

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.

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Overview

IDSR Reports

Ongoing Events

Field Reports

Public Health Bulletin - Pakistan, Week 01, 2024

This week's bulletin reveals critical trends and insights relevant to public health in Pakistan:

Acute Diarrhea (Non-Cholera), Influenza-like Illness (ILI), and Malaria top the list of reported cases this week, raising flags for public health vigilance. Pertussis cases in Balochistan require close attention. All reported cases are suspected and need thorough field investigation.

This edition delves into ongoing investigations of Enteric Fever Outbreak in District Bolan, Baluchistan and Diphtheria Outbreak Investigation in Dura Goth Uthal, District Lasbela. Additionally, the editor provides an update on the progress of the Pakistan Public Health Bulletin.

Empowering individuals is key to disease control. The closing section features "How to Prevent and Control Communicable Diseases: A Guide for Everyone", emphasizing respiratory health awareness, good hygiene practices, and timely medical consultation.

Our public health team urges immediate medical attention for any suspected infections. Remember, vigilance and collaboration are our strongest defenses against disease outbreaks.

Sincerely,
The Chief Editor



- During week 1, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by ILI, Malaria, ALRI <5 years, B. Diarrhea, VH (B, C & D), SARI, Typhoid and dog bite.
- Cases of Pertussis were reported in high numbers from Balochistan. All are suspected cases and need field investigation
- Twenty suspected cases of AFP reported from KP and eleven from Sindh. Field investigation required to verify the cases.

IDSR compliance attributes

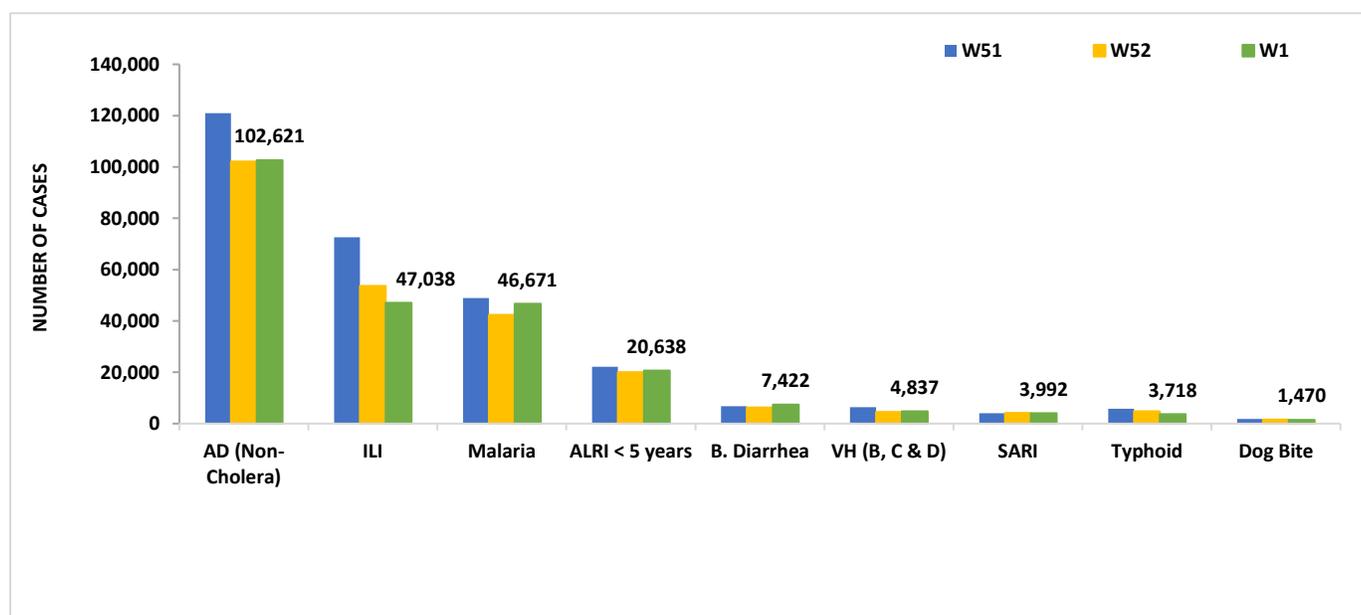
- The national compliance rate for IDSR reporting in 124 implemented districts is 74%
- AJK and Sindh are the top reporting region with a compliance rate of 98% and 90% followed by Gilgit Baltistan 86 and Baluchistan 74%
- The lowest compliance rate was observed in KPK.

<i>Region</i>	<i>Expected Reports</i>	<i>Received Reports</i>	<i>Compliance (%)</i>
<i>Khyber Pakhtunkhwa</i>	2658	1488	56
<i>Azad Jammu Kashmir</i>	382	376	98
<i>Islamabad Capital Territory</i>	70	48	69
<i>Balochistan</i>	1179	867	74
<i>Gilgit Baltistan</i>	390	337	86
<i>Sindh</i>	2088	1886	90
<i>National</i>	6767	5002	74

Table 1: Province/Area wise distribution of most frequently reported suspected cases during week 01, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	1,097	4,776	382	167	10,494	55,772	29,933	102,621
ILI	3,692	9,091	605	1,392	6,991	NR	25,267	47,038
Malaria	74	4,713	0	1	2,618	2,630	36,635	46,671
ALRI < 5 years	1,933	2,526	672	6	2,439	NR	13,062	20,638
B.Diarrhea	50	1,429	61	4	459	2,577	2,842	7,422
VH (B, C & D)	7	87	1	0	44	NR	4,698	4,837
SARI	553	1,154	415	0	1,482	NR	388	3,992
Typhoid	41	646	44	1	391	1,377	1,218	3,718
Dog Bite	23	126	1	0	124	NR	1,196	1,470
AVH(A&E)	21	33	5	0	140	NR	514	713
Mumps	29	64	8	1	60	NR	337	499
Measles	8	24	0	2	340	NR	123	497
AWD (S. Cholera)	40	276	80	0	32	NR	49	477
CL	0	163	0	0	233	18	5	419
Pertussis	5	158	0	0	41	NR	13	217
Chickenpox/ Varicella	2	8	10	2	64	44	33	163
Gonorrhea	0	66	2	0	6	NR	8	82
Dengue	0	3	0	0	0	NR	53	56
AFP	1	1	0	0	20	NR	11	33
Syphilis	0	23	0	0	0	NR	3	26
Chikungunya	0	0	0	0	17	NR	0	17
Meningitis	2	1	0	0	9	NR	3	15
VL	0	3	0	0	1	NR	8	12
Diphtheria (Probable)	0	4	2	0	5	NR	0	11
NT	0	1	0	0	8	NR	0	9
Rubella (CRS)	0	0	0	0	0	NR	4	4
HIV/AIDS	0	2	0	0	0	NR	0	2
Brucellosis	0	0	0	0	2	NR	0	2

Figure 1: Most frequently reported suspected cases during week 01, Pakistan.

