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

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Overview

IDSR Reports

Ongoing Events

Field Reports

Public Health Bulletin - Pakistan, Week 29, 2024

Pakistan's Public Health Bulletin has evolved far beyond its initial purpose as a simple list of illnesses. Today, it serves as a powerful resource, empowering both healthcare professionals and citizens with a wealth of public health information.

This comprehensive document delves deeply into prevalent diseases such as malaria, influenza, tuberculosis, and childhood respiratory infections. But its reach extends far wider, actively monitoring a broad spectrum of health concerns including diarrhea, dog bites, hepatitis, typhoid, and even potential cholera outbreaks. This critical data serves as the cornerstone for targeted prevention plans, enabling stakeholders to proactively address emerging health threats before they become widespread.

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 before they erupt into major outbreaks.

The Bulletin goes beyond just presenting numbers. It offers insightful reports from field activities, as exemplified by this week's edition featuring reports on AMR activities in Balochistan, building stronger vaccination programs, and investigating and respond to recent dengue case in Rawalpindi.

The Public Health Bulletin goes beyond informing, fostering knowledge sharing through a dedicated Knowledge Hub section (featuring " Preventing Viral Hepatitis: It's Time for Action" this week). It also tackles real-world issues, like The AMR in Pakistan: A silent Epudemic through featured commentary.

By equipping everyone with knowledge, the Public Health Bulletin empowers Pakistanis to build a healthier nation.

Sincerely,
The Chief Editor

Overview

- *During week 29, 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).*

- *Nineteen cases of AFP reported from KP, five from Sindh, three from Punjab, two from AJK and one from GB. All are suspected cases and need field verification.*

- *Ten suspected cases of HIV/ AIDS reported from Sindh, five from Balochistan and three from Punjab. Field investigation required to verify the cases.*

- *Five suspected cases of CCHF reported from Punjab. Field investigation required to verify the cases.*

- *Ten suspected cases of Brucellosis reported from KP. Field investigation required to verify the cases.*

- *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 83%*
- *Gilgit Baltistan and AJK are the top reporting regions with a compliance rate of 100% and 99%, followed by Sindh 94% and ICT 80%*
- *The lowest compliance rate was observed in KPK.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2350	1704	73
Azad Jammu Kashmir	382	378	99
Islamabad Capital Territory	35	28	80
Balochistan	1290	980	76
Gilgit Baltistan	374	373	100
Sindh	2085	1955	94
National	6516	5418	83

Pakistan

Table 1: Province/Area wise distribution of most frequently reported suspected cases during week 29, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	2251	7,268	1950	434	27,794	71,362	46,647	157,706
Malaria	52	4,600	1	1	5,115	2,162	46,856	58,787
ILI	943	5,466	359	640	2,937	2	19,508	29,855
TB	51	40	96	0	355	5,534	9,138	15,214
ALRI < 5 years	688	1315	553	0	1,245	411	6,525	10,737
B.Diarrhea	91	1864	190	6	1,445	694	3,260	7,550
Dog Bite	89	116	0	0	550	4,231	1,742	6,728
VH (B, C & D)	4	113	2	3	116	0	3,937	4,175
Typhoid	34	731	118	2	623	1,191	967	3,666
AWD (S. Cholera)	43	261	106	0	199	1,450	30	2,089
SARI	170	467	177	1	1,056	0	150	2,021
AVH (A&E)	18	57	0	0	257	0	569	901
Measles	10	39	6	1	190	401	68	715
Dengue	0	0	0	0	20	428	11	459
CL	1	125	0	0	246	1	2	375
Mumps	8	38	6	0	47	2	134	235
Chickenpox/ Varicella	7	29	22	0	70	20	35	183
Pertussis	0	92	2	0	36	0	0	130
Gonorrhea	0	111	0	0	0	0	14	125
Meningitis	2	2	0	0	2	15	12	33
AFP	2	0	1	0	19	3	5	30
NT	0	0	0	0	19	0	1	20
HIV/AIDS	0	5	0	0	0	3	10	18
Chikungunya	0	0	0	0	0	0	14	14
Syphilis	0	0	0	0	0	0	12	12
Diphtheria (Probable)	0	8	0	0	3	1	0	12
Brucellosis	0	0	0	0	10	0	0	10
Rubella (CRS)	0	5	0	0	0	0	0	5
CCHF	0	0	0	0	0	5	0	5
VL	0	1	0	0	0	0	0	1

Figure 1: Most frequently reported suspected cases during week 29, Pakistan.
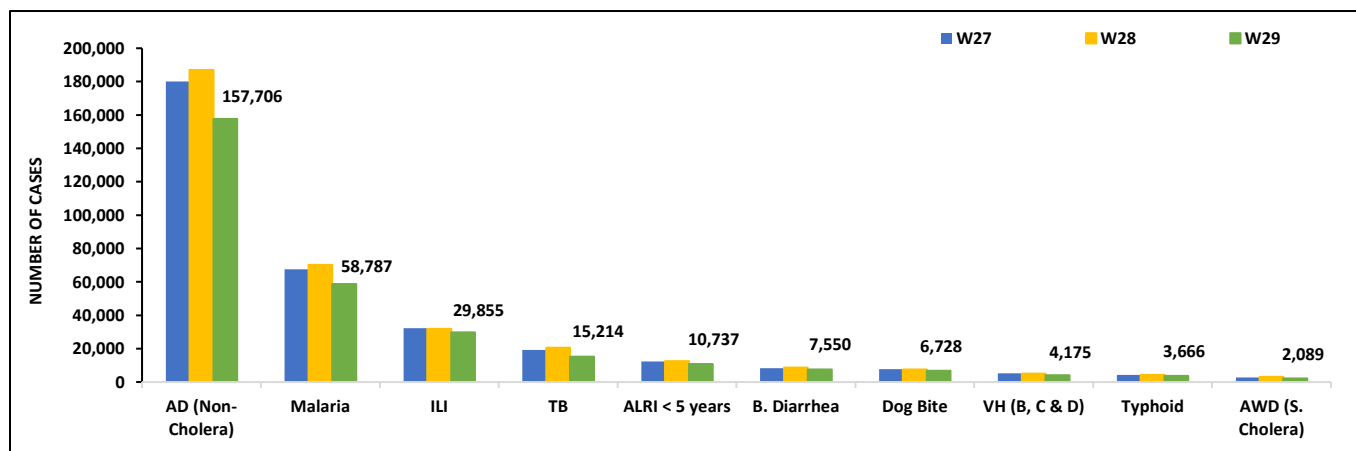
- Malaria cases were maximum followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, VH (B, C, D), B. Diarrhea, dog bite, Typhoid and AVH (A & E).
- Malaria cases are mostly from Larkana, Khairpur and Kamber whereas AD (Non-Cholera) cases are from Badin, Mirpurkhas and Dadu.
- Ten suspected cases of HIV/ AIDS and Five cases of AFP reported from Sindh. All are suspected cases and need field verification.
- There is a decreasing trend observed for Malaria, AD (Non-Cholera), TB, ALRI<5 Years, VH (B, C, D) and B. Diarrhea cases while an increasing trend observed for ILI and AVH (A & E) cases this week.

