

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 04, 2024

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

The latest edition of the public health bulletin for Pakistan reveals concerning trends and valuable insights regarding the nation's health landscape. This week's report highlights the continued presence of common illnesses like diarrhea, respiratory infections, and malaria. Additionally, there are several suspected cases of serious diseases like AFP, Brucellosis, Diphtheria, and HIV/AIDS, requiring further investigation to confirm the diagnosis and implement necessary public health interventions. As all reported cases currently lack confirmed diagnoses.

This edition of the bulletin further emphasizes the pivotal role of the National Conference on Integrated Approach to Public Health with Evidence-Based Data. It features Milestone Achievement in Punjab's Malaria Elimination Campaign as G6PD Testing Kits Deployed, along with a progress update on the Monthly Review Meeting of District Disease Surveillance & Response Units (DDSRUs) Held in Lahore. Recognizing the importance of individual empowerment in disease control, the editor concludes with an insightful update with the recent National Advisory for the Prevention and Control of Diphtheria.

Sincerely,
The Chief Editor



- During week 4, the most frequently reported cases were of Acute Diarrhea (Non-Cholera) followed by ILI, Malaria, ALRI <5 years, TB, B. Diarrhea, VH (B, C & D), Typhoid, SARI and dog bite.
- Twenty cases of AFP reported from KP and eleven from Sindh. All are suspected cases and need field verification.
- Eight cases of Brucellosis and eleven cases of Diphtheria reported from KP. Field investigation is required to confirm the cases.
- Six suspected cases of HIV/ AIDS reported from Sindh. Field investigation required to verify the cases.

IDSR compliance attributes

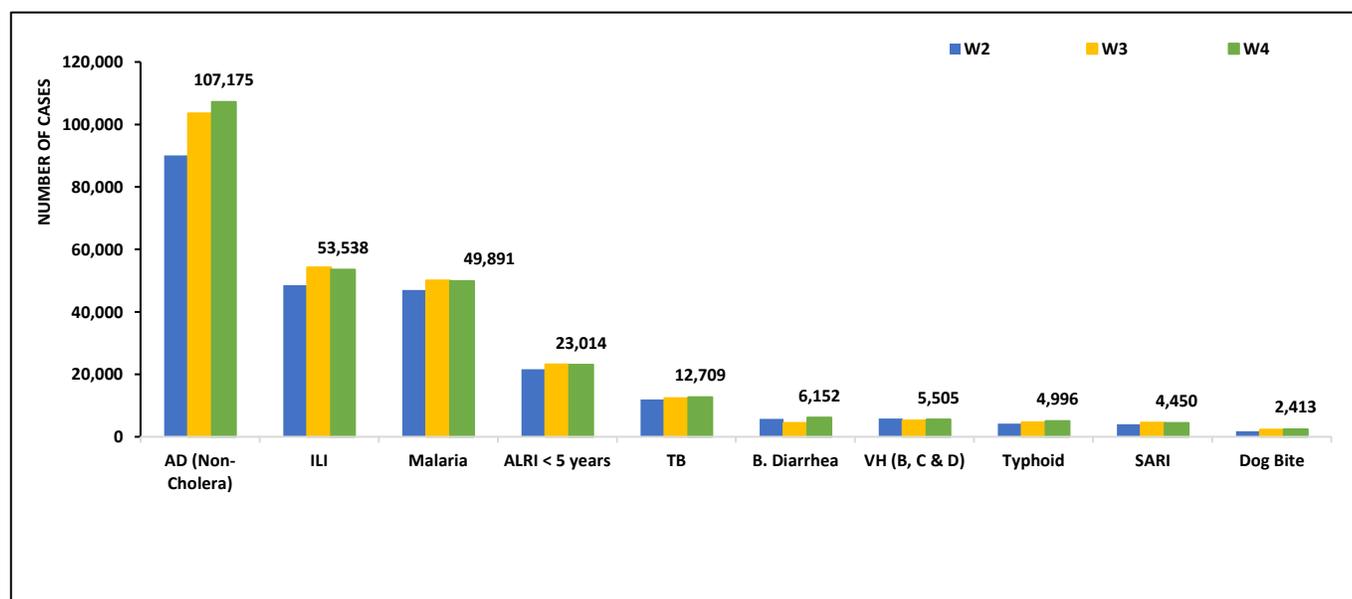
- The national compliance rate for IDSR reporting in 149 implemented districts is 76%
- Gilgit Baltistan and AJK are the top reporting regions with a compliance rate of 100% and 96%, followed by Sindh 93%
- The lowest compliance rate was observed in KPK.

Region	Expected Reports	Received Reports	Compliance (%)
<i>Khyber Pakhtunkhwa</i>	2750	1590	58
<i>Azad Jammu Kashmir</i>	382	368	96
<i>Islamabad Capital Territory</i>	70	52	74
<i>Balochistan</i>	1179	907	77
<i>Gilgit Baltistan</i>	374	374	100
<i>Sindh</i>	2088	1942	93
<i>National</i>	6843	5233	76

Table 1: Province/Area wise distribution of most frequently reported suspected cases during week 04, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	1,190	5,450	340	158	10,973	57,807	31,257	107,175
ILI	3,448	9,786	678	1,173	7,165	144	31,144	53,538
Malaria	11	5,019	0	0	2,921	2,812	39,128	49,891
ALRI < 5 years	2,044	2,559	759	5	2,999	NR	14,648	23,014
TB	56	125	49	7	414	NR	12,058	12,709
B.Diarrhea	45	1,268	34	2	407	1,317	3,079	6,152
VH (B, C & D)	6	166	1	0	107	NR	5,225	5,505
Typhoid	27	765	26	2	473	2,576	1,127	4,996
SARI	565	804	387	0	1,731	NR	963	4,450
Dog Bite	50	151	0	0	126	NR	2,086	2,413
AVH(A&E)	15	13	2	0	138	NR	647	815
Measles	5	40	5	0	429	NR	80	559
CL	0	211	0	0	302	26	3	542
Mumps	19	94	18	2	58	NR	311	502
AWD (S. Cholera)	23	151	32	0	40	NR	45	291
Pertussis	0	101	8	0	74	NR	14	197
Chickenpox/ Varicella	2	4	1	1	41	17	57	123
Gonorrhea	0	65	0	0	16	NR	19	100
Dengue	0	1	0	0	5	NR	85	91
NT	0	0	0	0	71	NR	0	71
AFP	1	0	0	0	20	NR	11	32
Meningitis	0	0	3	0	5	NR	9	17
Diphtheria (Probable)	0	4	0	0	11	NR	0	15
Syphilis	0	5	0	0	0	NR	8	13
HIV/AIDS	0	2	0	0	3	NR	6	11
Brucellosis	0	0	0	0	8	NR	0	8
VL	0	0	0	0	3	NR	0	3

Figure 1: Most frequently reported suspected cases during week 04, Pakistan.