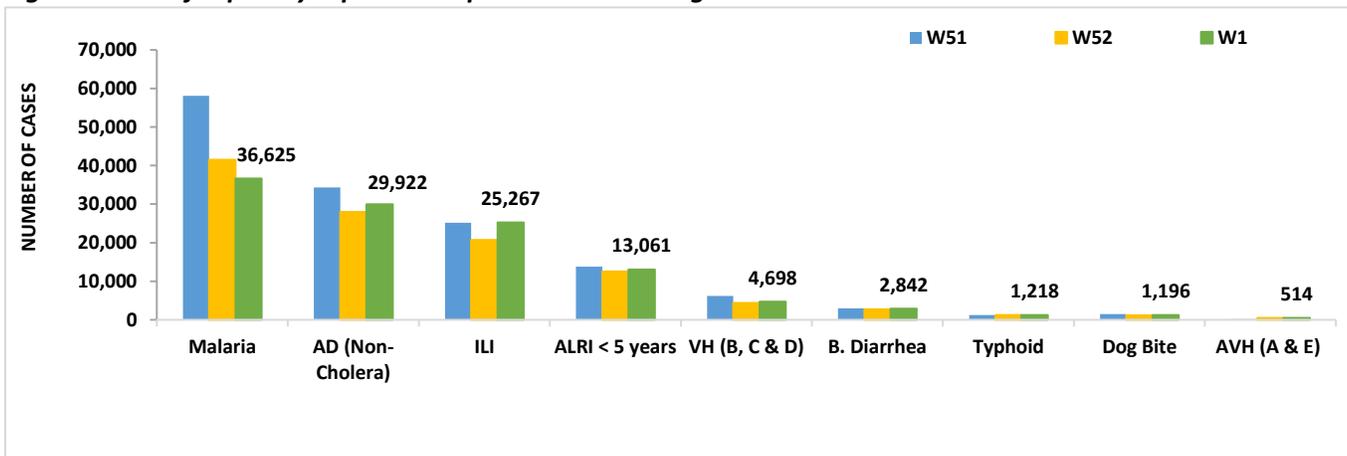


- Malaria cases were maximum followed by AD (Non-Cholera), ILI, ALRI<5 Years, VH (B, C, D), B. Diarrhea, Typhoid, dog bite and AVH (A&E).
- Malaria cases are from Larkana, Khairpur, Kamber and Dadu whereas AD cases are mostly from Khairpur, Tharparker and Dadu.
- Eleven cases of AFP reported from Sindh.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

Table 2: District wise distribution of most frequently reported suspected cases during week 01, Sindh

DISTRICTS	Malaria	AD (Non-Cholera)	ILI	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Typhoid	Dog Bite	AVH(A&E)
Badin	1,668	1,902	544	684	292	155	26	43	0
Dadu	2,639	2,204	0	951	3	371	127	50	9
Ghotki	281	398	0	531	254	49	1	199	2
Hyderabad	147	723	427	74	41	25	14	0	0
Jacobabad	1,219	591	468	971	117	64	10	73	0
Jamshoro	1,565	1,066	89	266	99	63	71	4	3
Kamber	2,663	1,051	0	421	279	112	32	39	0
Karachi Central	69	1,032	2,453	141	350	26	114	0	3
Karachi East	89	656	478	63	0	14	2	5	0
Karachi Keamari	6	207	70	48	0	0	2	0	0
Karachi Korangi	68	229	132	2	0	2	0	0	0
Karachi Malir	65	666	2,716	342	11	45	23	37	4
Karachi South	39	86	2	0	0	0	0	0	0
Karachi West	161	832	800	261	29	41	30	27	10
Kashmore	1,568	467	911	297	53	44	9	158	0
Khairpur	4,016	2,555	3,993	1,126	545	511	365	69	4
Larkana	4,207	1,392	9	699	122	214	2	0	0
Matiari	921	972	35	588	264	68	13	21	1
Mirpurkhas	2,294	1,738	4,228	968	159	96	8	48	3
Naushero Feroze	783	512	866	142	52	35	40	70	0
Sanghar	2,275	1,405	74	696	569	59	61	120	3
Shaheed Benazirabad	1,126	1,427	0	515	87	93	172	28	0
Shikarpur	1,453	810	5	172	189	104	2	77	0
Sujawal	608	646	0	158	16	54	5	20	19
Sukkur	1,570	902	1,867	364	272	175	4	49	0
Tando Allahyar	809	876	1,322	361	165	92	9	4	0
Tando Muhammad Khan	618	580	0	227	102	64	3	1	0
Tharparkar	1,836	2,228	2,945	1,306	23	161	27	3	8
Thatta	1,136	962	833	428	264	50	15	51	444
Umerkot	736	818	0	260	341	55	31	0	1
Total	36,635	29,933	25,267	13,062	4,698	2,842	1,218	1,196	514

Figure 2: Most frequently reported suspected cases during week 01 Sindh

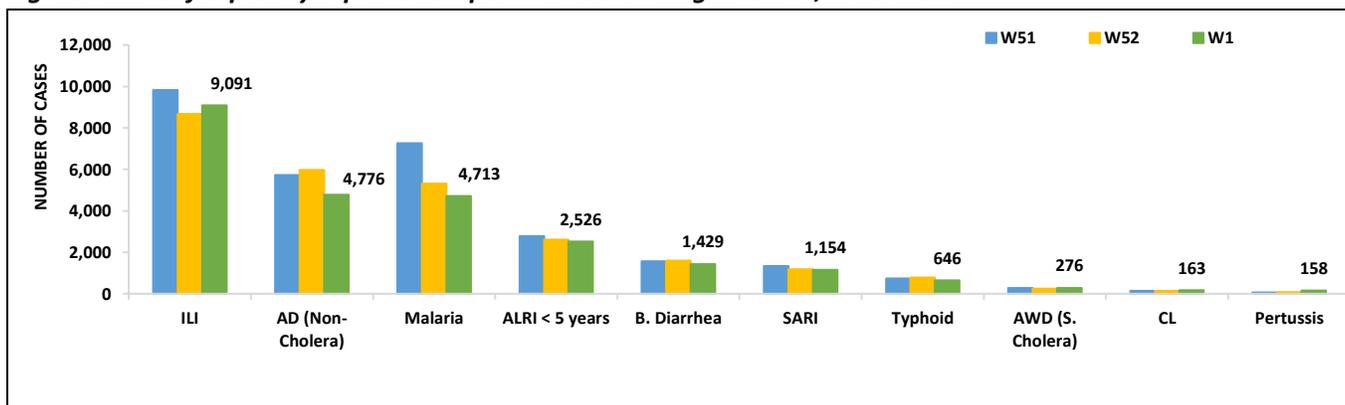


- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, AWD (S. Cholera), CL and Pertussis were the most frequently reported diseases from Balochistan province.
- Declining trend for AD (Non-Cholera) and Malaria cases observed this week.
- Cases of Pertussis were reported in high numbers from Kohlu and Harnai and CL from Jaffarabad. All are suspected cases and need field investigation to verify the cases.

