

PUBLIC HEALTH BULLETIN-PAKISTAN

Integrated Disease Surveillance & Response (IDSR) Report

**Center of Disease Control
National Institute of Health, Islamabad**

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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

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Public Health Bulletin - Pakistan, Week 26, 2024

Overview

Pakistan's Public Health Bulletin has transformed from a simple list of illnesses into a powerful resource for public health information. This comprehensive document empowers both healthcare professionals and citizens with valuable insights.

IDSR Reports

In-depth analyses delve into prevalent diseases like malaria, influenza, tuberculosis, and childhood respiratory infections. The Bulletin goes beyond these by actively monitoring diarrhea, dog bites, hepatitis, typhoid, and even potential cholera outbreaks. This critical data allows stakeholders to create targeted prevention plans and proactively address emerging health threats before they become widespread.

Ongoing Events

Field Reports

Imagine the Bulletin as an early warning system for diseases. By meticulously tracking disease prevalence, it identifies trends that could otherwise be missed. This enables swift public health interventions, potentially stopping the spread of illnesses like polio and brucellosis in their tracks.

Looking for more than just numbers? Look no further. This week's edition exemplifies the Bulletin's commitment to comprehensive reporting. It features insightful reports from field activities, including anti-dengue campaign monitoring, dengue sweep-up activities in specific districts, and a commentary on infection prevention best practices. It also provides a platform for knowledge sharing through Letters to the Editor and a Knowledge Hub section featuring resources like "Mitigating Monsoon Health Risks in Pakistan."

Knowledge empowers us, 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 crucial role in safeguarding public health and creating a safer, healthier future for the nation.

Sincerely,
The Chief Editor



- During week 26, 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).
- Twenty-two cases of AFP reported from KP, ten from Punjab, nine from Sindh and three from Balochistan. All are suspected cases and need field verification.
- Nineteen suspected cases of HIV/ AIDS reported from Punjab, eight from Sindh, six from Balochistan and three from KP. Field investigation required to verify the cases.
- Ten cases of Brucellosis reported from KP and six from Sindh. These are suspected cases and require field verification.
- There is an increasing 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

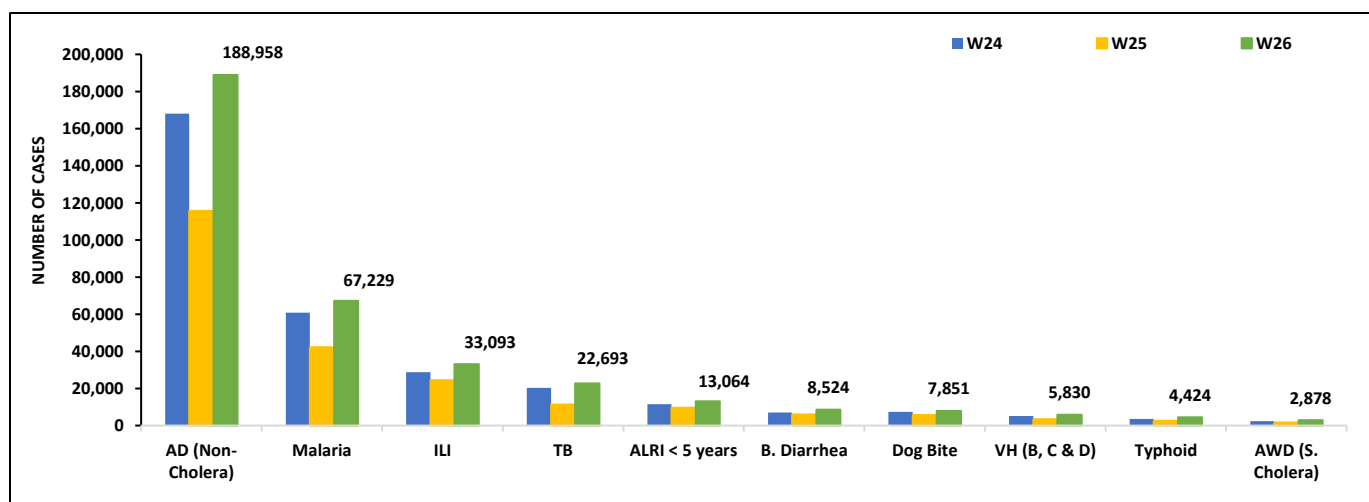
- The national compliance rate for IDSR reporting in 149 implemented districts is 84%
- Gilgit Baltistan and AJK are the top reporting regions with a compliance rate of 99%, followed by Sindh 94% and Balochistan 79%
- The lowest compliance rates were observed in ICT & KPK.

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2350	1734	74
Azad Jammu Kashmir	382	373	99
Islamabad Capital Territory	35	26	74
Balochistan	1241	977	79
Gilgit Baltistan	374	370	99
Sindh	2085	1957	94
National	6467	5437	84

Table 1: Province/Area wise distribution of most frequently reported suspected cases during week 26, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	2,330	8,094	1667	389	32,228	99,983	44,267	188,958
Malaria	54	5,010	0	2	6,149	3,492	52,522	67,229
ILI	1,437	6,681	244	753	3,999	2	19,977	33,093
TB	79	106	85	10	499	9,980	11,934	22,693
ALRI < 5 years	840	1,604	412	0	983	673	8,552	13,064
B.Diarrhea	106	2,102	150	3	1,534	1,069	3,560	8,524
Dog Bite	112	91	4	0	475	5,158	1,975	7,815
VH (B, C & D)	8	72	10	0	119	0	5,621	5,830
Typhoid	39	767	99	1	769	1,702	1,047	4,424
AWD (S. Cholera)	68	333	116	6	118	2,219	18	2,878
SARI	166	552	150	0	1,071	0	145	2,084
Measles	19	41	14	3	298	1,143	142	1,660
Dengue	1	54	0	0	65	750	50	920
AVH (A&E)	32	77	0	0	299	0	387	795
CL	0	135	0	0	240	2	2	379
Mumps	10	46	6	0	65	0	213	340
Chickenpox/ Varicella	7	8	16	1	102	67	43	244
Gonorrhoea	0	85	0	0	1	0	10	96
Pertussis	0	61	6	0	17	0	0	84
Chikungunya	0	0	0	0	0	0	54	54
Meningitis	0	1	1	0	10	27	6	45
AFP	0	3	0	0	22	10	9	44
HIV/AIDS	0	6	0	0	3	19	8	36
Diphtheria (Probable)	0	6	0	0	4	4	8	22
Brucellosis	0	0	0	0	10	0	6	16
Syphilis	0	2	0	0	1	0	9	12
Rubella (CRS)	0	2	0	0	0	0	8	10
Leprosy	0	3	0	0	4	0	0	7
NT	0	0	0	0	3	0	1	4
VL	0	0	0	0	2	0	0	2

Figure 1: Most frequently reported suspected cases during week 26, Pakistan.

