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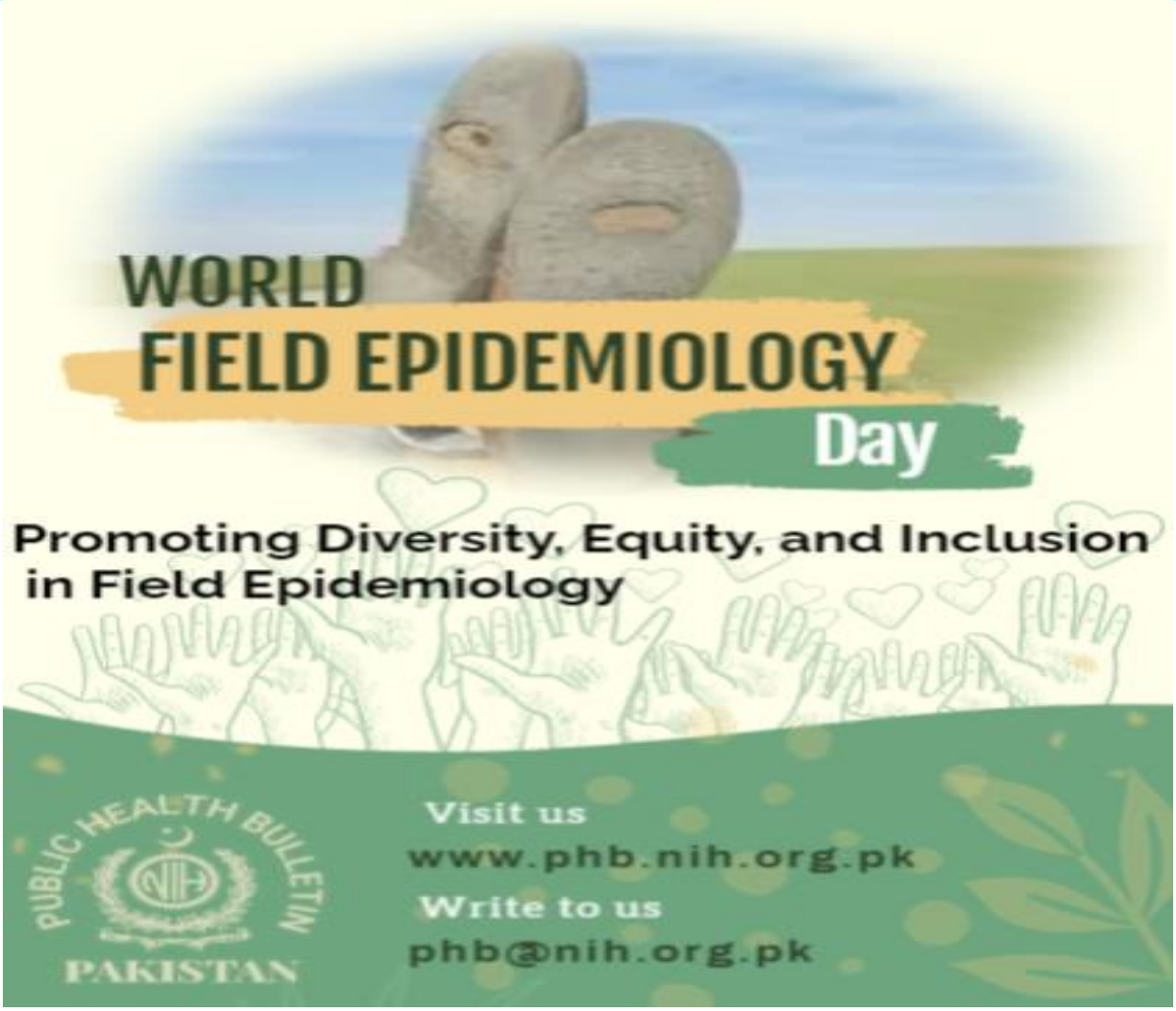
Integrated Disease Surveillance & Response (IDSR) Report

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.



UK Health Security Agency

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Preface

World Field Epidemiologist Day: A Celebration of Public Health Heroes

On the auspicious occasion of World Field Epidemiologist Day, we commemorate the invaluable contributions of epidemiologists and frontline workers in safeguarding community health.

Epidemiologists are public health professionals who leverage their expertise in epidemiology, statistics, and public health to investigate and respond to disease outbreaks and other public health challenges. They identify the root causes of diseases, track their spread, and develop interventions to prevent and control them.

Frontline workers are the first responders to public health emergencies, comprising nurses, doctors, paramedics, and other healthcare professionals who provide direct care to patients. They also include public health workers, such as sanitarians and community health workers, who work tirelessly to prevent diseases and promote health in their communities.

Both epidemiologists and frontline workers play a pivotal role in protecting our health. During the COVID-19 pandemic, they worked in tandem to investigate the outbreak, track its spread, and develop and implement interventions to mitigate its impact. They also play a critical role in preventing and controlling other public health problems, such as HIV/AIDS, malaria, and tuberculosis. They also work to strengthen public health systems to enable them to better detect and respond to future outbreaks.

On this World Field Epidemiologist Day, we acknowledge and honor the unwavering dedication and sacrifice of epidemiologists and frontline workers. They are the true heroes of our time.

We can all express our gratitude to epidemiologists and frontline workers by doing our part to protect our health and the health of our communities. This includes getting vaccinated against preventable diseases, practicing good hygiene, and adhering to public health recommendations. We can also 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 35 most frequent reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, ALRI <5 years, B. Diarrhea, Typhoid, VH (B&D), SARI, dog bite and AVH (A&E).*
- *Overall, increase in acute diarrhea cases observed from all provinces, specially from Punjab, Sindh and KP. All are suspected cases. Field investigation required to verify cases.*
- *Vaccine Preventable Diseases reported from all provinces. Vaccine coverage of the area along with case verification is required.*

All are suspected cases and need field verification.

IDSR compliance attributes

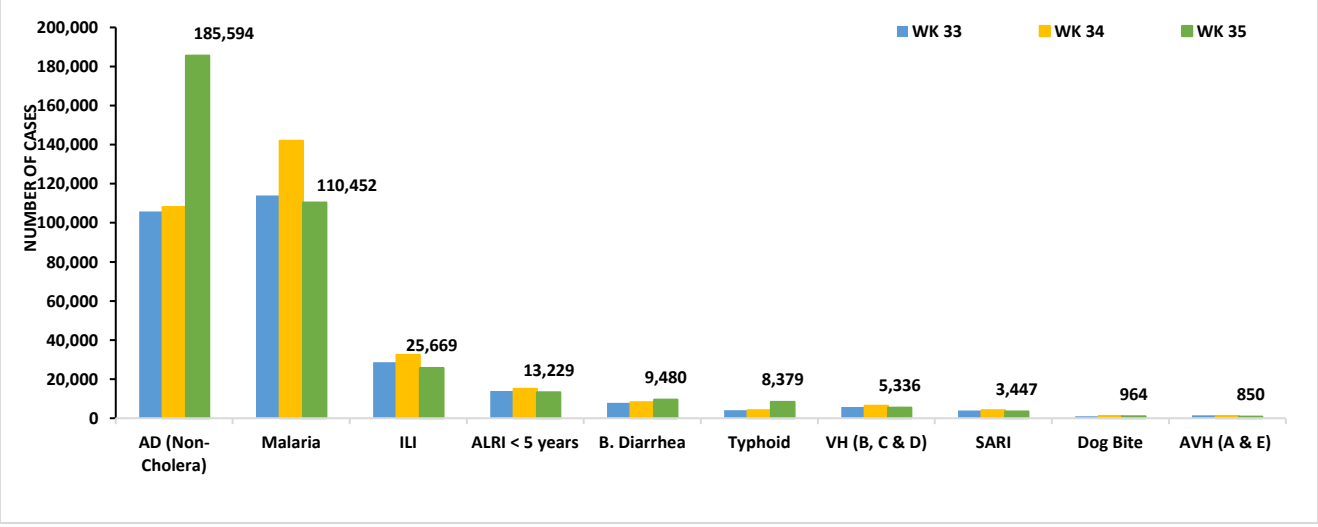
- *The national compliance rate for IDSR reporting in 113 implemented districts* is 78%
- *ICT and Sindh are the top reporting region with a compliance rate of 100% and 93% followed by AJK 92% and Khyber Pakhtunkhwa with 73%*
- *The lowest compliance rate was observed in Gilgit Baltistan.*

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	*1635*	*1192*	*73*
Azad Jammu Kashmir	*375*	*344*	*92*
Islamabad Capital Territory	*27*	*27*	*100*
Balochistan	*965*	*606*	*63*
Gilgit Baltistan	*216*	*59*	*27*
Sindh	*1834*	*1710*	*93*
National	*5052*	*3938*	*78*