Table 2: District wise distribution of most frequently reported suspected cases during week 29, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	3,508	3,614	233	700	416	320	218	113	80	46
Dadu	2,907	2,731	168	415	561	33	511	104	89	19
Ghotki	1,070	1,377	0	201	250	297	88	138	0	3
Hyderabad	380	2,052	1,145	25	72	35	18	0	9	0
Jacobabad	496	668	376	159	408	152	106	110	52	2
Jamshoro	1,123	2,122	71	296	130	74	89	21	52	4
Kamber	3,624	2,112	0	702	203	110	187	215	17	0
Karachi Central	3	589	333	4	0	4	0	0	26	8
Karachi East	28	276	80	3	6	1	4	1	1	0
Karachi Keamari	2	199	76	0	22	0	0	0	1	2
Karachi Korangi	23	233	102	2	0	0	3	0	0	0
Karachi Malir	233	1,533	2,154	73	142	30	56	28	30	1
Karachi South	29	67	5	0	0	0	0	0	0	0
Karachi West	128	846	1,387	138	227	112	52	122	33	11
Kashmore	1,204	471	380	169	130	27	66	74	6	0
Khairpur	4,080	2,536	4,161	888	667	140	373	129	189	5
Larkana	5,413	2,059	0	690	215	84	335	22	39	0
Matiari	1,220	1,944	2	446	139	219	62	21	7	5
Mirpurkhas	2,058	2,888	1,988	500	291	186	110	26	22	6
Naushero Feroze	1,617	1,214	930	402	215	14	92	131	117	0
Sanghar	2,948	1,498	11	934	305	680	29	90	14	2
Shaheed Benazirabad	1,480	1,887	1	348	182	57	76	117	79	0
Shikarpur	1,702	1,418	0	179	107	696	115	37	5	0
Sujawal	1,544	2,249	0	64	82	72	113	46	1	70
Sukkur	1,528	1,352	1,747	330	184	85	137	32	12	0
Tando Allahyar	1,140	1,442	473	382	145	240	156	45	11	3
Tando Muhammad Khan	1,301	1,403	0	353	99	25	63	0	1	0
Tharparkar	2,323	2,094	1,503	381	476	118	116	0	30	51
Thatta	1,976	1,910	2,182	16	424	89	14	120	16	327
Umerkot	1,768	1,863	0	338	427	37	71	0	28	4
Total	**46,856**	**46,647**	**19,508**	**9,138**	**6,525**	**3,937**	**3,260**	**1,742**	**967**	**569**

Figure 2: Most frequently reported suspected cases during week 29 Sindh
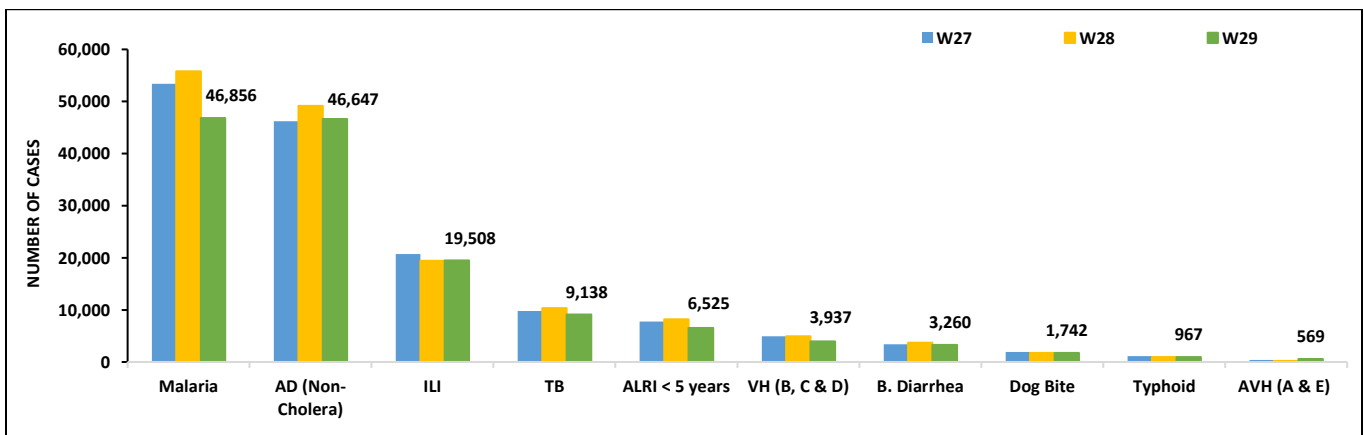
Balochistan

- 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 Pishin while ILI cases are mostly reported from Quetta, Kech (Turbat) and Pishin.
- AD (Non-Cholera), ILI, Malaria, B. Diarrhea, ALRI <5 years, Typhoid, SARI, CL and dog bite cases showed a decreasing trend this week.
- Five cases of HIV/AIDs reported from Balochistan. They need field verification.

Table 3: District wise distribution of most frequently reported suspected cases during week 29, Balochistan

Districts	AD Non-Cholera)	ILI	Malaria	B. Diarrhea	ALRI < 5 years	Typhoid	SARI	AWD (S.Cholera)	CL	Dog Bite
Awaran	10	39	57	18	0	2	2	16	0	1
Barkhan	100	49	95	10	34	27	0	0	0	2
Chagai	145	163	43	50	0	14	0	8	0	8
Chaman	120	136	14	80	28	33	30	60	0	1
Dera Bugti	100	1	177	45	12	9	1	0	0	0
Duki	117	51	40	38	20	4	17	0	0	1
Harnai	90	28	61	67	136	0	0	10	0	3
Hub	254	43	172	83	13	4	0	1	1	11
Jaffarabad	412	62	621	56	28	30	17	1	0	6
Jhal Magsi	240	220	355	5	15	5	3	0	0	20
Kalat	61	2	55	16	5	37	0	0	0	0
Kech (Turbat)	425	794	535	81	48	NR	6	NR	NR	NR
Kharan	131	242	40	61	0	5	0	2	0	0
Khuzdar	352	330	264	111	20	49	21	14	3	4
Killa Abdullah	263	72	31	62	16	68	2	0	24	5
Killa Saifullah	231	6	168	83	98	17	19	8	3	3
Kohlu	207	247	132	97	14	47	47	1	NR	1
Lasbella	309	80	257	20	66	7	4	0	NR	8
Loralai	273	319	91	66	40	27	104	4	0	7
Mastung	222	112	123	111	38	21	11	12	2	4
Musakhel	14	6	78	5	1	5	0	5	0	0
Naseerabad	229	20	153	39	45	46	1	0	2	8
Panjgur	118	50	170	60	40	6	12	38	30	2
Pishin	537	404	50	229	65	54	6	57	13	2
Quetta	647	935	26	134	96	68	34	4	33	0
Sherani	30	51	14	8	12	11	28	7	11	0
Sibi	122	223	20	11	4	20	24	3	0	2
Sohbat pur	266	3	209	50	94	20	12	2	1	7
Surab	62	189	107	0	0	56	0	0	0	0
Usta Muhammad	787	86	301	48	76	7	4	0	1	4
Washuk	108	161	54	25	2	4	0	1	0	3
Zhob	148	192	60	48	232	19	57	1	0	0
Ziarat	138	150	27	47	17	9	5	6	1	3
Total	**7,268**	**5,466**	**4,600**	**1,864**	**1,315**	**731**	**467**	**261**	**125**	**116**