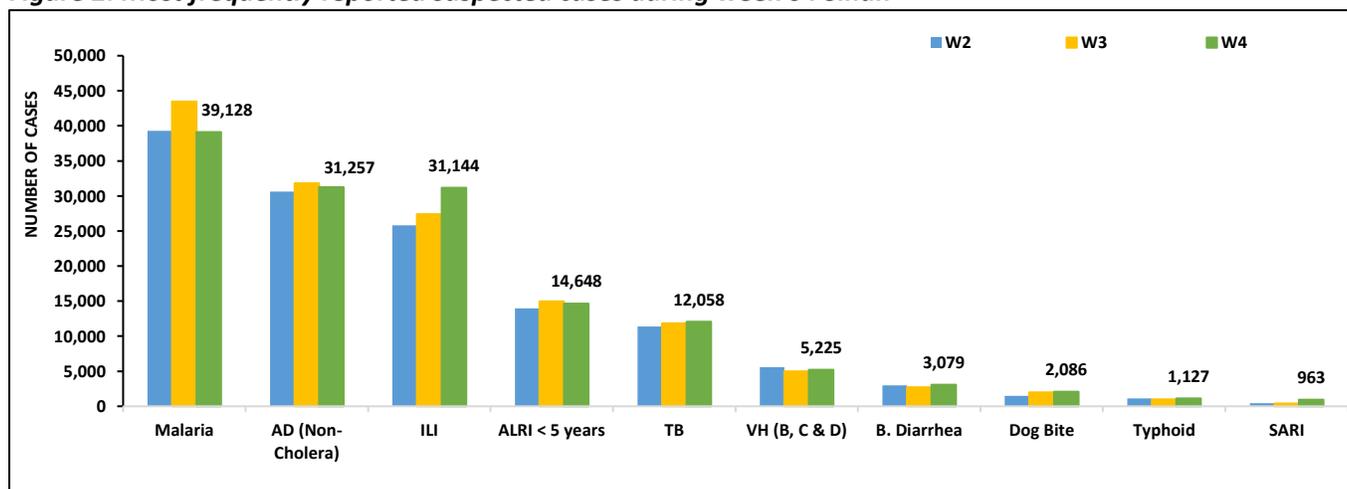


- Malaria cases were maximum followed by AD (Non-Cholera), ILI, ALRI<5 Years, TB, VH (B, C, D), B. Diarrhea, dog bite, Typhoid and SARI.
- Malaria cases are from Khairpur, Larkana and Kamber whereas AD cases are mostly from Khairpur, Dadu and Tharparkar.
- Six cases of HIV/AIDS reported from Sindh. All are suspected cases and need field verification.
- Eleven cases of AFP reported from Sindh this week. Need field investigation to confirm the cases.
- There is a decreasing trend for Malaria and almost same trend observed for AD (Non-Cholera), ALRI<5 Years and TB cases this week.

Table 2: District wise distribution of most frequently reported suspected cases during week 04, Sindh

Districts	Malaria	AD (Non-Cholera)	ILI	ALRI < 5 years	TB	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	SARI
Badin	1,924	1,925	674	761	936	196	163	90	34	47
Dadu	2,852	2,607	140	1,330	475	5	436	85	153	417
Ghotki	282	344	0	554	156	239	49	224	0	0
Hyderabad	233	1,220	2,706	270	142	101	83	38	14	0
Jacobabad	1,237	592	443	658	191	158	85	122	14	0
Jamshoro	1,655	950	47	292	337	92	57	9	43	3
Kamber	3,130	1,132	0	544	846	196	143	55	39	0
Karachi Central	25	1,121	2,449	152	740	383	11	0	76	25
Karachi East	101	751	446	36	23	1	10	2	1	0
Karachi Keamari	6	257	98	33	0	0	0	0	2	0
Karachi Korangi	71	340	106	1	9	0	6	0	4	0
Karachi Malir	40	627	2,207	139	26	17	53	27	13	1
Karachi South	41	110	0	0	0	0	0	0	0	0
Karachi West	158	1,065	2,750	322	442	329	79	295	100	105
Kashmore	1,414	447	1,051	489	287	224	42	233	4	0
Khairpur	4,181	2,655	4,887	1,358	941	417	568	129	273	180
Larkana	4,130	1,189	7	724	734	156	162	0	2	0
Matiari	813	968	36	635	586	455	35	38	10	0
Mirpurkhas	2,470	1,764	4,680	960	823	176	89	45	4	0
Naushero Feroze	923	564	1,072	184	369	100	50	120	66	0
Sanghar	2,388	1,314	89	499	1221	786	61	183	17	8
Shaheed Benazirabad	1,304	1,476	0	527	324	102	55	59	138	4
Shikarpur	1,807	1,063	7	272	29	89	130	170	3	15
Sujawal	772	579	0	125	62	8	41	32	3	0
Sukkur	1,231	970	2,298	382	463	250	170	35	4	0
Tando Allahyar	1,041	704	576	363	304	212	98	8	22	1
Tando Muhammad Khan	682	561	0	196	531	125	44	2	1	4
Tharparkar	1,984	2,063	3,408	1,686	557	23	152	2	43	151
Thatta	1,038	936	967	477	23	183	79	83	25	2
Umerkot	1,195	963	0	679	481	202	128	0	19	0
Total	39,128	31,257	31,144	14,648	12,058	5,225	3,079	2,086	1,127	963

Figure 2: Most frequently reported suspected cases during week 04 Sindh



- ILI, AD (Non-Cholera), Malaria, ALRI <5 years, B. Diarrhea, SARI, Typhoid, CL, VH (B, C & D) and AWD (S. Cholera) were the most frequently reported diseases from Balochistan province.
- ILI cases showed a decreasing trend while AD (Non-Cholera), Malaria, ALRI <5 years and B. Diarrhea cases showed an almost same trend this week.
- ILI cases are mostly reported from Kech (Turbat), Sibi and Quetta and AD (Non-Cholera) cases are mostly reported from Kech (Turbat), Jaffarabad and Quetta.