Table 1: Province/Area wise distribution of most frequently reported cases during week 35, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	2175	5,403	555	218	27,454	101,466	48,323	185,594
Malaria	147	7,628	2	1	8,317	4279	90,078	110,452
ILI	2,557	3,216	174	551	3,246	319	15,606	25,669
ALRI < 5 years	855	1450	92	1	1371	NR	9,460	13,229
B. Diarrhea	140	1428	34	4	928	3,183	3,763	9,480
Typhoid	70	707	17	0	1078	5,020	1,487	8,379
VH (B, C & D)	16	71	0	0	92	NR	5157	5,336
SARI	332	777	90	0	1509	NR	739	3,447
Dog Bite	105	88	0	0	130	NR	641	964
AVH (A & E)	50	12	3	1	288	NR	496	850
Mumps	89	76	23	0	107	NR	462	757
AWD (S. Cholera)	66	198	60	0	27	NR	21	372
CL	0	80	0	0	253	25	0	358
Pertussis	7	75	0	0	9	NR	234	325
Chickenpox/ Varicella	18	7	14	0	154	111	7	311
Syphilis	2	11	0	0	9	NR	235	257
Measles	4	31	1	0	123	NR	94	253
Gonorrhea	0	104	0	0	20	NR	37	161
Dengue	9	1	0	0	86	NR	32	128
Rubella (CRS)	20	36	0	0	7	NR	0	63
Brucellosis	3	39	0	0	9	NR	0	51
Meningitis	4	6	0	0	3	NR	14	27
AFP	2	1	0	0	21	NR	13	37
HIV/AIDS	1	1	0	0	0	NR	10	12
NT	1	2	0	0	15	NR	1	19
Diphtheria (Probable)	0	2	0	0	10	NR	0	12
Anthrax	0	0	0	0	0	NR	0	0
VL	0	3	0	0	2	NR	0	5
Leprosy	0	2	0	0	0	NR	0	2

Figure 1: Most frequently reported suspected cases during week 35, Pakistan



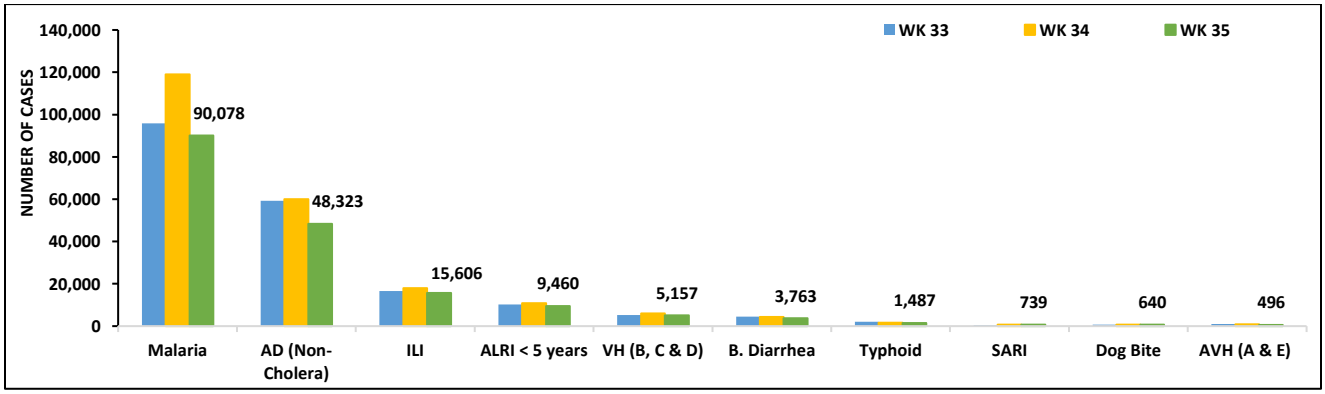
Sindh

- Malaria cases were maximum followed by AD (Non-Cholera), ILI, ALRI<5 Years, B. Diarrhea, VH (B, C, D), SARI, Typhoid, dog bite and AWD (S. Cholera).
- One hundred and twenty-eight cases from Mirpur Khas and 108 cases from Tando Muhammad Khan of Measles reported this week. Field investigation is required to identify the source to control the spread of disease.
- There is sharp rise in trend for Malaria whereas AD declined this week.

Table 2: District wise distribution of most frequently reported suspected cases during week 35, Sindh

DISTRICTS	Malaria	AD (Non-Cholera)	ILI	ALRI < 5 years	VH (B, C & D)	B. Diarrhea	Typhoid	SARI	Dog Bite	AVH (A & E)
Badin	7,482	3,454	312	441	415	256	146	0	70	1
Dadu	4,553	3,663	340	958	41	410	189	25	0	15
Ghotki	1,322	1,200	0	193	537	112	0	0	0	0
Hyderabad	313	1,617	230	31	51	5	10	0	0	0
Jacobabad	1,264	1,262	126	1,296	163	184	24	0	13	0
Jamshoro	1,885	2,119	224	229	113	147	94	10	37	5
Kamber	7,159	3,171	0	247	260	338	22	0	0	0
Karachi Central	105	1,012	1,467	146	195	74	120	0	0	13
Karachi East	128	630	87	1	7	8	7	0	4	1
Karachi Keamari	11	406	163	24	0	1	5	0	0	4
Karachi Korangi	46	266	0	3	1	3	3	0	0	1
Karachi Malir	187	1,139	2,094	369	19	47	14	23	9	1
Karachi South	30	117	0	0	0	0	0	0	0	0
Karachi West	119	919	488	118	16	38	27	38	40	8
Kashmore	1,887	764	335	201	53	99	20	0	0	0
Khairpur	5,347	3,320	1,606	921	161	396	188	281	35	7
Larkana	11,724	2,191	0	293	144	372	18	0	0	1
Matiari	1,447	1,814	11	423	362	93	6	0	29	4
Mirpurkhas	7,416	2,383	2,588	494	385	102	59	0	11	5
Naushero Feroze	1,702	1,285	451	137	75	67	88	0	56	0
Sanghar	3,770	2,190	104	470	845	93	100	229	143	2
Shaheed Benazirabad	2,325	2,239	14	464	92	86	217	7	0	0
Shikarpur	1,266	1,486	0	122	135	142	1	3	66	0
Sujawal	6,128	836	0	35	0	42	2	0	0	0
Sukkur	3,774	1,783	1,947	432	288	205	12	1	0	0
Tando Allahyar	2,294	1,050	359	179	306	117	17	2	23	8
Tando Muhammad Khan	2,875	1,055	0	146	114	62	0	0	31	0
Tharparkar	3,149	1,376	1,467	550	73	106	35	101	2	23
Thatta	5,068	1,921	1,193	224	130	73	16	12	72	396
Umerkot	5,302	1,655	0	313	176	85	47	7	0	1
Total	90,078	48,323	15,606	9,460	5,157	3,763	1,487	739	641	496

Figure 2: Most frequently reported suspected cases during week 35, Sindh



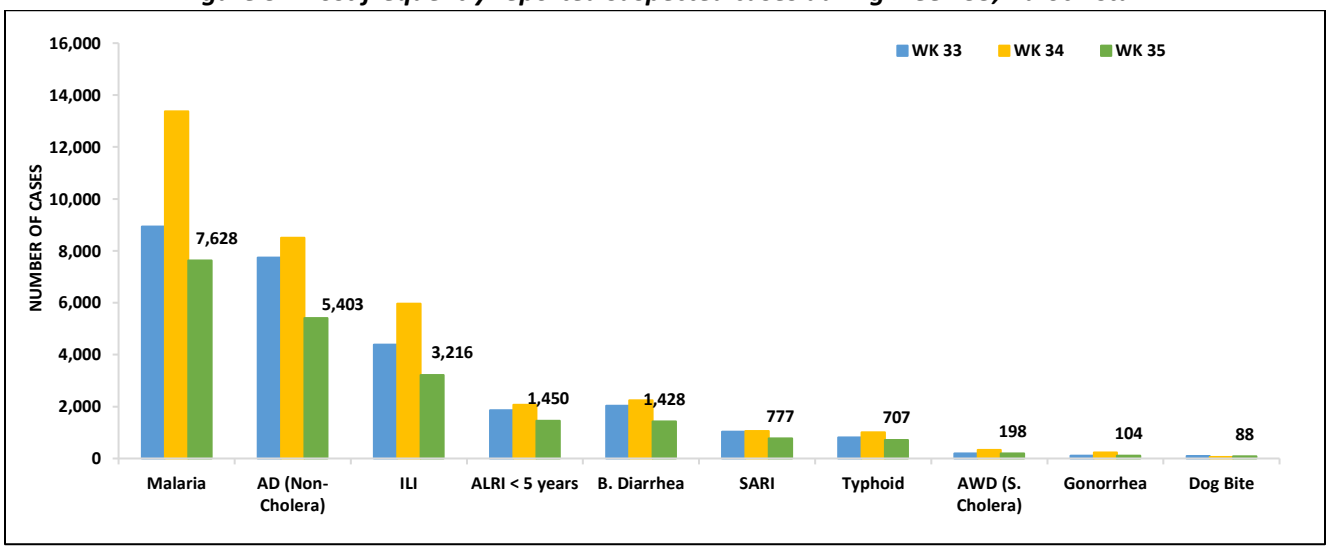
Balochistan

- Malaria, AD (Non-Cholera), ILI, ALRI <5 years, B. Diarrhea, SARI, Typhoid, AWD (S. Cholera), VH (A&E), Gonorrhea and dog bite were the most frequently reported diseases from Balochistan province.
- Trend for ILI, AD and Malaria cases declined this week.
- Jhal Magsi and Duki reported AWD in high numbers. 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 35, Balochistan

