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.

Overview

IDSR Reports

Ongoing Events

Field Reports

Public Health Bulletin - Pakistan, Week 37, 2024

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

Beyond data compilation, this week's bulletin also includes information of 22nd Polio case in Pakistan, information on Mpox as a Public Health Emergency of International Concern and Pakistan's response, Outbreak Investigation of CCHF, Outbreak Investigation of Acute leishmaniasis, and a knowledge review on Dengue.

Stay well-informed about public health matters. Subscribe to the Weekly Bulletin today! By equipping everyone with knowledge, the Public Health Bulletin empowers Pakistanis to build a healthier nation.

Sincerely,
The Chief Editor

- *During week 37, 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 SARI.*
- *Thirty-seven cases of AFP reported from KP, eleven from Sindh, ten from Punjab, four from AJK and one from Balochistan. All are suspected cases and need field verification.*
- *Twenty suspected cases of HIV/ AIDS reported from Punjab, twelve from Sindh and one each from Balochistan and KP. Field investigation required to verify the cases.*
- *Twenty-five suspected cases of Brucellosis reported from KP. Field investigation required to verify the cases.*
- *Four cases of CCHF reported from Punjab. All are suspected cases and need field verification.*
- *There is an increasing trend observed for Malaria, TB, ALRI <5 years and SARI cases while a decreasing trend observed for AD (Non-cholera), B. Diarrhea and VH (B, C & D) cases this week.*

IDSR compliance attributes

- *The national compliance rate for IDSR reporting in 158 implemented districts is 82%*
- *Gilgit Baltistan and AJK are the top reporting regions with a compliance rate of 100% and 96%, followed by Sindh 95% and ICT 77%*
- *The lowest compliance rate was observed in Balochistan i.e. 70%.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2330	1690	73
Azad Jammu Kashmir	382	364	96
Islamabad Capital Territory	36	28	77
Balochistan	1291	879	70
Gilgit Baltistan	374	374	100
Sindh	2086	1972	95
National	6499	5304	82

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 37, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	2,229	5,851	2,046	505	25,404	95,199	61,684	192,918
Malaria	15	5,138	0	3	7,839	3,270	104,455	120,720
ILI	1,725	4,522	352	1,336	4,476	1	27,520	39,932
TB	47	133	100	11	424	10,294	13,211	24,220
ALRI < 5 years	910	1,290	547	0	1,259	714	9,918	14,638
B.Diarrhea	75	1,405	139	9	1,054	838	5,164	8,684
Dog Bite	131	132	2	0	596	4,571	2,367	7,799
VH (B, C & D)	11	132	2	7	109	0	5,075	5,336
Typhoid	20	650	81	2	738	2,259	1,334	5,084
SARI	132	555	417	0	1,190	0	138	2,432
Dengue	2	3	0	4	118	1,796	249	2,172
AWD (S. Cholera)	24	110	52	0	78	1,543	2	1,809
AVH (A&E)	20	22	2	0	402	0	185	631
Measles	17	21	2	0	198	174	34	446
CL	0	125	0	0	225	2	2	354
Chikungunya	0	0	0	0	14	0	199	213
Mumps	7	36	4	0	75	0	84	206
Meningitis	1	0	1	0	14	73	19	108
Chickenpox/ Varicella	9	9	17	2	50	7	10	104
Pertussis	0	67	0	0	22	1	4	94
AFP	4	1	0	0	37	10	11	63
Gonorrhea	1	9	0	0	7	0	21	38
HIV/AIDS	0	1	0	0	1	20	12	34
Brucellosis	0	0	0	0	25	0	0	25
Syphilis	0	0	0	0	2	0	10	12
Diphtheria (Probable)	0	1	0	0	4	5	2	12
Leprosy	0	5	0	0	0	0	3	8
NT	0	0	0	0	6	0	0	6
CCHF	0	0	0	0	0	4	0	4
Rubella (CRS)	0	1	0	0	0	0	0	1

Figure 1: Most frequently reported suspected cases during Week 37, Pakistan.
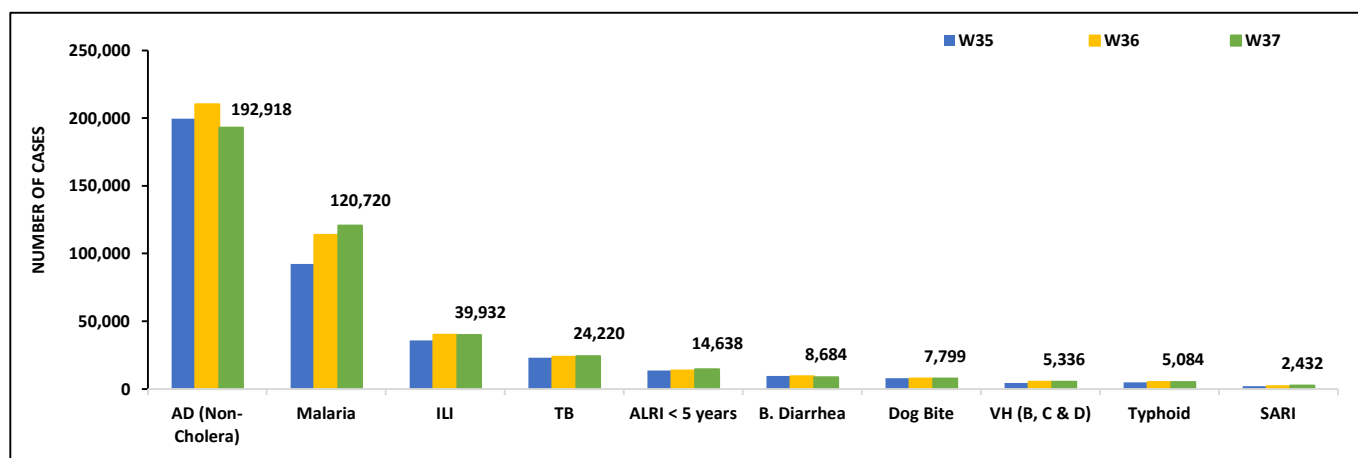
- Malaria cases were highest followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, B. Diarrhea, VH (B, C, D), dog bite, Typhoid and Dengue.
- Malaria cases are mostly reported from Khairpur, Larkana and Mirpurkhas whereas AD (Non-Cholera) cases are mostly reported from Khairpur, Dadu and Tharparkar.
- Eleven cases of AFP, twelve suspected cases of HIV/ AIDS are reported from Sindh. All are suspected cases and need field verification.
- There is an increasing trend observed for Malaria, ILI, TB, ALRI<5 Years and dog bite cases while almost same trend for B. Diarrhea, VH (B, C, D), Typhoid and Dengue cases.