Table 3: District wise distribution of most frequently reported suspected cases during week 04, Balochistan

Districts	ILI	AD Non-Cholera)	Malaria	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	CL	VH(B,C&D)	AWD (S.Cholera)
Awaran	53	42	43	2	18	2	7	1	0	18
Barkhan	178	150	57	71	11	16	78	0	0	20
Chagai	371	114	21	0	51	0	25	0	1	12
Chaman	233	78	8	11	86	24	17	5	0	6
Dera Bugti	67	92	13	43	65	58	8	1	2	4
Duki	334	190	50	0	9	0	0	2	0	0
Gwadar	12	89	73	202	72	0	0	0	1	7
Harnai	158	253	169	47	44	71	5	11	16	0
Hub	183	385	707	47	51	36	11	49	27	0
Jaffarabad	304	309	703	33	2	6	13	4	0	0
Jhal Magsi	61	141	180	44	24	9	39	2	4	2
Kachhi (Bolan)	9	33	19	18	13	4	27	0	0	0
Kalat	1,392	444	211	154	47	1	2	1	NR	8
Kech (Turbat)	444	109	28	0	68	28	5	0	3	9
Kharan	164	80	65	5	30	6	4	18	0	0
Khuzdar	4	109	105	249	69	20	30	12	0	2
Killa Saifullah	670	228	116	74	55	86	39	1	2	3
Kohlu	89	305	378	149	24	36	3	16	5	0
Lasbella	429	133	44	71	41	29	22	1	0	0
Loralai	233	170	35	86	58	58	17	0	2	10
Mastung	147	101	91	61	1	5	24	0	0	5
Naseerabad	0	198	351	40	27	2	61	9	59	0
Nushki	57	105	9	0	35	3	0	0	0	0
Panjgur	78	130	99	118	35	0	16	0	0	8
Pishin	193	12	2	26	34	2	4	5	0	0
Quetta	1,274	330	11	83	52	1	32	50	8	4
Sherani	107	16	1	2	7	45	8	4	0	11
Sibi	1,284	181	180	87	36	61	72	10	0	3
Sohbat pur	27	232	548	179	76	56	57	6	3	1
Surab	140	82	29	24	5	17	60	0	3	0
Usta Muhammad	247	311	552	312	53	30	17	3	30	0
Washuk	332	96	59	0	2	45	4	0	0	0
Zhob	312	121	44	300	32	29	48	0	0	4
Ziarat	200	81	18	21	35	18	10	0	0	14
Total	9,786	5,450	5,019	2,559	1,268	804	765	211	166	151

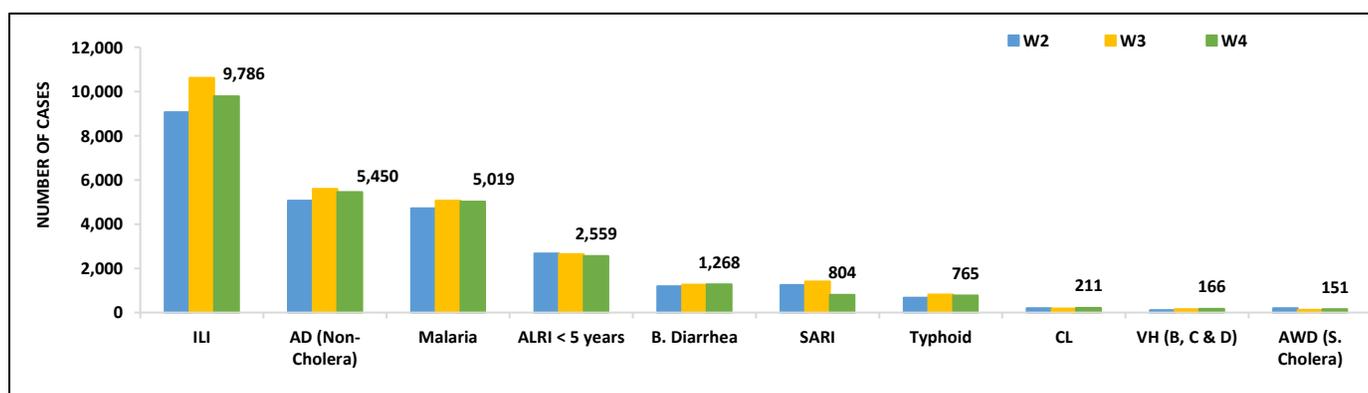


Figure 3: Most frequently reported suspected cases during week 04, Balochistan

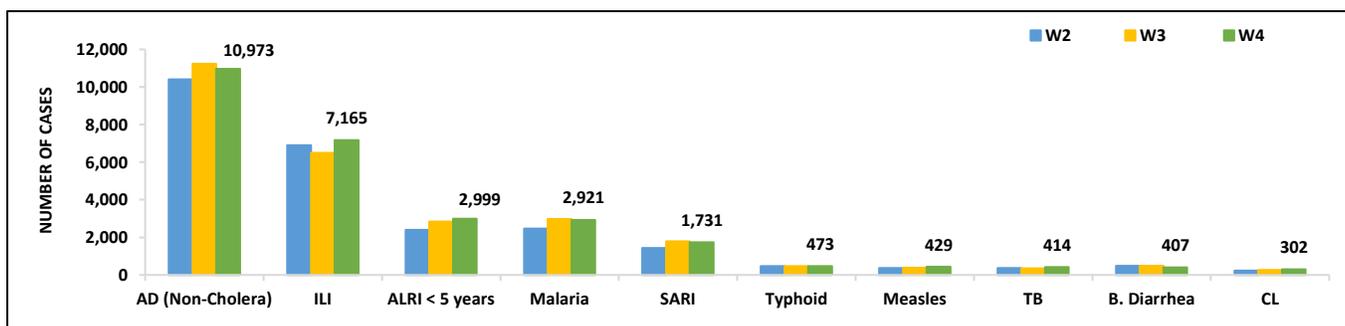


- Cases of AD (Non-Cholera) were maximum followed by ILI, ALRI<5 Years, Malaria, SARI, Typhoid, Measles, TB, B. Diarrhea and CL cases.
- AD (Non-Cholera) cases showed a decreasing trend while ILI and ALRI<5 years cases showed an increasing trend this week.
- Twenty cases of AFP reported from KP this week. All are suspected cases and need field verification.
- Eight cases of Brucellosis reported from KP this week. Field investigation is required to confirm the cases.

Table 4: District wise distribution of most frequently reported suspected cases during week 04, KP

Districts	AD (Non-Cholera)	ILI	ALRI <5 Years	Malaria	SARI	Typhoid	Measles	TB	B. Diarrhea	CL
Abbottabad	344	101	23	0	21	4	0	15	3	0
Bajaur	363	40	312	103	15	7	7	17	14	15
Bannu	632	0	47	1,082	3	71	31	25	5	1
Battagram	75	258	0	3	1	0	0	0	0	23
Buner	240	0	69	143	0	2	0	0	0	0
Charsadda	654	1,417	408	167	129	27	15	0	22	1
Chitral Lower	107	83	14	2	55	7	1	12	5	10
Chitral Upper	71	18	15	3	10	19	0	6	4	1
D.I. Khan	491	0	75	110	35	0	67	28	14	0
Dir Lower	603	7	251	377	0	22	23	24	30	3
Dir Upper	212	169	16	5	4	21	8	50	1	12
Hangu	152	311	0	215	13	5	6	3	15	18
Haripur	573	452	102	91	44	32	5	30	7	0
Karak	196	66	39	45	0	8	78	5	0	33
Khyber	45	85	41	10	0	7	1	5	18	16
Kohat	51	28	2	10	7	1	0	0	0	0
Kohistan Lower	74	0	5	2	0	0	1	0	7	0
Kohistan Upper	112	65	16	0	33	17	38	0	7	0
Kolai Palas	54	0	8	0	33	0	0	0	6	1
L & C Kurram	3	91	0	3	0	1	0	0	6	0
Lakki Marwat	226	44	97	93	0	8	5	7	2	3
Malakand	357	15	96	13	31	29	21	2	39	13
Mansehra	356	644	48	1	118	4	2	15	9	0
Mardan	477	45	684	21	3	0	0	7	16	0
Mohmand	88	33	17	132	65	6	2	1	19	69
Nowshera	571	293	5	65	27	1	18	10	11	29
Orakzai	10	16	5	3	0	0	0	0	2	0
Peshawar	1,325	791	192	18	191	29	55	20	69	26
SD DI Khan	0	0	0	2	0	0	0	0	0	0
SD Peshawar	0	35	0	1	0	0	0	0	5	0
SD Tank	1	0	0	1	0	1	0	0	0	0
Shangla	335	0	10	80	0	31	6	56	2	3
SWA	44	436	93	21	68	30	1	1	12	6
Swabi	525	871	188	8	140	13	15	66	4	0
Swat	1,218	207	104	14	0	1	5	7	13	0
Tank	293	168	7	68	0	65	12	1	4	13
Tor Ghar	52	0	0	9	22	2	0	0	18	6
Upper Kurram	43	376	10	0	663	2	6	1	18	0
Total	10,973	7,165	2,999	2,921	1,731	473	429	414	407	302