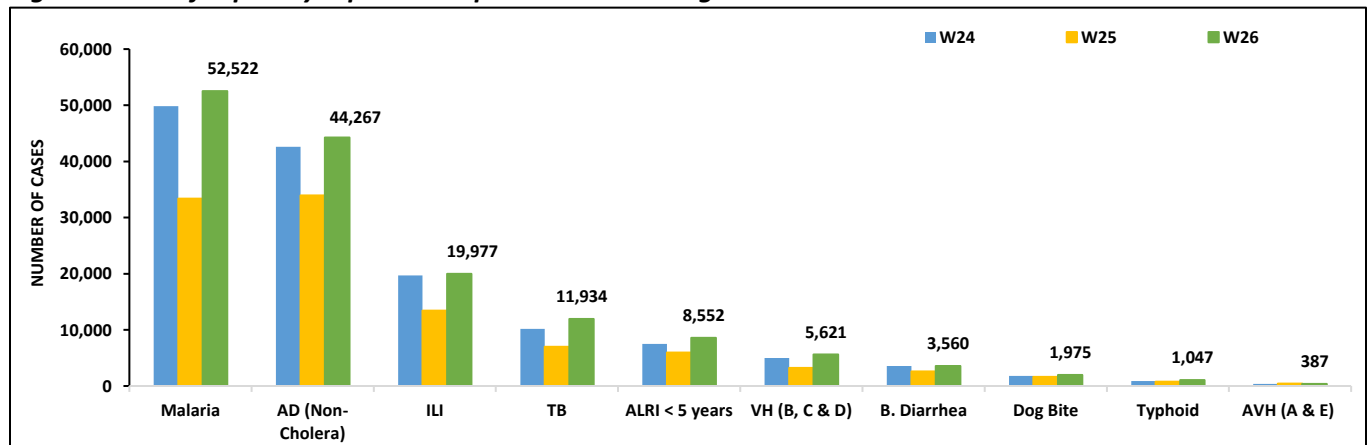


- Malaria cases were maximum followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, dog bite, Typhoid and AVH (A & E).
- Malaria cases are mostly from Larkana, Khairpur and Kamber whereas AD (Non-Cholera) cases are from Khairpur, Dadu and Badin.
- Nine cases of AFP, eight suspected cases of HIV/ AIDS and Six cases of Brucellosis reported from Sindh. All are suspected cases and need field verification.
- There is an increasing trend observed for Malaria, AD (Non-Cholera), ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, dog bite, Typhoid cases this week.

Table 2: District wise distribution of most frequently reported suspected cases during week 26, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	3,555	2,722	281	860	494	115	226	86	90	9
Dadu	3,914	2,971	278	473	941	119	546	162	79	15
Ghotki	1,696	1,197	0	268	273	222	93	192	0	12
Hyderabad	272	1,673	1,264	31	113	23	14	28	10	0
Jacobabad	886	774	336	174	427	421	128	126	50	0
Jamshoro	1,514	1,997	97	409	191	123	80	23	50	4
Kamber	4,083	1,951	5	829	262	262	162	185	31	0
Karachi Central	73	1,548	1,250	604	69	306	10	9	101	7
Karachi East	51	414	138	8	16	1	7	10	10	0
Karachi Keamari	2	329	121	0	24	0	0	0	3	2
Karachi Korangi	36	253	57	11	0	0	7	0	5	6
Karachi Malir	392	1,734	2,548	122	196	49	50	38	34	12
Karachi South	36	93	6	0	0	0	0	0	0	0
Karachi West	144	1,171	1,823	164	400	134	66	140	35	24
Kashmore	1,438	461	512	203	115	30	66	114	5	0
Khairpur	5,076	3,483	4,291	916	732	95	605	163	182	3
Larkana	6,576	2,003	0	942	323	97	304	9	14	0
Matiali	1,414	1,956	3	597	203	423	69	38	5	7
Mirpurkhas	1,823	2,172	1,982	671	422	147	128	38	30	11
Naushero Feroze	1,151	975	817	317	127	85	132	132	73	0
Sanghar	2,684	1,290	5	1050	406	1,017	30	143	32	2
Shaheed Benazirabad	1,539	2,013	0	397	299	106	78	148	83	0
Shikarpur	2,147	1,246	1	267	128	836	131	36	1	0
Sujawal	1,114	233	0	72	82	1	25	4	1	0
Sukkur	1,953	1,430	1,049	450	186	64	135	16	7	0
Tando Allahyar	1,472	1,363	519	567	215	451	136	59	21	3
Tando Muhammad Khan	1,495	1,199	0	635	175	53	69	0	2	0
Tharparkar	2,291	2,075	1,425	474	781	252	118	0	34	45
Thatta	1,825	1,713	1,169	42	489	151	83	76	24	225
Umerkot	1,870	1,828	0	381	463	38	62	0	35	0
Total	52,522	44,267	19,977	11,934	8,552	5,621	3,560	1,975	1,047	387

Figure 2: Most frequently reported suspected cases during week 26 Sindh

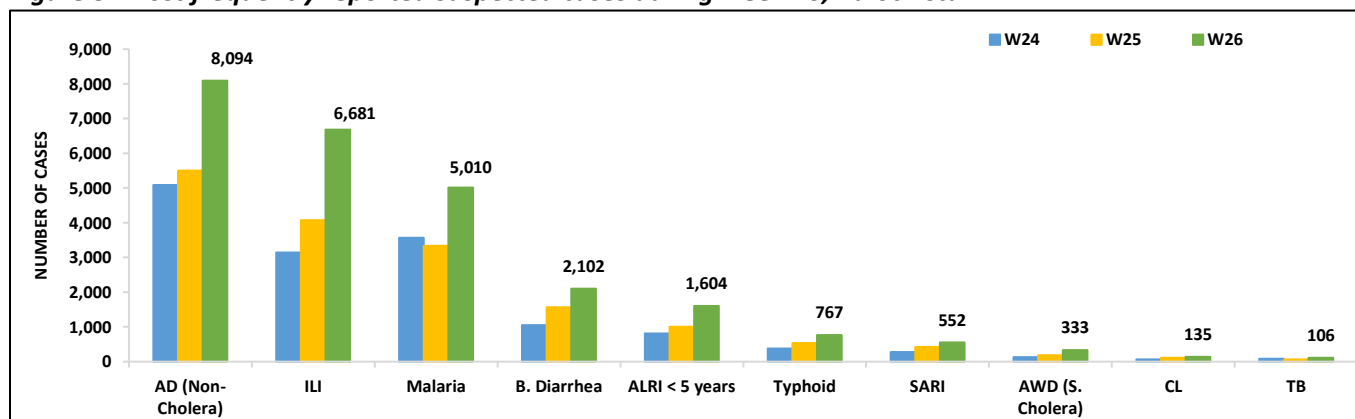


- AD (Non-Cholera), ILI, Malaria, B. Diarrhea, ALRI <5 years, Typhoid, SARI, AWD (S. Cholera), CL and TB cases were the most frequently reported diseases from Balochistan province.
- AD (Non-Cholera) cases are mostly reported from Usta Muhammad, Quetta and Kech (Turbat) while ILI cases are mostly reported from Quetta, Gwadar and Kech (Turbat).
- AD (Non-Cholera), ILI, Malaria, B. Diarrhea, ALRI <5 years, Typhoid, SARI, AWD (S. Cholera), CL and TB cases showed an increasing trend this week.
- Six suspected cases of HIV/ AIDS and Three cases of AFP reported from Balochistan. All are suspected cases and need field verification.