Table 2: District wise distribution of most frequently reported suspected cases during Week 37, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	7,701	3,929	1,542	967	639	328	248	115	68	0
Dadu	5,078	4,195	403	532	792	593	24	240	131	0
Ghotki	2,671	1,969	259	350	423	111	409	211	1	0
Hyderabad	743	1,703	1,802	84	103	0	35	0	9	0
Jacobabad	1,343	1,245	393	145	376	209	216	184	47	0
Jamshoro	3,025	2,752	92	444	253	138	157	40	68	0
Kamber	6,936	2,746	10	920	312	267	160	168	17	0
Karachi Central	152	1,590	1,821	298	17	6	44	28	184	171
Karachi East	111	529	317	18	34	8	5	8	1	0
Karachi Keamari	22	473	271	0	159	2	0	0	17	0
Karachi Korangi	70	415	0	27	1	5	0	1	0	10
Karachi Malir	591	2,113	3,331	181	307	84	51	37	67	42
Karachi South	51	96	0	0	0	0	0	0	0	0
Karachi West	208	783	1,202	129	245	54	131	55	30	0
Kashmore	1,991	707	436	280	151	106	18	158	6	0
Khairpur	12,353	4,388	5,960	1,359	1,133	558	243	162	229	0
Larkana	10,461	3,850	3	1,154	321	625	101	45	20	0
Matiari	3,502	2,559	6	642	240	113	191	53	7	20
Mirpurkhas	8,184	3,633	3,736	871	611	116	166	44	22	3
Naushero Feroze	3,852	2,289	1,105	582	375	224	46	208	184	0
Sanghar	4,072	1,284	11	881	317	49	945	49	18	0
Shaheed Benazirabad	3,053	2,532	6	412	184	124	161	135	82	0
Shikarpur	3,618	1,832	2	226	163	209	911	183	2	0
Sujawal	1,569	1,328	0	224	253	318	34	41	5	0
Sukkur	4,393	1,875	1,710	583	339	215	95	86	2	0
Tando Allahyar	4,952	1,664	336	476	220	170	328	53	5	0
Tando Muhammad Khan	2,565	1,585	0	554	203	172	70	0	1	0
Tharparkar	4,635	3,989	1,803	420	647	214	132	0	67	3
Thatta	2,911	1,331	963	23	643	46	120	63	10	0
Umerkot	3,642	2,300	0	429	457	100	34	0	34	0
Total	**104,455**	**61,684**	**27,520**	**13,211**	**9,918**	**5,164**	**5,075**	**2,367**	**1,334**	**249**

Figure 2: Most frequently reported suspected cases during Week 37 Sindh
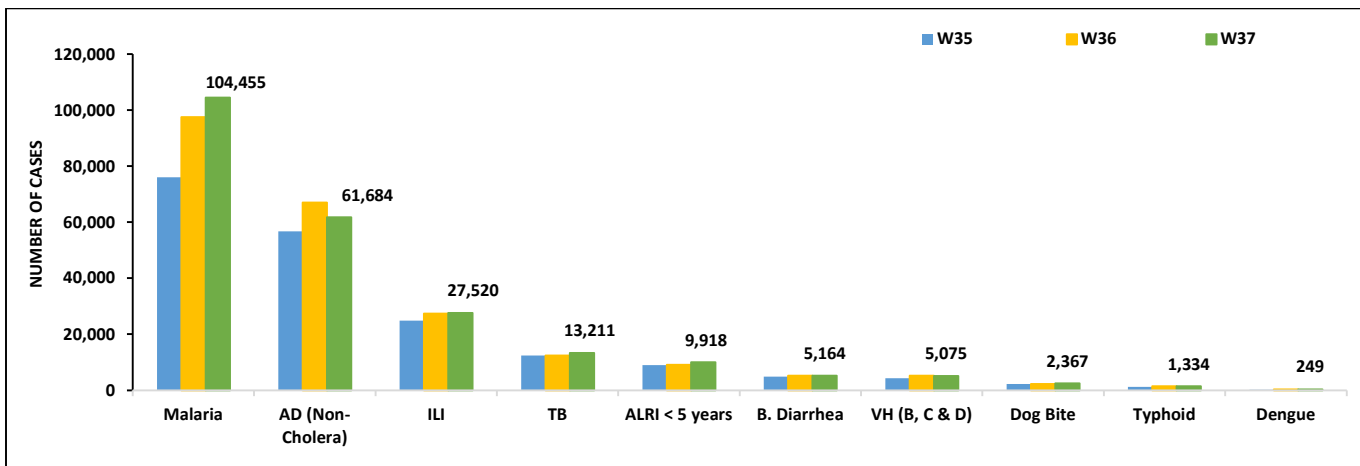
Balochistan

- AD (Non-Cholera), Malaria, ILI, B. Diarrhea, ALRI <5 years, Typhoid, SARI, TB, VH (B, C & D) and dog bite cases were the most frequently reported diseases from Balochistan province.
- AD (Non-Cholera) cases are mostly reported from Usta Muhammad, Jaffarabad and Lesbella while Malaria cases are mostly reported from Jaffarabad, Lesbella and Panjgur.
- One case of AFP, One case of HIV/ AIDS reported from Balochistan. Field investigation required to verify the case.
- AD (Non-Cholera), Malaria, ILI and B. Diarrhea cases showed a decreasing trend while ALRI <5 years, Typhoid, SARI, TB, VH (B, C & D) and dog bite cases showed an increasing trend this week.

Table 3: District wise distribution of most frequently reported suspected cases during Week 37, Balochistan

Districts	AD (Non-Cholera)	Malaria	ILI	B. Diarrhea	ALRI < 5 years	Typhoid	SARI	AWD (S.Cholera)	TB	CL
Barkhan	81	79	34	8	19	40	1	1	4	1
Chagai	150	39	299	47	2	18	8	0	2	0
Chaman	157	54	206	84	5	37	34	0	0	0
Dera Bugti	87	194	55	50	53	23	16	0	0	0
Harnai	62	60	18	63	123	0	0	0	2	1
Hub	110	89	59	13	6	1	0	0	0	0
Jaffarabad	457	1,090	74	64	25	6	12	70	27	37
Jhal Magsi	111	114	43	3	6	3	0	0	0	0
Kalat	33	55	4	8	18	34	2	1	0	0
Kharan	154	73	435	68	0	10	20	0	0	0
Khuzdar	313	266	461	116	5	44	39	0	0	0
Killa Abdullah	183	28	57	57	3	35	15	0	6	0
Killa Saifullah	150	208	0	42	73	10	0	0	0	0
Kohlu	194	180	313	86	16	55	76	1	1	3
Lasbella	395	527	80	29	68	2	1	0	2	4
Loralai	244	69	318	51	36	31	81	0	15	0
Mastung	205	180	167	65	67	61	32	2	24	41
Musakhel	44	266	58	25	6	25	2	2	1	5
Naseerabad	334	167	40	19	12	58	5	10	30	10
Nushki	183	24	10	41	0	0	0	0	0	0
Panjgur	248	316	95	73	115	20	27	0	0	0
Pishin	202	38	233	114	39	24	27	2	4	0
Quetta	332	13	655	57	103	23	8	0	0	0
Sherani	18	2	36	8	1	3	4	0	0	0
Sibi	174	171	245	24	49	34	46	0	1	0
Sohbat pur	238	283	8	63	80	24	11	5	5	5
Surab	44	54	53	0	7	4	2	0	0	0
Usta Muhammad	717	285	123	71	116	8	9	0	5	25
Zhob	146	130	182	26	206	8	74	39	0	0
Ziarat	85	84	161	30	31	9	3	0	3	0
Total	**5,851**	**5,138**	**4,522**	**1,405**	**1,290**	**650**	**555**	**133**	**132**	**132**