Figure 4: Most frequently reported suspected cases during week 04, KP



ICT, AJK & GB

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

AJK: ILI cases were maximum followed by ALRI <5 years, AD (Non-Cholera), SARI, B. Diarrhea, TB, Malaria, AVH (A&E), Typhoid and Mumps cases. Cases of ILI and AD (Non-Cholera) showed an decreasing trend in cases this week.

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

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

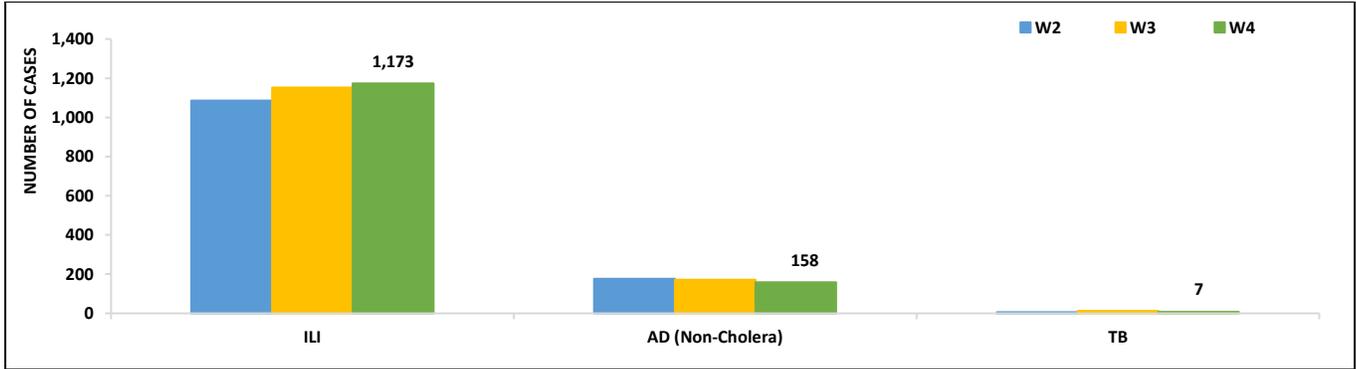


Figure 6: Week wise reported suspected cases of ILI, ICT

