

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

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Public Health Bulletin - Pakistan, Week 36, 2024

Celebrating World Field Epidemiologist Day: Honoring Public Health Heroes

Today, we commemorate World Field Epidemiologist Day, a time to recognize the invaluable contributions of epidemiologists and frontline workers to safeguarding public health. These dedicated professionals, often working in challenging conditions, play a pivotal role in investigating, preventing, and controlling disease outbreaks and other public health challenges.

Epidemiologists, armed with expertise in epidemiology, statistics, and public health, are the detectives of disease. They meticulously investigate outbreaks, identify their root causes, track their spread, and develop effective interventions. Their work is crucial in preventing and controlling diseases such as HIV/AIDS, malaria, and tuberculosis.

Frontline workers, including nurses, doctors, paramedics, and public health workers, are the first responders in public health emergencies. They provide direct care to patients and work tirelessly to promote health and prevent diseases in their communities. Their dedication and sacrifice during the COVID-19 pandemic were instrumental in mitigating its impact.

Both epidemiologists and frontline workers are essential in protecting our health and well-being. They work tirelessly to strengthen public health systems, enabling early detection and response to future outbreaks. Their unwavering commitment and dedication to public health make them true heroes of our time.

On this special day, let us express our gratitude to these unsung heroes. We can do so by taking personal responsibility for our health, getting vaccinated, practicing good hygiene, and adhering to public health recommendations. Additionally, we can support epidemiologists and frontline workers by advocating for increased investment in public health and working to reduce health inequities.

Together, we can create a world where everyone has the opportunity to live a healthy and fulfilling life.

Sincerely,
The Chief Editor



- During week 36, 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-seven cases of AFP reported from KP, eleven from Sindh, nine from Punjab, three from AJK and one from Balochistan. All are suspected cases and need field verification.
- Eleven suspected cases of HIV/ AIDS reported from Punjab, nine from KP and four from Sindh. Field investigation required to verify the cases.
- Nineteen suspected cases of Brucellosis reported from KP. Field investigation required to verify the cases.
- There is an increasing trend observed for AD (Non-cholera), Malaria, ILI, TB, VH (B, C & D) and Typhoid cases while a decreasing trend observed for B. Diarrhea, dog bite and AWD (S. Cholera) cases this week.

IDSR compliance attributes

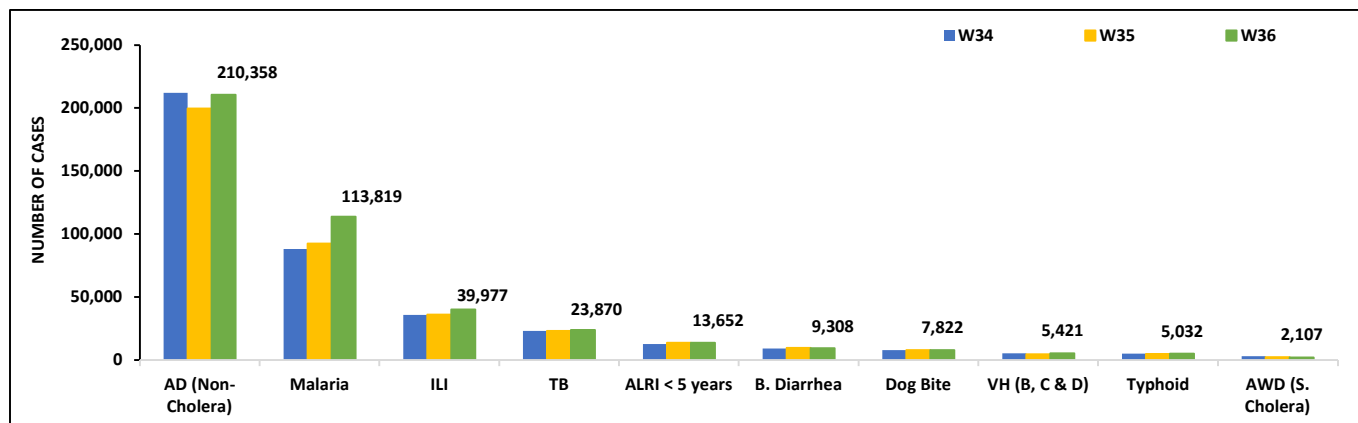
- The national compliance rate for IDSR reporting in 158 implemented districts is 83%
- Gilgit Baltistan and AJK are the top reporting regions with a compliance rate of 100% and 99%, followed by Sindh 96% and ICT 77%
- The lowest compliance rate was observed in Balochistan.

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2330	1660	71
Azad Jammu Kashmir	382	379	99
Islamabad Capital Territory	36	28	77
Balochistan	1291	782	70
Gilgit Baltistan	374	374	100
Sindh	2086	2009	96
National	6499	5232	83

Table 1: Province/Area wise distribution of most frequently reported suspected cases during Week 36, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	2,403	7,541	2,382	437	27,030	103,638	66,927	210,358
Malaria	12	5,232	0	0	7,981	3,198	97,396	113,819
ILI	1,722	5,795	205	1,317	3,717	4	27,217	39,977
TB	47	69	77	7	449	10,782	12,439	23,870
ALRI < 5 years	975	1,171	460	5	1,179	794	9,068	13,652
B.Diarrhea	88	1,422	117	6	1,545	943	5,187	9,308
Dog Bite	145	109	4	1	583	4,759	2,221	7,822
VH (B, C & D)	18	116	2	0	117	0	5,168	5,421
Typhoid	37	481	68	2	741	2,290	1,413	5,032
AWD (S. Cholera)	48	253	41	0	114	1,646	5	2,107
Dengue	0	7	0	1	86	1,723	273	2,090
SARI	154	315	185	0	1,012	0	290	1,956
AVH (A&E)	41	65	4	0	344	0	606	1,060
Measles	11	68	3	0	185	220	39	526
CL	0	78	0	0	181	8	0	267
Mumps	6	63	10	0	59	0	128	266
Chikungunya	0	0	0	0	0	0	217	217
Chickenpox/ Varicella	5	14	21	1	73	17	27	158
Gonorrhoea	0	90	0	0	21	0	14	125
Meningitis	5	9	0	0	2	72	14	102
Pertussis	1	31	0	0	29	0	2	63
AFP	3	1	0	0	27	9	11	51
HIV/AIDS	0	0	0	0	9	11	4	24
Brucellosis	0	0	0	0	19	0	0	19
Syphilis	0	1	0	0	0	0	16	17
Leprosy	0	1	0	0	13	0	0	14
NT	0	0	0	0	7	0	1	8
Diphtheria (Probable)	0	0	0	0	3	1	0	4
VL	0	1	0	0	0	0	0	1

Figure 1: Most frequently reported suspected cases during Week 36, Pakistan.