**Figure 3: Most frequently reported suspected cases during Week 37, Balochistan**

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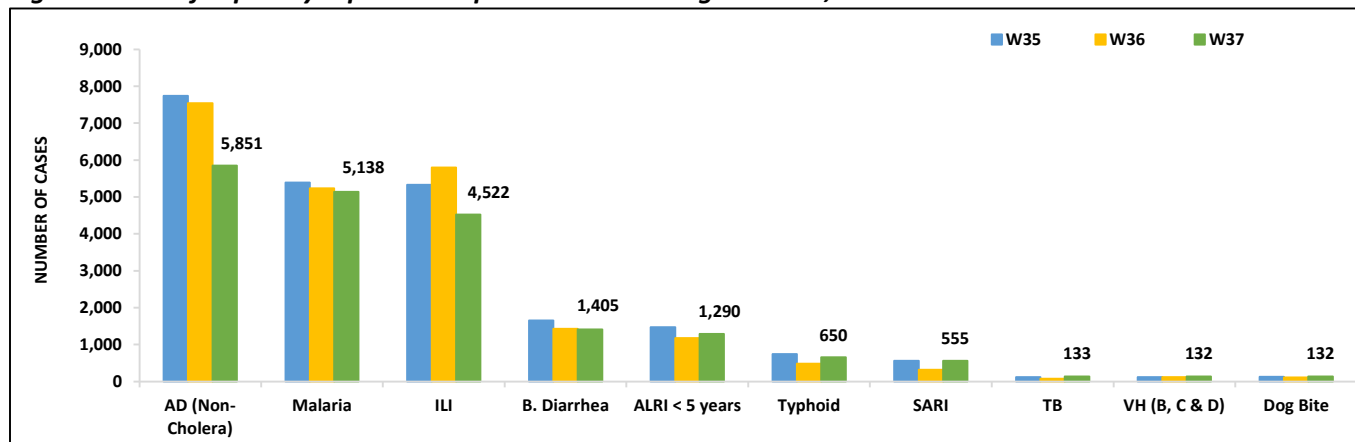
- Cases of AD (Non-Cholera) were highest followed by Malaria, ILI, ALRI<5 Years, SARI, B. Diarrhea, Typhoid , dog bite, TB and AVH (A & E) cases.
- AD (Non-Cholera), Malaria, B. Diarrhea and TB cases showed a decreasing trend while ILI, ALRI<5 Years, SARI and AVH (A & E) cases showed an increasing trend this week.
- Thirty-seven cases of AFP, One case of HIV/ AIDS, Twenty-five 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 37, KP

Districts	AD (Non-Cholera)	Malaria	ILI	B.Diarrhea	SARI	ALRI <5 Years	Typhoid	Dog Bite	TB	AVH (A&E)
Abbottabad	623	22	35	15	0	6	37	5	11	1
Bajaur	1,384	307	44	406	66	119	4	33	26	53
Bannu	663	1,411	5	26	2	50	100	2	28	22
Battagram	183	171	459	0	0	0	0	0	0	0
Buner	327	300	0	0	0	1	7	6	1	0
Charsadda	835	280	547	65	0	25	48	6	3	21
Chitral Lower	485	30	59	18	50	34	9	14	5	1
Chitral Upper	200	4	9	13	13	5	12	2	2	0
D.I. Khan	1,277	682	0	7	0	24	0	14	47	0
Dir Lower	1,658	292	3	111	0	112	43	64	6	15
Dir Upper	1,038	19	69	22	0	0	17	0	14	3
Hangu	82	202	0	12	0	2	0	0	8	0
Haripur	1,102	31	226	57	1	11	29	2	13	47
Karak	372	302	122	10	221	26	13	3	7	0
Khyber	316	344	37	50	34	107	43	22	9	4
Kohistan Lower	111	19	2	1	3	8	1	0	0	0
Kohistan Upper	418	11	0	6	0	29	19	0	0	0
Kolai Palas	84	8	12	3	13	6	5	0	1	0
L & C Kurram	45	40	89	0	1	17	5	1	0	0
Lakki Marwat	755	395	0	8	0	16	5	21	4	0
Malakand	731	13	0	20	0	76	20	0	0	40
Mansehra	628	4	246	23	120	2	22	0	8	0
Mardan	697	78	200	137	0	9	5	39	7	1
Mohmand	182	312	126	2	156	57	13	23	3	9
North Waziristan	16	15	0	0	0	3	4	18	0	2
Nowshera	1,743	216	53	7	8	22	9	6	8	19
Orakzai	4	3	9	0	0	0	0	0	0	0
Peshawar	3,557	104	876	39	56	129	58	3	25	24
SD Peshawar	3	0	0	0	0	0	0	0	0	0
SD Tank	27	64	2	0	0	5	1	1	1	0
Shangla	1,462	1,445	0	17	0	25	30	54	125	5
SWA	84	106	181	40	48	15	30	4	1	0
Swabi	1,538	114	526	41	93	14	46	183	37	71
Swat	2,127	75	182	74	33	23	42	57	10	63
Tank	366	274	34	0	0	4	24	0	12	0
Tor Ghar	107	113	0	0	12	25	6	4	0	1
Upper Kurram	174	33	323	29	260	47	31	9	2	0
Total	**25,404**	**7,839**	**4,476**	**1,259**	**1,190**	**1,054**	**738**	**596**	**424**	**402**

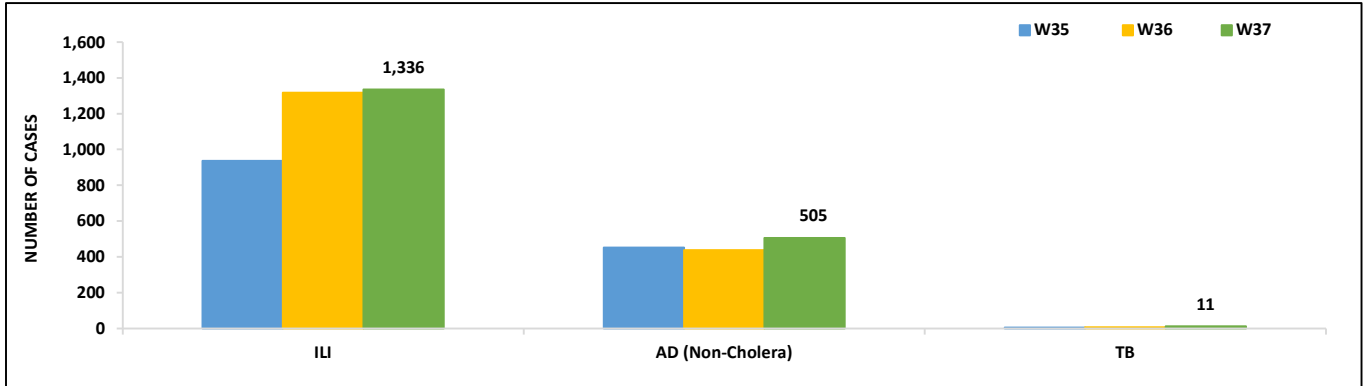*Figure 4: Most frequently reported suspected cases during Week 37, KP*
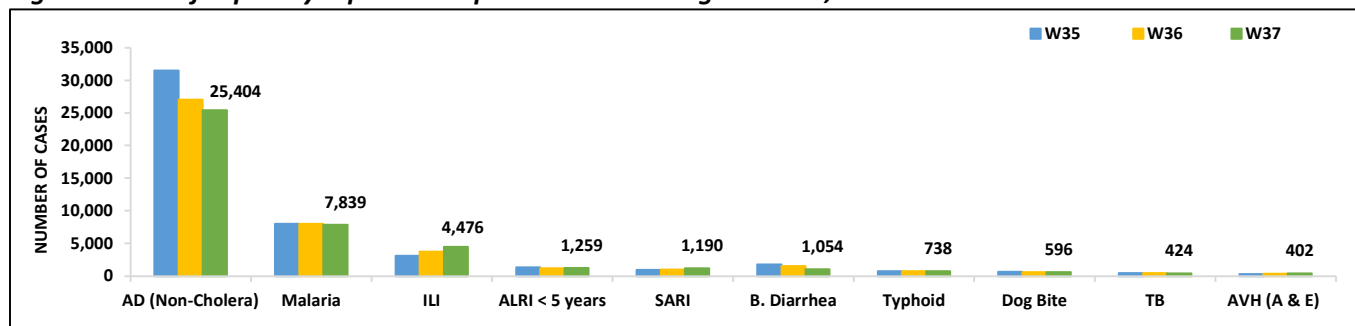
ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and TB. ILI, AD (Non-Cholera) and TB cases showed an increasing trend this week.