Table 3: District wise distribution of most frequently reported suspected cases during week 26, Balochistan

Districts	AD Non-Cholera)	ILI	Malaria	B. Diarrhea	ALRI < 5 years	Typhoid	SARI	AWD (S.Cholera)	CL	TB
Awaran	5	55	36	12	0	3	2	8	0	0
Barkhan	106	54	49	17	1	60	0	4	0	9
Chagai	152	168	66	51	4	21	2	9	0	0
Chaman	107	76	23	82	0	34	9	8	0	0
Dera Bugti	38	20	74	32	15	18	4	0	0	0
Duki	158	67	32	75	39	12	23	11	0	3
Gwadar	495	998	190	81	0	38	0	0	2	0
Harnai	83	19	67	79	171	2	0	12	1	1
Hub	106	35	73	19	4	1	0	0	0	0
Jaffarabad	282	86	298	73	28	7	6	0	0	25
Jhal Magsi	321	346	437	4	74	3	2	1	0	5
Kalat	48	3	38	9	16	19	2	0	1	0
Kech (Turbat)	505	673	588	109	87	NR	1	NR	3	NR
Kharan	176	351	62	96	0	5	5	3	0	0
Khuzdar	455	498	308	148	20	49	43	14	2	0
Killa Abdullah	166	80	42	74	20	35	39	46	30	1
Killa Saifullah	269	0	227	121	119	40	7	8	3	0
Kohlu	274	261	190	133	14	54	63	2	1	1
Lasbella	434	110	302	30	71	6	10	0	1	2
Loralai	245	315	68	64	29	24	116	2	0	0
Mastung	226	65	96	49	33	24	12	17	4	2
Naseerabad	287	19	172	13	30	46	2	0	3	0
Nushki	238	7	80	62	0	1	0	0	0	0
Panjgur	254	37	200	57	104	8	5	11	0	1
Pishin	386	334	54	162	60	36	8	68	18	3
Quetta	599	1,072	34	154	58	90	47	70	44	4
Sherani	42	72	14	11	3	6	25	4	16	0
Sibi	75	35	67	12	15	16	12	13	1	0
Sohbat pur	268	6	330	77	140	26	17	1	4	8
Surab	70	213	113	6	12	29	2	1	0	1
Usta Muhammad	735	107	542	57	97	8	19	0	0	0
Washuk	59	90	0	24	0	0	0	0	0	0
Zhob	213	199	71	36	307	12	55	0	0	40
Ziarat	217	210	67	73	33	34	14	20	1	0
Total	8,094	6,681	5,010	2,102	1,604	767	552	333	135	106

Figure 3: Most frequently reported suspected cases during week 26, Balochistan

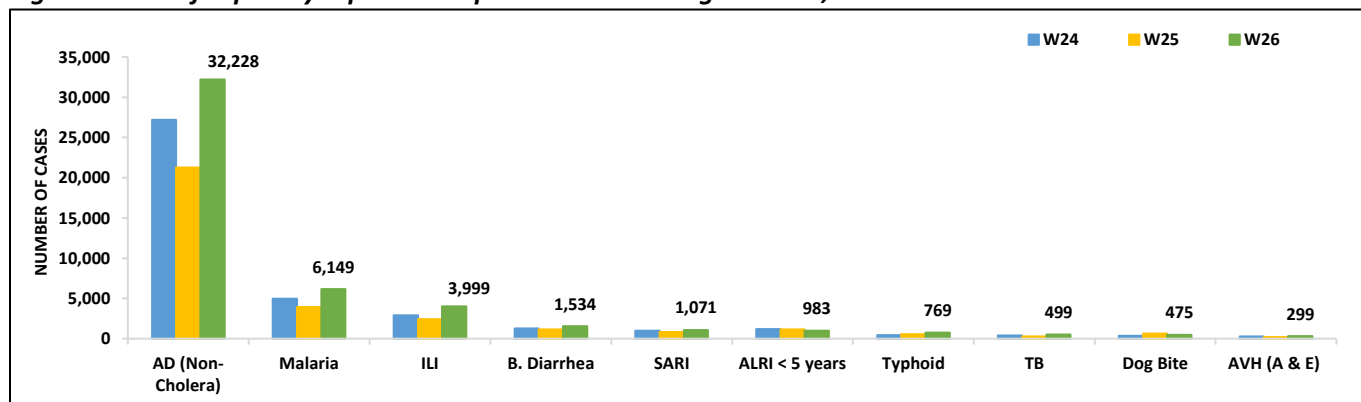


- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, B. Diarrhea, SARI, ALRI<5 Years, Typhoid, TB, dog bite and AVH (A & E) cases.
- AD (Non-Cholera), Malaria, ILI, B. Diarrhea, SARI, Typhoid, TB and AVH (A & E) cases showed an increasing trend this week.
- Twenty-two cases of AFP, three suspected cases of HIV/ AIDS and Ten 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 26, KP

Districts	AD (Non-Cholera)	Malaria	ILI	B.Diarrhea	SARI	ALRI <5 Years	Typhoid	TB	Dog Bite	AVH (A&E)
Abbottabad	1,187	27	155	14	10	12	39	18	1	5
Bajaur	1,367	251	55	175	33	29	16	48	30	58
Bannu	955	1,654	4	22	4	16	74	27	3	14
Battagram	133	157	337	0	0	0	0	0	0	0
Buner	688	345	0	0	0	0	4	3	13	0
Charsadda	1,270	195	332	136	9	98	86	4	6	47
Chitral Lower	594	22	29	33	8	8	9	6	5	0
Chitral Upper	206	6	12	2	16	2	19	2	2	0
D.I. Khan	1,216	330	0	24	4	15	0	35	6	0
Dir Lower	1,870	199	0	91	0	96	64	11	12	3
Dir Upper	928	14	121	18	0	7	0	29	0	3
Hangu	129	18	0	25	0	53	0	3	1	0
Haripur	1,189	19	131	14	22	50	16	22	8	67
Karak	297	192	11	0	0	13	4	9	25	0
Khyber	333	234	55	71	0	11	67	14	21	4
Kohat	178	59	4	0	0	1	3	3	6	0
Kohistan Lower	150	12	10	8	0	0	0	0	0	0
Kohistan Upper	483	28	56	27	35	20	28	0	0	9
Kolai Palas	83	3	5	17	2	3	7	0	0	0
L & C Kurram	87	75	64	16	21	17	11	1	6	0
Lakki Marwat	578	227	5	16	0	5	14	12	46	0
Malakand	1,126	37	16	184	16	25	18	4	0	30
Mansehra	1,216	13	288	6	54	32	15	9	0	2
Mardan	729	25	0	24	0	196	0	14	5	0
Mohmand	276	186	81	56	66	0	11	2	5	0
North Waziristan	20	21	0	12	18	0	10	0	0	0
Nowshera	2,233	69	12	32	3	14	21	8	2	4
Orakzai	88	41	25	16	0	0	7	0	11	0
Peshawar	3,879	82	844	210	43	33	74	22	37	11
SD Peshawar	4	0	0	0	0	0	0	0	0	0
SD Tank	22	47	0	2	0	0	0	0	0	0
Shangla	1,329	1,002	18	15	5	11	18	96	29	3
SWA	98	139	228	13	56	38	53	1	8	0
Swabi	2,080	85	700	35	88	152	37	78	116	23
Swat	4,512	61	136	143	28	19	26	13	60	14
Tank	248	91	0	1	0	0	1	0	0	0
Tor Ghar	130	133	0	24	8	0	8	0	2	2
Upper Kurram	317	50	265	52	522	7	9	5	9	0
Total	32,228	6,149	3,999	1,534	1,071	983	769	499	475	299

Figure 4: Most frequently reported suspected cases during week 26, KP



ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and AWD (S. Cholera). ILI, AD (Non-Cholera) and AWD (S. Cholera) cases showed an increasing trend this week.