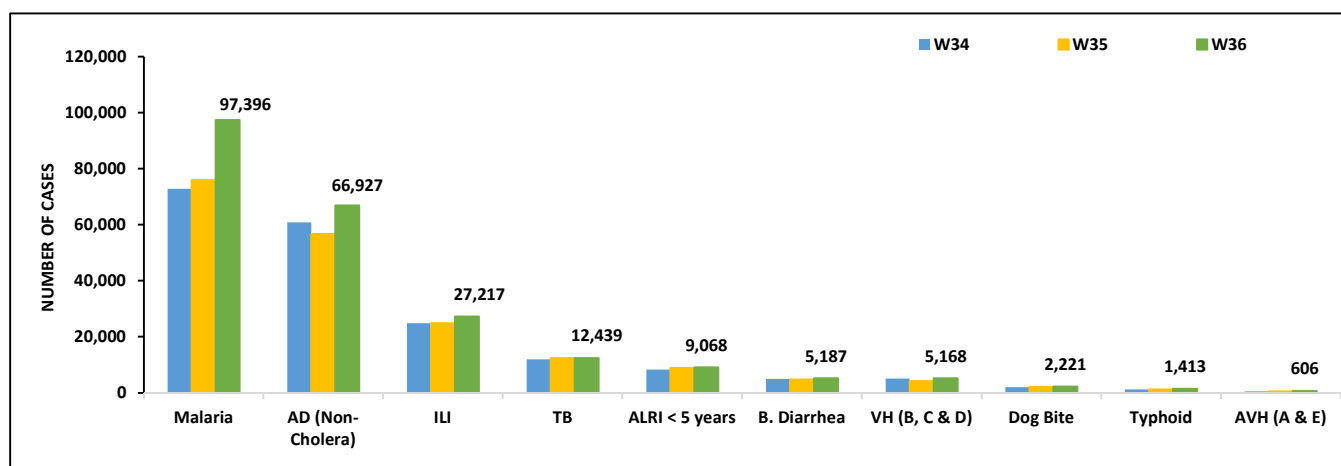


- Malaria cases were highest, followed by AD (Non-Cholera), ILI, TB, ALRI<5 Years, B. Diarrhea, VH (B, C, D), dog bite, Typhoid and AVH (A & E).
- Most of Malaria cases are reported from Khairpur, Mirpurkhas and Larkana whereas most of AD (Non-Cholera) cases are reported from Tharparkar, Mirpurkhas and Khairpur.
- Eleven cases of AFP, four cases of HIV/ AIDS are reported from Sindh. All are suspected cases and need field verification.
- An increasing trend is observed for Malaria, AD (Non-Cholera), ILI, TB, ALRI<5 Years, B. Diarrhea, VH (B, C, D) and Typhoid cases for this week.

Table 2: District wise distribution of most frequently reported suspected cases during Week 36, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	TB	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	AVH (A&E)
Badin	7,838	4,422	1,331	860	631	403	311	82	91	11
Dadu	5,512	4,189	229	481	731	557	29	199	131	18
Ghotki	2,853	1,809	234	334	368	117	451	170	1	0
Hyderabad	334	2,262	1,852	51	97	0	74	0	17	0
Jacobabad	1,076	1,158	497	133	333	139	203	141	56	0
Jamshoro	2,344	2,803	71	541	246	118	397	37	51	18
Kamber	6,655	2,738	6	889	265	238	117	174	21	0
Karachi Central	170	1,466	1,736	328	26	30	54	36	245	5
Karachi East	90	603	427	12	24	10	4	13	2	0
Karachi Keamari	21	399	159	1	13	7	0	1	13	0
Karachi Korangi	74	402	0	14	1	9	0	0	3	2
Karachi Malir	561	2,207	2,970	181	322	103	83	40	64	5
Karachi South	48	88	0	0	0	0	0	0	0	0
Karachi West	204	854	1,358	179	239	48	136	54	30	8
Kashmore	2,073	723	425	285	152	108	32	151	8	0
Khairpur	9,499	4,485	6,211	1178	998	440	294	160	218	5
Larkana	8,986	3,464	0	903	234	592	98	16	22	6
Matiali	2,947	2,699	6	585	171	115	400	54	10	98
Mirpurkhas	9,404	4,497	3,464	678	800	157	57	11	15	6
Naushero Feroze	3,871	2,301	1,103	602	416	211	22	311	147	0
Sanghar	4,323	1,315	20	904	361	57	727	94	25	1
Shaheed Benazirabad	2,902	2,825	3	472	253	117	110	80	95	0
Shikarpur	3,304	1,957	2	294	149	223	775	113	7	0
Sujawal	2,363	2,717	0	158	73	306	3	34	9	80
Sukkur	3,441	1,741	1,663	445	272	221	218	94	6	0
Tando Allahyar	4,280	1,805	294	455	210	203	333	36	11	0
Tando Muhammad Khan	2,614	1,841	0	570	193	197	14	0	2	0
Tharparkar	4,235	4,534	1,744	451	593	283	114	0	58	47
Thatta	2,351	2,179	1,412	25	438	97	84	120	12	293
Umerkot	3,023	2,444	0	430	459	81	28	0	43	3
Total	97,396	66,927	27,217	12,439	9,068	5,187	5,168	2,221	1,413	606

Figure 2: Most frequently reported suspected cases during Week 36 Sindh

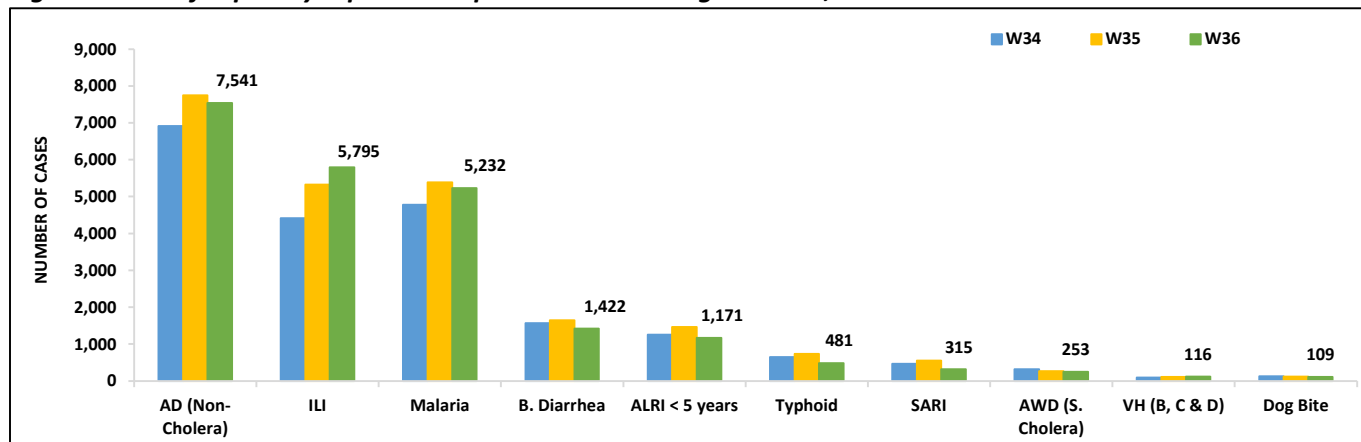


- AD (Non-Cholera), ILI, Malaria, B. Diarrhea, ALRI <5 years, Typhoid, SARI, AWD (S. Cholera), VH (B, C & D) and dog bite were the most frequently reported diseases from Balochistan province.
- AD (Non-Cholera) cases are mostly reported from Usta Muhammad, Gwadar and Jaffarabad while ILI cases are mostly reported from Gwadar, Quetta and Sibi.
- One case of AFP reported from Balochistan. It is suspected case and needs field verification.
- AD (Non-Cholera), Malaria, B. Diarrhea, ALRI <5 years, Typhoid, SARI, AWD (S. Cholera) and dog bite cases displayed a decreasing trend this week.