Table 3: District wise distribution of most frequently reported suspected cases during week 01, Balochistan

Districts	ILI	AD Non-Cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	AWD (S.Cholera)	CL	Pertussis
Awaran	22	31	68	5	16	4	3	8	0	3
Barkhan	208	99	35	115	18	9	45	19	0	4
Chagai	382	143	20	0	36	2	23	8	0	1
Chaman	276	74	5	6	113	37	77	2	2	12
Dera Bugti	68	63	187	67	57	15	12	0	0	0
Duki	21	17	6	15	8	23	3	2	1	0
Gwadar	733	299	33	33	43	0	5	0	0	0
Harnai	15	97	87	221	83	0	1	8	0	30
Hub	112	140	192	28	53	95	5	0	9	2
Jaffarabad	128	292	405	42	42	29	3	0	45	4
Jhal Magsi	405	239	502	41	11	14	7	0	0	7
Kachhi (Bolan)	130	141	232	28	48	59	32	16	1	3
Kalat	7	30	12	15	9	4	17	0	0	0
Kech (Turbat)	1,031	354	254	93	31	3	NR	NR	NR	NR
Kharan	381	93	30	0	38	8	5	11	0	0
Khuzdar	134	74	71	3	40	3	5	0	27	0
Killa Saifullah	10	108	120	151	43	30	15	0	7	9
Kohlu	768	201	120	59	140	176	40	37	1	50
Lasbella	82	244	495	141	22	33	4	0	22	0
Loralai	399	119	48	75	51	117	22	1	1	0
Mastung	367	191	39	107	43	126	22	7	6	0
Musa Khel	121	75	96	58	20	29	22	18	0	9
Naseerabad	0	197	329	11	13	0	40	0	0	0
Panjgur	159	123	92	176	51	22	14	17	3	6
Pishin	140	4	0	34	14	0	5	0	2	0
Quetta	1,422	291	26	74	70	6	31	71	26	0
Sherani	143	42	5	4	30	115	11	4	2	0
Sibi	317	137	264	71	45	34	32	24	4	16
Sohbat pur	28	218	422	125	59	28	57	0	3	0
Surab	134	87	56	14	5	26	58	0	0	2
Usta Muhammad	188	297	357	356	50	16	6	0	1	0
Washuk	206	75	25	15	40	0	0	0	0	0
Zhob	226	103	60	298	50	84	8	1	0	0
Ziarat	328	78	20	45	37	7	16	22	0	0
Total	9,091	4,776	4,713	2,526	1,429	1,154	646	276	163	158

Figure 3: Most frequently reported suspected cases during week 01, Balochistan

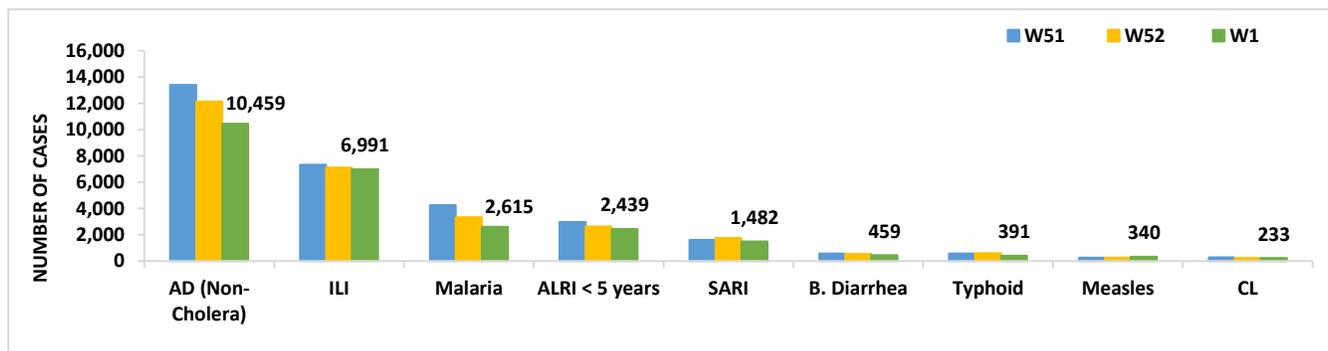


- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, SARI, B. Diarrhea, Typhoid, Measles and CL cases.
- AD (Non-Cholera) and Malaria cases showed a decline trend this week.
- Twenty suspected cases of AFP reported from KP this week. Field investigation required to verify the cases.
- Eighty-three cases of Measles were reported from D. I Khan. These are suspected cases and a field investigation is required to verify cases.

Table 4: District wise distribution of most frequently reported suspected cases during week 01, KP

Districts	AD (Non-Cholera)	ILI	Malaria	ALRI <5 Years	SARI	B. Diarrhea	Typhoid	Measles	CL
Abbottabad	295	106	3	21	33	2	7	1	0
Bajaur	142	42	60	9	19	16	1	5	0
Bannu	562	13	861	22	12	7	45	41	0
Battagram	91	524	0	0	0	0	0	0	4
Buner	176	0	103	0	0	0	2	0	0
Charsadda	450	546	202	63	84	11	24	8	1
Chitral Lower	179	200	3	35	86	10	11	0	4
Chitral Upper	57	25	1	35	13	7	16	0	0
D.I. Khan	475	0	122	57	6	9	0	83	0
Dir Lower	731	9	455	258	1	60	26	14	1
Dir Upper	181	230	1	37	9	2	4	2	1
Hangu	128	245	223	8	15	3	7	5	29
Haripur	608	754	12	154	46	6	39	0	0
Karak	203	80	50	29	0	0	4	43	52
Khyber	51	82	22	17	0	15	2	1	18
Kohat	61	41	14	2	9	0	0	0	0
Kohistan Lower	94	0	0	14	5	16	0	1	0
Kohistan Upper	192	39	3	23	1	6	35	15	0
Kolai Palas	73	0	0	18	26	3	1	0	0
L & C Kurram	0	0	0	0	0	2	0	0	0
Lakki Marwat	253	0	126	79	0	6	5	5	9
Malakand	398	29	13	67	25	41	19	23	11
Mansehra	327	787	0	128	130	7	1	2	0
Mardan	491	4	22	722	2	27	0	0	0
Mohmand	70	3	39	5	23	12	6	0	57
Nowshera	549	277	12	10	10	18	6	7	5
Orakzai	4	19	0	3	1	0	0	0	0
Peshawar	1,465	1,124	13	285	143	75	55	49	29
SD DI Khan	6	0	2	0	0	0	0	0	0
SD Peshawar	13	25	2	0	0	0	0	0	0
SD Tank	1	0	1	0	0	1	0	0	0
Shangla	189	0	55	20	0	0	10	0	0
SWA	49	374	55	125	120	38	42	1	10
Swabi	488	785	6	123	106	7	12	11	0
Swat	1,256	207	14	60	0	30	0	14	0
Tank	96	4	111	0	0	1	1	0	0
Tor Ghar	51	0	10	0	22	9	1	0	2
Upper Kurram	39	417	2	10	535	12	9	9	0
Total	10,494	6,991	2,618	2,439	1,482	459	391	340	233