AJK: AD (Non-Cholera) cases were maximum followed by ILI, ALRI <5 years, SARI, dog bite, B. Diarrhea, AWD (S. Cholera), Malaria, Typhoid and AVH (A & E) cases. An increasing trend observed for AD (Non-Cholera), ALRI <5 years, SARI, dog bite, B. Diarrhea, Malaria, Typhoid and AVH (A & E) cases while a decreasing trend observed for ILI and AWD (S. Cholera) cases this week.

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

ICT, AJK & GB

Figure 5: Most frequently reported suspected cases during week 26, ICT

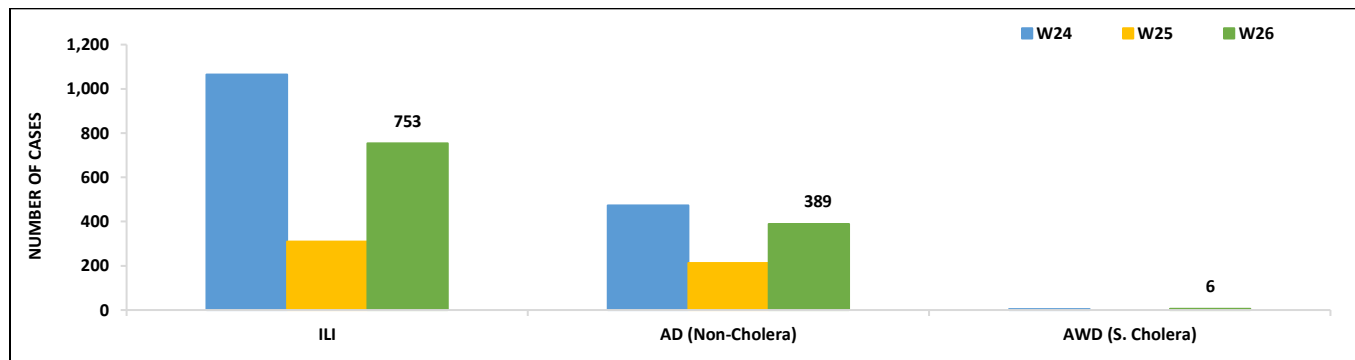


Figure 6: Week wise reported suspected cases of ILI, ICT

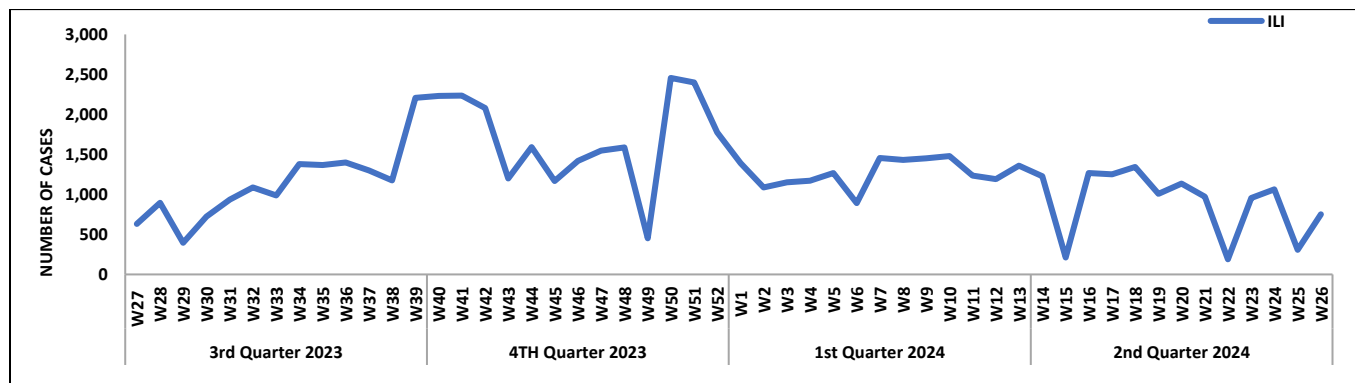


Figure 7: Most frequently reported suspected cases during week 26, AJK

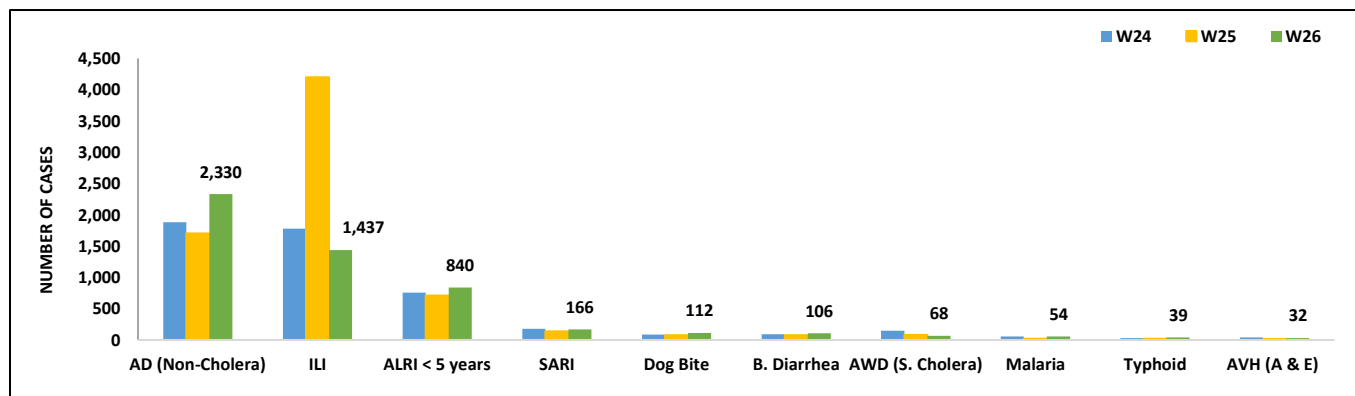


Figure 8: Week wise reported suspected cases of ILI and AD (Non-Cholera) AJK

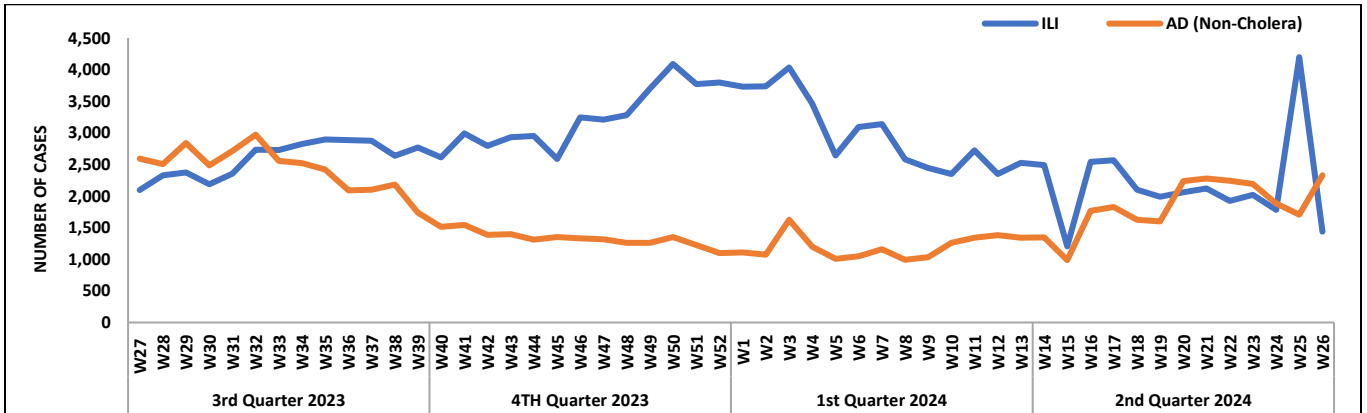