Table 3: District wise distribution of most frequently reported suspected cases during Week 36, Balochistan

Districts	AD Non-Cholera)	Malaria	ILI	B. Diarrhea	ALRI < 5 years	Typhoid	SARI	AWD (S.Cholera)	TB	CL
Barkhan	93	71	87	14	18	30	1	1	2	2
Chagai	140	264	60	55	0	16	2	19	0	2
Dera Bugti	96	75	203	55	57	24	22	0	0	0
Gwadar	609	1,080	248	71	1	15	3	6	NR	NR
Harnai	83	13	100	83	159	0	0	12	4	0
Hub	261	84	235	25	7	7	0	0	0	8
Jaffarabad	593	105	979	104	35	13	10	0	0	17
Jhal Magsi	243	496	303	2	19	1	0	0	0	9
Kalat	71	6	51	10	5	23	1	0	0	0
Kharan	138	367	44	63	0	4	25	0	0	0
Khuzdar	422	416	346	108	17	31	22	40	0	1
Killa Saifullah	231	4	190	42	80	9	0	0	0	0
Kohlu	51	120	66	38	24	12	21	NR	NR	NR
Lasbella	478	80	531	38	68	5	4	6	2	1
Loralai	245	334	84	35	51	29	19	3	0	10
Mastung	317	158	183	71	82	49	60	16	64	16
Musakhel	18	7	107	7	2	1	0	3	1	1
Naseerabad	471	3	225	17	8	58	1	0	16	18
Nushki	238	11	26	76	0	0	0	1	0	0
Panjgur	238	100	252	53	167	14	19	50	0	0
Pishin	268	261	49	122	37	12	5	61	0	9
Quetta	425	780	42	87	32	50	0	21	7	1
Sherani	35	44	3	11	3	5	5	0	0	0
Sibi	278	514	56	18	11	8	65	0	0	0
Sohbat pur	357	14	240	90	119	22	15	0	9	3
Surab	58	45	51	0	10	6	0	0	3	0
Usta Muhammad	935	125	342	88	137	12	5	0	8	9
Washuk	1	13	6	3	0	0	0	0	0	0
Ziarat	148	205	123	36	22	25	10	14	0	2
Total	7,541	5,795	5,232	1,422	1,171	481	315	253	116	109

Figure 3: Most frequently reported suspected cases during Week 36, Balochistan

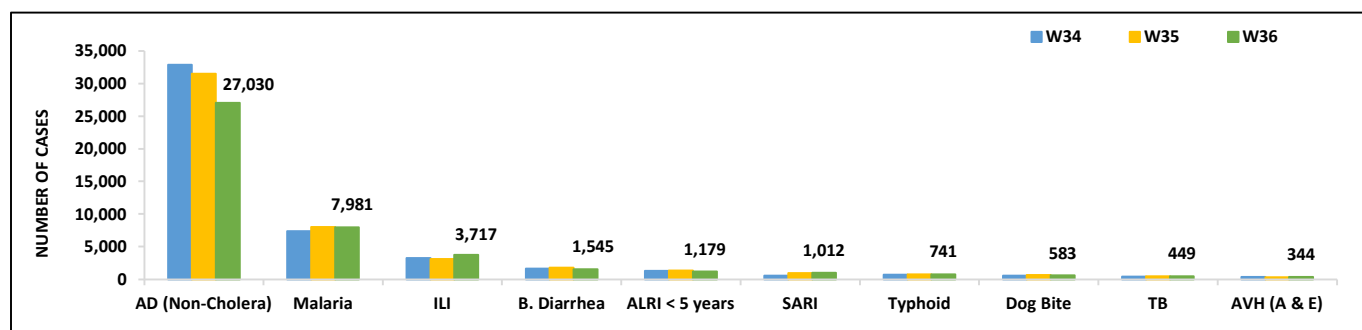


- Cases of AD (Non-Cholera) were highest followed by Malaria, ILI, B. Diarrhea, ALRI<5 Years, SARI, Typhoid , dog bite, TB and AVH (A & E) cases.
- AD (Non-Cholera), B. Diarrhea, ALRI<5 Years and dog bite cases showed a decreasing trend while ILI, B. SARI, TB and AVH (A & E) cases showed an increasing trend this week.
- Twenty-seven cases of AFP, Nine cases of HIV/ AIDS, Nineteen cases of Brucellosis reported from KP. All are suspected cases and require field verification.

Table 4: District wise distribution of most frequently reported suspected cases during Week 36, KP

Districts	AD (Non-Cholera)	Malaria	ILI	B.Diarrhea	SARI	ALRI <5 Years	Typhoid	Dog Bite	TB	AVH (A&E)
Abbottabad	745	25	36	4	16	0	44	4	23	0
Bajaur	1,199	313	41	132	302	59	6	47	14	36
Bannu	870	1,634	2	27	21	7	89	3	36	12
Battagram	171	3	327	0	0	0	0	0	0	0
Buner	354	387	0	0	29	0	6	5	4	0
Charsadda	761	292	492	19	59	0	52	1	3	17
Chitral Lower	501	23	44	34	8	31	11	13	5	1
Chitral Upper	207	6	7	9	9	14	21	1	1	0
D.I. Khan	1,273	340	0	18	3	0	2	12	55	0
Dir Lower	1,653	310	7	124	111	0	48	74	15	33
Dir Upper	1,109	15	92	11	12	0	6	0	16	2
Hangu	94	159	0	12	31	0	0	0	3	0
Haripur	976	26	180	19	22	1	20	2	16	57
Karak	349	328	67	26	13	73	6	11	11	0
Khyber	479	395	18	138	20	15	60	29	9	7
Kohistan Lower	107	12	0	8	0	60	1	0	0	0
Kohistan Upper	504	17	0	25	5	0	8	0	18	6
Kolai Palas	83	12	4	7	1	14	1	0	2	0
L & C Kurram	61	51	59	22	0	2	3	2	0	0
Lakki Marwat	724	252	0	19	10	0	12	21	12	0
Malakand	1,118	33	0	260	27	9	23	0	0	45
Mansehra	760	5	349	6	18	61	21	0	6	0
Mardan	604	51	0	6	198	0	0	3	9	0
Mohmand	173	372	118	24	4	129	10	10	0	8
North Waziristan	7	9	0	8	3	0	4	0	0	3
Nowshera	2,118	206	3	44	10	5	14	11	5	8
Orakzai	8	10	4	0	0	0	1	8	0	0
Peshawar	3,446	64	668	144	43	52	49	9	30	23
SD Peshawar	10	0	0	0	0	0	0	0	0	0
SD Tank	32	67	2	2	0	0	2	1	1	0
Shangla	1,479	1,870	0	15	20	21	23	37	94	5
SWA	134	134	165	19	6	69	24	6	4	0
Swabi	1,789	104	474	26	56	105	56	178	28	56
Swat	2,523	80	214	257	87	21	41	76	17	23
Tank	312	189	78	2	9	0	41	0	9	0
Tor Ghar	123	150	0	42	0	19	10	2	0	2
Upper Kurram	174	37	266	36	26	245	26	17	3	0
Total	27,030	7,981	3,717	1,545	1,179	1,012	741	583	449	344