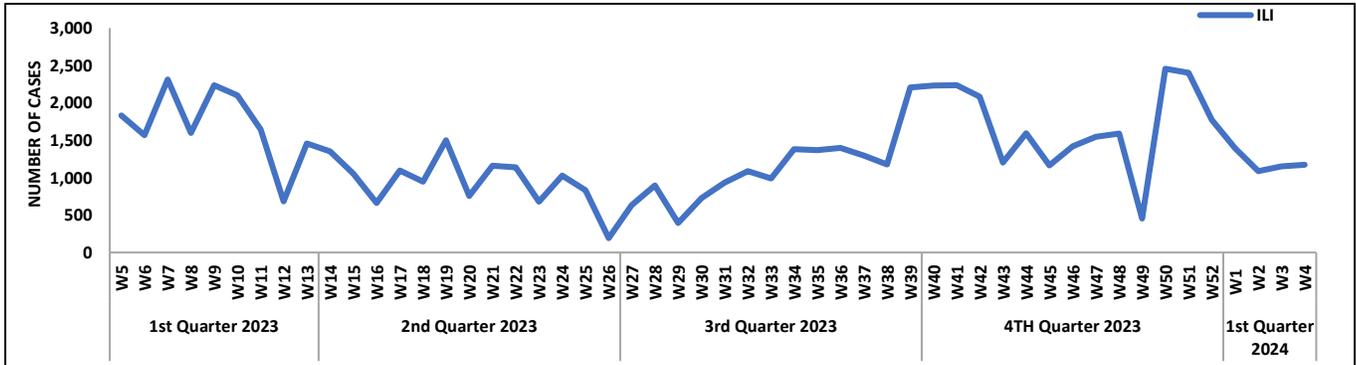


Figure 7: Most frequently reported suspected cases during week 04, AJK

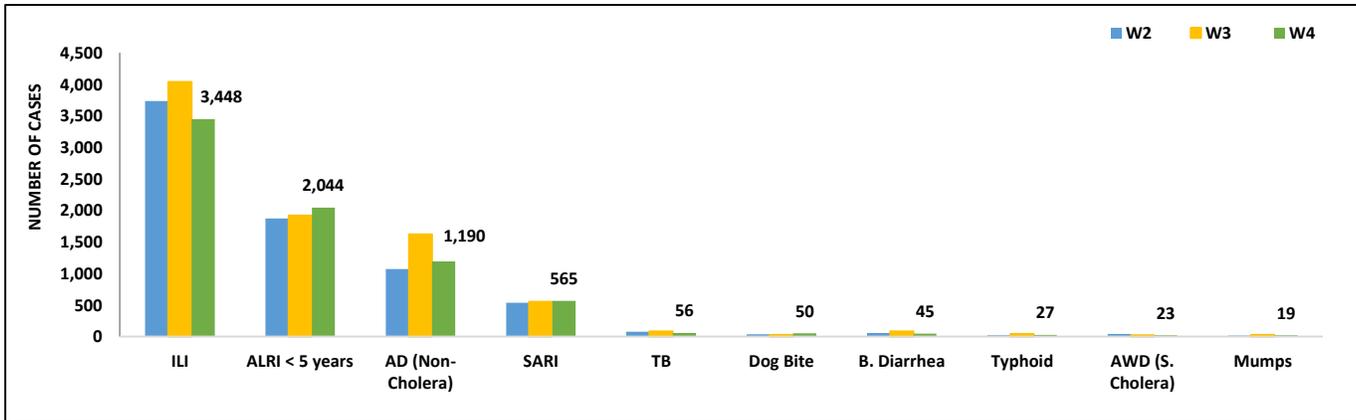


Figure 8: Week wise reported suspected cases of ILI and ALRI < 5 years AJK

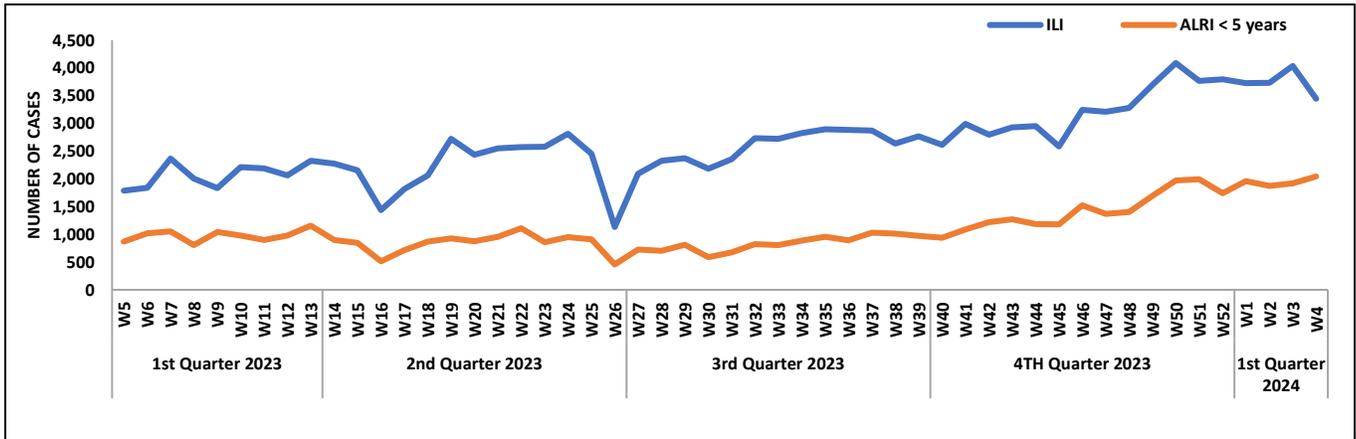


Figure 9: Most frequent cases reported during Wk 04, GB

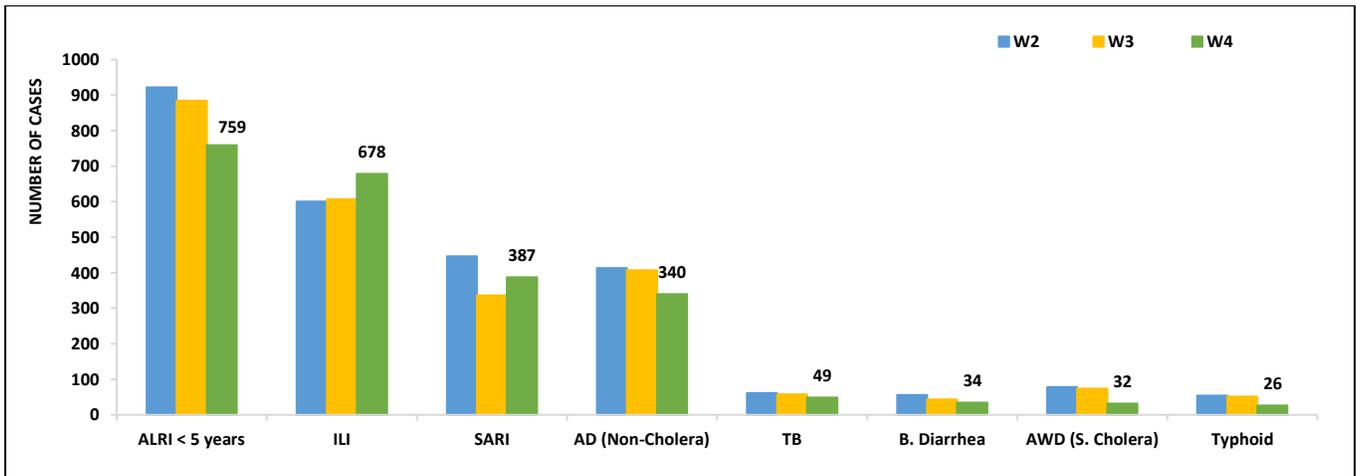
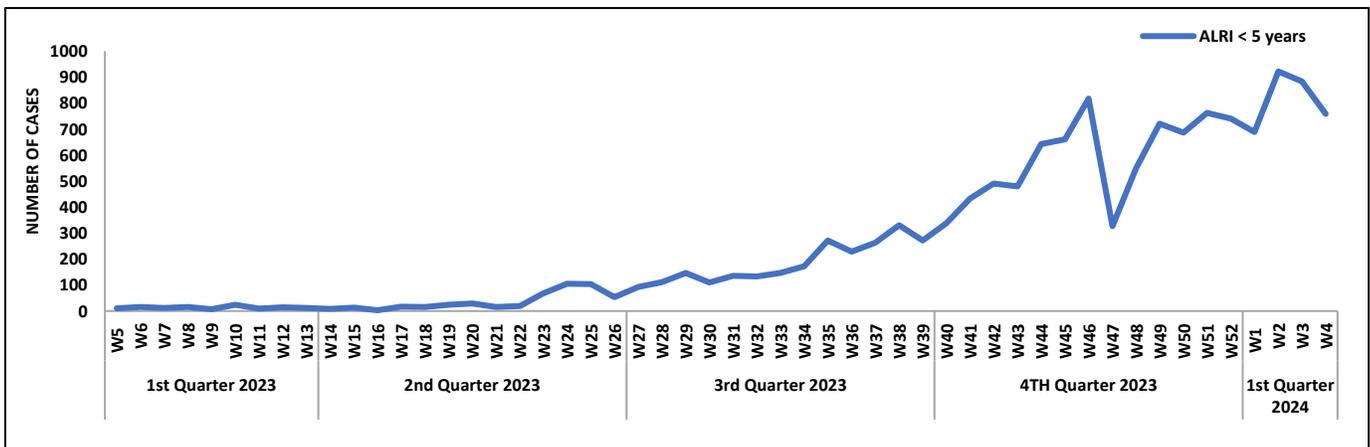


Figure 10: Week wise reported suspected cases of ALRI, GB



- Cases of AD (Non-Cholera) were the most frequently reported followed by Malaria, Typhoid, B. Diarrhea, ILI and Chickenpox.