Districts	Malaria	AD (Non-Cholera)	ILI	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	AWD (S. Cholera)	Gonorrhea	Dog Bite
Chagai	32	157	245	0	46	1	37	12	1	0
Dera Bugti	341	54	20	23	36	9	12	4	0	0
Duki	130	124	82	23	74	38	19	42	0	0
Harnai	77	83	13	228	161	0	5	11	0	6
Hub	428	427	125	14	74	165	12	4	0	0
Jaffarabad	1,936	407	104	13	66	6	6	0	9	19
Jhal Magsi	733	403	91	15	25	10	13	60	0	2
Kachhi (Bolan)	118	150	42	1	29	86	53	8	0	0
Kalat	27	21	8	8	30	0	14	0	2	0
Kharan	77	126	277	0	62	0	5	17	10	0
Khuzdar	144	93	82	2	45	4	31	4	11	13
Kohlu	102	51	136	7	76	19	29	3	0	0
Lasbella	1,011	617	140	523	34	32	23	0	0	4
Loralai	101	233	223	47	58	117	31	6	1	1
Mastung	257	566	46	36	107	103	108	0	59	28
Naseerabad	654	226	0	7	21	0	66	3	0	7
Nushki	98	243	13	4	92	0	0	14	2	0
Panjgur	124	106	89	37	25	2	17	5	2	0
Pishin	16	140	132	17	76	2	17	0	0	7
Quetta	39	480	1,097	38	111	7	33	0	2	0
Sherani	16	10	18	0	12	3	3	0	1	0
Sohbat pur	844	451	16	144	97	117	82	3	0	0
SURAB	139	69	90	11	8	9	80	0	4	1
Zhob	184	166	127	252	63	47	11	2	0	0
Total	7,628	5,403	3,216	1,450	1,428	777	707	198	104	88

Figure 3: Most frequently reported suspected cases during week 35, Balochistan



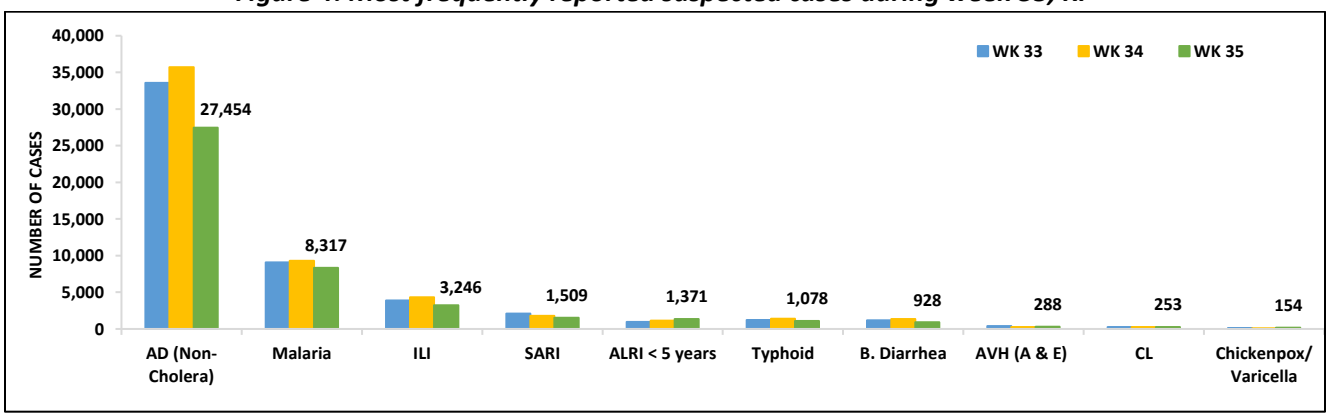
Khyber Pakhtunkhwa

- Cases of AD (Non-Cholera) were maximum followed by Malaria, ILI, SARI, ALRI<5 Years, Typhoid, B. Diarrhea, CL, AVH (A&E) and Measles cases.
- Trend for Malaria, ILI and AD showed decline in cases this week.
- Eighty-one cases of CL reported from Karak. These are suspected cases and a field investigation is required to verify cases and classify cases as new and follow up cases for effective prevention and control.

Table 4: District wise distribution of most frequently reported suspected cases during week 35, KP

Districts	AD (Non-Cholera)	Malaria	ILI	SARI	ALRI <5 Years	Typhoid	B. Diarrhea	AVH (A & E)	CL	Chickenpox/ Varicella
Abbottabad	653	3	11	11	13	18	3	0	0	1
Bajaur	327	201	51	5	15	0	42	0	12	1
Bannu	622	1,366	63	0	3	23	5	4	3	19
Buner	581	606	0	0	47	25	13	0	0	3
Charsadda	1,456	57	183	13	2	2	0	0	0	0
Chitral Lower	589	19	103	367	4	28	0	5	1	1
Chitral Upper	92	6	2	131	0	19	1	0	0	45
D.I. Khan	1,078	588	20	36	16	5	14	0	1	1
Dir Lower	2,144	781	10	0	207	66	152	36	5	13
Dir Upper	1,281	13	18	0	29	20	39	7	5	1
Hangu	315	701	103	42	5	20	19	4	29	0
Haripur	1,368	84	447	4	208	83	10	71	0	6
Karak	385	280	32	19	5	1	1	0	81	0
Khyber	7	3	0	1	0	4	3	0	0	1
Kohat	76	35	0	1	2	1	0	0	7	0
Kohistan Lower	215	4	0	197	10	0	8	0	0	0
Kohistan Upper	515	0	18	2	6	56	14	0	0	0
Kolai Palas	106	1	0	7	4	0	10	0	0	0
L & C Kurram	49	37	117	0	0	8	13	0	0	7
Lakki Marwat	646	1,719	0	0	15	17	14	0	9	0
Malakand	593	20	30	13	20	21	90	24	7	2
Mansehra	367	12	327	43	38	10	4	4	1	0
Mardan	873	127	132	5	244	0	21	9	0	5
NWA	NR	NR	0	0	5	NR	NR	NR	NR	6
Nowshera	2,067	177	3	28	2	21	32	4	47	3
Peshawar	3,878	115	519	55	124	231	173	32	14	23
Shangla	321	427	0	0	3	14	1	0	0	0
SWA	10	52	1	62	16	10	34	2	11	2
Swabi	1,641	64	455	41	122	32	30	30	0	5
Swat	4,520	49	176	0	108	5	111	14	0	2
Tank	341	582	0	0	68	36	13	0	9	0
Tor Ghar	100	151	0	14	3	18	35	0	11	3
Upper Kurram	238	37	425	412	27	284	23	42	0	4
Total	27,454	8,317	3,246	1,509	1,371	1,078	928	288	253	154

Figure 4: Most frequently reported suspected cases during week 35, KP



ICT, AJK & GB

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 AD (Non-Cholera), ALRI <5 years, SARI, Malaria, B. Diarrhea, Mumps, dog bite, AWD (S. Cholera) and Typhoid . Both ILI and AD cases showed downward trend in cases this week.

GB: AD (Non. Cholera) cases were maximum followed by ILI, ALRI<5 years, SARI and ALRI < 5 years. Diarrhea and Mumps. AD (Non-Cholera) showed a sharp rise in trend this week.