AJK: AD (Non-Cholera) cases were highest followed by ILI, ALRI <5 years, SARI, dog bite, B. Diarrhea, TB, AWD (S. Cholera), AVH (A & E) and Typhoid cases. A decreasing trend observed for AD (Non-Cholera), ILI, ALRI <5 years, SARI, dog bite, B. Diarrhea, TB, AWD (S. Cholera), AVH (A & E) and Typhoid cases this week.
Four suspected cases of AFP reported from AJK. Field investigation required to verify the cases.

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

Figure 5: Most frequently reported suspected cases during Week 37, ICT

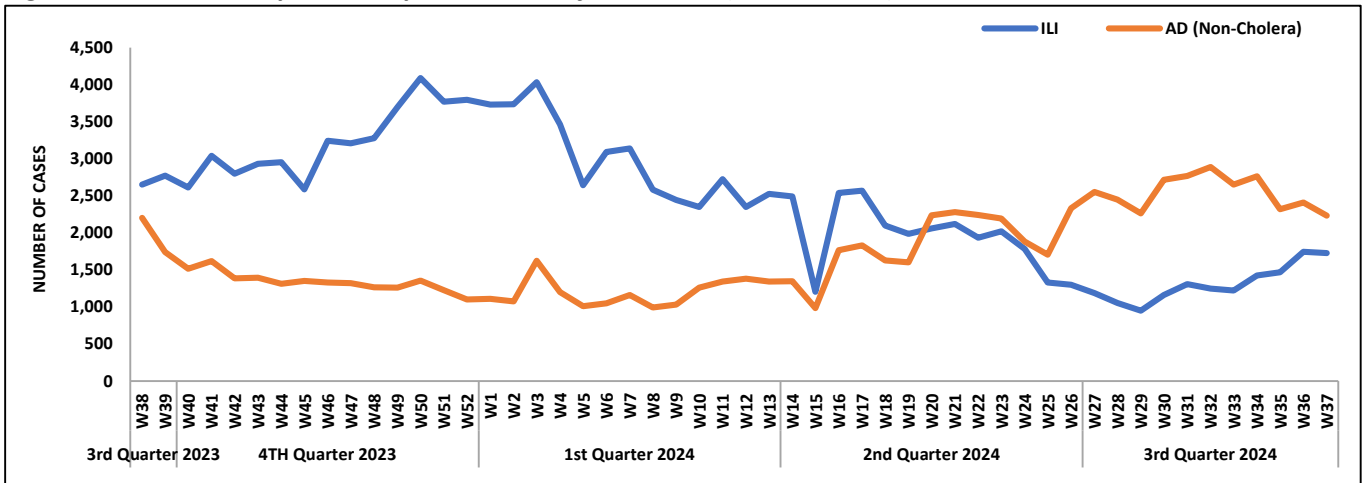*Figure 6: Week wise reported suspected cases of ILI, ICT*
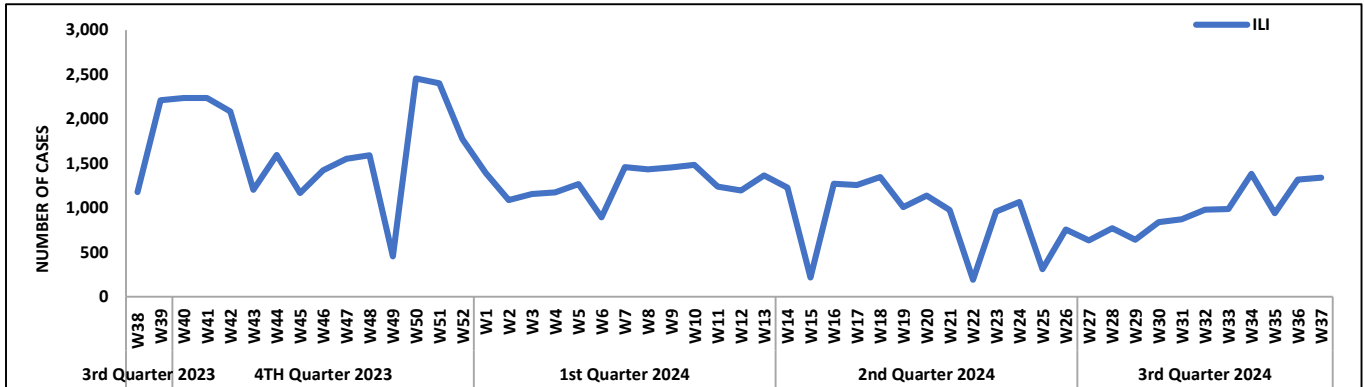
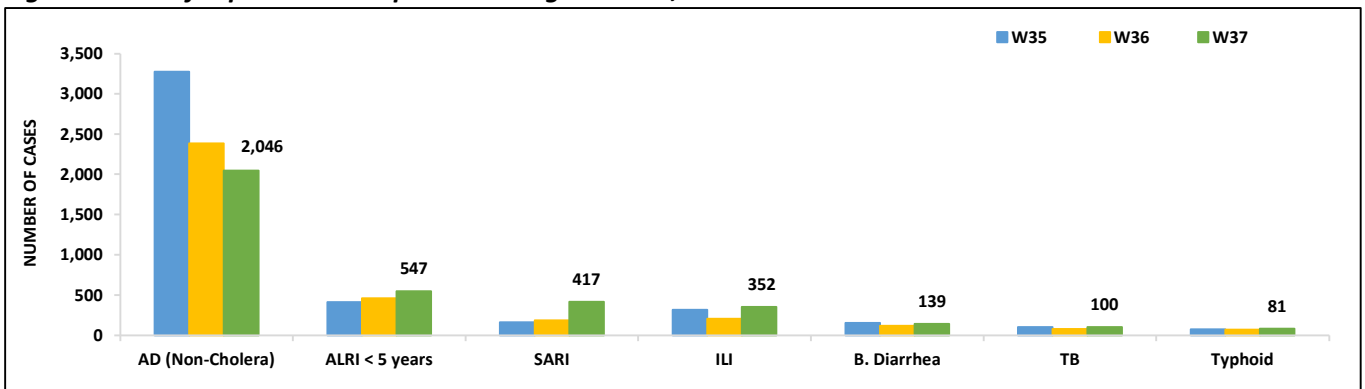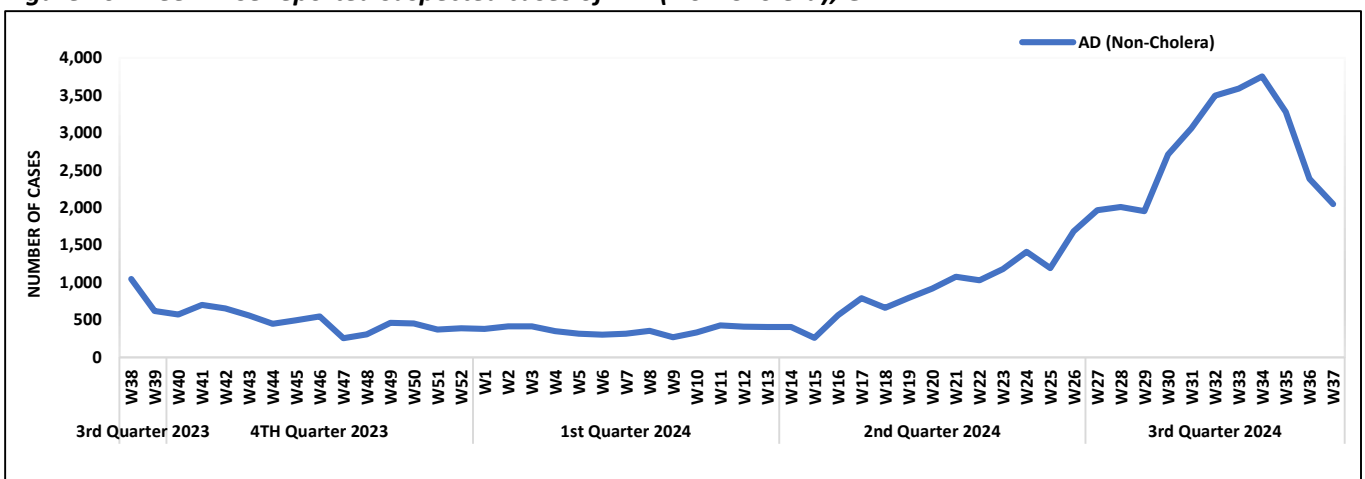*Figure 7: Most frequently reported suspected cases during Week 37, AJK*
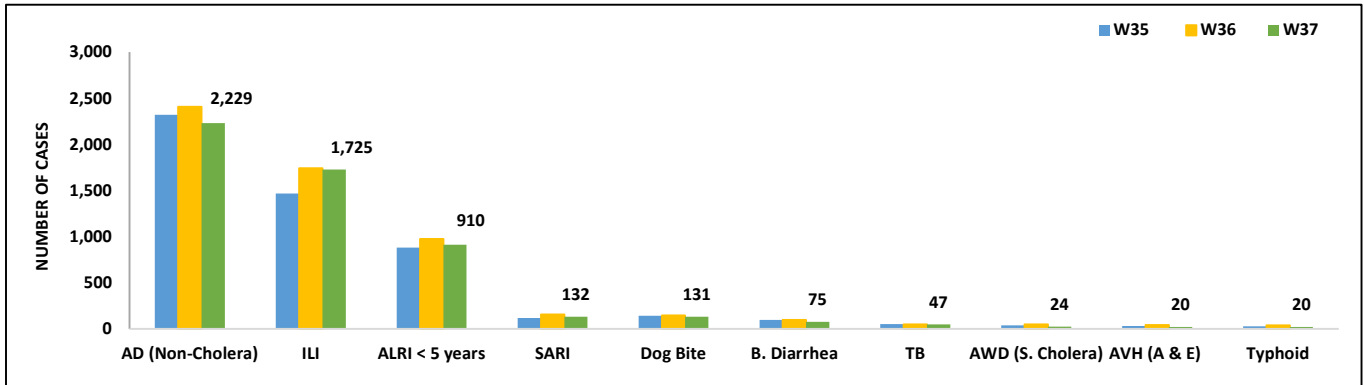
Figure 8: Week wise reported suspected cases of ILI and AD (Non-Cholera) AJK