**Figure 3: Most frequently reported suspected cases during week 29, Balochistan**
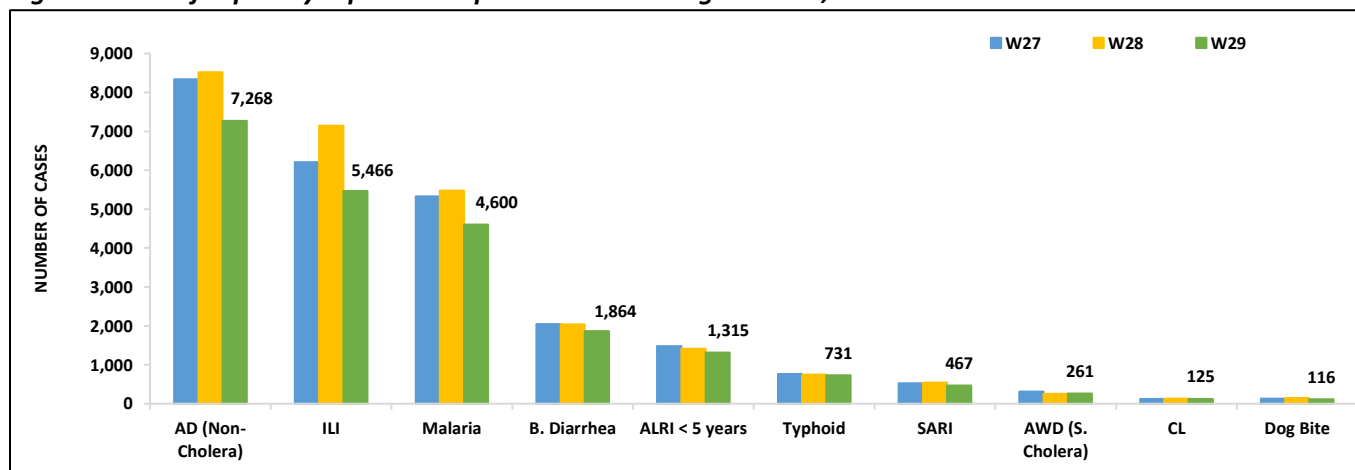
- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, B. Diarrhea, ALRI<5 Years, SARI, Typhoid, dog bite, TB and AVH (A & E) cases.
- AD (Non-Cholera), Malaria, ILI, B. Diarrhea, SARI, Typhoid and TB cases showed a decreasing trend while ALRI<5 Years, dog bite and AVH (A & E) cases showed an increasing trend this week.
- Nineteen cases of AFP 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 29, KP

Districts	AD (Non-Cholera)	Malaria	ILI	B.Diarrhea	ALRI <5 Years	SARI	Typhoid	Dog Bite	TB	AVH (A&E)
Abbottabad	949	21	38	9	8	2	23	1	17	0
Bajaur	910	165	27	181	215	16	6	36	11	53
Bannu	733	1,229	3	16	12	5	59	2	14	0
Battagram	177	173	310	0	0	0	0	0	0	0
Buner	385	209	0	1	0	0	5	16	0	0
Charsadda	1,260	174	194	110	119	0	73	4	2	40
Chitral Lower	598	21	46	33	15	19	14	8	9	0
Chitral Upper	136	4	10	3	4	0	9	1	0	0
D.I. Khan	938	204	0	13	6	0	1	4	38	0
Dir Lower	2,037	171	1	76	100	0	44	22	12	10
Dir Upper	1,070	15	126	11	23	0	8	1	15	5
Hangu	102	62	0	15	9	0	0	0	8	0
Haripur	985	16	110	18	13	6	20	6	26	42
Karak	341	134	6	0	21	0	3	33	5	0
Khyber	269	229	21	61	10	17	39	29	10	4
Kohat	304	127	11	0	15	2	12	15	16	0
Kohistan Lower	138	6	2	7	0	0	4	0	0	0
Kohistan Upper	374	7	5	27	38	8	22	2	0	0
Kolai Palas	63	4	0	5	3	13	1	0	0	0
L & C Kurram	16	3	0	3	0	2	0	5	0	0
Lakki Marwat	566	157	2	13	3	0	5	20	7	0
Malakand	1,150	31	11	246	29	7	19	0	2	31
Mansehra	1,088	0	311	7	36	39	36	0	7	0
Mardan	767	25	0	9	236	0	0	39	1	0
Mohmand	133	185	71	38	5	70	6	6	1	0
North Waziristan	26	22	NR	NR	25	50	NR	NR	NR	NR
Nowshera	1,776	92	34	32	1	6	2	14	2	3
Orakzai	22	22	7	0	0	0	0	1	0	0
Peshawar	3,061	44	466	114	44	49	62	13	22	32
SD Peshawar	6	0	0	0	0	0	0	0	0	0
SD Tank	5	25	2	0	0	0	0	0	0	0
Shangla	1,609	956	0	56	34	0	38	76	63	6
SWA	158	172	137	29	71	70	9	7	0	0
Swabi	1,414	51	506	22	80	85	18	80	33	9
Swat	3,723	56	166	240	28	43	32	70	18	20
Tank	312	179	34	1	21	0	38	28	9	0
Tor Ghar	149	124	0	34	0	7	2	1	1	2
Upper Kurram	44	0	280	15	21	540	13	10	6	0
Total	27,794	5,115	2,937	1,445	1,245	1,056	623	550	355	257