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

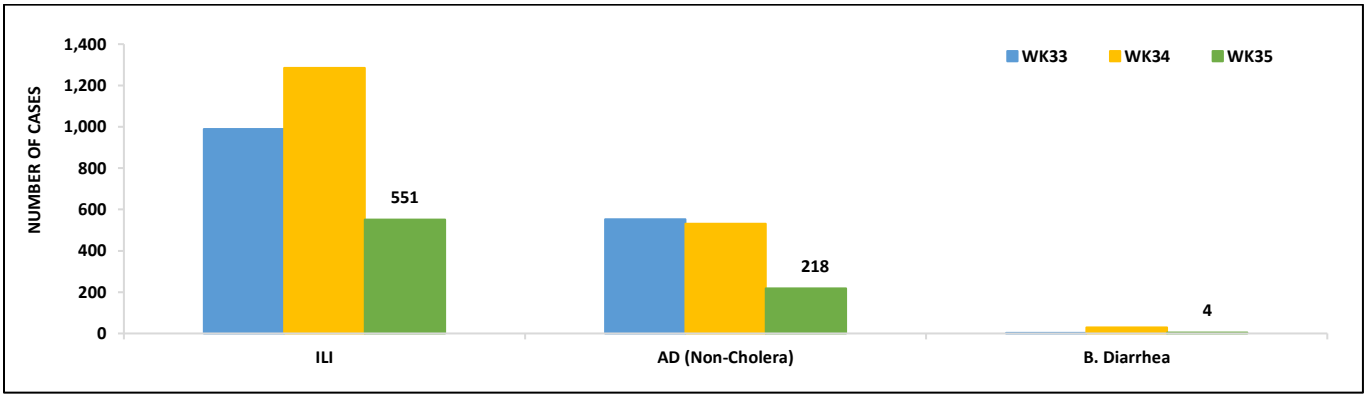


Figure 6: Week wise reported suspected cases of ILI, ICT

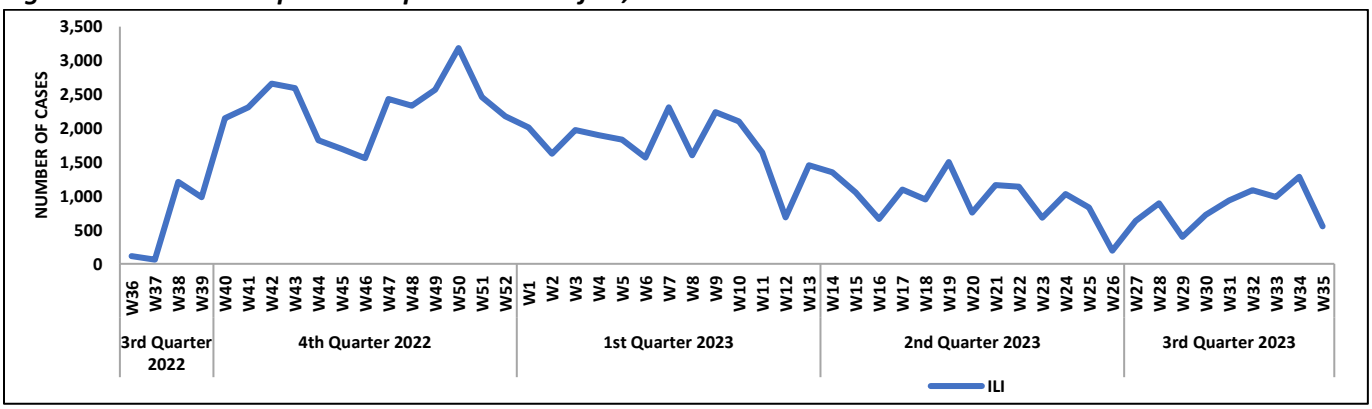


Figure 7: Most frequently reported suspected cases during week 35, AJK

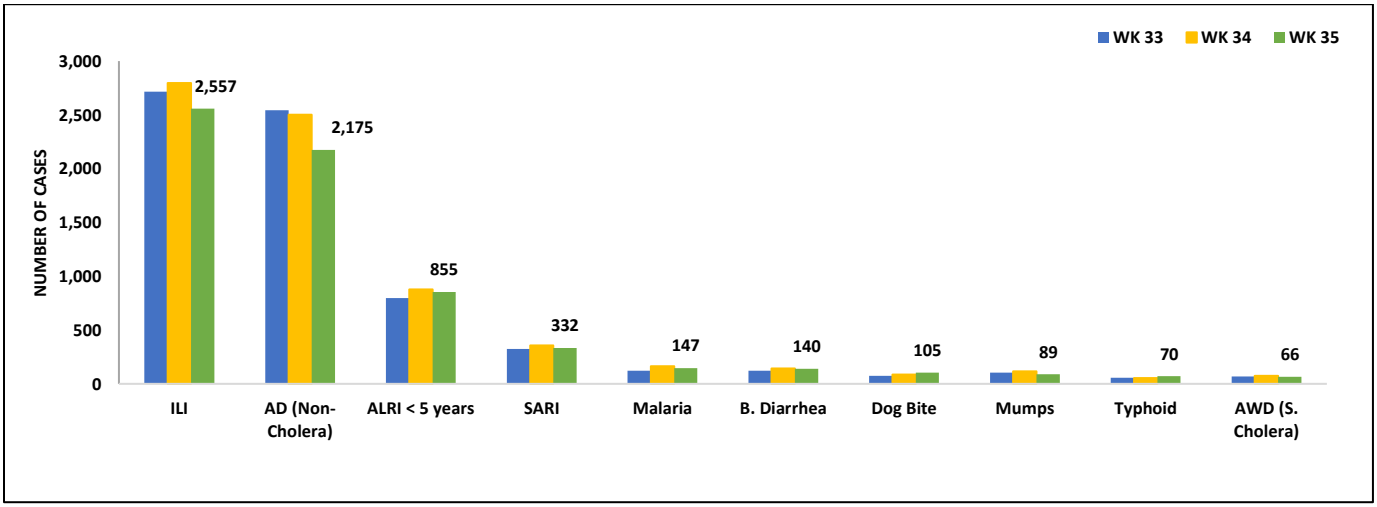


Figure 8: Week wise reported suspected cases of AD (Non-Cholera) and ILI, AJK

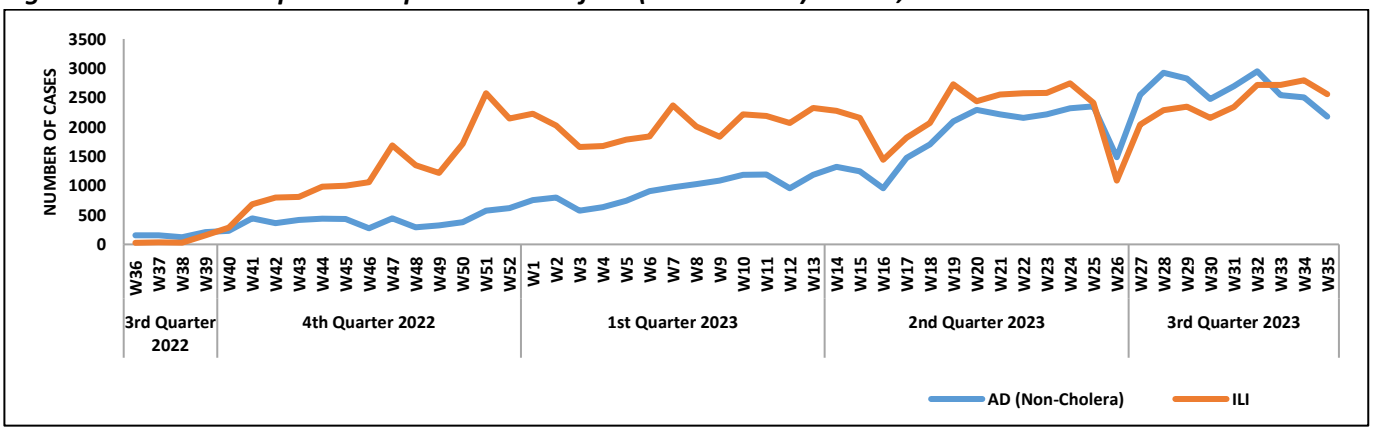


Figure 9: Most frequent cases reported during WK 35, GB

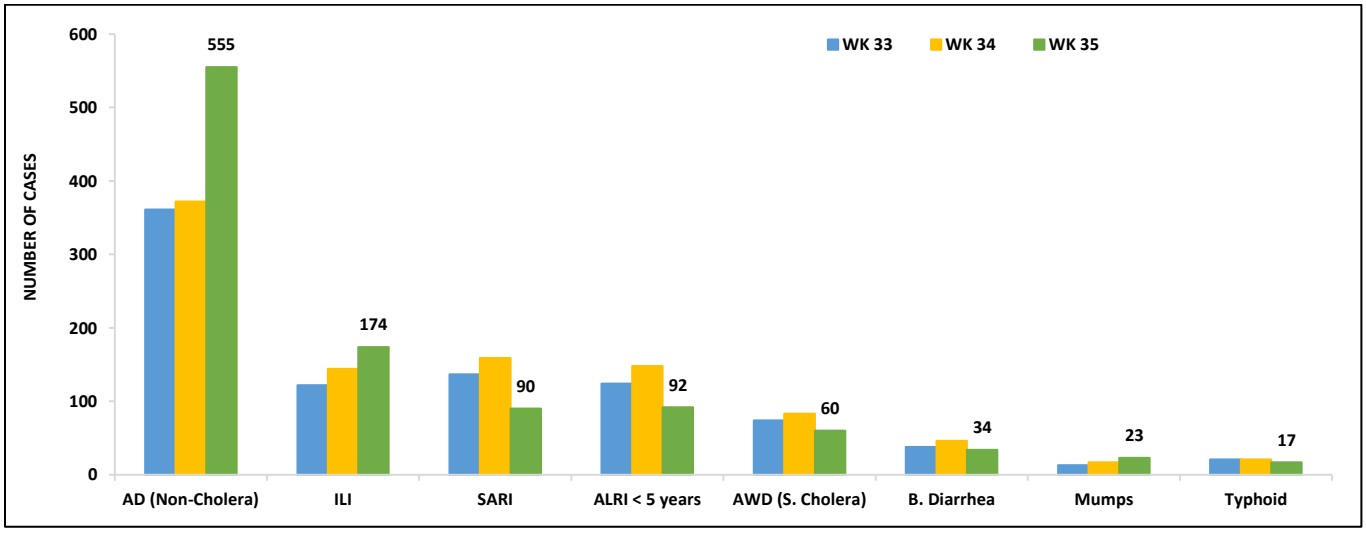
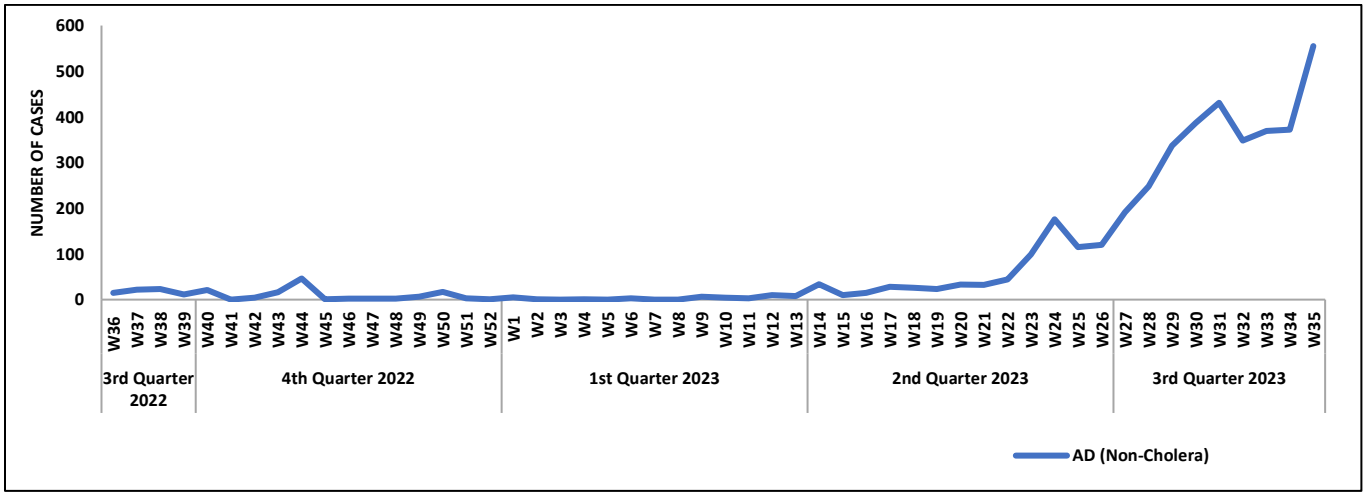


Figure 10: Week wise reported suspected cases of AD (Non-Cholera), GB



Punjab

- AD (Non. Cholera) cases were most frequent followed by Malaria and Typhoid.
- Diarrhea cases were reported in high numbers from Lahore, Faisalabad, Rawalpindi and Gujranwala. All are suspected cases and need verification.