Figure 11: District wise distribution of most frequently reported suspected cases during week 04, Punjab

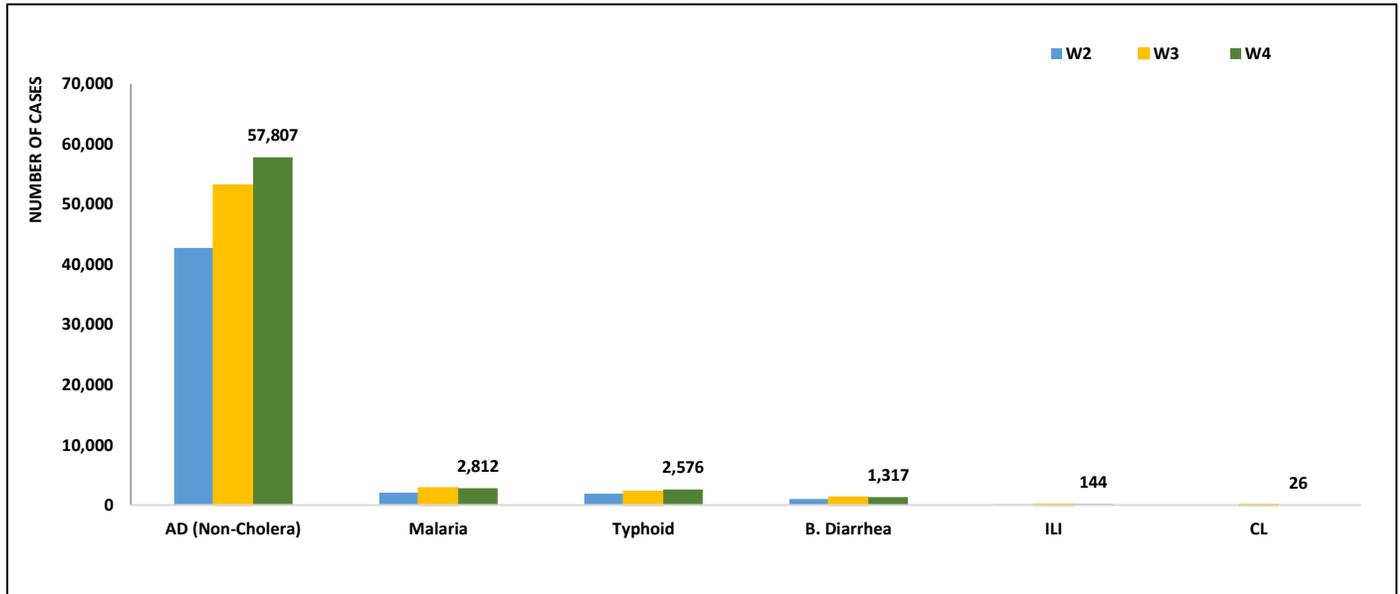


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 04

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)	93	1	-	-	-	-	0	0	-	-
AD (Non-Cholera)	93	0	-	-	-	-	0	0	-	-
Malaria	3,053	144	-	-	-	-	0	0	2	0
CCHF	-	-	6	0	2	0	0	0	-	-
Dengue	33	3	-	-	0	0	2	0	0	0
VH (B&C)	1,780	319	223	131	-	-	63	3	304	0
Typhoid	466	1	-	-	-	-	5	0	-	-
Covid-19	-	-	61	0	3	0	438	1	-	-
HIV	40	0	-	-	-	-	3	0	-	-
Pertussis	-	-	-	-	-	-	11	0	-	-
Diphtheria	-	-	-	-	2	0	40	4	-	-
Influenza A	-	-	-	-	8	1	54	3	-	-
TB	108	17	-	-	-	-	-	-	-	-
Syphilis	102	0	-	-	-	-	-	-	-	-
Measles	-	-	-	-	-	-	1	0	-	-

IDSR Reports Compliance

- Out OF 149 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 04, 2024

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	110	102	93%
	Bannu	234	119	51%
	Battagram	63	21	33%
	Buner	34	24	71%
	Bajaur	44	22	50%
	Charsadda	59	51	86%
	Chitral Upper	34	28	82%
	Chitral Lower	35	34	97%
	D.I. Khan	94	92	98%
	Dir Lower	74	74	100%
	Dir Upper	52	45	87%
	Hangu	22	22	100%
	Haripur	71	60	85%
	Karak	35	32	91%
	Khyber	64	14	22%
	Kohat	61	61	100%
	Kohistan Lower	11	11	100%
	Kohistan Upper	20	20	100%
	Kolai Palas	10	10	100%
	Lakki Marwat	70	70	100%
	Lower & Central Kurram	40	5	13%
	Upper Kurram	42	12	29%
	Malakand	48	36	75%
	Mansehra	136	79	58%
	Mardan	80	62	78%
	Nowshera	55	54	98%
	North Waziristan	380	0	0%
	Peshawar	153	132	86%
	Shangla	65	16	25%
	Swabi	63	61	97%
	Swat	76	71	93%
	South Waziristan	134	51	38%
	Tank	34	33	97%
	Torghar	14	14	100%
Mohmand	86	27	31%	
SD DI Khan	19	1	5%	
SD Peshawar	5	3	60%	
SD Tank	58	1	2%	
Orakzai	68	16	24%	
	Mirpur	37	37	100%
	Bhimber	20	20	100%
	Kotli	60	60	100%
	Muzaffarabad	45	44	98%
	Poonch	46	46	100%



Azad Jammu Kashmir	Haveli	39	27	69%
	Bagh	40	40	100%
	Neelum	39	38	97%
	Jhelum Vellay	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	35	26	74%
	CDA	35	26	74%
Balochistan	Gwadar	25	7	28%
	Kech	40	31	78%
	Khuzdar	20	18	90%
	Killa Abdullah	20	0	0%
	Lasbella	55	55	100%
	Pishin	62	7	11%
	Quetta	43	17	40%
	Sibi	36	33	92%
	Zhob	39	26	67%
	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	40	98%
	Harnai	17	17	100%
	Kachhi (Bolan)	35	35	100%
	Jhal Magsi	26	26	100%
	Sohbat pur	25	25	100%
	Surab	32	31	97%
	Mastung	45	45	100%
	Loralai	33	21	64%
	Killa Saifullah	28	27	96%
	Ziarat	29	16	55%
	Duki	31	24	77%
	Nushki	32	30	94%
	Dera Bugti	45	0	0%
	Washuk	46	20	43%
	Panjgur	38	20	53%
	Awaran	23	7	30%
	Chaman	24	22	92%
	Barkhan	20	19	95%
Hub	33	32	97%	
Musakhel	41	29	71%	
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	61	84%
	Ghotki	64	63	98%
	Umerkot	43	41	95%
	Naushahro Feroze	107	62	58%
	Tharparkar	282	250	89%
	Shikarpur	60	60	100%
	Thatta	53	52	98%
	Larkana	67	67	100%
	Kamber Shadadkot	71	70	99%
	Karachi-East	23	22	96%
	Karachi-West	20	20	100%
	Karachi-Malir	37	15	41%
	Karachi-Kemari	18	6	33%
	Karachi-Central	11	11	100%
	Karachi-Korangi	18	17	94%
	Karachi-South	4	4	100%
	Sujawal	54	54	100%
	Mirpur Khas	106	105	99%
	Badin	123	117	95%
	Sukkur	64	64	100%
	Dadu	90	87	97%
	Sanghar	100	100	100%
	Jacobabad	44	42	95%
	Khairpur	169	167	99%
	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%



National Conference Tackles Integrated Approach to Public Health with Evidence-Based Data

The National Institute of Health (NIH), in collaboration with the Ministry of National Health Services, Regulations and Coordination and the Carter Center, recently hosted a two-day national conference in Islamabad. Titled "Integrated Approach for Evidence-Based Public Health - Role of National Health Data Center," the event brought together key stakeholders from various sectors to discuss the crucial role of data in strengthening public health in Pakistan.