Figure 4: Most frequently reported suspected cases during Week 36, KP



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

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

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

Figure 5: Most frequently reported suspected cases during Week 36, ICT

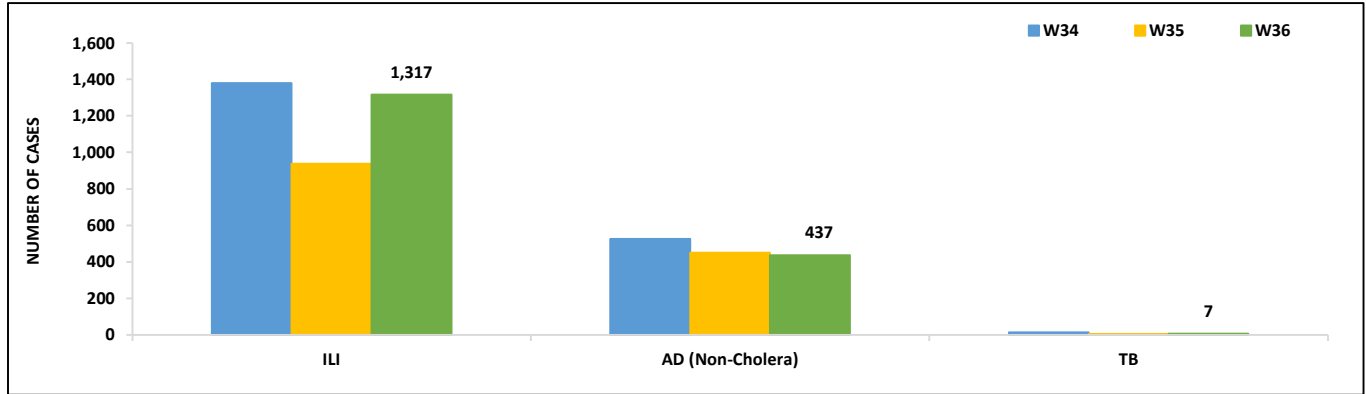


Figure 6: Week wise reported suspected cases of ILI, ICT

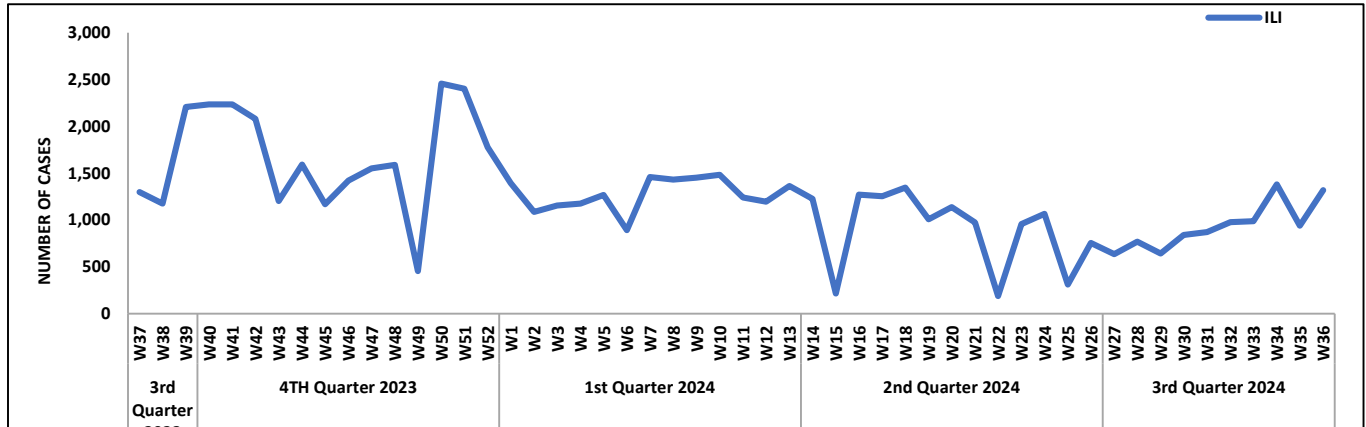


Figure 7: Most frequently reported suspected cases during Week 36, AJK

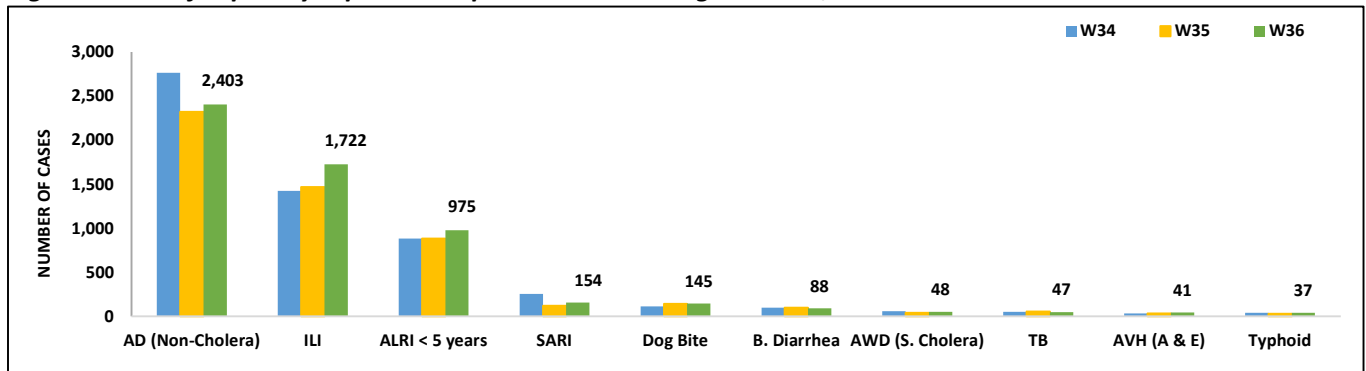


Figure 8: Week wise reported suspected cases of ILI and AD (Non-Cholera) AJK

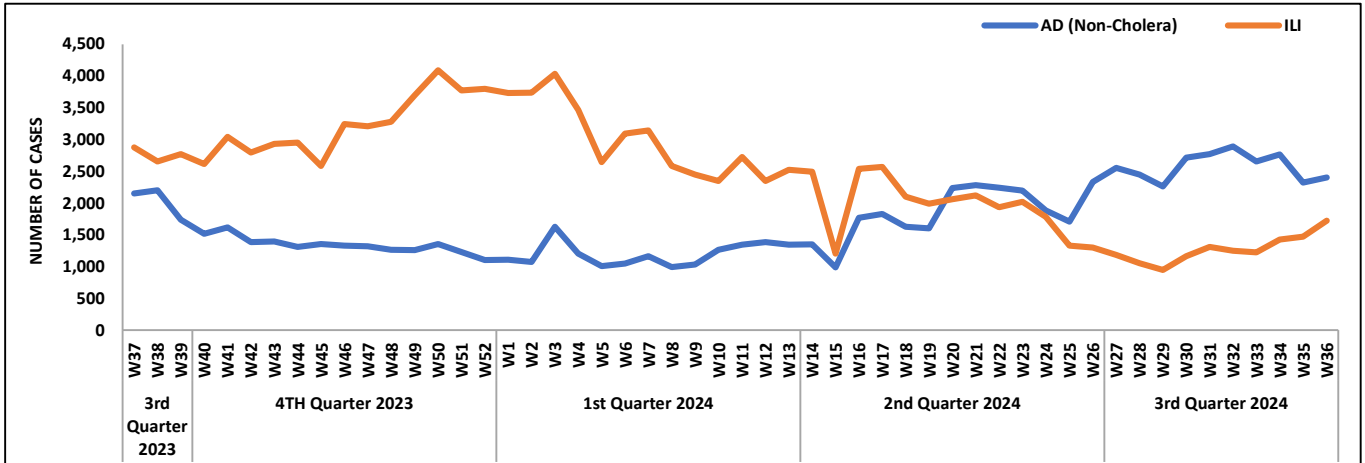


Figure 9: Most frequent cases reported during Week 36, GB