Figure 11: District wise distribution of most frequently reported suspected cases during week 35, Punjab

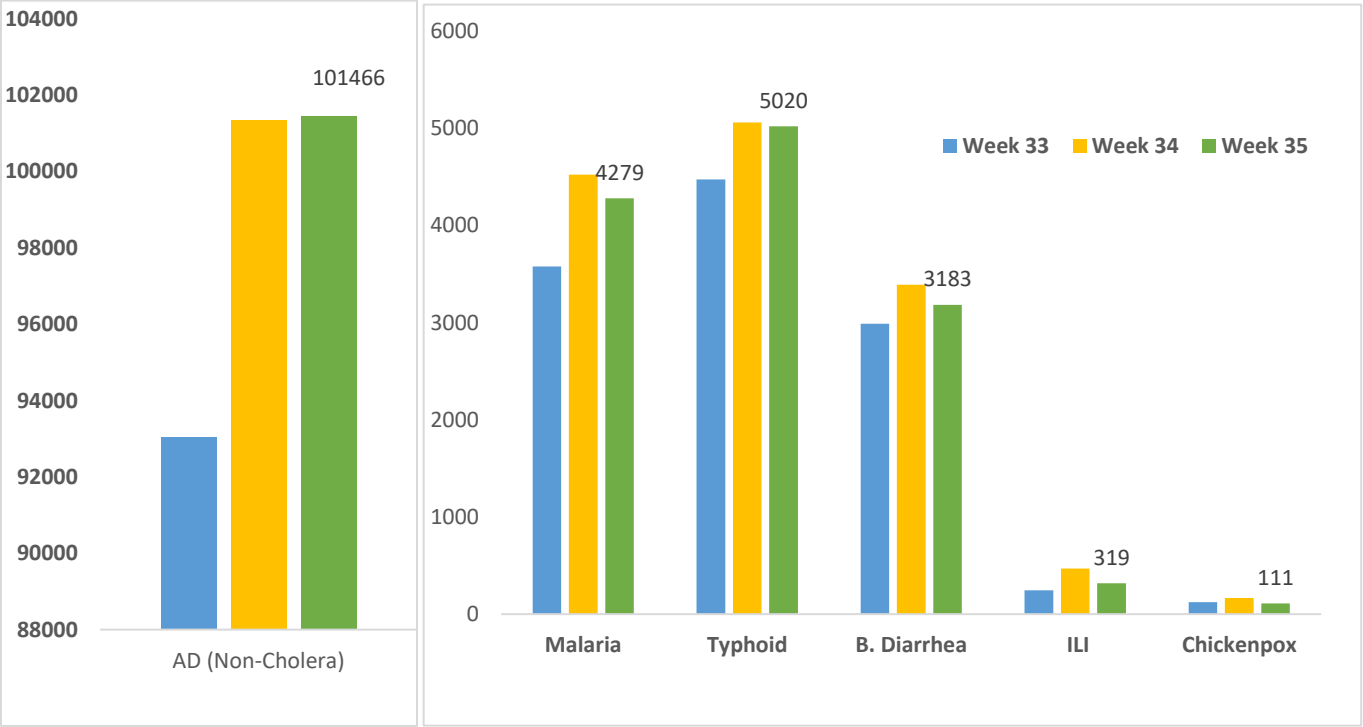


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 35

Diseases	Sindh	Balochistan	Punjab	KPK	ISL	Gilgit
Acute Watery Diarrhoea (S. Cholera)	0	-	-	-	-	-
Acute diarrhea(non-cholera)	0	-	0	-	-	-
Malaria	374	-	-	-	-	-
CCHF	-	1	-	2	-	3
Dengue	15	-	-	-	-	5
Acute Viral Hepatitis(A)	0	-	-	-	-	-
Acute Viral Hepatitis(B)	104	-	-	-	1	-
Acute Viral Hepatitis(C)	111	20	0	-	-	-
Acute Viral Hepatitis(E)	25	-	-	-	-	-
Typhoid	4	-	-	-	-	-
Covid 19	-	1	-	10	-	8

IDSR Reports Compliance

- Out OF 113 IDSR implemented districts, compliance is low from Balochistan districts. Green color showing >50% compliance while red color is <50% compliance