Figure 9: Most frequent cases reported during Week 26, GB

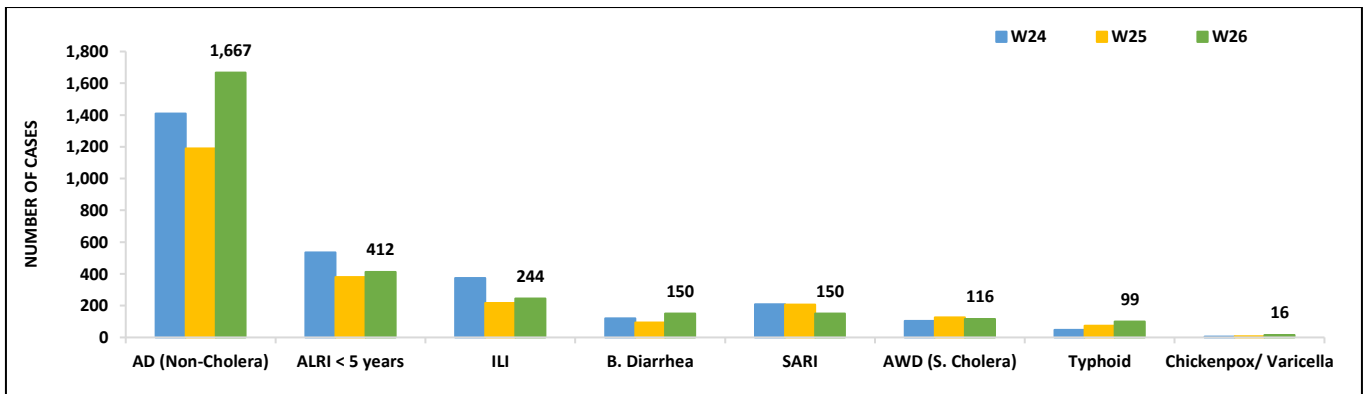
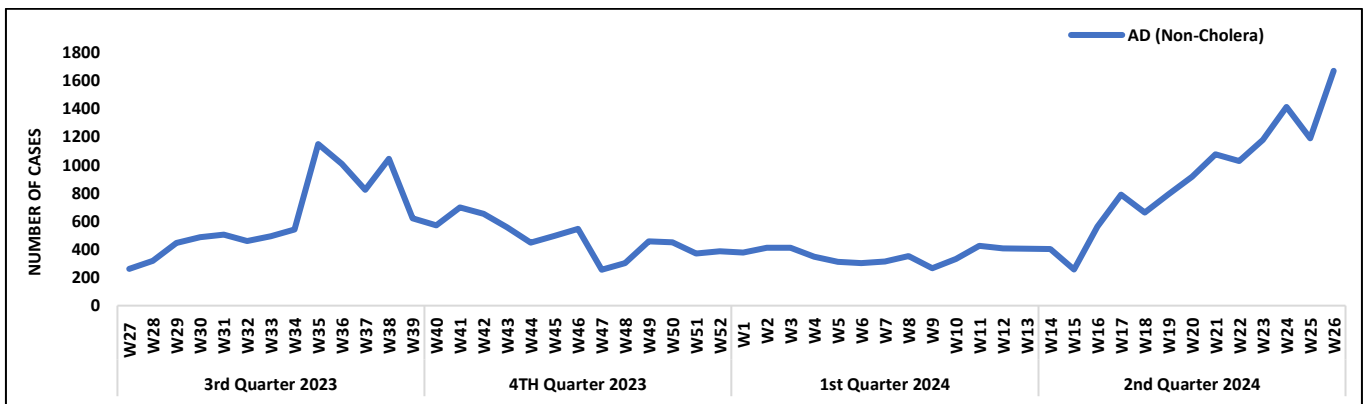


Figure 10: Week wise reported suspected cases of AD (Non-Cholera), GB



- AD (Non-Cholera) cases were maximum followed by TB, dog bite, Malaria, AWD (S. Cholera), Typhoid, Measles, B. Diarrhea, Dengue and ALRI<5 Years cases.
- AD (Non-Cholera), TB, dog bite, Malaria, AWD (S. Cholera), Typhoid and B. Diarrhea cases showed an increasing trend while Measles, Dengue and ALRI<5 Years cases showed a decreasing trend this week.
- Nineteen suspected cases of HIV/ AIDS and Ten cases of AFP reported from Punjab. Field investigation required to verify the cases.
- reported from Punjab. All are suspected cases and need field verification.

Figure 11: Most frequently reported suspected cases during week 26, Punjab.