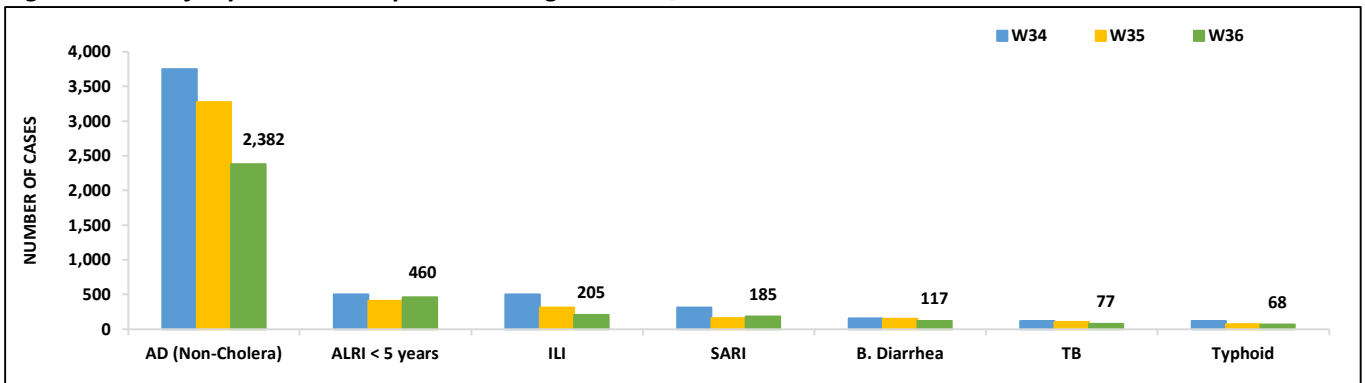
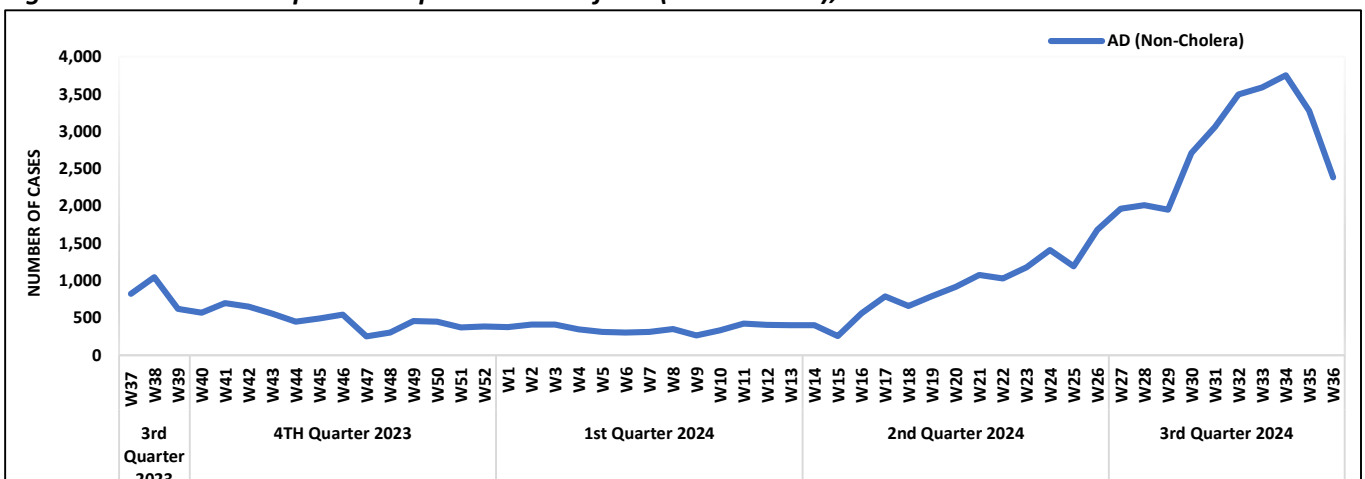


Figure 10: Week wise reported suspected cases of AD (Non-Cholera), GB



- 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 and Dengue cases displayed an increasing trend while dog bite, Typhoid, AWD (S. Cholera), B. Diarrhea, ALRI<5 Years and Measles cases displayed a decreasing trend this week.
- Nine cases of AFP, Eleven cases of HIV/ AIDS are reported from Punjab. All are suspected cases and need field verification.

Figure 11: Most frequently reported suspected cases during Week 36, Punjab.

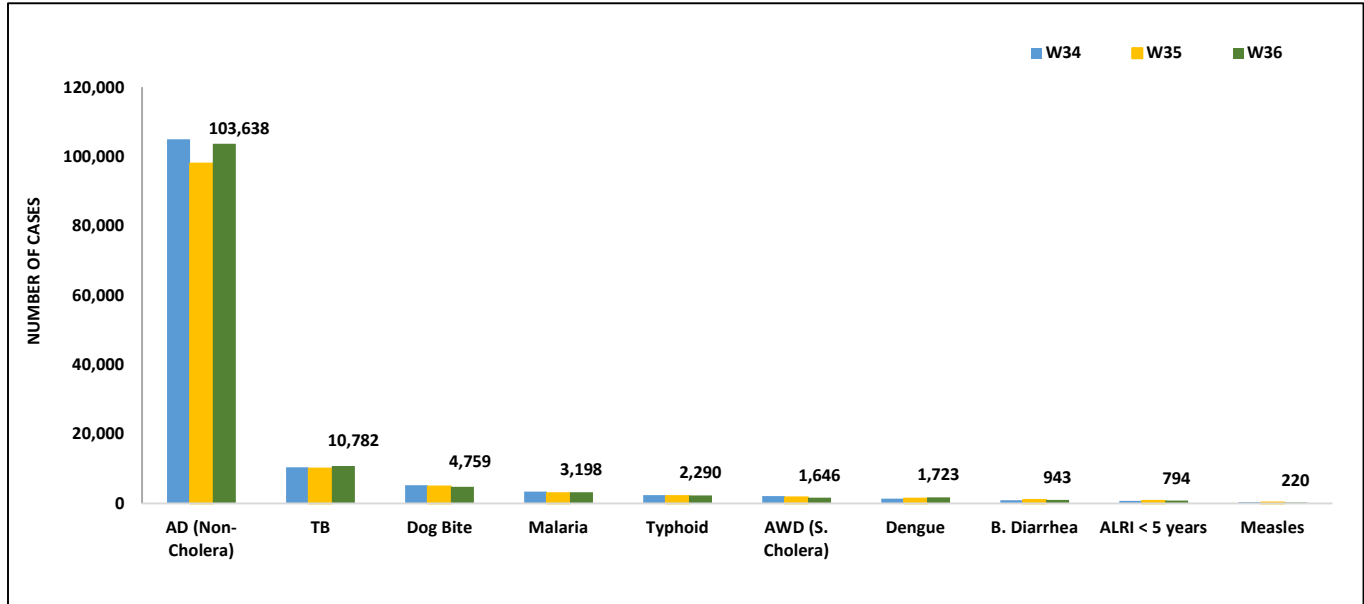
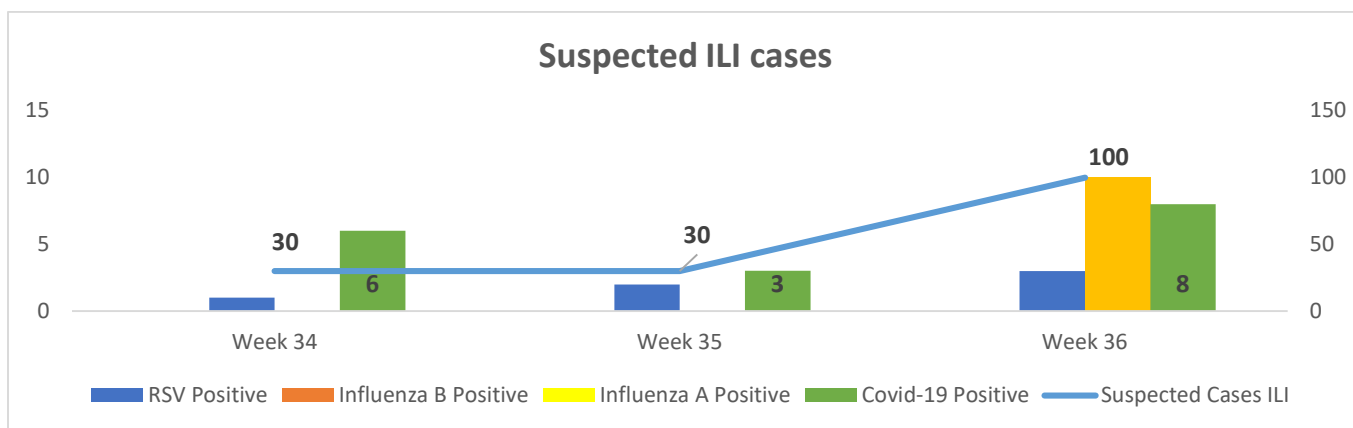
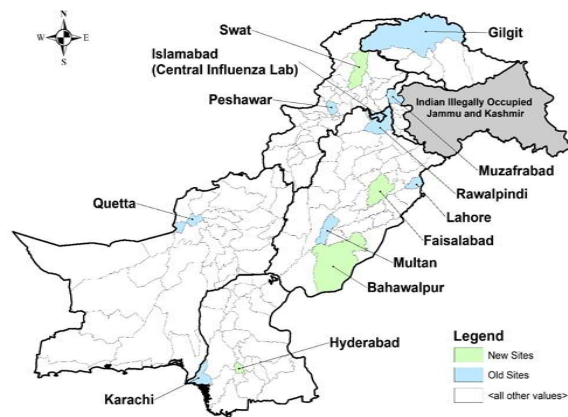