Figure 4: Most frequently reported suspected cases during week 01, KP



ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera). ILI cases showed a downward trend in cases this week.

AJK: ILI cases were maximum followed by ALRI <5 years, AD (Non-Cholera), SARI, Malaria, B. Diarrhea, Typhoid, AWD (S. Cholera) and Mumps. Cases of ILI, ALRI < 5 years and SARI showed an increasing trend this week.

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

Figure 5: Week wise reported suspected cases of ILI, ICT

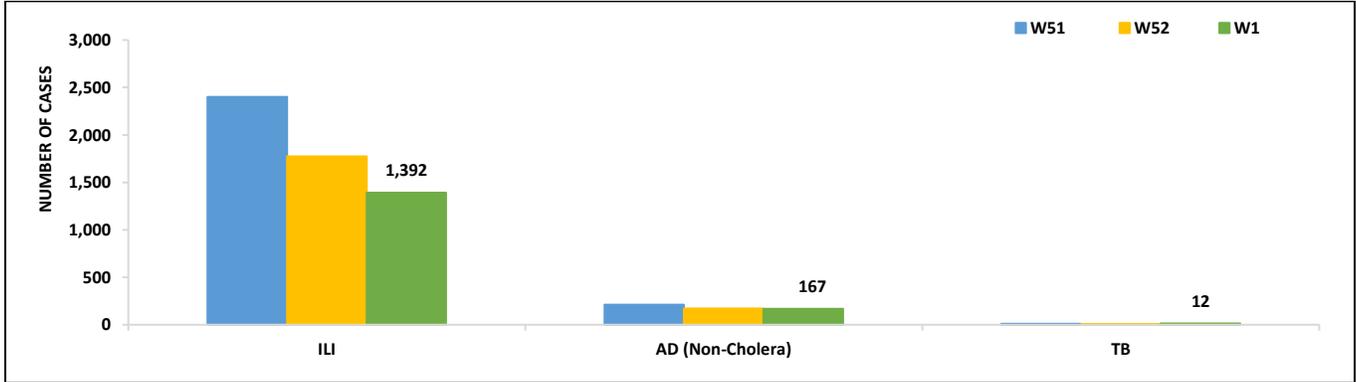


Figure 6: Week wise reported suspected cases of ILI, ICT

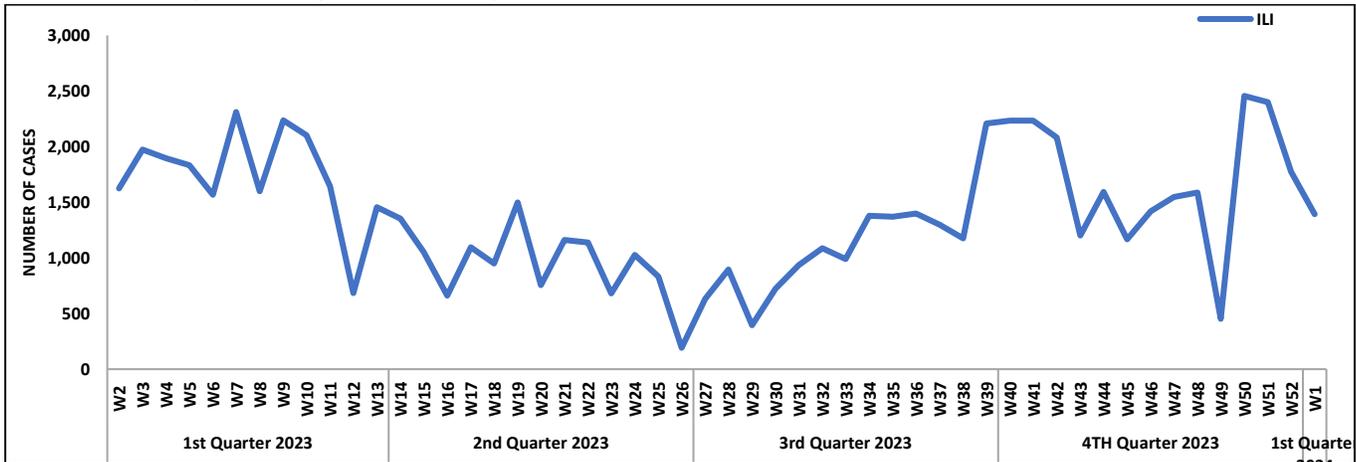