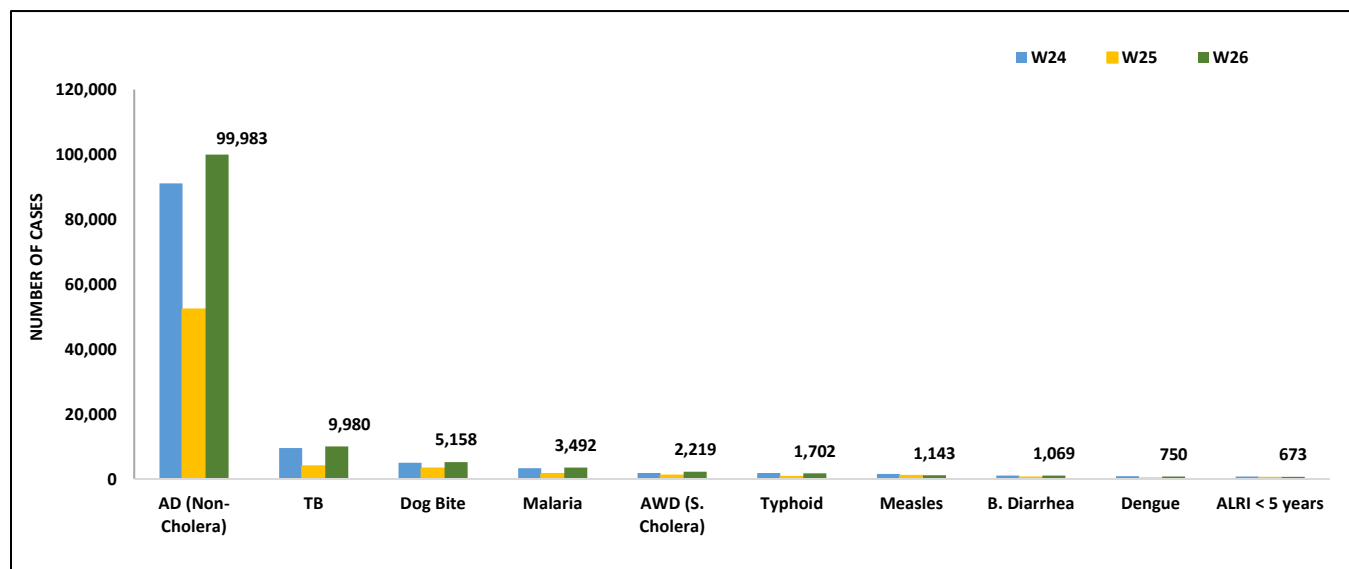


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 26

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)	12	0	-	-	4	0	-	-	-	-
AD (Non-Cholera)	92	0	-	-	-	-	-	-	-	-
Malaria	2,920	106	-	-	-	-	-	-	-	-
CCHF	-	-	17	2	3	2	1	0	-	-
Dengue	993	39	0	0	1	0	6	0	-	-
VH (B)	3,253	72	0	0	-	-	-	-	22	5
VH (C)	3,464	234	0	0	-	-	-	-	-	-
VH (A&E)	46	0	-	-	-	-	-	-	-	-
Covid-19	-	-	21	0	2	1	21	1	35	0
HIV	250	0	-	-	-	-	-	-	-	-
Influenza A	0	0	0	0	27	0	40	0	0	0
TB	66	0	-	-	-	-	-	-	-	-
Syphilis	166	0	-	-	-	-	-	-	-	-
Typhoid	595	11	-	-	-	-	-	-	-	-

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 26, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	107	96%
	Bannu	239	135	56%
	Battagram	63	15	24%
	Buner	34	28	82%
	Bajaur	44	34	77%
	Charsadda	59	56	95%
	Chitral Upper	34	26	76%
	Chitral Lower	35	35	100%
	D.I. Khan	114	108	95%
	Dir Lower	74	74	100%
	Dir Upper	53	45	85%
	Hangu	22	19	86%
	Haripur	72	66	92%
	Karak	35	35	100%
	Khyber	52	17	33%
	Kohat	61	61	100%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	70	100%
	Lower & Central Kurram	42	23	55%
	Upper Kurram	41	31	76%
	Malakand	42	34	81%
	Mansehra	136	96	71%
	Mardan	80	73	91%
	Nowshera	55	53	96%
	North Waziristan	12	2	17%
	Peshawar	151	129	85%
	Shangla	39	25	64%
	Swabi	63	62	98%
	Swat	77	75	97%
	South Waziristan	134	49	37%
	Tank	34	30	88%
	Torghar	14	14	100%
Mohmand	86	42	49%	
SD Peshawar	5	1	20%	
SD Tank	58	4	7%	
Orakzai	68	19	28%	
FATA	Mirpur	37	37	100%
	Bhimber	20	19	95%
	Kotli	60	60	100%
	Muzaffarabad	45	45	100%
	Poonch	46	46	100%
	Haveli	39	38	97%



Azad Jammu Kashmir	Bagh	40	37	93%
	Neelum	39	36	92%
	Jhelum Vellay	29	28	97%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	21	20	95%
	CDA	14	6	43%
Balochistan	Gwadar	25	25	100%
	Kech	40	36	90%
	Khuzdar	74	69	93%
	Killa Abdullah	24	16	67%
	Lasbella	55	55	100%
	Pishin	69	29	42%
	Quetta	43	34	79%
	Sibi	36	29	81%
	Zhob	39	26	67%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	13	87%
	Kohlu	75	61	81%
	Chagi	35	24	69%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	22	63%
	Jhal Magsi	26	26	100%
	Sohbat pur	25	25	100%
	Surab	32	32	100%
	Mastung	45	44	98%
	Loralai	33	29	88%
	Killa Saifullah	28	27	96%
	Ziarat	29	19	66%
	Duki	31	29	94%
	Nushki	32	28	88%
	Dera Bugti	45	14	31%
	Washuk	46	10	22%
	Panjgur	38	18	47%
	Awaran	23	6	26%
	Chaman	25	20	80%
	Barkhan	20	20	100%
Hub	33	22	67%	
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%
	Diامر	62	62	100%
	Astore	54	54	100%



	Shigar	27	26	96%
	Skardu	52	52	100%
	Ganche	29	28	97%
	Kharmang	18	18	100%
Sindh	Hyderabad	73	57	78%
	Ghotki	64	63	98%
	Umerkot	43	42	98%
	Naushahro Feroze	107	90	84%
	Tharparkar	282	241	85%
	Shikarpur	59	59	100%
	Thatta	52	52	100%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	18	78%
	Karachi-West	20	20	100%
	Karachi-Malir	37	37	100%
	Karachi-Kemari	18	12	67%
	Karachi-Central	11	9	82%
	Karachi-Korangi	18	17	94%
	Karachi-South	4	4	100%
	Sujawal	54	30	56%
	Mirpur Khas	106	105	99%
	Badin	124	120	97%
	Sukkur	63	63	100%
	Dadu	88	88	100%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	169	164	97%
	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%



Forging a United Front: NIH-WHO Collaboration Updates National Action Plan for Antimicrobial Resistance

In a collaborative effort to combat the growing threat of antimicrobial resistance (AMR), the National Institutes of Health (NIH) joined forces with the World Health Organization (WHO) to convene a critical technical working group meeting last week. The central focus of this meeting was the meticulous review and subsequent update of the National Action Plan for Antimicrobial Resistance, covering the period 2024-2028. This vital initiative brought together a team of esteemed experts dedicated to strengthening the nation's strategies in tackling AMR, a public health concern of paramount importance.

The meeting served as a platform for a comprehensive examination of the existing National Action Plan. Participants engaged in a thorough evaluation of its strengths and weaknesses, pinpointing areas where advancements could be made to fortify the country's response to AMR. Leveraging the extensive knowledge and experience of the WHO representatives, the working group explored best practices and cutting-edge approaches currently employed on a global scale. These international insights proved invaluable in shaping the direction of the revised National Action Plan.

Throughout the discussions, a central theme emerged – the necessity for a multi-pronged approach. The group recognized the significance of addressing AMR across various sectors, encompassing human health, animal health, and the environment. This "One

Health" perspective acknowledges the interconnectedness of these domains and underscores the need for coordinated efforts to achieve lasting progress.

The deliberations yielded a wealth of valuable recommendations aimed at bolstering the National Action Plan. These included potential enhancements to national surveillance systems for AMR, fostering a culture of responsible antimicrobial use in both human and veterinary medicine, and promoting ongoing research and development. The updated plan will also emphasize public awareness campaigns designed to educate the public about the judicious use of antibiotics and the gravity of the AMR threat.

The successful culmination of this technical working group meeting marks a significant step forward in the national fight against AMR. The revised National Action Plan, informed by the expertise of both domestic and international stakeholders, will equip the nation with a robust and comprehensive strategy to mitigate the alarming rise of antimicrobial resistance, safeguarding public health for years to come.

Building a Public Health Cornerstone: The Pakistan- US Collaboration Behind the PHB

The Pakistan Public Health Bulletin (PHB) stands as a testament to the enduring partnership between the National Institutes of Health (NIH) of Pakistan and the US Centers for Disease Control and Prevention (US-CDC). Recognizing the critical need for a centralized platform for public health communication, the NIH and US-CDC joined forces in 2021 to prioritize the development of the PHB.



The US-CDC's expertise in public health communication and disease surveillance proved invaluable. They delivered comprehensive training programs for Pakistani personnel across all provinces, including those in Azad Jammu and Kashmir and Gilgit-Baltistan. These programs equipped provincial and district surveillance officers, along with health managers, with the necessary skills to effectively gather, analyze, and disseminate public health data.