The Need for Integration:

The conference highlighted the fragmented nature of existing health data systems in Pakistan, leading to challenges in disease surveillance, outbreak response, and policy formulation. Speakers emphasized the need for an integrated approach, where data from various sources, including hospitals, clinics, and laboratories, is pooled and analyzed to provide a comprehensive picture of the nation's health landscape.

Enter the National Health Data Center:

The National Health Data Center (NHDC), established under the NIH, was presented as a key player in achieving this integration. The center aims to consolidate health data from across the country, ensuring its quality, accessibility, and utilization for evidence-based public health decision-making.

Key Discussion Points:

The conference delved into various aspects of establishing and utilizing the NHDC effectively. Key discussion points included:

- **Data standardization and interoperability:** Participants stressed the need for standardized data collection and sharing mechanisms to ensure compatibility across different systems.
- **Data governance and privacy:** Addressing concerns about data security and privacy was crucial, with participants advocating for robust safeguards and ethical data use practices.

- **Building capacity and skills:** The importance of training health professionals in data analysis and interpretation was emphasized to maximize the utility of the NHDC.
- **Collaboration and partnerships:** The conference highlighted the need for collaboration between government agencies, academia, civil society, and international organizations to ensure the success of the NHDC initiative.

Outcomes and Future Directions:

The conference concluded with a renewed commitment to building a robust and integrated health data system in Pakistan. Participants called for continued support from government, stakeholders, and international partners to realize the NHDC's full potential.

Significance of the Event:

This conference represents a significant step forward in Pakistan's journey towards evidence-based public health. By leveraging the power of data, the NHDC has the potential to transform the way health challenges are identified, addressed, and prevented, ultimately leading to better health outcomes for all citizens.

A note from Field Activities.

Milestone Achieved in Punjab's Malaria Elimination Campaign: G6PD Testing Kits Deployed

Dr. Shaban Nadeem
Manager Operations CD&EPC
Punjab

A significant step forward was taken today in the fight against malaria in Punjab with the handover of G6PD testing kits and devices to the Department of Health Services, Community Development & Epidemic Prevention Control (CD&EPC) Punjab. The ceremony, held in Rawalpindi, marked a crucial milestone in the ongoing Malaria Elimination from Punjab campaign.

The delegation from the Federal Directorate of Malaria Control (DoMC) Islamabad, led by Mian Rehan Ahmad, presented the testing kits and devices to Dr. Yadullah Ali, DHS CD&EPC Punjab. The



equipment was then promptly transported and received by Dr. Usman Haider Sheikh and his team at the Civil Hospital Sakhi Sarwar in DG Khan, where it will be used in a pilot program targeting the district's high prevalence of malaria cases.

The deployment of G6PD testing is a critical component in the fight against malaria, particularly for the effective use of Primaquine, a drug with the potential to prevent relapses. G6PD deficiency, a genetic condition, can cause severe side effects when treated with Primaquine. This mandatory testing ensures safe and individualized treatment for recurrent malaria cases, maximizing the effectiveness of the drug while safeguarding patient health.

The initiative was spearheaded by the Primary & Secondary Healthcare Department under the Punjab Health Reforms initiative. This collaborative effort between federal and provincial authorities demonstrates a strong commitment to eliminating malaria from Punjab.

This development signifies a positive step towards:

- Enhanced patient safety: G6PD testing ensures safe and effective use of Primaquine, minimizing potential side effects.
- Improved treatment efficacy: Targeted treatment based on G6PD status leads to better outcomes and prevents treatment failures.
- Accelerated malaria elimination: Effective treatment of recurrent cases contributes significantly to achieving malaria-free status.

Providing These Testing Kits and Devices Is A Vital Step in Our Collective Fight Against Malaria. G6PD Testing Will Empower Healthcare Professionals in DG Khan to Deliver Safe and Effective Treatment, Ultimately Contributing to Our Shared Goal of Malaria Elimination in Punjab."

The success of this initiative depends on:

- Effective implementation of the pilot program in DG Khan.

- Scaling up the program to other high-burden districts in Punjab.
- Raising public awareness about G6PD deficiency and malaria prevention.

Dr. Yadullah Ali, DHS CD&EPC Punjab said that We are grateful to the DoMC for their collaboration and support. The G6PD testing pilot program in DG Khan will be instrumental in improving patient care and advancing our malaria elimination efforts. The deployment of G6PD testing kits and devices in Punjab is a commendable step towards achieving malaria elimination. Continued collaboration, effective implementation, and community engagement are crucial for a malaria-free future in Punjab.

Letter to Editor

Monthly Review Meeting of District Disease Surveillance & Response Units (DDSRUs) Held in Lahore

Dr. Yadullah Aki
Director CD&EPC
Punjab.

A monthly review meeting of all District Disease Surveillance & Response Units (DDSRUs) in Punjab province was held on Feb 04th, 2024 at the Committee Room No. 1, Directorate General Health Services Punjab, Lahore. The meeting was chaired by Dr. Yadullah Ali, DHS CD&EPC, and aimed to assess the functionality, performance, and challenges faced by the DDSRUs.

Opening Remarks and Participation:

The inaugural session was chaired by Dr. Muhammad Shaban Nadeem, Manager Operations CD&EPC Punjab. Other key participants included Dr. Mohsin Watto (Epidemiologist), Dr. Junaid (Manager Trainings CD&EPC), Dr. Saeed Akhtar Ghuman (Senior Consultant UK-HSA Punjab), Dr. Ahmad Shafeeq (Technical Support PDSRU from WHO), and team members from PDSRU and FETP Fellows.

Meeting Agenda:

The primary agenda points of the meeting were:

- **Functionality Status:** Assessing the operational readiness and effectiveness of DDSRUs across the province.



- **Performance Evaluation:** Reviewing the performance of DDSRUs in terms of surveillance, data collection, reporting, and outbreak response.
- **Issuance of Weekly Bulletins:** Discussing the process and content of weekly bulletins regarding Integrated Disease Surveillance & Response (IDSR).
- **Issues and Way forward:** Identifying challenges faced by DDSRUs and developing strategies for improvement.

Presentations and Discussions:

Representatives from each DDSRU presented their individual reports, highlighting their current functionality, achievements, and challenges. The presentations sparked discussions and feedback from the chair and other participants, leading to a comprehensive understanding of the overall situation across the province.