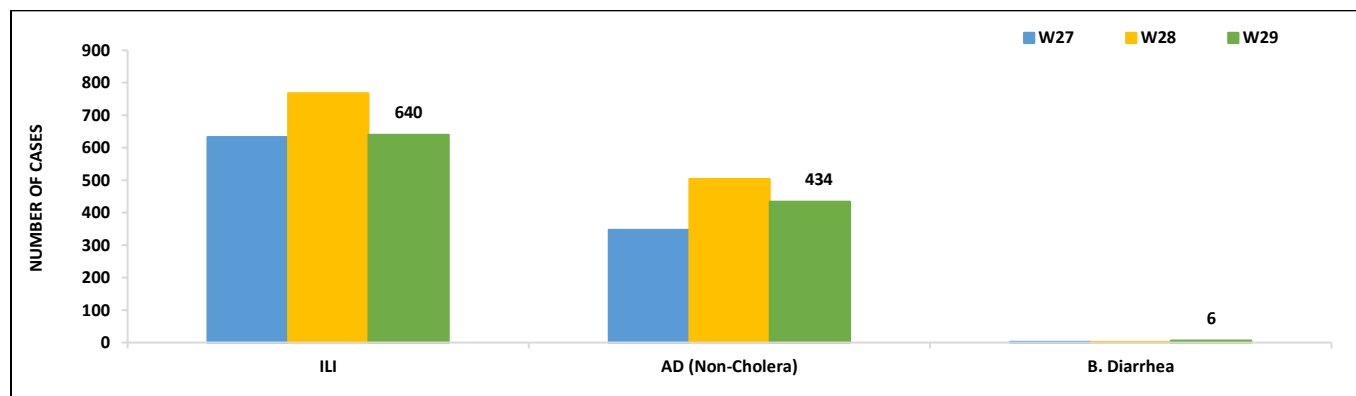*Figure 4: Most frequently reported suspected cases during week 29, KP*
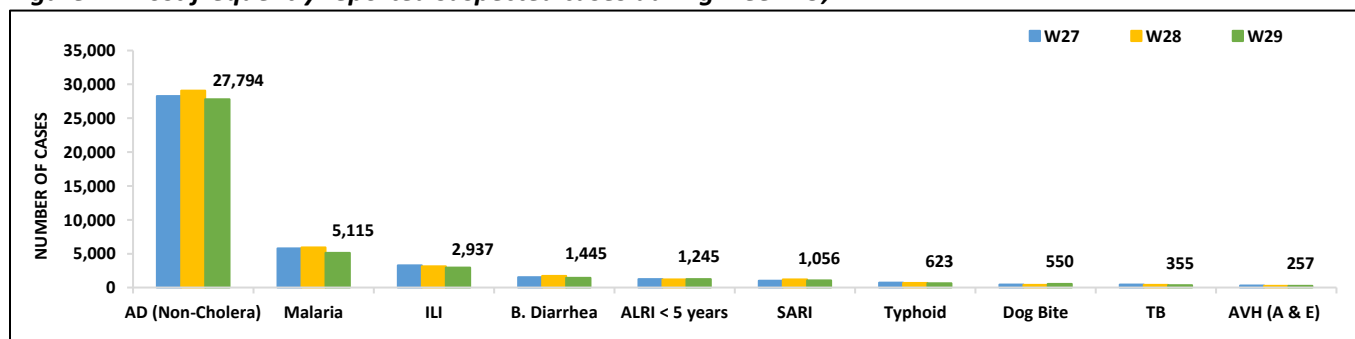
ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and B. Diarrhea. ILI and AD (Non-Cholera) cases showed a decreasing trend while B. Diarrhea cases showed an increasing trend this week.

AJK: AD (Non-Cholera) cases were maximum followed by ILI, ALRI <5 years, SARI, B. Diarrhea, dog bite, Malaria, TB, AWD (S. Cholera) and Typhoid cases. A decreasing trend observed for AD (Non-Cholera), ILI, ALRI <5 years, SARI, B. Diarrhea, dog bite and Typhoid cases while an increasing trend observed for TB and AWD (S. Cholera) cases this week. Two cases of AFP reported from AJK. All are suspected cases and need field verification.