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 36

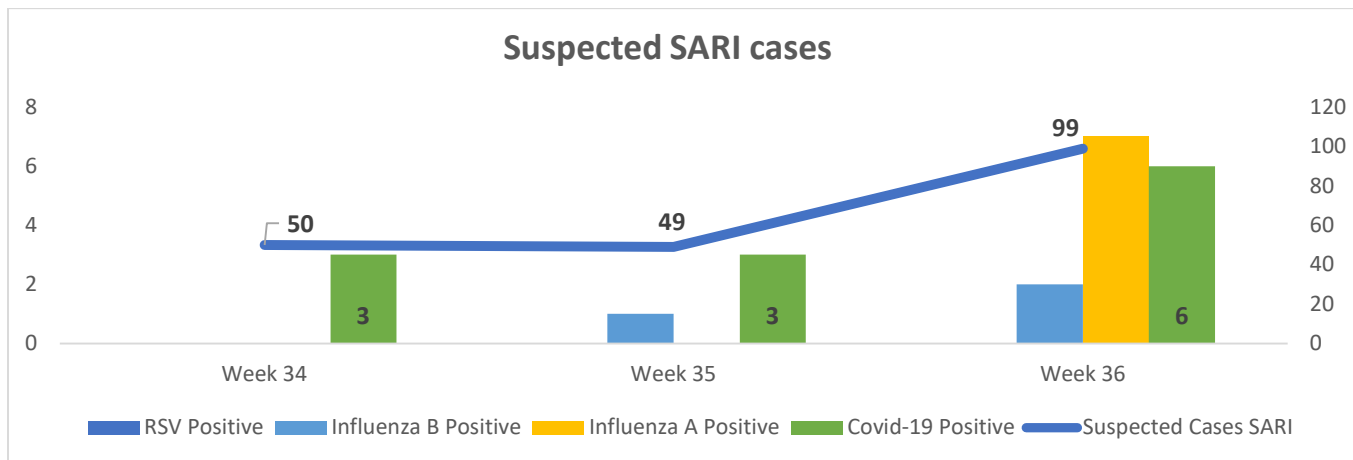
Diseases	Sindh		Balochistan		KPK		ISL		GB		Punjab		AJK	
	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos	Total Test	Total Pos
AWD (S. Cholera)	7	2	-	-	6	1	-	-	-	-	-	-	-	-
AD (Non-Cholera)	100	0	-	-	-	-	-	-	-	-	-	-	-	-
Malaria	1,514	214	-	-	-	-	-	-	-	-	-	-	-	-
CCHF	-	-	18	5	-	-	1	0	-	-	-	-	-	-
Dengue	1,346	38	-	-	-	-	22	0	-	-	-	-	-	-
VH (B)	3,273	308	174	142	-	-	-	-	140	4	-	-	-	-
VH (C)	3,283	280	-	-	-	-	-	-	115	0	-	-	-	-
VH (A&E)	-	-	-	-	8	1	-	-	-	-	-	-	-	-
Covid-19	-	-	24	0	4	0	2	1	35	0	-	-	-	-
HIV	23	0	-	-	-	-	-	-	-	-	-	-	-	-
Influenza A	0	0	0	0	6	1	41	2	0	0	100	10	-	-
TB	22	0	-	-	-	-	-	-	-	-	-	-	-	-
Syphilis	20	0	-	-	-	-	-	-	-	-	-	-	-	-
Typhoid	549	8	-	-	-	-	-	-	-	-	-	-	-	-
Diphtheria (Probable)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pertussis	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-POX	-	-	-	-	11	0	4	0	-	-	-	-	-	-
Chickenpox/Varicella	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chikungunya	-	-	-	-	-	-	-	-	-	-	-	-	-	-
*Measles	63	33	14	9	258	110	3	3	0	0	147	49	18	9
*Rubella	63	1	14	0	258	11	3	1	0	0	147	0	18	1



The National Influenza Centre (NIC) comprises twelve Laboratory-Based sentinel surveillance sites strategically located at major tertiary care hospitals across Pakistan providing comprehensive geographical coverage. These sites collect samples from individuals with Influenza-Like Illness (ILI) and Severe Acute Respiratory Infections (SARI), which are then analyzed for high-impact Respiratory pathogens with epidemic and pandemic potential, including Influenza, SARS-CoV-2, and Respiratory Syncytial Virus.



From weeks 33-36, 2024, a total of 180 ILI samples were collected, out of which 18 positives for Covid 19, (17) Positive for Influenza types A (10) & 7 for Inf-B and 145 tested negatives,



For SARI Cases total of 217 samples were collected 195 tested negative, 12 Positives for Covid-19, (10) Positive for Influenza Types A (7) % 3 positive for Inf-B. No Sample was Positive for RSV.

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 36, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	111	106	95%
	Bannu	239	133	56%
	Battagram	63	16	25%
	Buner	34	26	76%
	Bajaur	44	39	89%
	Charsadda	59	55	93%
	Chitral Upper	34	28	82%
	Chitral Lower	35	35	100%
	D.I. Khan	114	113	99%
	Dir Lower	74	74	100%
	Dir Upper	53	41	77%
	Hangu	22	13	59%
	Haripur	72	70	97%
	Karak	35	35	100%
	Khyber	52	21	40%
	Kohat	61	0	0%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	19	95%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	68	97%
	Lower & Central Kurram	42	23	55%
	Upper Kurram	41	34	83%
	Malakand	42	33	79%
	Mansehra	136	97	68%
	Mardan	80	57	71%
	Nowshera	55	53	96%
	North Waziristan	12	5	42%
	Peshawar	151	108	72%
	Shangla	37	34	92%
	Swabi	63	60	95%
	Swat	77	68	88%
	South Waziristan	134	54	40%
	Tank	34	31	91%
	Torghar	14	14	93%
Mohmand	68	57	84%	
SD Peshawar	5	1	20%	
SD Tank	58	10	17%	
Orakzai	68	8	12%	
Balochistan	Mirpur	37	37	100%
	Bhimber	20	20	100%
	Kotli	60	60	100%
	Muzaffarabad	45	45	98%



Azad Jammu Kashmir	Poonch	46	45	98%
	Haveli	39	38	97%
	Bagh	40	40	100%
	Neelum	39	38	97%
	Jhelum Vellay	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	21	21	100%
	CDA	15	7	47%
Balochistan	Gwadar	25	21	84%
	Kech	44	0	0%
	Khuzdar	74	64	86%
	Killa Abdullah	26	0	0%
	Lasbella	55	55	100%
	Pishin	69	22	32%
	Quetta	39	22	56%
	Sibi	36	20	56%
	Zhob	39	0	0%
	Jaffarabad	16	16	100%
	Naserabad	32	31	97%
	Kharan	30	30	100%
	Sherani	15	4	27%
	Kohlu	75	17	23%
	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	13	41%
	Mastung	45	45	100%
	Loralai	33	30	91%
	Killa Saifullah	28	27	96%
	Ziarat	29	16	55%
	Duki	31	0	0%
	Nushki	32	29	91%
	Dera Bugti	45	40	89%
	Washuk	46	1	2%
	Panjgur	38	24	63%
	Awaran	23	0	0%
	Chaman	25	0	0%
	Barkhan	20	19	95%
Hub	33	30	91%	
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	40	100%