Key Emphasis:

Dr. Yadullah Ali, the chair of the meeting, emphasized the importance of ensuring the complete functionality of DDSRUs. He stressed the need for the presence and active participation of all members of Rapid Response Teams (RRTs) and advocated for complete ownership of the program by all District Health Authorities.

Outcomes and Next Steps:

The meeting concluded with several key takeaways and action items:

- **Strengthening Functionality:** Develop and implement strategies to ensure the full operational capacity of all DDSRUs.
- **Improving Performance:** Identify areas for improvement in surveillance, data collection, reporting, and outbreak response, and implement targeted interventions.
- **Enhancing Communication:** Streamline the process of issuing weekly IDSR bulletins and ensure timely dissemination of information.
- **Addressing Challenges:** Develop and implement solutions to address the specific challenges faced by individual DDSRUs.

Conclusion:

The monthly review meeting of DDSRUs provided a valuable platform for assessing the program's functionality, performance, and challenges. The collaborative discussions and shared insights will

guide future efforts to strengthen disease surveillance and response capabilities across Punjab province, ultimately contributing to improved public health outcomes.

Knowledge Hub

Advisory for the Prevention and Control of Diphtheria

Background:

Diphtheria is vaccine-preventable upper-respiratory infection that usually affects the mucous membranes of the nose and throat. The disease is caused by the toxins produced by *Corynebacterium diphtheriae* (C. diphtheriae) or by *Corynebacterium ulcerans* (C. ulcerans). Humans are the only reservoir of the disease and transmit the infection from one person to another through respiratory droplets particularly by coughing or sneezing or rarely with contaminated clothes and surfaces. Diphtheria occurs worldwide, particularly in countries with suboptimal vaccination coverage. In Pakistan, sporadic cases of Diphtheria continue to be reported throughout the year and frequently during winter and spring. Diphtheria has been notified as a priority/reportable disease in Pakistan. Despite the availability of a safe and effective vaccine, outbreaks have been occurring with more often among partially or non-vaccinated population. People living in overcrowded, unhygienic conditions, malnutrition also pose a risk of increased disease burden. Enhancing routine immunization coverage and implementing infection prevention and control measures at hospital and community level can significantly limit the potential and scale of the disease transmission.

Objectives of the Advisory:

This Advisory is intended to alert the health professionals to remain vigilant and detect suspected Diphtheria cases and to undertake prevention and control measures during the winter season.

Clinical Presentation:

The presentation of Diphtheria ranges from asymptomatic carriers to life threatening respiratory illness. After a usually short incubation period (2-5 days to 10 days max.), the release of the cytotoxin may produce characteristic lesions on the affected



mucous membranes of upper respiratory tract causing respiratory Diphtheria or affecting skin causing Cutaneous diphtheria (rare). The most visible and common symptom of diphtheria is a thick, gray-whitish coating also called as pseudo-membrane that appears within 2-3 days of illness onset on the nasal mucosa, throat and tonsils and is the hallmark of respiratory diphtheria. Usually, diphtheria has a gradual onset and is characterized by a mild fever, sore throat and difficulty swallowing, malaise, loss of appetite, and/or hoarseness. On inspection, the patient may also have an obviously swollen neck, referred to as "bull neck due to swollen cervical lymph nodes, soft tissue edema and mucosal edema. The case-fatality ratio is 5%-10% which may turn up to 100% among unvaccinated if not treated appropriately. Diphtheria toxins may also get into the blood stream causing complications that may include myocarditis, polyneuropathy, and renal failure and bleeding problems due to low blood platelets.

Sample Collection and Transportation:

Nasopharyngeal swab for culture or for PCR should only be obtained using sterile polyester, rayon or nylon flocked swabs. Amies-Transport medium with charcoal is generally used as the transport medium. Specimens should be transported to the laboratory at 2-8°C within 24-48 hours of collection.

Laboratory Confirmation:

PCR is a rapid test with higher sensitivity while culture is considered the gold standard laboratory test for Diphtheria.

Clinical Management:

Isolate the patient in single room. In addition to standard precautions, droplet and contact precautions for respiratory and cutaneous diphtheria respectively. Diphtheria Antitoxin (DAT) is highly effective and the gold standard for treatment of diphtheria, should be administered immediately to probable cases with respiratory diphtheria based on clinical diagnosis. Antibiotics can be prescribed oral or intravenous based on the clinical condition of the patient and culture report. Recommended antibiotics are azithromycin, clarithromycin, and erythromycin and penicillin. Trimethoprim-sulfamethoxazole can also be used and patients after completing 48 hours of effective antibiotic therapy are usually non-contagious to diphtheria. Asymptomatic carriers with

toxigenic strain should be subjected to the same isolation and treatment measures as the index case. It is important to initiate prophylactic therapy in contacts who have not been immunized, before the results of culture are received. The disease is usually not contagious 48 hours after antibiotics are instituted.

Diphtheria antitoxin (DAT) stockpiles:

The potential size of a stockpile needs careful consideration since treatment of diphtheria cases is also dependent on diagnostic capacity and the provision of health-care services. As DAT is included in the WHO Model List of Essential Medicines for Children, DRAP must ensure the minimum required stockpiles.

Case Definition for surveillance:

Suspected/Probable case: An upper respiratory tract illness with an adherent membrane of the tonsils or larynx, pharynx and/or nose and laryngitis, pharyngitis or tonsillitis.

Confirmed case: Detection of *Corynebacterium* spp. isolated by culture is laboratory confirmed case.

Epidemiologically linked cases: An epidemiologically linked case meets the definition of a suspected case and is linked epidemiologically to a laboratory-confirmed case. In this situation, a person has had intimate respiratory or physical contact with a laboratory-confirmed case within the 14 days prior to onset of sore throat.

Outbreak response:

A single laboratory-confirmed case should trigger a public health response. Two epidemiologically linked cases, of which at least one is laboratory confirmed, is considered an outbreak. All outbreaks should be investigated immediately and case-based data should be collected.

Prevention and Control Measures:

Vaccination consists of DPT 3 doses of 0.5 ml each/IM administered to the children less than one year of age as per mentioned schedule: 1st dose at age six weeks; 2nd dose at age ten weeks; 3rd dose at age fourteen weeks. DPT (also DTP and DTWP) refers to a class of combination vaccines against three infectious diseases i.e. Diphtheria, Pertussis (whooping cough), and tetanus. However, following infection prevention and control measures are recommended to prevent further transmission of diphtheria:



- Frequent and thorough hand washing with soap and water and use of hand sanitizer if soap and water are unavailable.
- Apply standard precautions (droplet and contact) in patient settings and at community level.
- Awareness to exercise respiratory etiquettes through covering mouth and nose while

sneezing or coughing with elbow must be ensured.

- Suspected cases should avoid contact with young children and women in late pregnancy, especially the unimmunized, until at least 02 days of antibiotics are taken.

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