Table 6: IDSR reporting districts Week 35

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Agreed Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	110	110	101	92%
	Bannu	92	92	69	75%
	Buner	34	34	27	79%
	Bajaur	44	44	31	70%
	Charsadda	61	61	49	80%
	Chitral Upper	33	33	8	24%
	Chitral Lower	35	35	31	89%
	D.I. Khan	89	89	73	82%
	Dir Lower	75	75	56	75%
	Dir Upper	55	55	41	75%
	Hangu	22	22	22	100%
	Haripur	69	69	58	84%
	Karak	34	34	34	100%
	Kohat	59	59	59	100%
	Kohistan Lower	11	11	11	100%
	Kohistan Upper	20	20	18	90%
	Kolai Palas	10	10	10	100%
	Lakki Marwat	49	49	49	100%
	Lower & Central Kurram	40	40	10	25%
	Upper Kurram	42	42	12	29%
	Malakand	42	42	34	81%
	Mansehra	133	133	28	21%
	Mardan	84	84	43	51%
	Nowshera	52	52	47	90%
	North Waziristan	21	21	4	19%
	Peshawar	101	101	101	100%
	Shangla	36	36	5	14%
	Swabi	60	60	58	97%
	Swat	77	77	63	82%
	Tank	34	34	29	85%
	Torghar	11	11	11	100%
Azad Jammu Kashmir	Mirpur	37	37	35	100%
	Bhimber	20	20	15	75%
	Kotli	60	60	49	82%
	Muzaffarabad	43	43	42	98%
	Poonch	46	46	46	100%
	Haveli	34	34	33	97%
	Bagh	40	40	36	90%
	Neelum	39	39	33	85%

	Jhelum Vellay	29	29	29	100%
	Sudhnooti	27	27	26	96%
Islamabad Capital Territory	ICT	18	18	18	100%
	CDA	9	9	9	100%
Balochistan	Kech	24	24	19	43%
	Khuzdar	136	20	18	90%
	Lasbella	85	85	55	65%
	Pishin	118	23	9	39%
	Quetta	77	22	20	91%
	Zhob	37	37	28	76%
	Jaffarabad	47	47	16	34%
	Naserabad	37	37	33	89%
	Kharan	32	32	29	91%
	Sherani	32	32	3	9%
	Kohlu	75	75	20	27%
	Chagi	35	35	25	71%
	Kalat	65	65	10	15%
	Harnai	18	18	17	94%
	Kachhi (Bolan)	35	35	13	37%
	Jhal Magsi	39	39	26	67%
	Sohbat pur	25	25	24	96%
	Surab	33	33	20	61%
	Mastung	45	45	45	100%
	Loralai	26	26	26	100%
	Killa Saifullah	31	31	27	87%
	Duki	31	31	29	94%
	Nushki	32	32	30	94%
	Dera Bugti	45	45	23	51%
	Panjgur	38	38	8	21%
	Hub	33	33	33	100%
Gilgit Baltistan	Hunza	31	31	30	97%
	Ghizer	62	62	1	2%
	Gilgit	48	48	10	2%
	Shigar	24	24	11	46%
	Skardu	51	51	7	14%
	Hyderabad	71	71	23	32%
	Ghotki	65	65	64	98%
	Umerkot	98	43	43	100%
	Naushahro Feroze	68	68	58	85%
	Tharparkar	278	100	95	95%
	Shikarpur	60	60	60	100%
	Thatta	53	53	53	100%
	Larkana	67	67	67	100%
	Kamber Shadadkot	71	71	71	100%
	Karachi-East	14	14	13	93%

Sindh	Karachi-West	20	20	20	100%
	Karachi-Malir	37	37	25	68%
	Karachi-Kemari	17	17	15	88%
	Karachi-Central	11	11	11	100%
	Karachi-Korangi	18	18	13	72%
	Karachi-South	4	4	4	100%
	Sujawal	31	31	31	100%
	Mirpur Khas	104	104	104	100%
	Badin	124	124	107	86%
	Sukkur	64	64	64	100%
	Dadu	90	90	90	100%
	Sanghar	101	101	99	98%
	Jacobabad	43	43	43	100%
	Khairpur	168	168	167	99%
	Kashmore	59	59	59	100%
	Matiari	42	42	42	100%
	Jamshoro	70	70	67	96%
	Tando Allahyar	54	54	53	98%
	Tando Muhammad Khan	41	41	25	61%
	Shaheed Benazirabad	124	124	124	100%

Public Health Bulletin-Pakistan: Vol 3, Issue 35 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 is a two-year, competency-based training program that prepares public health professionals to work as field epidemiologists. The program is designed to develop the skills and knowledge necessary to conduct epidemiological investigations, analyze data, and develop and implement public health interventions.

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.

Impact of FELTP in Pakistan

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.

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.

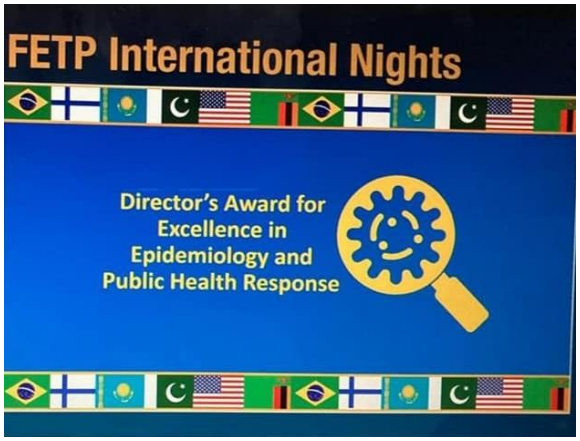
The Role of Diversity and Inclusion in FELTP

The FELTP in Pakistan is committed to promoting diversity and inclusion in the field of epidemiology. The program recognizes that diverse perspectives and experiences are essential to developing effective public health solutions.

The FELTP actively recruits candidates from diverse backgrounds, including women, minorities, and people with disabilities. The program also provides training on unconscious bias and cultural competence.

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.



Pakistan awarded Directors Award for Excellence in Epidemiology & Public Health Response

A note from Field Activities.

Investigative Report on Childhood Deaths from Suspected Measles in UC Tarai, Taluka Salehpat, District Sukkur

Source: DHIS-2 Reports
https://dhis2.nih.org.pk/dhis-web-event-reports/

Introduction:

Measles is a highly contagious viral disease that can cause serious complications, including pneumonia, encephalitis, and death. This Report investigates child deaths from suspected measles in UC Tarai, Pakistan.

Background:

On 12-08-2023, team PDSRU-DGHSS was informed about seven suspected cases of measles and 5 deaths allegedly due to measles through the District Disease Surveillance and Response Unit Sukkur.

Objective:

The objective of the investigation was to:

- Investigate the reported cases and to ensure their proper treatment
- Investigate and confirm the reported deaths and to identify the cause of deaths
- Identify the risk factors associated with the reported deaths in UC Tarai, Tehsil Salehpat
- Find out additional cases or deaths on active search.
- Recommend the preventive and control measures to prevent VPD-related deaths

Methods:

To learn about the disease history and clinical course of the deceased children, face-to-face interviews and verbal autopsies were conducted with their relatives. The interviews and autopsies included questions about the children's symptoms, medical history, and vaccination status. The status of routine immunization in the village was also assessed. This involved reviewing vaccination records and interviewing health workers and community members. An active case search was carried out using the WHO standard case definition of measles. This involved visiting households in the affected villages and interviewing people about any suspected cases of measles. The case search also involved looking for clinical signs of measles, such as fever, rash, and cough. The risk factors for measles in the affected villages were also evaluated. This involved looking at factors such as the vaccination coverage in the area, the health-seeking behavior of the community, and the environmental conditions.

Findings

Five deaths occurred between July 30 and August 11, 2023, in the village of Haji Akan Khan Shambani. All of the deceased children were unvaccinated against measles, and the reason for their non-vaccination was their parents' refusal of the vaccines. In addition to the 7 reported cases, 12 additional cases were found during the active case search indicating that there is a significant burden of measles in the community that is not being captured by routine surveillance. Nineteen (19) blood samples were collected and sent to NIH for analysis. The health-seeking behavior of the community is also a concern, as many people are seeking healthcare from a local quack. Poor personal hygiene and inadequate sanitation were also observed in the affected villages. These conditions can facilitate the spread of measles and other infectious diseases.

Conclusion

The findings of this investigation suggest that there are a number of factors contributing to the measles outbreak in the village of Haji Akan Khan Shambani. These factors include vaccine hesitancy, underreporting of cases, poor health-seeking behavior, and poor environmental conditions. In order to effectively control the outbreak and prevent future outbreaks, it is important to address all of these factors. This can be done through a combination of public health interventions, such as vaccination campaigns, social mobilization activities, and environmental improvements.

Recommendation:

The following recommendations are made to effectively control the measles outbreak and prevent future outbreaks:

- Immediate case response activities, including targeted behavior change communication sessions and accelerated mop-up activity.
- Sensitization of healthcare providers to report suspected cases.
- Expansion and strengthening of the surveillance network to include informal healthcare providers.
- Mobilization of the Sindh Healthcare Commission and anti-quackery teams to contain clinical malpractice.
- Deployment of more vaccinators to Salehpat tehsil.
- Strengthening of routine immunization.

UK Health Security Agency
World Health Organization
USAID
safetynet

A note from Field Activities.