US-CDC's support extended beyond training. They partnered with the NIH to recruit a graphic/web designer and secure the services of a public health consultant, further solidifying the PHB's foundation. Additionally, the logistical and IT equipment they provided continues to be essential for the PHB's daily operations.

The NIH team also received in-depth training from the US-CDC on various technical aspects of PHB development, including content structure, development processes, and project implementation. This comprehensive training program ensured that the PHB's launch in June 2023 marked a significant milestone for Pakistan's public health communication landscape.

Since its launch, the PHB has become a trusted source of information, delivering critical updates on emerging infectious diseases, public health interventions, and health advisories. This empowers healthcare professionals, policymakers, and the general public to make informed decisions regarding their health and well-being.

The US-CDC's commitment extends beyond the initial development. They remain collaborative partners with the NIH, working to strengthen the PHB's capacity and reach. This ongoing partnership ensures the PHB remains a valuable resource for Pakistan's public health infrastructure for years to come.

The success of this bulletin wouldn't be possible without the valuable contributions of our partners. The UK Health Security Agency (UKHSA)

deserves recognition for their ongoing support with DHIS-2 and for publishing the weekly IDSR report, which has been instrumental in including current disease data in the bulletin. We also extend our gratitude to the World Health Organization (WHO) and SafetyNet Inc. for their partnership. Their combined efforts have significantly strengthened the PHB's position as a pillar of public health communication in Pakistan

In conclusion, the Pakistan Public Health Bulletin stands as a shining example of successful international collaboration in public health communication. The US-CDC's investment in training, logistics, and technical expertise served as the catalyst for the PHB's development. This collaborative effort has yielded a vital resource that empowers Pakistanis to protect their health and well-being.

Notes from field activities

Anti-Dengue Campaign Monitoring, Support, and Investigation: Field Activity Report

Source: DHIS-2 Reports
<https://dhis2.nih.org.pk/dhis-web-event-reports/>

Introduction:

Dengue fever is a constant threat along Pakistan's coastal belt, including District Kech. A recent surge in dengue cases in Turbat city following unusual rainfall prompted a field activity to address the outbreak.

Methods:

A multifaceted approach was employed to combat the dengue outbreak. Door-to-door anti-dengue campaigns were conducted across nine Union Councils (UCs) within Tehsil Kech. Teams identified potential cases, administered rapid diagnostic tests (RDTs) to suspected individuals, and completed



questionnaires for all identified cases. Water containers were inspected for mosquito larvae, and breeding site information was meticulously recorded. Community engagement remained a central focus throughout the campaign.

Results:

A total of 10,453 houses were inspected, with 805 showing potential dengue cases. An additional 1,137 houses were locked and inaccessible. Extensive container inspections revealed 104,255 water containers, of which 1,207 contained mosquito larvae. A total of 58 grams of larvicide (IGR) were applied during the campaign.

Detailed findings were further categorized by UC, providing a granular view of the outbreak's distribution. Data on inspected houses, positive cases, locked houses, inspected containers, positive containers, and larvicide application were documented for each UC. UC Absor had the highest number of positive houses (238) and positive containers (441). UC Malikabad and Singanisar faced a moderate burden with 113 and 126 positive houses, respectively. Conversely, UC Shahitump, UC Sarikhana, Turbat City, and UC Mand Buloo reported lower numbers of positive cases, ranging from 41 to 97 houses. The use of larvicide (IGR) also varied, with UC Malikabad receiving the most (35 grams) and Turbat City receiving none. Notably, a significant number of houses (ranging from 61 to 277 across UCs) remained inaccessible due to being locked. This may have limited the campaign's ability to comprehensively assess and address the outbreak in all areas. A total of 46 cases were confirmed positive for dengue fever through RDTs.

Discussion:

While a definitive conclusion regarding the impact of the campaign on case numbers cannot be drawn from this data alone, the observed decrease in cases coincides with the implementation of the anti-dengue campaigns and awareness sessions. Further investigation and longer-term data collection would be necessary to establish a causal relationship.

Recommendations:

To further mitigate the risk of dengue outbreaks, social and behavioral change awareness campaigns focusing on preventive measures are recommended.

Dengue Extended Sweep-up Activities UC 45, Rawalpindi

Dr. Hussain Shah Tirmazi
DDHO Rawal Town
Rawalpindi

Mr. Adnan Rafi,
Entomologist

Introduction

Dengue is a mosquito-borne viral disease that can be fatal. It is caused by the dengue virus, which is transmitted to humans through the bite of an infected *Aedes aegypti* mosquito. The virus is found in tropical and subtropical regions around the world.

Objective:

To monitor and enhance the extended sweep-up activities of outdoor and indoor vector surveillance being implemented in the area.

Methods:

In a comprehensive effort to combat dengue, a team conducted a thorough inspection of UC 45. This involved visiting homes, businesses, and public spaces to identify and eliminate potential mosquito breeding grounds. To further empower the community, the team also held awareness sessions on dengue prevention strategies. Additionally, they conducted both outdoor and indoor vector surveillance to monitor mosquito populations and inform targeted interventions.

Findings:

The inspection of UC 45 revealed several mosquito breeding sites. These included waterlogged containers, discarded tires, and flower pots, all providing ideal conditions for mosquito reproduction. Furthermore, it became evident that some residents lacked awareness regarding the signs and symptoms of dengue, as well as preventative measures.



Outdoor vector surveillance identified stagnant water sources near drains and canals as prime breeding grounds, contributing to higher mosquito populations during the rainy season. Indoor inspections revealed a correlation between poor sanitation and increased mosquito activity. Homes with open windows and doors also showed higher mosquito presence, highlighting the importance of proper screening.

Actions Taken:

Taking decisive action, the team eliminated all identified mosquito breeding sites by removing waterlogged containers, discarded tires, and flower pots. To empower the community for long-term prevention, they distributed mosquito nets, insect repellent, bed nets, and educational materials on avoiding mosquito bites. Additionally, they reinforced these measures through awareness sessions covering dengue symptoms, prevention techniques, and the importance of proper waste disposal.

Recognizing the need for systemic solutions, the team recommended improvements to local sanitation infrastructure, including better drainage systems and garbage collection. They further emphasized the importance of ongoing community education on proper waste management to prevent future outbreaks.

Recommendations:

To address the mosquito issue more effectively, several recommendations were made. Firstly, increasing the frequency and scale of sweep-up activities and vector surveillance would allow for quicker identification and removal of breeding sites. Secondly, a larger team of health workers would ensure comprehensive and efficient coverage of the affected area.

To achieve long-term success, community participation is crucial. Collaboration with community leaders can raise awareness about the importance of these activities and encourage resident involvement. Furthermore, providing more information and education on dengue prevention will empower the community to take preventative measures.

Finally, to directly protect residents, increasing the distribution of mosquito nets and other preventative measures like insect repellent will provide a crucial layer of defense against mosquito bites.

Letter to Editor

The District Health Authority's (DHA) Multifaceted Approach to Dengue Prevention in Rawalpindi

Dr. Asif Arbab Khan Niazi
CEO DHA
Rawalpindi

The District Health Authority (DHA) in Rawalpindi prioritizes safeguarding public health. Demonstrating this commitment, the DHA's Department of Epidemics Prevention and Control (EP&CD) has launched a comprehensive anti-dengue surveillance campaign. This campaign utilizes specially trained teams dedicated to identifying and eliminating mosquito breeding grounds, a crucial step in combating dengue fever.