Figure 7: Most frequently reported suspected cases during week 01, AJK

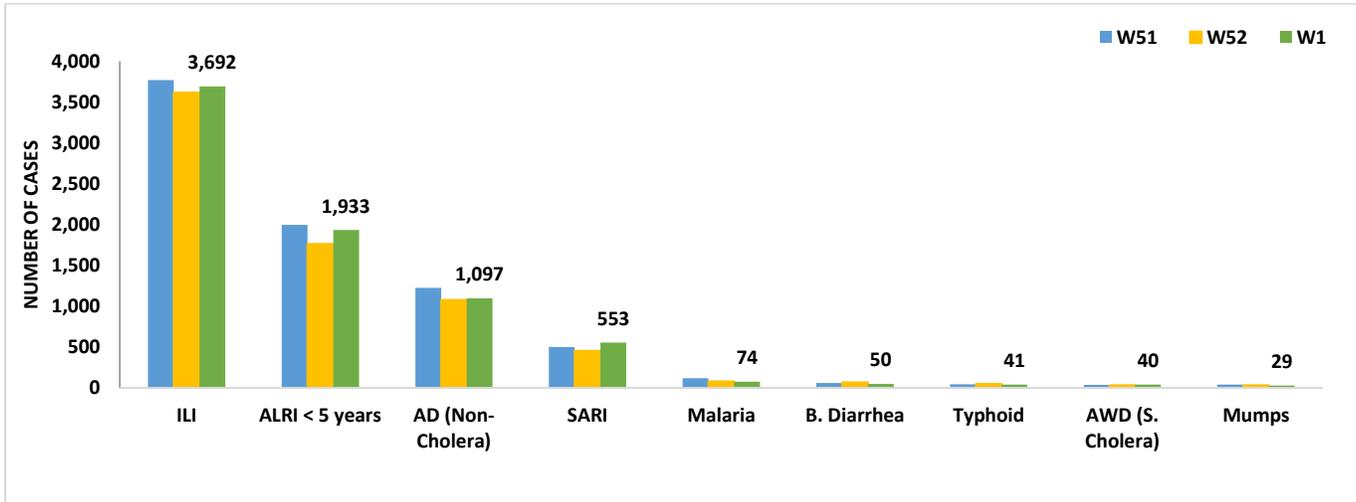


Figure 8: Week wise reported suspected cases of ILI and ALRI<5 years AJK

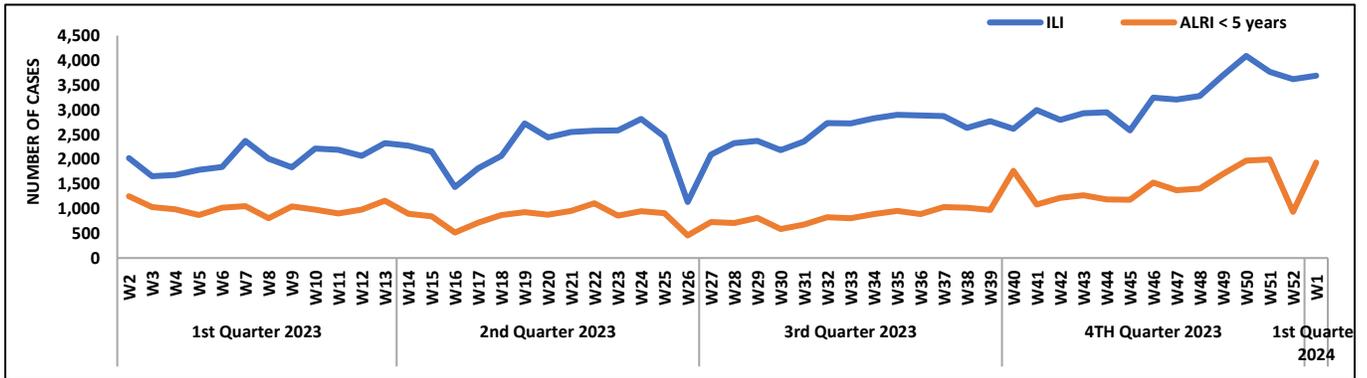


Figure 9: Most frequent cases reported during Wk 01, GB

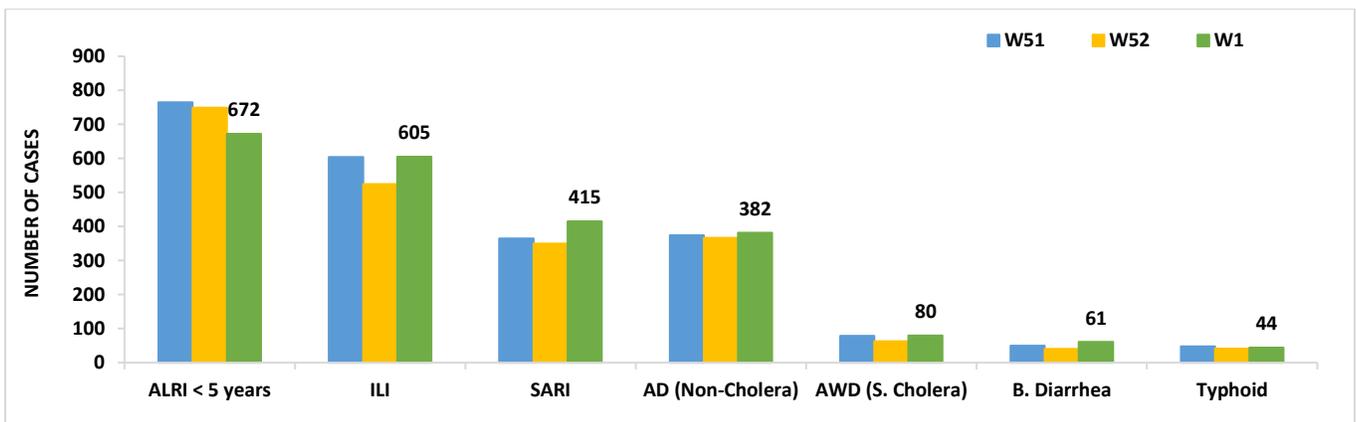
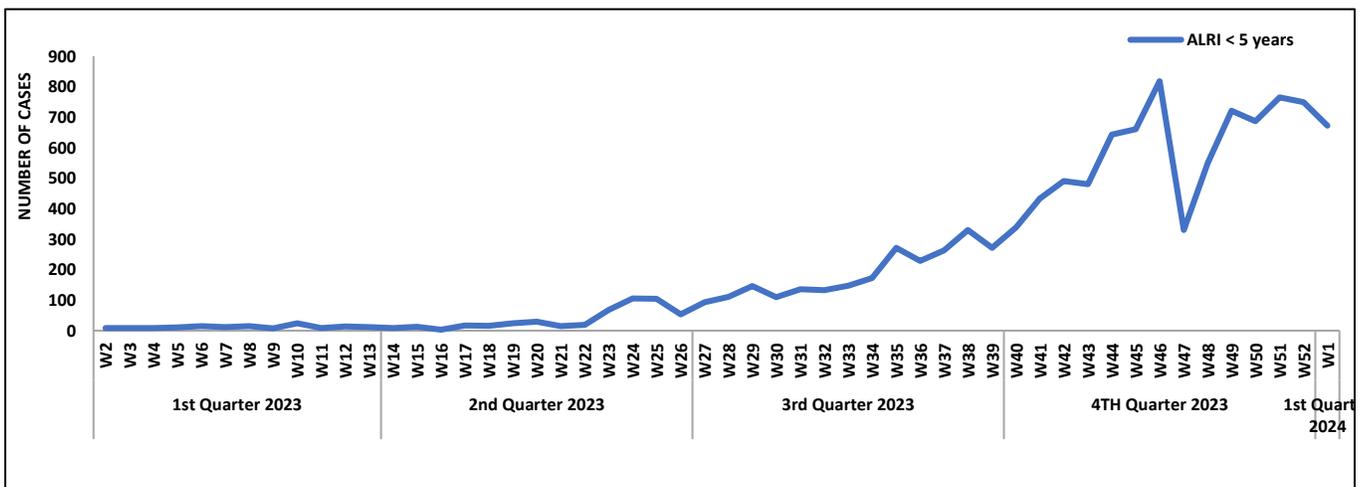


Figure 10: Week wise reported suspected cases of ALRI, GB



- Cases of AD (Non-Cholera) were the most frequently reported followed by Malaria, Typhoid, B. Diarrhea, Chickenpox and ILI.
- AD (Non-Cholera) and Typhoid cases showed a decline trend this week.