Figure 9: Most frequent cases reported during Week 37, GB

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

Punjab

- AD (Non-Cholera) cases were highest followed by TB, dog bite, Malaria, Typhoid, AWD (S. Cholera), Dengue, B. Diarrhea, ALRI<5 Years and Measles cases.
- AD (Non-Cholera), TB, dog bite, Malaria, Typhoid, AWD (S. Cholera), Dengue, B. Diarrhea, ALRI<5 Years and Measles cases showed a decreasing trend this week.
- Ten cases of AFP, Twenty cases of HIV/ AIDS, Four cases of CCHF reported from Punjab. All are suspected cases and require field verification.

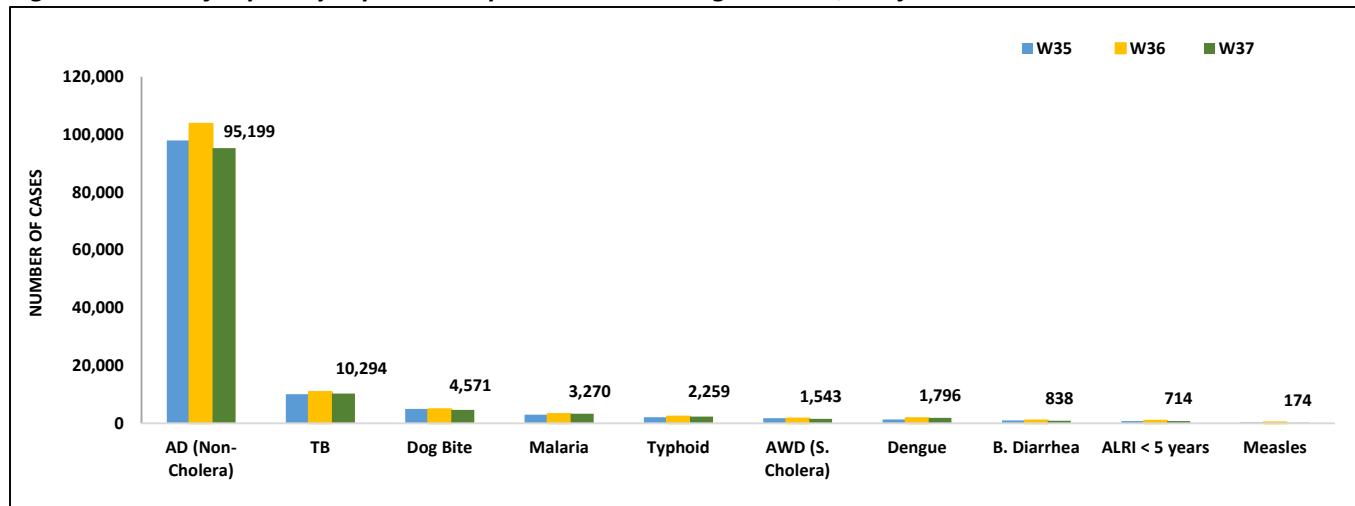**Figure 11: Most frequently reported suspected cases during Week 37, Punjab.**

Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 37

Diseases	Sindh		Balochistan		KPK		ISL		GB		Punjab		AJK	
	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos
AWD (S. Cholera)	10	1	-	-	8	0	-	-	-	-	-	-	-	-
AD (Non-Cholera)	96	0	-	-	-	-	-	-	-	-	-	-	-	-
Malaria	1,871	256	-	-	-	-	-	-	-	-	-	-	33	0
CCHF	-	-	14	4	2	1	5	0	-	-	-	-	-	-
Dengue	1,593	42	-	-	-	-	48	7	-	-	-	-	-	-
VH (B)	3,165	86	79	66	1	-	-	-	-	-	-	-	-	-
VH (C)	3,188	242	179	49	-	-	-	-	-	-	-	-	-	-
VH (A&E)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Covid-19	-	-	15	0	1	0	43	3	-	-	-	-	-	-
HIV	-	-	-	-	-	-	-	-	-	-	-	-	38	0
Influenza A	-	-	-	-	1	1	43	0	-	-	-	-	-	-
TB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Syphilis	-	-	-	-	-	-	-	-	-	-	20	0	-	-
Typhoid	608	3	-	-	-	-	-	-	-	-	-	-	-	-
Diptheria (Probabale)	-	-	-	-	3	0	-	-	-	-	-	-	-	-
Pertussis	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-POX	-	-	-	-	-	-	10	1	-	-	-	-	-	-
Chickenpox/ Varicella	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Chikungunya	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Measles	64	33	14	9	188	87	6	5	3	0	208	61	19	9
Rubella	64	1	14	0	188	3	6	0	3	1	208	4	19	0