Cholera Case Investigation in village Khanpur , UC Panjuk, Jhalmagsi,Balochistan ,August 2023

Source: DHIS-2 Reports
https://dhis2.nih.org.pk/dhis-web-event-reports/

Background:

Cholera is a preventable and treatable disease, but it remains a major public health problem in developing countries, including Pakistan. In August 2023, a case of cholera was detected in a village in Jhalmagsi district, Balochistan, Pakistan. This prompted an urgent outbreak investigation.

Objective: The objective of the investigation was to:

- Actively search for suspected cases
- Determine the extent of the outbreak
- Identify associated risk factors
- Control the outbreak

Methods

A detailed epidemiological study was conducted, involving a visit to Khanpur village, where the index case of cholera had been detected. The WHO case definition for cholera was used, which states that a case of cholera should be suspected when a patient aged 5 years or more develops severe dehydration or dies from acute watery diarrhea in an area where the disease is not known to be present, or when a patient aged 5 years or more develops acute watery diarrhea, with or without vomiting, in an area where there is a cholera epidemic. A case of cholera is confirmed when V. cholerae O1 or O139 is isolated from any patient with diarrhea.

The index case was examined and found to be improving. Contact tracing was performed, and samples were collected from close contacts who had developed acute watery diarrhea. Three water samples were also collected from the houses of the case and contacts and sent for laboratory testing. A house-to-house search was conducted to identify additional cases of acute watery diarrhea.

Findings "

The finding that three additional suspected cases of cholera were identified during active case search but tested negative suggests that there may have been other factors contributing to the outbreak, such as the presence of other enteric pathogens or environmental contamination. Overall, the risk factors identified in this investigation suggest that poor sanitation and hygiene practices, as well as inadequate water safety measures, are major contributors to the risk of cholera outbreaks in Khanpur village.

Conclusion:

The cholera outbreak investigation in Khanpur village, Jhalmagsi district, Balochistan, Pakistan, in August 2023, identified a number of risk factors for cholera transmission, including poor hygienic practices and lack of hand washing practices, open defecation, no practice of using boiled water/chlorinated water, and inadequate monitoring services and surveillance networks. The findings of the investigation suggest that the outbreak was likely caused by contaminated water, as the water sources in the village were contaminated after flooding and sluggish water flow.

Recommendations:

The following recommendations were made to prevent future cholera outbreaks in Khanpur village:

- Conduct awareness sessions to improve hygienic practices and handwashing.
- Build latrines for the community with proper waste disposal.
- Promote the use of boiled or chlorinated water.
- Provide water filtration plants for marginalized exposed communities and ensure chlorination of water.
- Enhance the surveillance network for early detection of outbreaks.
- The implementation of these recommendations is essential to reducing the risk of future cholera outbreaks in Khanpur village and other similar communities.

Correspondence to Editor.

How I've used my skills to make difference: My Success Story

Dr. Muhammad Arif
Alumni FELTP 11th Cohort Balochistan

With a passion for data analysis, I pioneered the use of spatial statistical techniques and GeoDa software in epidemiology, uncovering hot and cold districts for acute watery diarrhea (AWD) in Baluchistan, Pakistan. My spatial statistical model now empowers field epidemiologists to effectively plan and prevent future AWD outbreaks, marking a historic success.

My interest in spatial epidemiology was sparked by the devastating 2012 AWD outbreak in Baluchistan, which affected over 100,000 people. I realized that traditional epidemiological methods were insufficient for understanding and responding to complex disease outbreaks that vary across space and time.

To address this gap, I developed a novel spatial statistical model to identify hot and cold districts for AWD in Baluchistan. My model incorporated a variety of geographic and environmental factors, including population density, water quality, and sanitation coverage.

The results of my analysis revealed significant spatial disparities in AWD risk, with some districts experiencing up to 10 times higher rates than others. This information has been invaluable for field epidemiologists, who are now able to target their interventions to the area's most at risk.

In addition to its practical impact, my spatial statistical model has also made a significant contribution to the field of epidemiology. It has been published in leading peer-reviewed journals and is now being used by researchers and practitioners around the world.

I am proud that my work has helped to improve the lives of people in Baluchistan and beyond. I am committed to continuing my research in spatial epidemiology and developing innovative tools to help protect public health.

Specifically, my spatial statistical model has been used to:

Guide the deployment of rapid response teams to hot districts during AWD outbreaks

- Identify priority areas for water and sanitation interventions
- Develop targeted risk communication and community engagement campaigns
- Monitor the effectiveness of preventive measures over time

My work has been recognized by the Pakistani government and the international community, and I have received numerous recognitions for my contributions to public health. I am grateful for the opportunity to make a difference in the world, and I am committed to continuing my work in spatial epidemiology.

Tribute to an Experienced Epidemiologist

Dr. Muhammad Mohsan Watto
Chief Epidemiologist, Punjab
Alumni FELTP 4th Cohort

Dr. Muhammad Mohsan Watto, Chief Epidemiologist of the Punjab Health Department, leverages his Master of Public Health (MPH) in Public Health from the University of Lahore and his Master of Science in Field Epidemiology from the University of Health Sciences, Lahore, Pakistan, to lead a team of epidemiologists in the surveillance, prevention, and control of infectious diseases.

With proven expertise in Epidemiology, Technical Assistance, Health Education, Public Health Surveillance, and Disease Surveillance, Dr. Watto has a successful track record of developing and implementing effective public health programs.

His passion for using technology to improve public health has led him to develop several innovative tools

and applications to support disease surveillance and outbreak response.

Dr. Watto's high motivation, results-oriented focus, and strong commitment to public health drive him to use his skills and experience to make a positive impact on the health of the people of Punjab and beyond.

In addition to his technical skills and experience, Dr. Watto is a strong communicator and team player. He effectively communicates complex technical concepts to both technical and non-technical audiences and builds and leads high-performing teams.

Confident in his abilities, Dr. Watto is eager to contribute to the improvement of public health and make a difference in the lives of others.

Journey as a public health protector: My Success Story

Dr. Ehsan Ghani
DHO(Preventive Services)
Alumni FELTP 5th Cohort
Punjab

With my background as a Medical Doctor specializing in Public Health and Field Epidemiology from CDC Atlanta, I have developed a comprehensive understanding of epidemiological principles and infectious disease prevention strategies. My core competence lies in designing and implementing evidence-based interventions aimed at containing outbreaks and minimizing their impact on public health.

Throughout my career, I have successfully led teams in conducting outbreak investigations, analyzing data, developing response plans, and coordinating with various stakeholders to implement effective control measures. For example, during the COVID-19 pandemic, I led a team of epidemiologists in investigating a cluster of cases in a rural community. We identified the source of the outbreak and implemented a targeted intervention plan that resulted in a significant decrease in cases.

In addition to my technical expertise, I possess strong communication skills which enable me to effectively disseminate information about disease prevention strategies to different audiences. I am skilled at tailoring messages for maximum impact, whether it is presenting findings at conferences or collaborating with local communities. For example, I developed and delivered a series of educational workshops on COVID-19 prevention for healthcare workers and community leaders. These workshops were well-received and helped to raise awareness about the virus and how to prevent its spread.

I thrive in fast-paced environments where quick thinking and adaptability are crucial. My experience working on high-profile projects such as the COVID-19 pandemic response has equipped me with the ability to remain calm under pressure while making critical decisions that can save lives. For example, during the early stages of the pandemic, I was tasked with developing a response plan for a potential surge in cases. I worked quickly and efficiently to develop a plan that was both comprehensive and adaptable. This plan was implemented successfully and helped to mitigate the impact of the pandemic on our community.

I am passionate about safeguarding public health and preventing the spread of infectious diseases. With my solid background in medicine and field epidemiology, I am equipped with the knowledge and skills to make a positive impact. I am committed to working tirelessly to protect the health of the public and to create a healthier world for all.

A Field Worker's Journey to Epidemiology: From Data Collector to Epidemiologist

Dr. Muhammad Bilal
Assistant Professor (Community Medicine), FMU
Alumni FELTP 13th Cohort
Punjab

Dr. Bilal Ahmad is a frontline Field Epidemiologist and Public Health Professional with great competence in Prevention and Control of Epidemics. He has a proven track record of success in managing complex public health challenges, as evidenced by his exceptional performance during the COVID-19 pandemic.

In his role as District Epidemiologist of Faisalabad, Pakistan, Dr. Ahmad managed all aspects of the district's COVID-19 response, including the establishment of quarantine centers, contact tracing, hospital and home isolation, receiving of passengers at the airport, admission of patients to hospitals, and safe burials of the deceased. He also supervised all human resources, logistics, and information systems for the district's COVID-19 Control Cells 24/7 since March 2020.