Figure 11: District wise distribution of most frequently reported suspected cases during week 01, Punjab

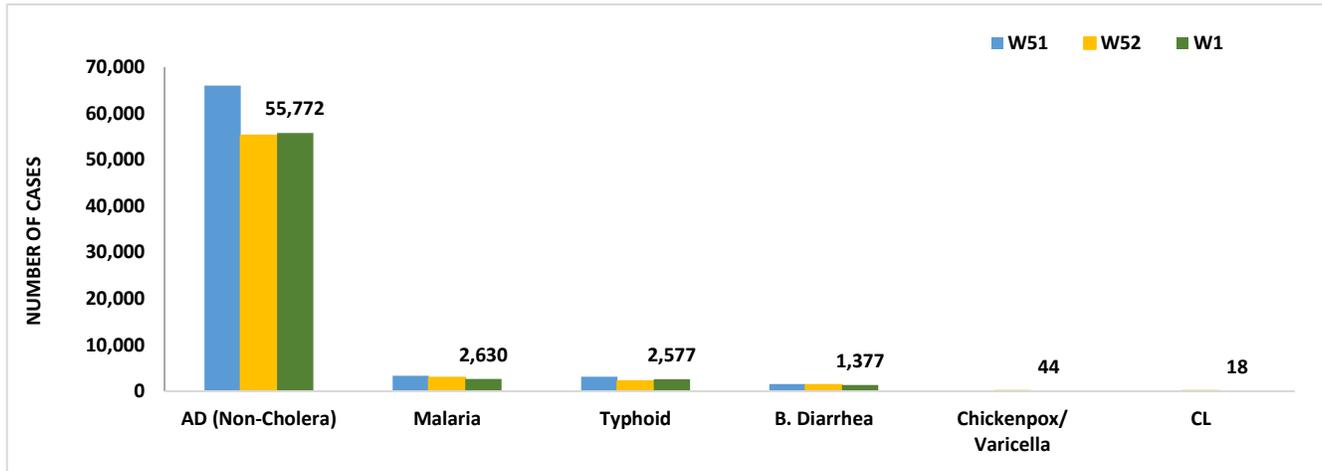


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 01

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)	-	-	-	-	-	-	0	0	-	-
AD (Non-Cholera)	-	-	-	-	-	-	5	1	-	-
Malaria	814	28	-	-	-	-	0	0	2	0
CCHF	-	-	14	0	-	-	0	0	-	-
Dengue	-	-	-	-	-	-	3	0	-	-
MPOX	-	-	-	-	-	-	0	0	-	-
Acute Viral Hepatitis(B)	29	3	-	-	-	-	26	0	120	0
Acute Viral Hepatitis(A)	-	-	-	-	-	-	3	0	-	-
Acute Viral Hepatitis(E)	-	-	-	-	-	-	2	0	-	-
Acute Viral Hepatitis(C)	31	9	33	8	-	-	26	1	120	0
Typhoid	469	2	-	-	-	-	0	0	-	-
Covid-19	-	-	93	7	-	-	229	1	11	0
HIV	-	-	-	-	-	-	1	0	-	-
Pertussis	-	-	-	-	-	-	1	0	-	-
Diphtheria	-	-	-	-	1	0	16	1	-	-
Influenza A	-	-	-	-	30	7	131	24	-	-

IDSR Reports Compliance

- Out OF 125 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 01, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	110	100	91%
	Bannu	244	103	42%
	Battagram	63	22	35%
	Buner	34	23	68%
	Bajaur	44	20	45%
	Charsadda	59	52	88%
	Chitral Upper	34	28	82%
	Chitral Lower	35	32	91%
	D.I. Khan	94	91	97%
	Dir Lower	74	73	99%
	Dir Upper	52	30	58%
	Hangu	22	22	100%
	Haripur	71	60	85%
	Karak	32	32	100%
	Khyber	64	13	20%
	Kohat	61	61	100%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	19	90%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	70	100%
	Lower & Central Kurram	40	1	3%
	Upper Kurram	42	7	17%
	Malakand	48	37	77%
	Mansehra	136	76	56%
	Mardan	80	70	88%
	Nowshera	54	49	91%
	North Waziristan	380	0	0%
	Peshawar	153	117	76%
	Shangla	65	14	22%
	Swabi	62	59	95%
	Swat	76	69	91%
	South Waziristan	133	47	35%
	Tank	34	29	85%
	Torghar	14	13	93%
	Mohmand	86	22	26%
	SD DI Khan	19	2	11%
	SD Peshawar	5	3	60%
	SD Tank	58	1	2%
	Orakzai	68	5	7%
	Mirpur	37	37	100%
	Bhimber	20	20	100%
Kotli	60	59	98%	
Muzaffarabad	45	45	100%	



Azad Jammu Kashmir	Poonch	46	46	100%
	Haveli	39	34	87%
	Bagh	40	40	100%
	Neelum	39	39	100%
	Jhelum Vellay	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	35	24	69%
	CDA	35	24	69%
Balochistan	Gwadar	25	24	96%
	Kech	39	24	62%
	Khuzdar	20	18	90%
	Killa Abdullah	20	0	0%
	Lasbella	55	55	100%
	Pishin	62	4	6%
	Quetta	43	20	47%
	Sibi	36	33	92%
	Zhob	39	29	74%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	15	100%
	Kohlu	75	71	95%
	Chagi	35	29	83%
	Kalat	41	39	95%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	35	100%
	Jhal Magsi	26	26	100%
	Sohbat pur	25	25	100%
	Surab	32	32	100%
	Mastung	45	45	100%
	Loralai	33	23	70%
	Killa Saifullah	28	27	96%
	Ziarat	29	21	72%
	Duki	31	6	19%
	Nushki	32	0	0%
	Dera Bugti	45	24	53%
	Washuk	46	15	33%
	Panjgur	38	19	50%
	Awaran	23	6	26%
	Chaman	24	22	92%
	Barkhan	20	19	95%
	Hub	33	32	97%
Usta Muhammad	34	34	100%	
Gilgit Baltistan	Hunza	32	29	91%
	Nagar	20	20	100%
	Ghizer	40	39	98%
	Gilgit	40	40	100%
	Diامر	78	39	50%