IDSR Reports Compliance

- Out of 158 IDSR implemented districts, compliance is low from KP and Balochistan. Green color highlights >50% compliance while red color highlights <50% compliance

Table 6: IDSR reporting districts Week 37, 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	138	58%
	Battagram	63	18	29%
	Buner	34	26	76%
	Bajaur	44	37	84%
	Charsadda	59	54	92%
	Chitral Upper	34	27	79%
	Chitral Lower	35	34	97%
	D.I. Khan	114	113	99%
	Dir Lower	74	74	100%
	Dir Upper	53	48	91%
	Hangu	22	15	68%
	Haripur	72	70	97%
	Karak	35	35	100%
	Khyber	52	19	37%
	Kohat	61	0	0%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	68	97%
	Lower & Central Kurram	42	17	40%
	Upper Kurram	41	33	80%
	Malakand	42	26	62%
	Mansehra	136	102	75%
	Mardan	80	76	95%
	Nowshera	55	51	93%
	North Waziristan	12	4	33%
	Peshawar	151	115	76%
	Shangla	37	32	86%
	Swabi	63	62	98%
	Swat	77	71	92%
	South Waziristan	134	54	40%
	Tank	34	32	90%
	Torghar	14	14	100%
	Mohmand	68	61	90%
	SD Peshawar	5	1	20%
	SD Tank	58	7	12%
	Orakzai	68	10	15%
	Mirpur	37	36	97%
	Bhimber	20	19	95%
	Kotli	60	60	100%

Azad Jammu Kashmir	Muzaffarabad	45	44	98%
	Poonch	46	39	85%
	Haveli	39	38	97%
	Bagh	40	34	85%
	Neelum	39	38	97%
	Jhelum Vellay	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	21	20	95%
	CDA	15	8	53%
Balochistan	Gwadar	25	0	0%
	Kech	44	0	0%
	Khuzdar	74	68	92%
	Killa Abdullah	26	17	65%
	Lasbella	55	55	100%
	Pishin	69	21	30%
	Quetta	39	19	49%
	Sibi	36	31	86%
	Zhob	39	28	72%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	4	27%
	Kohlu	75	53	71%
	Chagi	35	24	69%
	Kalat	41	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	35	100%
	Jhal Magsi	28	28	100%
	Sohbat pur	25	25	100%
	Surab	32	17	53%
	Mastung	45	45	100%
	Loralai	33	31	94%
	Killa Saifullah	28	27	96%
	Ziarat	29	10	34%
	Duki	31	4	13%
	Nushki	32	29	91%
	Dera Bugti	45	33	73%
	Washuk	46	0	0%
	Panjgur	38	28	74%
	Awaran	23	0	0%
	Chaman	25	24	96%
	Barkhan	20	20	100%
	Hub	33	16	48%
	Musakhel	41	18	44%
	Usta Muhammad	34	34	100%
Gilgit Baltistan	Hunza	32	32	100%
	Nagar	20	20	100%
	Ghizer	40	40	100%
	Gilgit	40	40	100%

	Diamer	62	62	100%
	Astore	54	53	98%
	Shigar	27	27	100%
	Skardu	52	52	100%
	Ganche	29	27	93%
	Kharmang	18	18	100%
Sindh	Hyderabad	73	60	82%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	107	92	86%
	Tharparkar	282	236	84%
	Shikarpur	59	59	100%
	Thatta	52	52	100%
	Larkana	67	66	99%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	20	87%
	Karachi-West	20	20	100%
	Karachi-Malir	37	32	86%
	Karachi-Kemari	18	12	67%
	Karachi-Central	11	11	100%
	Karachi-Korangi	18	18	100%
	Karachi-South	4	4	100%
	Sujawal	54	54	100%
	Mirpur Khas	106	104	98%
	Badin	124	119	96%
	Sukkur	63	61	97%
	Dadu	88	87	99%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	169	159	94%
	Kashmore	59	59	100%
	Matiari	42	39	93%
	Jamshoro	72	72	100%
	Tando Allahyar	54	53	98%
	Tando Muhammad Khan	40	39	98%
	Shaheed Benazirabad	122	122	100%
Punjab	D.G Khan	108	1	1%

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Table 7: IDSR reporting Tertiary care hospital Week 37, 2024

AJK	Mirpur	1	1	100%
	Muzaffarabad	1	1	100%
	Poonch	1	1	100%
Sindh	Karachi-South	1	1	100%
	Sukkur	1	0	0%
	Shaheed Benazirabad	1	1	100%
	Karachi East	1	0	0%

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Polio on the Rise: Pakistan's 22nd Case Sparks Renewed Urgency in Eradication Efforts

Pakistan faces a renewed public health crisis with the resurgence of polio, a preventable but highly contagious viral infection. The confirmation of the 22nd polio case in 2024 signals a significant threat, particularly for young children, who are most vulnerable to the irreversible paralysis caused by the disease. This alarming trend calls for immediate and concerted efforts by parents, caregivers, and health authorities to protect the nation's children.

Current Situation

The latest polio case was reported in a 30-month-old boy from Balochistan, a region that remains a hotspot for wild poliovirus transmission. Of the 22 cases reported in 2024, 15 have originated from Balochistan, highlighting the region's critical role in Pakistan's ongoing polio crisis. The resurgence has placed immense pressure on healthcare systems and has renewed the call for action from health authorities.

Government Response

In response to this outbreak, the government has intensified efforts to close critical gaps in vaccination coverage, access, and public acceptance. The National Polio Eradication Emergency Operations Plan has been revised, prioritizing door-to-door vaccination campaigns aimed at boosting immunity in high-risk areas. Two major campaigns are planned for later this year, focusing on communities with lower vaccination rates, to curb the spread of the virus.

Government health officials continue to urge parents and caregivers to ensure their children receive the polio vaccine on schedule. The National Coordinator for the Polio Emergency Operations Centre has stressed the importance of maintaining high vaccination coverage to protect against further spread. Every missed vaccination increases the risk of transmission, jeopardizing the health and safety of entire communities.

Conclusion

Polio eradication remains a critical goal, not only for Pakistan but for the world. Parents play a pivotal role in this effort by welcoming vaccination teams into their homes and ensuring their children receive the necessary vaccines. By doing so, they contribute to both the protection of their families and the larger objective of eliminating polio

Strengthening Public Health Preparedness in Azad Jammu and Kashmir: NIH Conducts IDSR Training Workshop

The National Institutes of Health (NIH) has made a significant contribution to enhancing public health preparedness in Azad Jammu and Kashmir (AJK) by conducting a comprehensive Integrated Disease Surveillance and Response (IDSR) training workshop. This targeted initiative focused on tertiary-level healthcare facilities in seven districts of AJK, equipping healthcare professionals with the essential tools to effectively monitor, investigate, and respond to disease outbreaks.

IDSR Training: A Cornerstone of Public Health Preparedness

The IDSR training workshop provided participants with a deep understanding of the principles and methodologies underpinning disease surveillance and response. Through interactive

sessions, case studies, and practical exercises, healthcare professionals learned to:

Identify and analyze disease patterns: Participants gained the ability to recognize emerging disease trends and identify potential outbreaks.

Conduct epidemiological investigations: Participants were trained in the techniques of conducting thorough epidemiological investigations to determine the cause, source, and mode of transmission of diseases.

Implement effective public health interventions: Participants learned about a range of public health interventions, including case isolation, contact tracing, and vaccination campaigns, to contain and mitigate the spread of diseases.

Collaboration and Coordination: Key to Effective Disease Response

The training workshop emphasized the importance of collaboration and coordination among various stakeholders in ensuring a timely and effective response to disease outbreaks. Participants were encouraged to work closely with government agencies, healthcare providers, and community leaders to share information, coordinate efforts, and implement appropriate public health measures.