The strategy employs a two-pronged approach, deploying 788 personnel for meticulous inspections within homes and buildings. Additionally, 211 personnel focus on tackling potential breeding sites in outdoor public spaces. This comprehensive approach has yielded significant results. Through their extensive surveillance, the teams have successfully identified and eliminated mosquito larvae at a staggering 8,064 sites across Rawalpindi. Disrupting the dengue transmission cycle on such a large scale significantly protects the health and well-being of Rawalpindi residents.

However, the breakdown of these figures reveals a critical aspect of dengue control: a two-pronged approach is essential. While the indoor teams identified larvae in 6,735 homes, highlighting the importance of community participation, the detection of larvae at 1,361 outdoor locations underscores the necessity of comprehensive surveillance efforts. This emphasizes the need for



vigilance in both private and public spaces to effectively control dengue.

The DHA's commitment extends beyond surveillance. Educational campaigns empower residents to prevent mosquito breeding within their homes and surroundings. However, achieving complete success requires community collaboration. 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. This collaborative effort not only disrupts the dengue transmission cycle but also empowers residents to become active participants in safeguarding their own health and the well-being of their community.

Commentary

CDC's Infection Prevention and Control Recommendations for Viral Hemorrhagic Fevers (VHFs):

<https://www.cdc.gov/viral-hemorrhagic-fevers/hcp/infection-control/index.html>

Dr. Waqar Ahmed
Safetynet, NIH, Islamabad

This recent guidance from the Centers for Disease Control and Prevention (CDC) offers a critical resource for healthcare professionals (HCPs) encountering patients with suspected or confirmed VHFs in hospitals. The document emphasizes the significance of implementing robust infection control measures to safeguard both patients and healthcare workers from these potentially life-threatening illnesses.

VHFs encompass a diverse group of viruses known to cause internal bleeding and organ dysfunction. The inherent severity of these diseases necessitates a heightened level of vigilance in clinical settings. The CDC's recommendations serve as a well-

structured framework, outlining essential precautions for HCPs to minimize the risk of transmission.

A cornerstone of these guidelines is the appropriate use of personal protective equipment (PPE). Donning gloves, gowns, masks, and eye protection shields HCPs from infectious fluids and aerosols that might harbor VHF pathogens. The document underscores the importance of adhering to strict protocols for donning, doffing, and disposing of PPE to ensure its effectiveness.

Limiting contact with a VHF patient's bodily fluids is another crucial principle. The CDC recommends implementing strategies to minimize these interactions, such as utilizing spill kits and employing meticulous cleaning and disinfection protocols. Aerosol-generating procedures, which could potentially propagate infectious particles, should be avoided whenever possible.

Hand hygiene, a cornerstone of infection control in all healthcare settings, assumes even greater significance in the context of VHFs. The CDC emphasizes the importance of frequent handwashing with soap and water or using an alcohol-based hand sanitizer.

In conclusion, the CDC's infection prevention and control recommendations provide HCPs with a comprehensive roadmap for protecting themselves and their patients from VHFs. By adhering to these guidelines and remaining vigilant, healthcare workers can play a vital role in curbing the spread of these serious illnesses.

It is important to note that these are general recommendations, and the specific protocols may vary depending on the particular VHF and the local healthcare setting.

Knowledge Hub

Mitigating Monsoon Health Risks: Preparing for Health Challenges in Pakistan

Pakistan eagerly awaits the annual monsoon season, a lifeline for agriculture and a respite from scorching summers. However, along with the life-



giving rains come significant health challenges. Heavy monsoon rains often trigger infrastructure failures, particularly affecting railways. While these rail failures disrupt transportation, the resulting stagnant water and altered ecosystems create ideal breeding grounds for disease-carrying vectors and pathogens. This essay will explore the expected health risks associated with heavy monsoon rail failures in Pakistan and outline preventive measures to mitigate these threats.

The Breeding Grounds of Disease:

When heavy monsoon rains overwhelm drainage systems and flood railway tracks, stagnant water accumulates. This stagnant water becomes a breeding ground for mosquitoes, the primary vectors of diseases like dengue fever, malaria, and chikungunya. These diseases cause debilitating symptoms like fever, muscle aches, and rashes, placing a significant strain on healthcare resources.

Furthermore, contaminated water sources are another major concern during heavy monsoon rains. Overflowing drains and sewage systems can contaminate drinking water sources, leading to a surge in waterborne diseases like diarrhea, typhoid fever, and cholera. These diseases cause severe dehydration and, in severe cases, can be fatal, particularly for young children and the elderly.

The altered humidity levels and damp environments also favor the growth of fungal spores and bacteria. These can cause respiratory problems like asthma attacks, bronchitis, and skin infections. Additionally, stagnant water can contribute to the spread of parasitic diseases like schistosomiasis, a debilitating illness affecting the intestines and urinary tract.

Protecting Your Health:

While heavy monsoon rains and their consequences are inevitable, several preventive measures can significantly reduce the risk of contracting diseases:

- **Mosquito Control:** Eliminate potential mosquito breeding sites by emptying stagnant water from containers around your home. Use mosquito nets while sleeping and wear long-sleeved

clothing during dusk and dawn, when mosquitoes are most active.

- **Safe Drinking Water:** Always boil drinking water or use water purification tablets to ensure its safety. Avoid consuming floodwater or water from potentially contaminated sources.
- **Hygiene Practices:** Maintain proper hygiene by washing hands frequently with soap and water, especially before eating and after using the toilet. This helps prevent the spread of germs and bacteria.
- **Sanitation:** Practice proper waste disposal to prevent contamination of water bodies. If you live in an area prone to flooding, consider raising your toilet and sewage systems to minimize contamination risks.
- **Early Diagnosis and Treatment:** Seek immediate medical attention if you experience symptoms of any monsoon-related disease. Early diagnosis and treatment can significantly improve outcomes and prevent complications.

Community Action and Government Initiatives:

Mitigating the health risks associated with heavy monsoon rains requires a multi-pronged approach. Communities can work together to improve drainage systems, clean up neighborhoods, and raise awareness about preventive measures.

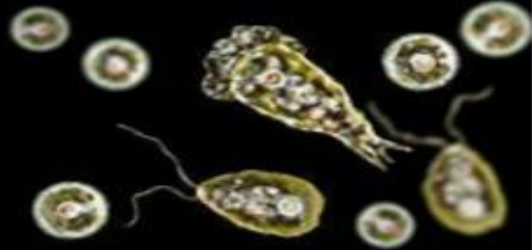
Government initiatives are also crucial. Investing in infrastructure improvements like better drainage systems and flood control measures can significantly reduce the risk of stagnant water accumulation. Additionally, public health campaigns promoting preventive measures, coupled with ensuring access to clean drinking water and sanitation facilities, are essential to safeguard public health during the monsoon season.

Conclusion:

Heavy monsoon rains, while beneficial for agriculture, can pose significant health risks due to potential rail failures and the resulting stagnant water. By implementing preventive measures on individual and community levels, along with robust government initiatives, these risks can be effectively mitigated.



Naegleria fowleri



"the brain-eating amoeba"

Naegleria Fowleri is a free-living amoeba that can cause a rare and deadly brain infection called primary amebic meningoencephalitis (PAM).

PAM is rapidly progressing disease and is 99% Fatal but 100% Preventable.





Be aware, before you dare!



**PREVENTION
IS THE ONLY
CURE**



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