	Astore	54	54	100%
	Shigar	27	26	96%
	Skardu	52	43	83%
	Ganche	29	29	100%
	Kharmang	18	18	100%
Sindh	Hyderabad	73	32	44%
	Ghotki	64	64	100%
	Umerkot	43	28	65%
	Naushahro Feroze	107	62	58%
	Tharparkar	282	247	88%
	Shikarpur	60	60	100%
	Thatta	53	51	96%
	Larkana	67	67	100%
	Kamber Shadadkot	71	70	99%
	Karachi-East	23	22	96%
	Karachi-West	20	20	100%
	Karachi-Malir	37	19	51%
	Karachi-Kemari	18	6	33%
	Karachi-Central	11	11	100%
	Karachi-Korangi	18	13	72%
	Karachi-South	4	4	100%
	Sujawal	54	54	100%
	Mirpur Khas	106	103	97%
	Badin	127	118	93%
	Sukkur	64	62	97%
	Dadu	90	86	96%
	Sanghar	100	100	100%
	Jacobabad	44	41	93%
	Khairpur	169	161	95%
	Kashmore	59	58	98%
	Matiari	42	41	98%
	Jamshoro	68	68	100%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	40	40	100%
	Shaheed Benazirabad	124	124	100%



A Note from Field Activities.

Investigation of Suspected Typhoid Outbreak in Dhadhar, Bolan, (Balochistan) from 29th Dec 2023 to 02nd Jan 2024.

Dr Mudassir Ali Abro
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FETP Fellow Balochistan

Introduction:

During the 51st epidemiological week of 2023 (December 20th to January 5th, 2024), Dhadhar, Bolan District, Pakistan, experienced a significant outbreak of enteric fever (typhoid fever). This epidemiological investigation aimed to:

- Quantify the magnitude of the enteric fever outbreak in Dhadhar and nearby villages.
- Identify, assess, and evaluate the risk factors associated with enteric fever transmission in Dhadhar, Bolan.
- Formulate recommendations for effective outbreak control and future prevention strategies.

Methods:

The investigation employed active case finding, case reporting, and clinical data collection to identify and document suspected enteric fever cases. Individuals residing in Dhadhar who presented with acute febrile illness (fever $\geq 38^{\circ}\text{C}$ for 3 days or more) accompanied by abdominal discomfort, fatigue, and either diarrhea or constipation were included. A structured questionnaire based on the IDSR for Typhoid Fever was used to assess clinical signs and symptoms, source of drinking water, travel history, treatment history, and identify close contacts. Epidemiological interviews with confirmed cases and their close contacts were conducted to further assess potential exposure factors and transmission routes.

Environmental samples, including water sources, were collected for bacterial contamination analysis.

Results:

A total of 338 suspected enteric fever cases were reported during the outbreak period. Individuals of all age groups were affected, with a slight predominance among the 15-25-year demographic. Males constituted 43.3% of the cases, while females represented 56.6%. Common presenting symptoms included high fever, abdominal pain, headache, and general malaise. Spatial analysis revealed the cases were geographically dispersed throughout Dhadhar City, with notable clusters identified in Mashkaf, Rind Ali, and Dhadhar Bazar Colony.

Preliminary investigation strongly suggests contaminated water and food as the primary mode of enteric fever transmission. Secondary person-to-person transmission within households and close communities was also identified as a contributing factor.

Discussion:

This outbreak highlights Dhadhar City's vulnerability to waterborne diseases like enteric fever. The significant number of confirmed cases, coupled with the diverse age and gender distribution, underscores the outbreak's widespread impact. The clinical presentation aligned with classic enteric fever symptoms, while the relatively low case-fatality rate underscores the importance of timely medical intervention.

Epidemiological investigations strongly indicate contaminated water as the primary culprit, with ongoing microbiological analysis of water samples aiming to identify the specific bacterial strain responsible. Additionally, person-to-person transmission within close-knit communities emerged as a secondary transmission route, highlighting the need for improved hygiene practices and sanitation infrastructure.

Conclusion:

The findings from this investigation provide valuable insights for public health authorities, local communities, and relevant stakeholders to effectively control the ongoing outbreak and prevent future

occurrences. Collaborative efforts towards improving water quality, sanitation infrastructure, and community-level hygiene awareness are crucial. The lessons learned from this outbreak will inform strategies and policies aimed at preventing and mitigating the impact of waterborne diseases in Dhadhar City and similar regions.

A Note from Field Activities.

Diphtheria Outbreak Investigation in Dura Goth Uthal, District Lasbela, Pakistan - December 2023

Dr Nida Rasheed
FELTP Fellow 14th cohort

Dr Rozina
DSO Lasbela

Introduction:

On December 26, 2023, a concerning signal emerged in Dura Goth Uthal, District Lasbela, Pakistan: a suspected diphtheria outbreak. This report details the subsequent investigation conducted to determine the cause, extent, and control measures implemented to address this public health threat.

Methodology:

A swift response was initiated. A multi-sectoral team, comprising representatives from the District Health Office (DHO), Expanded Program on Immunization (EPI), World Health Organization (WHO), and Lady Health Workers (LHWs), was formed to spearhead the investigation. Employing a comprehensive approach, the team embarked on:

- **Active case finding:** Door-to-door visits were conducted, employing a case definition encompassing clinical presentation ("a person of any age in Dura Goth and vicinity with an upper respiratory tract illness with an adherent membrane of the nose, pharynx, tonsils, or larynx with or without pharyngitis, laryngitis or tonsillitis") and geographical location.
- **Risk factor identification:** Structured questionnaires were administered to

patients and their contacts to identify potential environmental and social factors contributing to the outbreak.

- **Throat swab collection and laboratory confirmation:** Throat swabs were collected from suspected cases and promptly sent for laboratory analysis to confirm the diagnosis.
- **Intervention deployment:** Mop-up vaccination campaigns were conducted, targeting unvaccinated children under five years with penta vaccine and children above five years with Td vaccine. Additionally, community health education sessions and awareness campaigns were initiated to empower residents with knowledge about diphtheria prevention.