Impact on Public Health Preparedness

By equipping healthcare professionals in AJK with the necessary IDSR skills, the NIH has significantly enhanced the region's capacity to prevent, detect, and respond to public health emergencies. This investment in training will undoubtedly improve the overall health and well-being of the population in AJK. The IDSR training workshop conducted by the NIH represents a crucial step towards strengthening public health preparedness in Azad Jammu and Kashmir. By empowering healthcare professionals with the essential skills and knowledge, the NIH has enabled them to play a vital role in protecting the health of the region's population.

Mpox Update: Pakistan's Vigilance Amidst Global Resurgence.

The global resurgence of Clade I Mpox led the World Health Organization (WHO) to declare it a Public Health Emergency of International Concern (PHEIC) on August 14, 2024. In response, Pakistan's health authorities have implemented increased vigilance and proactive public health measures to prevent the potential spread of the virus within the country. While no indigenous cases have been confirmed so far, the presence of suspected cases, coupled with the ongoing international outbreak, underscores the need for robust preventive strategies. Key efforts include enhancing surveillance systems, strengthening airport screening protocols, and raising public awareness to mitigate the risk of an outbreak. These actions are critical to safeguarding public health and maintaining Pakistan's readiness to respond to this emerging infectious threat.

Since 2022, Pakistan has reported a total of 15 Mpox cases, including one death. In 2024 alone, six cases have been recorded, with five occurring after the WHO's PHEIC declaration. All confirmed cases in Pakistan have been identified as the Clade IIb strain, and no evidence of local transmission has been documented to date.

NIH Pakistan's Ongoing Efforts to Combat Mpox

The National Command and Operations Centre (NCOC) and the National Institute of Health (NIH) hold daily meetings to assess the situation, analyze data, and formulate recommendations. Referral hospitals and quarantine centers have been established across the provinces, and hospitals nationwide have implemented stringent infection control measures. Public health laboratories remain on high alert to facilitate rapid Mpox testing and case identification.

The NIH has also bolstered its surveillance capabilities to ensure prompt detection and monitoring of Mpox cases, enabling swift intervention. Public awareness campaigns have been launched to educate the population on Mpox symptoms, transmission methods, and preventive actions. These materials are readily available on the NIH website and social media channels.

As part of its comprehensive response strategy, Pakistan is expediting the plans and procedures for procurement of Mpox vaccines, with a focus on high-risk groups. Vaccination is considered a vital component in mitigating the outbreak's impact and preventing further spread of the virus.

Notes from the field:

Investigation of CCHF Outbreak in Killi Alizai, District Loralai, 10th-15th September, 2024

Introduction

Crimean-Congo Hemorrhagic Fever (CCHF) is a zoonotic viral disease caused by the Crimean-Congo Hemorrhagic Fever virus (CCHFV), which belongs to the Nairovirus genus within the Bunyaviridae family. CCHF is primarily transmitted to humans through tick bites or contact with infected animal tissues or fluids. It is a severe disease with a high mortality rate and is prevalent in regions with livestock and ticks, such as Balochistan, Pakistan. In early September 2024, a confirmed CCHF case was reported in the Killi Alizai area of District Loralai, prompting an immediate epidemiological investigation.

Objectives

- To investigate the confirmed CCHF outbreak in Killi Alizai, District Loralai.
- To identify potential sources of infection and transmission modes.

- To recommend control measures to contain the outbreak.

Methods

The investigation took place in Killi Alizai, District Loralai, Balochistan. The total population of Loralai is approximately 272,432, with Killi Alizai accounting for 10,912 residents. A confirmed case of CCHF was defined as a patient with clinical signs of hemorrhagic fever, who tested positive for CCHFV by PCR or ELISA.

A total of 20 human blood samples were collected, including samples from the confirmed patient, close family members, and neighbors. Additionally, animal blood and tick samples were collected for laboratory analysis. The team also conducted an environmental assessment, focusing on risk factors such as livestock husbandry practices, hygiene conditions, and the proximity of animals to human dwellings. Tick density and species prevalence were evaluated to assess the likelihood of transmission.

Data on exposure history (tick bites, animal contact), clinical symptoms, and travel history were collected through semi-structured questionnaires administered to both suspected cases and controls. Active case finding was conducted in local healthcare facilities and communities to identify additional cases.

Results

Of the 20 blood samples collected, only one sample tested positive for CCHF. The confirmed CCHF case was a 56-year-old male resident of Killi Alizai, identified as Khan Muhammad. He presented with a high fever, muscle pain, and hemorrhagic symptoms. Samples from family members and neighbors were negative. The team identified a high density of ticks, predominantly *Hyalomma marginatum* and *Rhipicephalus sanguineus*, in the affected area. These species are known vectors for CCHFV. Tick samples collected from two areas (Killi Dargezai and Killi Alizai) are still pending analysis for virus identification.

Discussion

The findings from this investigation indicate that the CCHF outbreak in Killi Alizai was likely transmitted through tick bites due to poor hygienic conditions and close contact with livestock. Although only one confirmed case was identified, the environmental conditions present a significant risk for future outbreaks. The high density of *Hyalomma* ticks, coupled with the close proximity of animals to human dwellings, provides a conducive environment for the transmission of CCHFV.

The presence of rodent infestations and the improper management of livestock further exacerbated the risk. While no additional human cases were confirmed during the investigation, the potential for cross-border transmission of CCHF, particularly through the movement of livestock, remains a significant concern. Given that CCHF can be fatal without early intervention, heightened surveillance and public health measures are critical to prevent further outbreaks.

Conclusion

The investigation successfully identified the primary risk factors associated with the CCHF outbreak in Killi Alizai. The outbreak was largely attributed to poor hygiene, inadequate livestock management, and high tick exposure. Immediate public health interventions, including tick control measures, quarantine of the infected individual, and raising community awareness, were implemented to contain the outbreak. Ongoing surveillance and enhanced laboratory capacity are necessary to prevent future cases.

Recommendations

Enhanced Surveillance: Regular monitoring of CCHF cases and tick populations in District Loralai, especially during peak tick season (spring and summer), should be prioritized.

Public Health Education: Conduct community awareness programs to educate local residents on CCHF transmission, prevention, and the importance of hygiene.

Livestock Management: Implement better livestock management practices, including keeping animals outside human living areas and maintaining cleanliness in animal farms.

Tick Control Programs: Initiate tick control programs using acaricides (such as Cypermethrin and Ivermectin) and promote the use of protective clothing and repellents for individuals at risk.

Laboratory Capacity: Improve the laboratory capacity for CCHFV diagnostics to facilitate rapid detection and response to future cases.

Hygienic Improvements: Provide resources to improve sanitation and waste management in affected areas, particularly around livestock farms.

Investigation of Suspected Cutaneous Leishmaniasis Outbreak in Amin Abad, District Chagi, Balochistan, from 29th Aug -3rd Sept, 2024

Introduction

Leishmaniasis is a neglected tropical disease caused by protozoan species of *Leishmania*, transmitted through the bite of infected female *Phlebotomine* sandflies. There are various forms of leishmaniasis, including visceral (kala-azar), mucocutaneous, disseminated cutaneous, and cutaneous leishmaniasis. In Pakistan, cutaneous and visceral leishmaniasis are the most prevalent. Cutaneous leishmaniasis (CL) primarily affects the skin, causing sores, while visceral leishmaniasis (VL) affects internal organs such as the spleen, liver, and

bone marrow. Past cases of CL have been reported in various districts of Balochistan, including Jaffarabad, Sohbatpur, Naseerabad, Usta Mohd, Phin, Sherani, Killa Abdullah, and Quetta. Recently, suspected CL cases in Amin Abad District, Chagi, were reported to the Director General Health Office in Quetta. A team was dispatched to investigate and confirm these cases.