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

Figure 5: Most frequently reported suspected cases during week 29, ICT

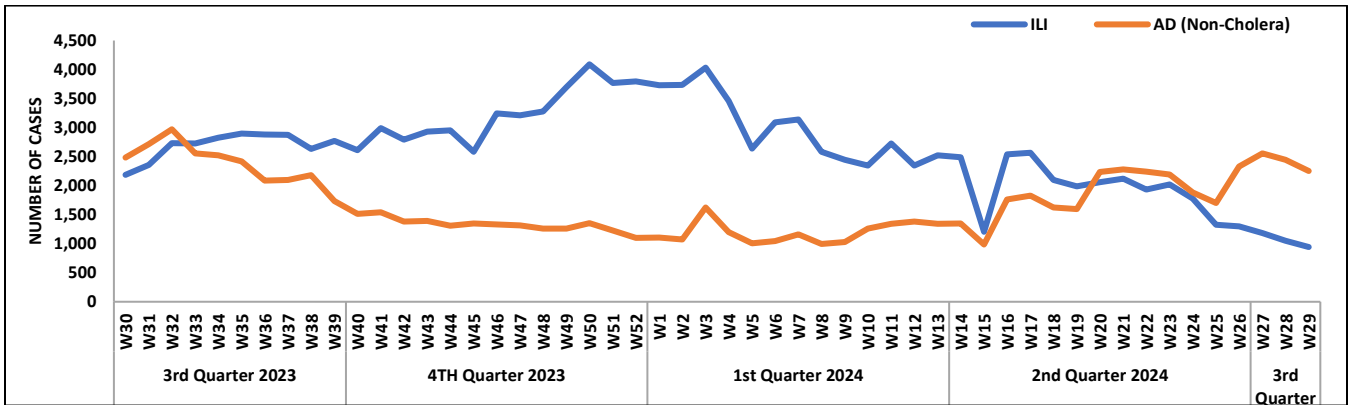**Figure 6: Week wise reported suspected cases of ILI, ICT**
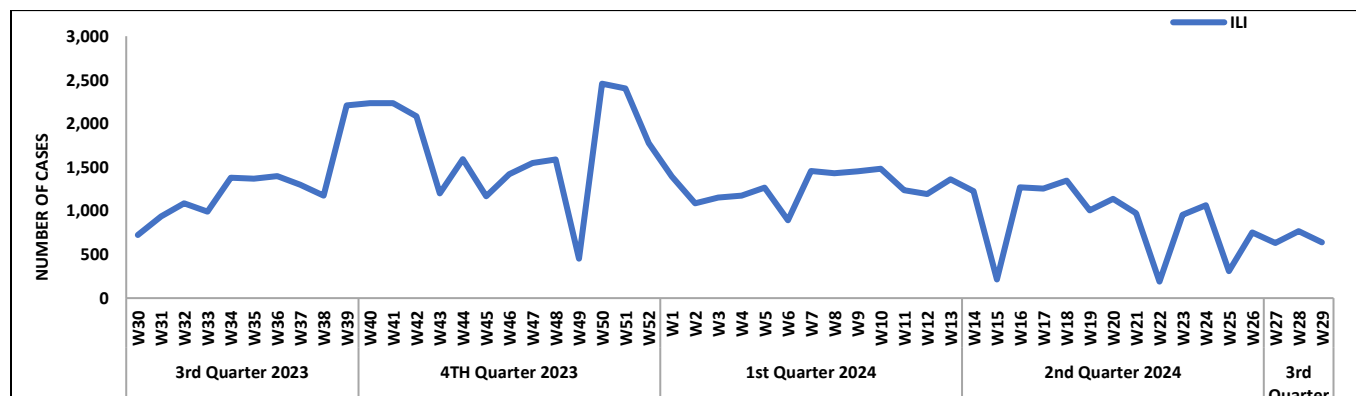
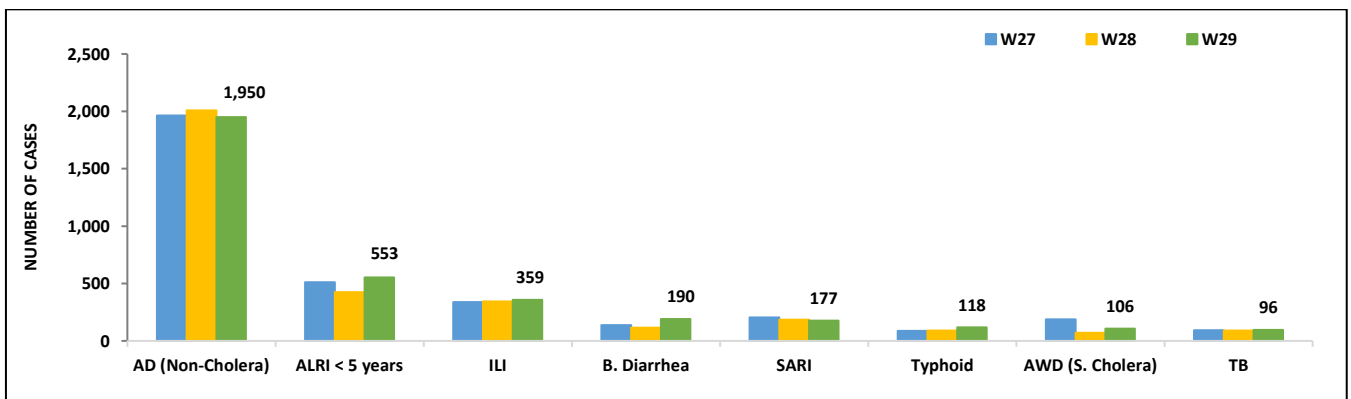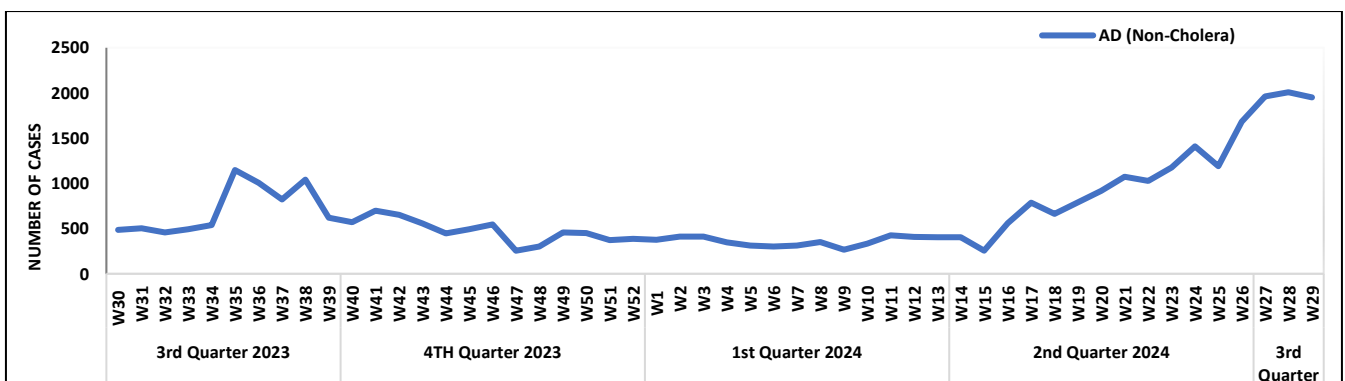**Figure 7: Most frequently reported suspected cases during week 29, AJK**
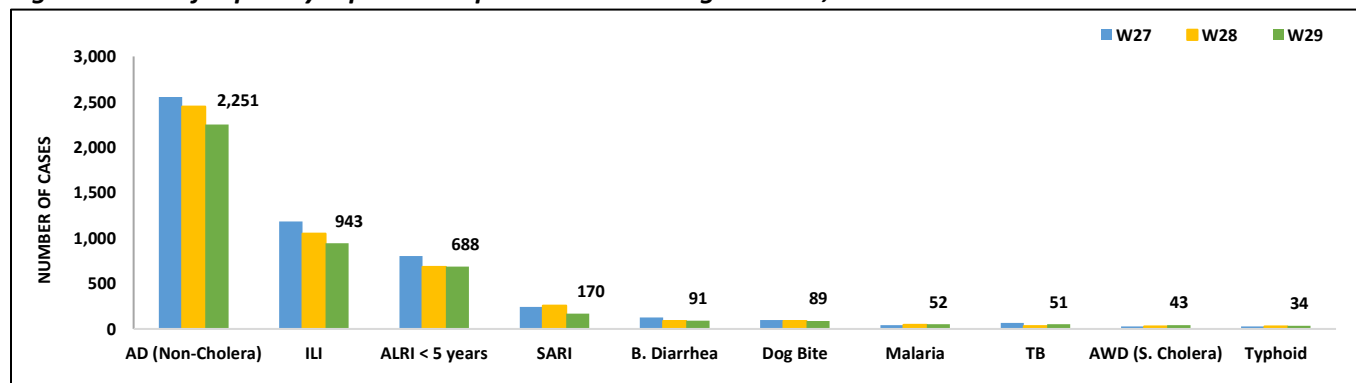
Figure 8: Week wise reported suspected cases of ILI and AD (Non-Cholera) AJK

*Figure 9: Most frequent cases reported during Week 29, 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), Typhoid, B. Diarrhea, Dengue, ALRI<5 Years and Measles cases.
- AD (Non-Cholera), TB, dog bite, Malaria, AWD (S. Cholera), Typhoid, B. Diarrhea, Dengue, ALRI<5 Years and Measles cases showed a decreasing trend this week.
- Three cases of AFP, Three suspected cases of HIV/ AIDS and Five suspected cases of CCHF reported from Punjab. All are suspected cases and need field verification.