Results:

The initial case involved a 7-year-old girl exhibiting symptoms for one week, including fever, difficulty swallowing, and a visible pharyngeal membrane. Although she had received routine childhood vaccinations, she had no recent travel history. A close contact, a 6-year-old unvaccinated girl, was identified. Both cases had their throat swabs sent for analysis. Subsequently, a 2-year-old girl presenting with fever, sore throat, and neck swelling was identified during contact tracing. Notably, all three affected children resided in close proximity, highlighting potential localized transmission. While one child was vaccinated, the other two remained unvaccinated. Although none had recent travel history, the arrival of guests from Karachi, a city with reported diphtheria cases, was identified. Importantly, laboratory results for all cases were still pending at the time of this report. Mop-up vaccination efforts successfully vaccinated 130 children, ensuring protection for the vulnerable under-five population and older individuals.

Conclusion:

Preliminary findings suggest that low vaccination coverage within the affected community, coupled with potential exposure to individuals from a diphtheria-endemic area, likely contributed to this outbreak. Definitive confirmation of the causative agent awaits the ongoing laboratory investigation.

Recommendations:



To effectively control this outbreak and prevent further spread, immediate action is crucial:

- **Targeted vaccination campaigns:** Prioritization of routine immunization efforts, with particular focus on reaching unvaccinated children under five, is essential to build community immunity.
- **Community-based health education:** Empowering residents with knowledge about diphtheria symptoms, transmission routes, vaccination importance, and hygiene practices is vital for outbreak control.
- **Enhanced disease surveillance:** Strengthening disease surveillance activities through prompt identification and reporting of suspected cases is essential for early intervention.
- **Improved healthcare access:** Ensuring swift and accessible healthcare services for early diagnosis and treatment of diphtheria cases is crucial for patient outcomes and community protection.

Pakistan Public Health Bulletin (PHB)

Pakistan Public Health Bulletin (PHB) Achieves Significant Progress

The Pakistan Public Health Bulletin (PHB) has made significant progress in improving data reporting, surveillance information dissemination, and audience engagement. These achievements will ensure that PHB remains a valuable resource for public health professionals and stakeholders in Pakistan.

The PHB is a monthly publication that provides timely and relevant information on public health trends, emerging risks, and best practices. It is a critical tool for public health professionals, policymakers, and other stakeholders who are working to improve the health of the Pakistani people.

In recent months, the PHB has taken a number of steps to improve its quality and impact. These steps include:

- **Strengthening data reporting and analysis:** The PHB has worked with key stakeholders to develop and implement new data reporting and analysis tools. This has resulted in more timely and comprehensive data on public health trends and risks.
- **Improving surveillance information dissemination:** The PHB has developed new and innovative ways to disseminate surveillance information to a wider audience. This includes the development of interactive dashboards, infographics, and social media campaigns.
- **Engaging with stakeholders:** The PHB has increased its engagement with stakeholders by conducting regular surveys and focus groups. This feedback has been used to improve the content and format of the PHB.

The PHB's achievements in these areas are significant. By improving data reporting, surveillance information dissemination, and audience engagement, the PHB is better positioned to support public health professionals and stakeholders in their efforts to improve the health of the Pakistani people.

Knowledge Hub

How to Prevent and Control Communicable Diseases: A Guide for Everyone

Communicable diseases are those that can be transmitted from one person to another, either directly or indirectly. They can be caused by a variety of microorganisms, including bacteria, viruses, parasites, and fungi. Communicable diseases can cause a wide range of illnesses, from mild to severe, and can even be fatal.

Prevention and control of communicable diseases is essential to protect public health. There are a number of different strategies that can be used, including:

- **Vaccination:** Vaccination is one of the most effective ways to prevent communicable diseases. Vaccines work by exposing the body to a weakened or inactive form of a pathogen, which helps the body to develop immunity. This immunity can then protect the person from getting sick if they are exposed to the pathogen in the future.



- **Personal hygiene:** Good personal hygiene practices, such as washing hands regularly, can help to prevent the spread of communicable diseases. This is because many communicable diseases are spread through contact with contaminated surfaces or objects.
- **Environmental sanitation:** Environmental sanitation practices, such as proper sewage disposal and water treatment, can help to prevent the spread of communicable diseases. This is because many communicable diseases can be spread through contaminated water or food.
- **Vector control:** Vector control measures, such as mosquito control programs, can help to prevent the spread of communicable diseases that are transmitted by vectors (such as insects).
- **Public education:** Public education about communicable diseases can help people to learn about the risks of these diseases and how to protect themselves and others.

In addition to these general prevention and control strategies, there are also specific measures that can be taken to prevent and control specific communicable diseases. For example, people who are traveling to areas where certain communicable diseases are common may need to take additional precautions, such as taking antimalarial medication or getting vaccinated against yellow fever.

The prevention and control of communicable diseases is a complex challenge, but it is essential to protect public health. By implementing a variety of different strategies, we can help to reduce the risk of communicable diseases and improve the health of everyone.

Here are some specific examples of how the strategies listed above can be used to prevent and control communicable diseases:

Vaccination:

- The measles, mumps, and rubella (MMR) vaccine is highly effective at preventing these diseases. Two doses of the MMR vaccine are recommended for all children, and adults who have not been vaccinated should get two doses as well.

- The polio vaccine is highly effective at preventing polio, a paralytic disease that can be fatal. Three doses of the polio vaccine are recommended for all children.
- The hepatitis A vaccine is highly effective at preventing hepatitis A, a liver disease that can be serious. Two doses of the hepatitis A vaccine are recommended for all children and adults.

Personal hygiene:

- Wash your hands often with soap and water, especially after using the toilet, before eating, and after handling raw meat.
- If soap and water are not available, use an alcohol-based hand sanitizer.
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- Cover your cough or sneeze with a tissue or your sleeve.
- Clean and disinfect frequently touched surfaces, such as doorknobs, light switches, and faucet handles.

Environmental sanitation:

- Ensure that your home has a safe water supply and proper sewage disposal.
- Wash fruits and vegetables thoroughly before eating them.
- Cook meat and poultry to a safe internal temperature.
- Refrigerate food promptly and avoid leaving it out at room temperature for more than two hours.

Vector control:

- Use insect repellent when spending time outdoors.
- Wear long sleeves and pants when possible.
- Eliminate mosquito breeding grounds around your home by emptying standing water.

By following these prevention and control strategies, we can all help to reduce the risk of communicable diseases and improve the health of everyone.





PREVENT COLDS & FLU



Because of the increased risk of flu, gastrointestinal and respiratory illness at this time of the year, we ask that you take precautions to prevent the spread of germs.

1

WASH

Wash your hands for at least 30 seconds with soap and warm water.

2

COVER

Cover your mouth and nose when cough or sneeze with your elbow or tissue.

3

DON'T TOUCH

Don't touch your eyes, nose or mouth.

4

AVOID

Avoid close contact with those who are sick. Wash your hands with sanitizer.

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