba- killing activity against free-living amebae, including Naegleria fowleri.

Prevention & Control measures:

- Naegleria fowleri cannot survive in clean, cool and chlorinated water. Chlorine kills Naegleria fowleri and is the most effective way to disinfect swimming pools and reticulated water systems.
- Community education and raising awareness assumes significance in known endemic areas. Key recommended messages may include:
    - Avoid jumping or diving into warm fresh water or thermal pools and keeping the head above water in spas, thermal pools and warm fresh water.
    - Empty and clean small collapsible wading pools daily.
    - Ensure swimming pools and spas are adequately chlorinated and well maintained. If using un-chlorinated water, don't allow water to go up in nose when bathing, showering or washing the face.

- Potentially contaminated water should not be used for any form of nasal irrigation or nasal lavage.

Advise for water utilities:

- Water supplies at risk including reticulated raw and drinking water, lakes, dams, bores, tanks, reservoirs, pipelines, and swimming pools that are poorly maintained, under or unchlorinated.
- Proper design, management and cleaning of assets (e.g. pipes and storage tanks) is required to minimize the sediment (which may harbor Naegleria cysts) and reduce water stagnation (which may lead to loss of disinfectant residual).

Chlorination:

- Water supplies at risk of N. fowleri must ensure adequate primary disinfection and maintain a chlorine residual of at least 0.5 mg/L at all times, in all parts of the distribution system.
- Regularly monitor the water temperature and chlorine residual throughout the distribution system. Periodic testing for Naegleria fowleri can be carried out in at risk systems.

Disease Surveillance and Notification:

Surveillance and notification of PAM infection should be enhanced with the dissemination of standard case definitions and diagnostics to areas of transmission and areas at risk.

Risk Communications:

Symptoms of N. fowleri infection are clinically similar to viral & bacterial meningitis and these conditions are much more common than amoebic meningoencephalitis. Making clinicians. aware about the disease may therefore, improve case detection and provide insight into human or environmental determinants of infection and allow improved assessment of treatment. effectiveness.

Health Education:

Awareness and education in the affected areas must also be undertaken to educate people on requisite preventive measures. Households should also be warned of the potential risk, if adequate disinfection cannot be maintained throughout the distribution system

The situation may please be continuously monitored and updates along with the actions taken be kindly communicated to the NIH regularly on phone no. +92-51-9255237, Fax: +92-51- 9255575, E-mail: eic.nih@gmail.com.

July is International Group B strep disease Awareness Month!

➢ About 1 in 4 pregnant women "carry" or are "colonized" with group B strep

➢ There are three types of perinatal Group B Strep disease, each with their own prevention challenges:

✓ Prenatal-onset (before birth)
✓ Early-onset (EOS first 6 days of life)
✓ Late-onset (7 days of age through usually 3 months of age)

➢ ***GROUP B STREP DISEASE is a leading cause of sepsis and meningitis in newborns according to the U.S Centers for Disease Control and Prevention (CDC)***

➢ It is now recommended as standard of care in several countries for all pregnant women to be routinely tested for Group B strep disease with a vaginal/rectal swab test during the 36th or 37th week during **each** pregnancy unless their urine already cultured positive in the current pregnancy

➢ Group B strep disease colonization is transient which means that a woman could test negative, but be colonized later in pregnancy and vice versa

➢ Group B strep disease is a fast-acting type of bacteria so it is imperative that ***everyone*** who takes care of baby knows the symptoms of possible Group B strep disease infection in babies and how to respond it.

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