Figure 11: Most frequently reported suspected cases during week 29, Punjab.
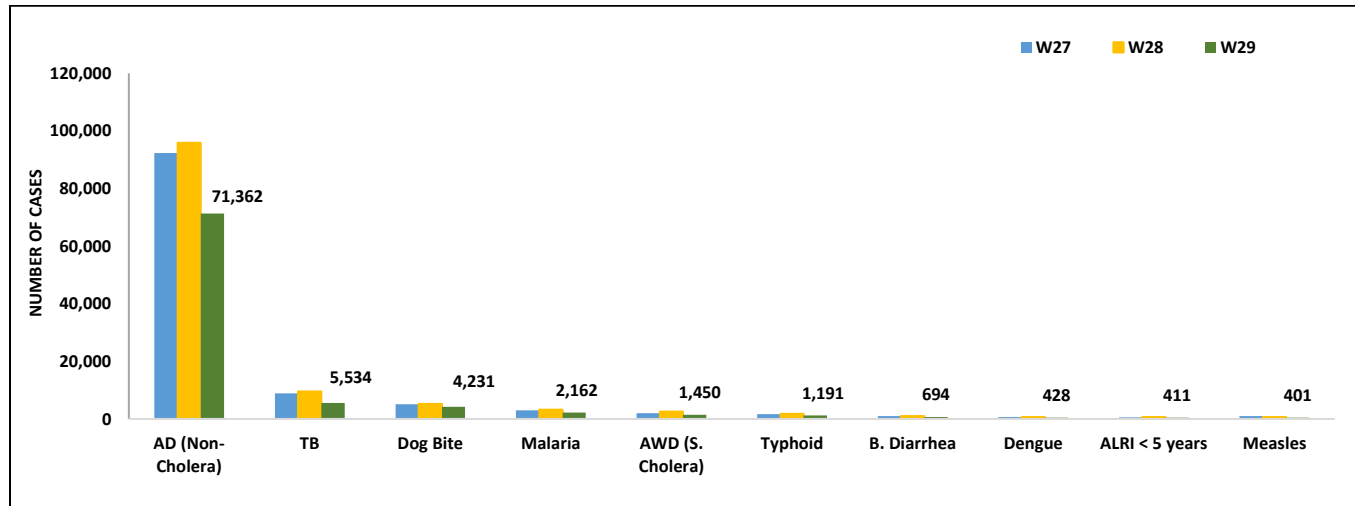
Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 29

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)	10	0	-	-	-	-	0	0	-	-
AD (Non-Cholera)	63	0	-	-	-	-	-	-	-	-
Malaria	1,794	75	-	-	-	-	-	-	-	-
CCHF	-	-	7	0	3	0	5	1	-	-
Dengue	635	14	0	0	-	-	5	0	-	-
VH (B)	2,497	54	182	151	-	-	-	-	31	5
VH (C)	2,745	181	162	56	-	-	-	-	-	-
VH (A&E)	37	0	-	-	2	0	-	-	-	-
Covid-19	-	-	4	0	1	0	2	0	35	0
HIV	176	0	-	-	-	-	-	-	-	-
Influenza A	5	0	0	0	12	0	52	0	0	0
TB	32	0	-	-	-	-	-	-	-	-
Syphilis	165	0	-	-	-	-	-	-	-	-
Typhoid	467	8	-	-	-	-	-	-	-	-
Diptheria (Probabale)	-	-	-	-	-	-	23	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 29, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	105	95%
	Bannu	239	108	45%
	Battagram	63	19	30%
	Buner	34	27	79%
	Bajaur	44	39	89%
	Charsadda	59	54	92%
	Chitral Upper	34	26	76%
	Chitral Lower	35	34	97%
	D.I. Khan	114	107	94%
	Dir Lower	74	73	99%
	Dir Upper	53	45	85%
	Hangu	22	17	77%
	Haripur	72	68	94%
	Karak	35	35	100%
	Khyber	52	16	31%
	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	24	57%
	Upper Kurram	41	31	76%
	Malakand	42	32	76%
	Mansehra	136	109	80%
	Mardan	80	75	94%
	Nowshera	55	54	98%
	North Waziristan	12	3	25%
	Peshawar	151	107	71%
	Shangla	39	34	87%
	Swabi	63	60	95%
	Swat	77	76	99%
	South Waziristan	134	52	39%
	Tank	34	32	94%
	Torghar	14	14	100%
	Mohmand	86	41	48%
	SD Peshawar	5	0	0%
	SD Tank	58	4	7%
	Orakzai	68	11	16%
	Mirpur	37	37	100%
	Bhimber	20	20	100%
	Kotli	60	59	98%
	Muzaffarabad	45	45	100%
	Poonch	46	46	100%
	Haveli	39	39	100%

Azad Jammu Kashmir	Bagh	40	40	100%
	Neelum	39	39	100%
	Jhelum Vellay	29	27	93%
	Sudhnooti	27	26	96%
Islamabad Capital Territory	ICT	21	20	95%
	CDA	15	8	53%
Balochistan	Gwadar	25	0	0%
	Kech	44	40	91%
	Khuzdar	74	68	92%
	Killa Abdullah	26	20	77%
	Lasbella	55	55	100%
	Pishin	69	49	71%
	Quetta	43	32	74%
	Sibi	36	20	56%
	Zhob	39	29	74%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	15	100%
	Kohlu	75	48	64%
	Chagi	35	24	69%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	34	97%
	Jhal Magsi	26	26	100%
	Sohbat pur	25	25	100%
	Surab	32	32	100%
	Mastung	45	45	100%
	Loralai	33	33	100%
	Killa Saifullah	28	27	96%
	Ziarat	29	16	55%
	Duki	31	27	87%
	Nushki	32	0	0%
	Dera Bugti	45	34	76%
	Washuk	46	12	26%
	Panjgur	38	19	50%
	Awaran	23	7	30%
	Chaman	25	22	88%
	Barkhan	20	20	100%
	Hub	33	29	88%
	Musakhel	41	3	7%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	20	20	100%
	Ghizer	40	40	100%
	Gilgit	40	39	98%
	Diamer	62	62	100%
	Astore	54	54	100%

	Shigar	27	27	100%
	Skardu	52	52	100%
	Ganche	29	29	100%
	Kharmang	18	18	100%
	Hyderabad	73	68	93%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	107	85	79%
	Tharparkar	282	226	80%
	Shikarpur	59	59	100%
	Thatta	52	52	100%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	14	61%
	Karachi-West	20	20	100%
	Karachi-Malir	37	37	100%
	Karachi-Kemari	18	12	67%
	Karachi-Central	11	7	64%
	Karachi-Korangi	18	18	100%
	Karachi-South	4	4	100%
	Sujawal	54	54	100%
	Mirpur Khas	106	105	99%
	Badin	124	121	98%
Sindh	Sukkur	63	63	100%
	Dadu	88	83	94%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	169	156	92%
	Kashmore	59	57	97%
	Matiari	42	40	95%
	Jamshoro	70	69	99%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	40	40	100%
	Shaheed Benazirabad	122	122	100%

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The tour of the public health reference laboratory at Fatima Jinnah Hospital Quetta is equally significant. Such laboratories play a pivotal role in AMR surveillance and monitoring. Their capacity to accurately diagnose infections and detect antimicrobial resistance patterns is essential for guiding treatment decisions and informing public health interventions.

While this meeting represents a positive development, it is essential to translate these discussions into concrete actions. The implementation of well-defined strategies, coupled with adequate resource allocation, is imperative to achieve tangible results. Moreover, sustained engagement with communities and healthcare providers is crucial to raise awareness about AMR and promote responsible antibiotic use.

Pakistan faces a formidable challenge in combating AMR, but with concerted efforts, we can mitigate its impact. The meeting in Quetta is a step in the right direction. It is now incumbent upon all stakeholders to build upon this momentum and work collaboratively to protect public health from the devastating consequences of AMR.