Methods

The investigation was conducted from 29 August to 3 September 2024 in Amin Abad District, Chagi. The team visited the villages of Killi Abdul Qadoos, Killi Haji Zakria, and Killi Gazi Khan. A case definition for CL was applied: any individual presenting at least one skin lesion characterized by an ulcer with raised edges and a depressed center or a plaque, nodular lesion, or palpable skin abnormality. The investigation also involved using a structured questionnaire from the CDC to gather clinical information (signs and symptoms), demographic details (age, sex), travel history, treatment history, and potential risk factors.

Active case search and contact tracing were performed in the affected areas. The team also assessed living conditions, hygiene practices, and exposure to potential vectors.

Results

The investigation identified a total of 20 suspected cases of cutaneous leishmaniasis (CL) in Amin Abad District, Chagi. These cases were primarily detected in the villages of Killi Abdul Qadoos, Killi Haji Zakria, and Killi Gazi Khan. All suspected cases exhibited typical clinical symptoms, including skin lesions characterized by ulcers with raised edges, depressed centers, and nodular plaques. In addition to CL, other viral and bacterial skin infections were reported, but these were not directly related to the outbreak.

The investigation revealed several significant risk factors contributing to the outbreak. Most of the affected individuals lived in brick and clay houses with poor sanitation and hygiene conditions. The proximity of homes to cultivation areas, sheep and goat breeding sites, and exposure to agricultural activities increased the likelihood of sandfly bites, a known vector for CL. The team also observed limited use of bed nets, particularly impregnated bed nets, during nighttime sleep, which heightened the risk of transmission.

Furthermore, the investigation found that no proper laboratory tests or treatment protocols were in place for the suspected CL cases, underscoring a lack of healthcare infrastructure to address the disease effectively. These conditions likely contributed to the spread of CL in the community, necessitating immediate public health interventions.

Discussion

The investigation found that suspected CL cases were closely associated with risk factors such as agriculture, proximity to animal breeding areas, and poor living conditions. The lack of bed net usage and the absence of proper diagnosis and treatment further exacerbated the situation. Unhygienic conditions and a lack of health education in the community may have contributed to the outbreak.

Conclusion

The reported cases were likely influenced by multiple risk factors, including agricultural exposure, poor sanitation, and inadequate use of protective measures such as bed nets. The absence of laboratory confirmation and appropriate treatment for CL in the affected population raises concerns about the control of this outbreak. Public health interventions, including health education, better sanitation, and prompt treatment, are essential to prevent further spread.

Recommendations

Indoor residual spraying (IRS): Conduct IRS in affected households with trained personnel using appropriate equipment and techniques.

Use of impregnated bed nets: Encourage the use of long-lasting insecticidal nets (LLIN) to prevent sandfly bites, as normal mosquito nets are ineffective.

Early diagnosis and treatment: Prompt identification and treatment of CL cases are crucial to reducing disease transmission to family members and neighbors. Anti-leishmaniasis medications are highly effective in reducing disease morbidity.

Community mobilization and education: Implement behavior change interventions to educate the community about prevention and control measures.

Strengthening surveillance: Maintain strong disease surveillance to monitor vector-borne diseases and prevent further outbreaks, particularly in agriculture-dependent areas like Amin Abad

Knowledge hub

Understanding Dengue: Transmission, Symptoms, and Prevention

Dengue fever, commonly referred to as "breakbone fever," is a mosquito-borne viral illness that affects millions of people globally every year. Dengue is prevalent in tropical and subtropical regions. In recent years, its incidence has grown due to urbanization, increased international travel, and climate change.

What is Dengue?

Dengue is caused by the dengue virus (DENV), which has four distinct serotypes: DENV-1, DENV-2, DENV-3, and DENV-4. Infection with one serotype usually provides lifelong immunity against that specific serotype, but not the others. This means individuals can be infected up to four times in their lifetime, with each infection potentially more severe than the last.

Mode of Transmission

Dengue is primarily spread by the *Aedes aegypti* mosquito, which thrives in urban areas and lays its eggs in stagnant water found in containers like buckets, flowerpots, and discarded tires. The mosquitoes become infected when they bite someone already carrying the virus, and the infection can then be transmitted to other humans through subsequent bites.

The *Aedes aegypti* mosquito bites during the daytime, particularly in the early morning and late afternoon. *Aedes albopictus* is another mosquito species capable of transmitting dengue but is less common.

Symptoms of Dengue

Dengue fever typically begins four to ten days after a person is bitten by an infected mosquito. Symptoms vary in severity but often include:

- High fever (up to 104°F/40°C)
- Severe headache
- Pain behind the eyes
- Joint and muscle pain (hence the term "breakbone fever")
- Nausea and vomiting
- Skin rash
- Fatigue

In some cases, dengue may progress to severe dengue (also known as dengue hemorrhagic fever), which can be life-threatening. Symptoms of severe dengue include bleeding from the nose or gums, persistent vomiting, rapid breathing, and severe abdominal pain. Immediate medical attention is required if these symptoms appear.

Preventing Dengue

Currently, there is no specific antiviral treatment for dengue, so prevention focuses on avoiding mosquito bites and reducing mosquito populations. Below are key preventive measures:

Eliminate Breeding Sites

Mosquitoes breed in stagnant water, so removing sources of standing water is critical. Regularly empty, clean, or cover containers such as flowerpots, water storage tanks, buckets, and tires.Ensure drains are not clogged and gutters are free of leaves or debris that can collect water.

Use Mosquito Repellents

Apply mosquito repellents on exposed skin, especially during peak biting hours (early morning and late afternoon). Use products containing DEET, picaridin, or oil of lemon eucalyptus for long-lasting protection.

Wear Protective Clothing

When outdoors, especially in mosquito-prone areas, wear long-sleeved shirts, long pants, socks, and shoes to minimize skin exposure.

Use Mosquito Nets and Screens

Sleeping under mosquito nets is particularly important in areas with heavy dengue transmission, especially for young children or people who are bedridden. Ensure windows and doors have screens to prevent mosquitoes from entering the house.

Insecticide Use

Use insecticide-treated nets (ITNs) or indoor residual sprays (IRS) to kill or repel mosquitoes. Outdoor insecticides can be used to reduce adult mosquito populations in high-risk areas.

Community Awareness and Engagement

Preventing dengue requires coordinated community efforts. Public health campaigns should educate people on recognizing symptoms and removing breeding sites. Community participation in cleaning up public spaces and households is crucial to reduce mosquito populations.

What to Do If You Suspect Dengue

If you or someone you know is experiencing symptoms of dengue, it is important to seek medical care. Doctors can perform blood tests to confirm the infection. While there is no specific treatment for dengue, supportive care, such as hydration and pain relief, can alleviate symptoms. Hospitalization may be necessary in severe cases to monitor and manage complications.

Conclusion

Dengue fever is a growing public health concern, particularly in tropical regions. Although there is no cure, dengue can be managed through early detection and supportive care. Preventive measures, including eliminating mosquito breeding sites, using repellents, and raising community awareness, are key strategies to reduce the spread of this disease.

KEEP THE ENVIRONMENT CLEAN TO PREVENT DENGUE

GET RID OF
STAGNANT WATER
FROM PLACES WHERE
MOSQUITOES BREED
SUCH AS
FLOWER POTS
USED TYRES
OLD CONTAINERS

Field Epidemiology and Disease Surveillance Division, National Institute of Health, (NIH) Islamabad