	Diامر	62	62	100%
	Astore	54	54	100%
	Shigar	27	27	100%
	Skardu	52	52	100%
	Ganche	29	29	100%
	Kharmang	18	18	100%
Sindh	Hyderabad	73	63	86%
	Ghotki	64	64	100%
	Umerkot	43	43	100%
	Naushahro Feroze	107	90	84%
	Tharparkar	282	248	88%
	Shikarpur	59	59	100%
	Thatta	52	52	100%
	Larkana	67	67	100%
	Kamber Shadadkot	71	71	100%
	Karachi-East	23	20	87%
	Karachi-West	20	20	100%
	Karachi-Malir	37	37	100%
	Karachi-Kemari	18	16	89%
	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	121	98%
	Sukkur	63	61	97%
	Dadu	88	88	100%
	Sanghar	100	100	100%
	Jacobabad	44	44	100%
	Khairpur	169	169	100%
	Kashmore	59	59	100%
	Matiari	42	40	95%
	Jamshoro	72	72	100%
	Tando Allahyar	54	52	100%
Tando Muhammad Khan	40	40	100%	
Shaheed Benazirabad	122	122	100%	

Table 7: IDSR reporting Tertiary care hospital Week 36, 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%

Public Health Bulletin- Pakistan: Special Edition World Field Epidemiology Day.

Field Epidemiology Training Program in Pakistan: Building Capacity to Protect Public Health

Field epidemiology is a discipline that uses scientific methods to investigate and control diseases in populations. Field epidemiologists play a vital role in protecting public health by identifying and responding to disease outbreaks, evaluating the effectiveness of public health interventions, and developing new strategies to prevent and control diseases. The Field Epidemiology Training Program (FELTP) in Pakistan offers a comprehensive approach to developing the skills and knowledge necessary for effective field epidemiology practice. By providing two distinct training programs, the FELTP caters to the diverse needs of public health professionals. The Short-Term Frontline Training Course equips frontline healthcare workers with essential epidemiological tools to respond swiftly to public health emergencies. In contrast, the Advanced Field Epidemiology Course offers a deep dive into the intricacies of field epidemiology, preparing professionals for leadership roles in public health. This tailored approach ensures

that the FELTP is well-positioned to meet the evolving demands of public health in Pakistan.

The FELTP curriculum is based on the International Standards for Training in Field Epidemiology (ISTFE), which are developed by the Centers for Disease Control and Prevention (CDC).

The program includes a mix of classroom instruction, field practicums, and mentored research projects. FELTP graduates work in a variety of settings, including government agencies, non-governmental organizations, and academic institutions. They play a leading role in public health surveillance, outbreak response, and disease prevention and control.

The FELTP in Pakistan has had a significant impact on the country's public health capacity. FELTP graduates have played a key role in responding to major public health challenges, including the COVID-19 pandemic, measles outbreaks, and cholera outbreaks. They have investigated outbreaks, developed response plans, and implemented control measures to protect public health. FELTP graduates have also made significant contributions to public health research and policy development. They have published research in leading peer-reviewed journals and developed evidence-based guidelines for public health practice.

The FELTP is accredited by the CDC, demonstrating its commitment to excellence in field epidemiology training. The program's accreditation ensures that FELTP graduates have the competencies necessary to work effectively in field epidemiology positions. The FELTP is currently in its 16th cohort, with advanced course classes being commenced at the National Institutes of Health (NIH) in Islamabad. The program's longevity and continued success are testaments to its importance in building Pakistan's public health workforce.



The FELTP in Pakistan recognizes the importance of collaboration and partnership in addressing complex public health challenges. By fostering a collaborative environment, the program aims to leverage diverse perspectives and experiences to develop effective solutions. The FELTP actively seeks candidates from various backgrounds, including those with different professional experiences, cultural perspectives, and geographic locations. This diversity brings a wealth of knowledge and insights to the program, enhancing its ability to address the unique needs of different communities. Additionally, the FELTP provides training on interdisciplinary collaboration and effective communication skills to ensure that graduates can work seamlessly with colleagues from various fields and backgrounds.

The Field Epidemiology Training Program in Pakistan is a vital resource for building public health capacity and protecting the health of the Pakistani people. FELTP graduates play a leading role in public health surveillance, outbreak response, and disease prevention and control. The FELTP is committed to promoting diversity and inclusion in the field of epidemiology, and recognizes that diverse perspectives and experiences are essential to developing effective public health solutions. As the program continues to grow and evolve, it will remain a critical component of Pakistan's public health infrastructure, preparing future generations of field epidemiologists to meet the country's public health challenges.

The FELTP's impact extends beyond Pakistan's borders. The program is a model for field epidemiology training in the region and has contributed to the development of FELTPs in other countries. FELTP graduates have also collaborated with international partners to respond to global public health threats. The program's commitment to excellence in field epidemiology training has made it a leader in the global field epidemiology community.

In conclusion, the Field Epidemiology Training Program in Pakistan is a highly successful

program that has made significant contributions to the country's public health capacity. The program's commitment to excellence, diversity, and inclusion has prepared a cadre of skilled field epidemiologists who are protecting the health of the Pakistani people. As the program continues to evolve, it will remain a vital resource for building public health capacity in Pakistan and beyond.

A Collaborative Triumph, Harnessing the Power of Partnership for Public Health:

The Pakistan Public Health Bulletin:

The Pakistan Public Health Bulletin (PHB), a groundbreaking initiative launched in June 2023, has emerged as a cornerstone of public health communication in Pakistan. Born from a collaborative effort between the National Institutes of Health (NIH) and the US Centers for Disease Control and Prevention (US-CDC), the PHB has rapidly become an indispensable resource for healthcare professionals and citizens alike.

A Foundation Built on Collaboration

The PHB's success story is a testament to the power of partnership. The US-CDC's invaluable training and logistical support, including personnel recruitment and IT resources, provided the program with a solid foundation. Building on this initial collaboration, the PHB has attracted the support of esteemed organizations such as the UK Health Security Agency (UKHSA), World Health Organization (WHO), SafetyNet Inc., and others.

Bridging the Gap Between Data and Action



The PHB's unique value lies in its ability to transform complex surveillance data into actionable insights. By converting weekly Integrated Disease Surveillance and Response (IDSR) reports into a user-friendly format, the bulletin empowers public health professionals to make informed decisions. The PHB's visually appealing layout, engaging editorials, and clear graphical summaries make understanding surveillance data effortless.

A Knowledge Hub for Citizens

Beyond serving as a resource for healthcare professionals, the PHB also plays a crucial role in empowering citizens. The bulletin's website serves as a knowledge hub, offering a wealth of public health educational messages. By accessing this information, citizens can take charge of their health and make informed decisions about disease prevention and health promotion.

A Tapestry of Voices

The PHB's success is not merely about statistics; it's about fostering a strong collaborative spirit. The NIH, along with its partners, has ensured that the bulletin's content is diverse and relevant. From Vaccination Superintendents to Health Managers, from Professors of Pediatrics to Health Ministers, the PHB features insights from a wide range of public health professionals. This blend of perspectives provides a comprehensive and well-rounded view of Pakistan's public health landscape.

A Commitment to Quality

The PHB's commitment to quality is evident in its rigorous editorial process. Senior and associate editors work closely with partners like SafetyNet Inc. to ensure that the information presented in the bulletin is accurate, clear, and adheres to best practices in public health communication.