A Step Forward in the Battle Against the Antimicrobial Resistance, Balochistan, Pakistan

The recent collaboration between the National Institute of Health's (NIH) AMR team, the World Health Organization (WHO), and key stakeholders in Quetta signifies a crucial step forward in Pakistan's efforts to combat the growing threat of antimicrobial resistance (AMR). This silent epidemic requires a comprehensive approach involving all levels of society.

Balochistan, with its unique challenges, requires a tailored approach to address AMR. The province's geographical isolation, limited healthcare infrastructure, and socio-economic factors contribute to the complex landscape of AMR. By engaging with local stakeholders, the NIH has demonstrated a commitment to understanding these challenges firsthand and developing strategies to overcome them.

The focus on presenting updates on AMR programs and their implementation across the country is commendable. A unified approach is vital in tackling AMR, and sharing best practices and lessons learned among provinces can significantly strengthen the overall response. Moreover, identifying and addressing AMR-specific challenges in Balochistan is a crucial step towards developing effective solutions for the region.

Second Health Cluster Technical Working Group on Flood, Lahore Punjab

The second convening of the Health Cluster Technical Working Group on Flood, held at CR-2, Directorate General of Health Services, Lahore marked a critical juncture in Pakistan's proactive response to the impending flood crisis. Under the leadership of Dr. Muhammad Ilyas Gondal, DG Health Punjab, and the co-leadership of Dr. Yadullah Ali, DHS CD&EPC, a diverse assembly of stakeholders, including government entities, United Nations

agencies, and development partners, convened to formulate a cohesive strategy for mitigating the anticipated disaster.

The primary objective of the gathering was to conduct a comprehensive assessment of preparedness levels for confronting the looming flood calamity. In-depth presentations by the DHS CD&EPC, PDMA, and the chief executive officers of DG Khan and Rajanpur provided critical insights into the current situation and potential challenges.

A pivotal outcome of the meeting was the unequivocal commitment demonstrated by development partners to extend both technical and logistical resources as required. This collaborative spirit underscores the paramount importance of a unified approach to combating the adverse effects of flooding. Other Key outcomes of the meeting included a comprehensive assessment of flood preparedness, the establishment of strong collaborative ties between government agencies and development partners, and a firm commitment to providing essential support for flood mitigation efforts.

By fostering collaboration and knowledge sharing, the Health Cluster Technical Working Group has positioned itself as a pivotal force in safeguarding vulnerable communities from the devastating consequences of the impending flood. The meeting's outcomes serve as a foundation for developing and implementing robust strategies to mitigate the impact of the disaster and ensure the well-being of the affected population.

Notes from field activities

Dengue Outbreak Investigation: Case response and Vector Control in UC-02, Allahabad, Rawalpindi Cantonment, July 2024

Muhammad Zeeshan
Town Entomologist Cantt

Introduction

A 13-year-old male child was confirmed as a dengue case through a private laboratory testing from Union Council (UC) - 02, Allahabad, Rawalpindi Cantonment. In response to this notification, a rapid response team was promptly dispatched to UC-02 to initiate case response activities and assess the situation. The primary objectives of the on-site visit were to identify additional dengue cases and potential mosquito breeding sites within the patient's vicinity.

Methods

A comprehensive inspection of the area was carried out with a dual focus: active case detection and identification of potential mosquito breeding sites. To identify suspected dengue cases, standardized case definitions were employed. Households and outdoor environments were systematically examined for the presence of stagnant water bodies, which are known breeding grounds for mosquitoes.

Results

Field visit findings indicated a complex epidemiological scenario. Two individuals residing in the same household presented with symptoms consistent with dengue, necessitating laboratory confirmation. A comprehensive search for additional suspected cases within the vicinity yielded negative results.

Concurrently, environmental assessment revealed substantial mosquito breeding risks. Four residential properties were identified as active breeding sites, with an additional two located in outdoor areas. A nearby graveyard posed a significant potential for mosquito propagation and required immediate remediation. Moreover, the accumulation of waste near the index case's residence was determined to be a contributing factor to the overall mosquito population.

Discussion

The identification of multiple mosquito breeding sites in close proximity to the confirmed dengue case underscores the heightened risk of disease transmission within the community. Swift and decisive action is imperative to mitigate this threat. Concurrent with these efforts, an active case response is in progress to contain the spread of dengue. To effectively address the identified breeding grounds, immediate clearance of the graveyard is essential. Additionally, a comprehensive solid waste management strategy must be implemented to prevent the further accumulation of mosquito breeding habitats.

Commentary

Antimicrobial Resistance in Pakistan: A Silent Epidemic

Dr. Waqar Ahmed
Safetynet, NIH,
Islamabad

Antimicrobial resistance (AMR) is a complex and escalating global health crisis that poses a grave threat to human, animal, and environmental health. The intricate interplay of factors contributing to the emergence and spread of AMR has rendered it a formidable challenge to address. The alarming rate at which AMR is developing worldwide underscores the urgency of the situation. If left unchecked, the potential for ten million annual deaths from untreatable infections by 2050 is a stark reminder of the catastrophic consequences we face.

Antimicrobial resistance (AMR) occurs when bacteria, viruses, fungi, and parasites develop the ability to resist antimicrobial treatments, making infections harder to treat and increasing the risk of severe illness and death

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The intricate connections between human, animal, and environmental health, as encapsulated by the One Health approach, are central to understanding AMR. The indiscriminate use of antibiotics in agriculture, livestock, and human medicine has created a perfect storm for the proliferation of antibiotic-resistant bacteria. These pathogens, capable of transmitting between humans, animals, and the environment, have compromised our ability to effectively treat infections.

The dissemination of AMR is facilitated by a complex web of factors, including the misuse of antibiotics, contaminated environments, and inadequate infection control practices. The transmission of resistant bacteria through direct contact, food, water, and the environment highlight the interconnectedness of this crisis. While the role of livestock in spreading AMR is still under investigation, the potential for contamination through food products and the environment cannot be overlooked.

It is imperative to recognize that AMR is not merely a medical issue but a societal and environmental challenge. The indiscriminate use of antibiotics and the lack of proper disposal practices have led to the contamination of soil, water, and air with antibiotic-resistant bacteria and genes. This environmental contamination further exacerbates the problem by creating a reservoir for these resistant pathogens.

Antimicrobial Resistance: A Looming Threat in Pakistan

Pakistan is at the forefront of a burgeoning antimicrobial resistance (AMR) crisis. The alarming prevalence of antibiotic-resistant pathogens, as evidenced by studies demonstrating high rates of methicillin-resistant Staphylococcus aureus (MRSA), a formidable hospital-acquired infection, has been reported to be as high as 60% in some Pakistani hospitals (Khan et al., 2018) and the emergence of multidrug-resistant tuberculosis (MDR-TB), underscores the gravity of the situation (WHO, 2020). The indiscriminate use of antibiotics, exacerbated by over-the-counter availability and poor prescribing practices, has fueled the development of AMR. The Drug Regulatory Authority of Pakistan (DRAP) found that 70% of pharmacies dispensed antibiotics without a valid prescription (DRAP, 2019). This, coupled with suboptimal infection control measures, has created a perfect storm for the proliferation of drug-resistant infections.

AMR significantly impacts global health and economies. Resistant infections lead to higher mortality rates, increased healthcare costs, and lost productivity due to prolonged illness and outbreaks.

Beyond the immediate public health implications, AMR imposes a significant economic burden. Prolonged hospitalizations, increased healthcare costs, and decreased productivity are direct consequences of this crisis. The World Bank's estimation* of potential economic losses highlights the far-reaching impact of AMR on Pakistan's economy. (Dadgostar P, 2019)

The environment also plays a crucial role in the AMR crisis. Hospitals, as significant contributors to antibiotic pollution, discharge contaminated wastewater containing antibiotic-resistant bacteria into the environment. Antibiotic-resistant bacteria were detected in hospital wastewater in Karachi by

Ahmed et al., in 2017. This underscores the need for robust wastewater treatment infrastructure to mitigate the spread of AMR.

The livestock sector is another critical component of the AMR challenge. The widespread use of antibiotics in animal husbandry has led to the emergence of antibiotic-resistant bacteria, which can subsequently enter the human food chain. High levels of antibiotic resistance were found in E. coli isolated from poultry meat in Lahore by a study published in the Journal of Food Protection (2014) This necessitates stringent regulations on antibiotic use in livestock and effective surveillance systems to monitor AMR in this sector.

In conclusion, Pakistan's battle against AMR is complex and multifaceted. Addressing this crisis requires a comprehensive approach that encompasses human health, animal health, and environmental stewardship. By implementing robust surveillance systems, promoting rational antibiotic use, strengthening infection control practices, and investing in research and development, Pakistan can make significant strides in combating AMR and protecting the health of its population.

Strengthening the Fight Against Antimicrobial Resistance in Pakistan

Fortifying infection prevention and control measures within healthcare facilities is paramount in the battle against antimicrobial resistance (AMR). The strict adherence to evidence-based practices, such as meticulous hand hygiene, is indispensable. While comprehensive guidelines for infection prevention and control exist, their consistent implementation across healthcare facilities remains a significant challenge, as highlighted by the World Health Organization in 2019.

Simultaneously, robust investments in research and development to identify novel antibiotics are imperative. The diminishing pipeline of new antimicrobial agents underscores the critical need for innovative solutions. The Pakistani government can catalyze progress in this domain by

offering financial incentives and fostering collaborations with global research institutions.

Concurrently, public awareness campaigns are essential to educate the populace about the judicious use of antibiotics, the perils of self-medication, and the importance of completing prescribed treatment regimens. The active engagement of diverse stakeholders is crucial for the development and execution of effective public awareness initiatives.

Pakistan confronts a formidable challenge in combating AMR. Nevertheless, through concerted efforts by government agencies, healthcare providers, the pharmaceutical industry, and the public, this crisis can be mitigated. The implementation of comprehensive strategies, the cultivation of a robust research ecosystem, and the education of the public are essential steps toward a future where antibiotics remain efficacious.

In conclusion, antimicrobial resistance poses a severe and far-reaching threat to public health in Pakistan. A collective commitment to antibiotic stewardship, infection prevention, research, and public education is imperative to effectively address this crisis and safeguard the efficacy of antibiotics for future generations.

Knowledge Hub

Preventing Viral Hepatitis: A Silent Threat and the Power of Prevention

Viral hepatitis, an inflammation of the liver caused by a virus, silently affects millions worldwide. While several types exist, hepatitis A, B, C and E pose the most significant threats. Although some forms lack a cure, fortunately, effective preventative measures exist to safeguard yourself and your community.

Understanding the Different Faces of Hepatitis

- **Hepatitis A & E:** This highly contagious form spreads through contaminated food or water, or close contact with an infected person. Poor sanitation practices often contribute to its spread.
- **Hepatitis B:** Transmitted through contact with infected blood, semen, or other bodily fluids, this virus primarily affects individuals through unprotected sexual contact, sharing needles for drug use, or exposure to infected blood products.
- **Hepatitis C:** This type primarily spreads through contact with infected blood, often resulting from sharing needles or other drug-using equipment. Additionally, mother-to-child transmission during childbirth can occur.

These viruses can lead to a spectrum of health problems, ranging from mild illness to chronic liver disease, cirrhosis, and even liver cancer. Early diagnosis and treatment are crucial to manage the infection and prevent complications.

Building a Shield: Effective Prevention Strategies

Fortunately, several measures can significantly reduce your risk of contracting viral hepatitis:

- **Prioritizing Hygiene:** Washing hands thoroughly with soap and water, especially after using the bathroom, changing diapers, and before preparing food, remains a simple yet effective defense.
- **Food and Water Safety:** Practice safe food handling and preparation techniques. Opting for bottled water when traveling to areas with poor sanitation is another key preventive step.
- **Vaccination:** Vaccines offer a powerful shield against hepatitis A and B. Vaccination is highly effective in preventing infection and is recommended for children and adults depending on individual risk factors. While no vaccine exists for hepatitis C, research in this area continues to be a priority.
- **Safe Sexual Practices:** Consistent and correct condom use, along with limiting the number of sexual partners, significantly reduces the risk of contracting hepatitis B and C through sexual contact.

- **Avoiding Sharing Personal Items:** Sharing needles, syringes, or other drug-using equipment carries a high risk of transmitting hepatitis C and other blood-borne infections. Similarly, avoid sharing personal items like razors or toothbrushes.
- **Blood Safety:** Ensure blood products received through transfusions or medical procedures are rigorously screened for hepatitis viruses.

High-Risk Groups: Targeted Efforts for Enhanced Protection

Certain populations are at a heightened risk of contracting viral hepatitis due to specific occupations or behaviors. These high-risk groups include intravenous drug users, healthcare workers, individuals with multiple sexual partners, people living with HIV/AIDS, and patients undergoing hemodialysis. Targeted prevention and screening strategies are essential for these populations to mitigate the risk of infection.

Regular health screenings and awareness campaigns tailored to these high-risk groups are crucial for early detection and intervention.

It's time to Act: Early Detection and Taking Charge of Your Health

If you are concerned about your risk of hepatitis, consulting your healthcare provider is essential. Early diagnosis allows for prompt treatment and minimizes potential damage to your liver.

By promoting awareness, implementing preventive measures, and ensuring access to healthcare services, we can significantly reduce the burden of viral hepatitis and create a healthier future for all.

World Hepatitis Day 2024 theme urges immediate action to prevent, detect, and treat hepatitis, safeguarding lives and building a healthier future.

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WORLD HEPATITIS DAY

28 JULY

Hepatitis means Inflammation of the Liver.

The liver is a vital organ that processes nutrients, filters the blood, and fights infections.

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