A Brighter Future for Public Health

The first year of the PHB stands as a compelling example of what can be achieved through collaboration. By providing timely, accurate information and fostering knowledge sharing, the PHB empowers stakeholders at all levels to make informed decisions and safeguard public health for all citizens. As the PHB continues to evolve, it holds the promise of further strengthening Pakistan's public health infrastructure and paving the way for a healthier and more resilient future.

Mpox Update: Pakistan's Vigilance Amidst Global Resurgence.

The recent resurgence of Clade I Mpox prompted the World Health Organization (WHO) to declare it a Public Health Emergency of International Concern (PHEIC) on August 14, 2024.

The current situation highlights the necessity for heightened vigilance and proactive public health measures to prevent the potential spread of Mpox within the country. While no local cases have been confirmed so far, the presence of suspected cases and the ongoing international outbreak necessitate robust preventive strategies. Health authorities are focusing on enhancing surveillance, strengthening airport screening processes, and increasing public awareness to mitigate the risk of an outbreak. These measures aim to protect public health and ensure that Pakistan remains vigilant in the face of this emerging infectious threat.

Pakistan has reported a total of 15 Mpox cases, including one death, since the beginning of 2023. Among these, total 6 cases have occurred in 2024 and 5 cases have occurred after Mpox has been declared PHEIC. All positive cases in the country have been identified as Clade IIb strain, however, no indigenous transmission has been documented within Pakistan to date.



NIH Pakistan's Ongoing Efforts to Combat Mpox

To effectively manage the outbreak, the National Command and Operations Centre (NCOC) NIH conducts daily meetings to evaluate the situation, analyze data, and develop recommendations. Provincial directives have established referral hospitals and quarantine centers, while hospitals nationwide have implemented stringent infection control measures. Furthermore, public health laboratories are on high alert for testing.

NIH Pakistan has strengthened its surveillance infrastructure to rapidly identify and monitor Mpox cases, facilitating prompt interventions. Additionally, the organization has launched awareness campaigns to educate the public about Mpox symptoms, transmission, and prevention measures. These materials are readily accessible on the NIH webpage and social media platforms.

As part of its comprehensive response, the country is expediting plan and procedures for Mpox vaccines procurement for high-risk groups. Vaccination is a crucial strategy for mitigating the outbreak's impact.

Notes from the field:

Entomological survey for investigating Dengue outbreak in district Hub, Balochistan, Pakistan

Introduction

Dengue fever, a significant public health threat in Pakistan, is primarily transmitted by the *Aedes aegypti* mosquito. This study aimed to investigate the prevalence, distribution, and seasonal variations of *Aedes aegypti* larvae in Hub district, a coastal administrative district in Balochistan, Pakistan. The district has a total area of 6,716 km² and a population of approximately 339,640.

Methods

The study was conducted in Hub district, For the entomological surveillance, households were visited to identify water-holding containers. Various standard sampling equipment, including larval dippers, ladles, netting, strainers, and droppers, were used to collect larvae. A LED zooming torch was also employed to illuminate the containers and facilitate clear observation of the larvae. Collected specimens were stored in labeled plastic bottles and transported to a laboratory for further analysis.

Entomological indices, such as the House Index, Container Index, and Breteau Index, were calculated to assess the prevalence of *Aedes aegypti* larvae. The House Index measures the percentage of houses with at least one positive container, the Container Index indicates the percentage of all water-holding containers infested with larvae or pupae, and the Breteau Index represents the number of positive containers per 100 houses inspected.

Results

A total of 100 households were surveyed in Hub district, Balochistan, Pakistan, with 720 water-holding containers inspected. Of these, 372 were found to contain *Aedes aegypti* larvae, resulting in a positivity rate of 51.1%. When examining outdoor containers (344 total), 46 were positive for larvae, yielding a positivity rate of 13.37%. Overall, 420 indoor and outdoor containers were inspected, and 320 were positive for *Aedes aegypti* larvae, leading to an overall positivity rate of 61.5%.

For the entomological indices, only data from indoor water containers were used. The House Index (HI), Container Index (CI), and Breteau Index (BI) were estimated to be 61%, 27.1%, and 12%, respectively. Drums were identified as the most common breeding site for *Aedes aegypti* larvae, with a positivity rate of 40.17%. Other breeding sites included underground water tanks (29.07%), overhead water tanks (22.8%), earthen pots (22.6%),



discarded containers (12.1%), and air-conditioner/refrigerator drip water (10.7%).

Among outdoor breeding sites, plant nurseries had the highest positivity rate at 17.1%, followed by Dhaba hotels (15.5%). The peak seasons for *Aedes aegypti* larvae were observed in August and September, likely due to favorable climatic conditions after the monsoon season, including increased rainfall and suitable temperature and humidity.

Regarding container coverage, 1.91% of positive water containers were properly covered, 49.76% were partially covered, and 48.3% were uncovered.

Discussion

Aedes aegypti mosquitoes, known for their role in transmitting dengue fever, were found to thrive in a variety of small, water-filled containers, both within and around residential areas. These versatile insects demonstrated a preference for breeding in stagnant water, often found in household items like underground water tanks, overhead water tanks, earthen pots, drums, and discarded containers.

The increased prevalence of *Aedes aegypti* larvae during the months of August and September can be attributed to the favorable climatic conditions that followed the monsoon season. The combination of elevated rainfall and suitable temperatures and humidity provided ideal breeding grounds for these mosquitoes. The abundant water sources and conducive environmental conditions facilitated the rapid development and proliferation of *Aedes aegypti* populations.

Understanding these breeding habits and seasonal patterns is crucial for implementing effective dengue prevention and control measures. Strategies such as eliminating stagnant water sources, promoting proper water storage practices, and conducting regular fogging can significantly reduce mosquito populations and mitigate the risk of dengue transmission.

Recommendations

To effectively control *Aedes aegypti* and reduce the risk of dengue transmission, the following recommendations are proposed:

- Implementation of community-based surveillance programs to monitor for *Aedes aegypti* larvae.
- Promotion of proper water storage practices, such as covering containers and removing unnecessary water-holding objects.
- Regular fogging to reduce adult mosquito populations.
- Community education campaigns to raise awareness about dengue prevention and control measures.

Knowledge hub

Field Epidemiology: A Cornerstone of Public Health

Field epidemiology, the study of diseases and outbreaks within populations, serves as a crucial tool for protecting public health. By identifying disease causes, tracking their spread, and developing effective interventions, field epidemiologists play a pivotal role in disease control.

One of the key contributions of field epidemiology is its ability to provide valuable insights into the factors influencing disease occurrence and spread. This knowledge is essential for designing targeted prevention strategies. For instance, during the COVID-19 pandemic, field epidemiologists played a crucial role in understanding how the virus spreads and developing effective measures like vaccination and social distancing.

Another crucial role of field epidemiology is the early detection and response to disease outbreaks. By identifying and responding to outbreaks promptly, field epidemiologists can help



prevent the spread of diseases and minimize their impact. For example, during the Ebola outbreak in West Africa, field epidemiologists were instrumental in identifying the source of the outbreak and implementing measures to contain its spread.

Furthermore, field epidemiology plays a vital role in assessing the efficacy of prevention and control interventions. By evaluating the impact of strategies like vaccines and public health measures, field epidemiologists help ensure the use of most effective approaches to protect public health. For instance, field epidemiologists have played a key role in evaluating the effectiveness of COVID-19 vaccines and other interventions.

Field epidemiology has been applied to a wide range of diseases, from infectious diseases like smallpox and COVID-19 to chronic diseases like HIV/AIDS, malaria, and tuberculosis. It has also been instrumental in addressing emerging infectious diseases such as Zika and Ebola.

In conclusion, field epidemiology is an indispensable tool for safeguarding public health. By understanding disease patterns, detecting outbreaks early, and evaluating interventions, field epidemiologists contribute significantly to disease control and the well-being of communities worldwide.



World Field Epidemiology



Disease detectives on the frontlines Across Pakistan







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