In addition to his core responsibilities, Dr. Ahmad went above and beyond to engage philanthropists to provide food in quarantine centers and Personal Protection Equipment (PPE) for field and hospital health workers. He also coordinated with Law Enforcing Agencies to implement lockdowns as and when required.

With the rollout of the COVID-19 vaccine, Dr. Ahmad led the vaccine deployment and administration process in District Faisalabad. He ensured uniformity of administrative SOPs and coordinated activities to initiate a strong vaccination campaign since February 2021. He established 37 CVCs across the district to provide COVID-19 vaccination to the public and later expanded the vaccination program to the doorsteps of people by deputing special teams.

Dr. Ahmad's dedication and commitment to public health were particularly evident during the polio campaign in July 2020, when no one was ready to undertake this task. Despite suffering from COVID-19 twice during the pandemic, Dr. Ahmad continued to manage all activities from isolation through video link with the District Administration and Law & Enforcement Agencies.

Dr. Ahmad is currently working as an Assistant Professor of Community Medicine at Punjab Medical College, Faisalabad Medical University, Faisalabad. In this role, he is responsible for teaching and training the next generation of public health professionals. He is also actively involved in research on field epidemiology and public health interventions.

Dr. Ahmad's success story is a testament to the importance of field epidemiology in preventing and controlling epidemics. His work has helped to protect the health and well-being of the people of Faisalabad and beyond. He is an inspiration to all public health professionals who work tirelessly to protect the public from infectious diseases.

A Field Worker's Journey to Epidemiology: From the Frontlines to the Forefront

Dr. Waqar Ahmed
Public Health Advisor
(Safetynet), NIH
Alumni FELTP 13th
Cohort
Punjab

I am Dr. Waqar Ahmed, a public health professional and frontline field epidemiologist. I have been working as the District Surveillance Coordinator in Rawalpindi since 2017.

During the COVID-19 pandemic, I have been at the forefront of all pandemic management activities in Rawalpindi District. My work has included COVID-19 case management, Prevention in public, contact tracing of confirmed patients, Home isolations, Referral process, Admission of patients, and supervising Safe burials

I have also supervised all Human Resources, Rapid Response Teams, and Information Systems for the District Corona Control Cell 24/7 since March 2020. I played a critical role in managing quarantine centers, tracking and testing of travelers, and coordinating with the district administration and law enforcement agencies to implement COVID-19 prevention and control guidelines, Non-Pharmacological Interventions, and smart lockdowns. These measures have effectively controlled the spread of the disease and limited morbidity and mortality in the district.

I also led the COVID-19 vaccine deployment and administration in Rawalpindi, ensuring uniformity of administrative Standard Operating Procedures and coordinating activities to initiate a robust vaccination campaign since January 2021. I have also been instrumental in expanding the vaccination drive across the district, including community-based COVID-19 vaccination aimed at making the vaccine available near each citizen's home. I have achieved

vaccination targets by working on the frontline of the Reach Every Door (RED) COVID vaccination drive.

In addition to my work in Rawalpindi, I also currently serve as the Public Health Advisor of the Pakistan Public Health Bulletin at the National Institute of Health in Islamabad. My work as a field epidemiologist has given me the opportunity to make a real difference in the lives of people in my community. I am proud to have played a role in preventing the spread of COVID-19 and protecting the health of the people of Rawalpindi. I am also committed to continuing to work to improve public health in Pakistan and around the world.

I am grateful for the opportunity to share my success story as a public health professional and frontline field epidemiologist. My work has been challenging, but it has also been incredibly rewarding. I have learned so much about myself and about the importance of public health. I am also grateful for the support of my colleagues, family, and friends. I could not have done this work without them. I am hopeful that my story will inspire others to pursue careers in public health. We need more dedicated and passionate people working to protect the health of our communities.

The Role of Pakistan FELTP in Flood Response

The Pakistan Field Epidemiology and Laboratory Training Program (FELTP) played a crucial role in the country's response to the unprecedented monsoon season and flooding in 2022, which resulted in the washing away of villages, roads, and buildings, and affected 33 million people.

FELTP graduates have been working at the district, provincial, and national levels to assist with coordination of efforts across multiple sectors. Within the National Flood Response Coordination Center (NFRCC), FELTP graduates are coordinating disease surveillance and providing daily situational reports to key actors involved in the response. Additionally, the FELTP Coordinator has been serving as the co-chair for daily health cluster meetings with the World Health Organization (WHO), Ministry of National Health Services, UN agencies, non-governmental organizations (NGOs), and provincial health departments to ensure cross-sector collaboration.

These national-level meetings reference data collected and analyzed at Provincial Disease Surveillance Units (PDSRUs), which have been bolstered by the FELTP team's involvement. The team has established a daily reporting system and regularly monitors trends of communicable diseases in flood affected areas, which helps to develop and inform response plans. As part of these efforts, FELTP alumni also provide technical support to provincial and district health departments to ensure rapid access to essential health services, strengthen and expand disease surveillance and outbreak response, and implement preventive and control measures. They have also assisted these health departments in establishing emergency control rooms and medical camps.

Epidemiological and laboratory support

FELTP graduates and residents supported epidemiological and laboratory investigations in the flood-affected areas. This included collecting data and samples, conducting case investigations, and implementing public health response measures. They also trained field surveillance and data management staff on how to collect and analyze data, and how to use the DHIS-2 tool to compile and enter data.

Rapid needs assessment and response planning

FELTP graduates supported provincial and district health departments through a rapid needs assessment plan developed by FELTP, the World Health Organization (WHO), and local health authorities. This assessment helped to identify the most urgent needs in the flood-affected areas and to develop a plan for addressing them. The plan focused on strengthening and expanding disease surveillance, outbreak response, and preventive and control measures.

Risk communication and community outreach

FELTP teams supported community leaders in developing and disseminating awareness messages about communicable diseases and routes of transmission. They also conducted health awareness sessions on waterborne and vector-borne diseases, as well as other infectious diseases. This helped to reduce the risk of disease outbreaks and to ensure that people had the information they needed to protect their health.

Training and support for healthcare workers FELTP provided onsite training to healthcare staff and laboratory personnel on how to manage patients with communicable diseases. They also assisted with the establishment of emergency control rooms and medical camps. This helped to ensure that people had access to the care they needed, even in the most remote and difficult-to-reach areas.

Coordination of disease surveillance and reporting

FELTP played a key role in coordinating disease surveillance and reporting in the flood-affected areas. This was essential for ensuring an effective multi-sectoral response across the country. FELTP graduates also presented daily situational reports at the National Flood Response Coordination Centre (NFRCC) meetings.

Overall, the role of FELTP in the response to the 2022 floods in Pakistan was crucial. FELTP graduates and residents provided essential support in a wide range of areas, including epidemiological and laboratory investigations, rapid needs assessment and response planning, risk communication and community outreach, training and support for healthcare workers, and coordination of disease surveillance and reporting. Their dedication and expertise helped to protect the health of the Pakistani people during a time of great need.

In addition to the above, FELTP also played a role in the following areas:

Immunization: FELTP graduates facilitated routine immunization and COVID-19 vaccination in the flood-affected areas. They also monitored vaccination activities and reported data on adverse effects following immunization (AEFI) to health authorities.

WASH: FELTP graduates engaged in community outreach support in water, sanitation, and hygiene (WASH). This helped to ensure that people had access to clean water and safe sanitation facilities, which is essential for preventing the spread of disease.

FELTP's role in the response to the 2022 floods in Pakistan is a testament to the program's value and impact. FELTP graduates are highly skilled and experienced professionals who are able to provide critical support in a variety of public health emergencies. FELTP is an essential part of Pakistan's public health system, and its graduates play a vital role in protecting the health of the Pakistani people.

Knowledge Hub

Field epidemiology and Community Health.

Field epidemiology is the study of diseases and outbreaks in populations. It is a critical tool for disease control and the protection of public health. Field epidemiologists work to identify the causes of diseases, track their spread, and develop and implement interventions to prevent and control them.

Field epidemiology is important for a number of reasons. First, it helps us to understand the distribution and determinants of diseases. This information is essential for developing effective prevention and control strategies. For example, field epidemiologists have played a crucial role in understanding the transmission dynamics of COVID-19 and developing interventions such as vaccination and social distancing.

Second, field epidemiology helps us to identify and respond to disease outbreaks early. This is essential for preventing the spread of diseases and minimizing their impact on public health. For example, field epidemiologists were able to identify and respond to the Ebola outbreak in West Africa early on, which helped to prevent the outbreak from spreading further.

Third, field epidemiology helps us to evaluate the effectiveness of prevention and control interventions. This information is essential for ensuring that we are using the most effective strategies to protect public health. For example, field epidemiologists have played a key role in evaluating the effectiveness of COVID-19 vaccines and other interventions.

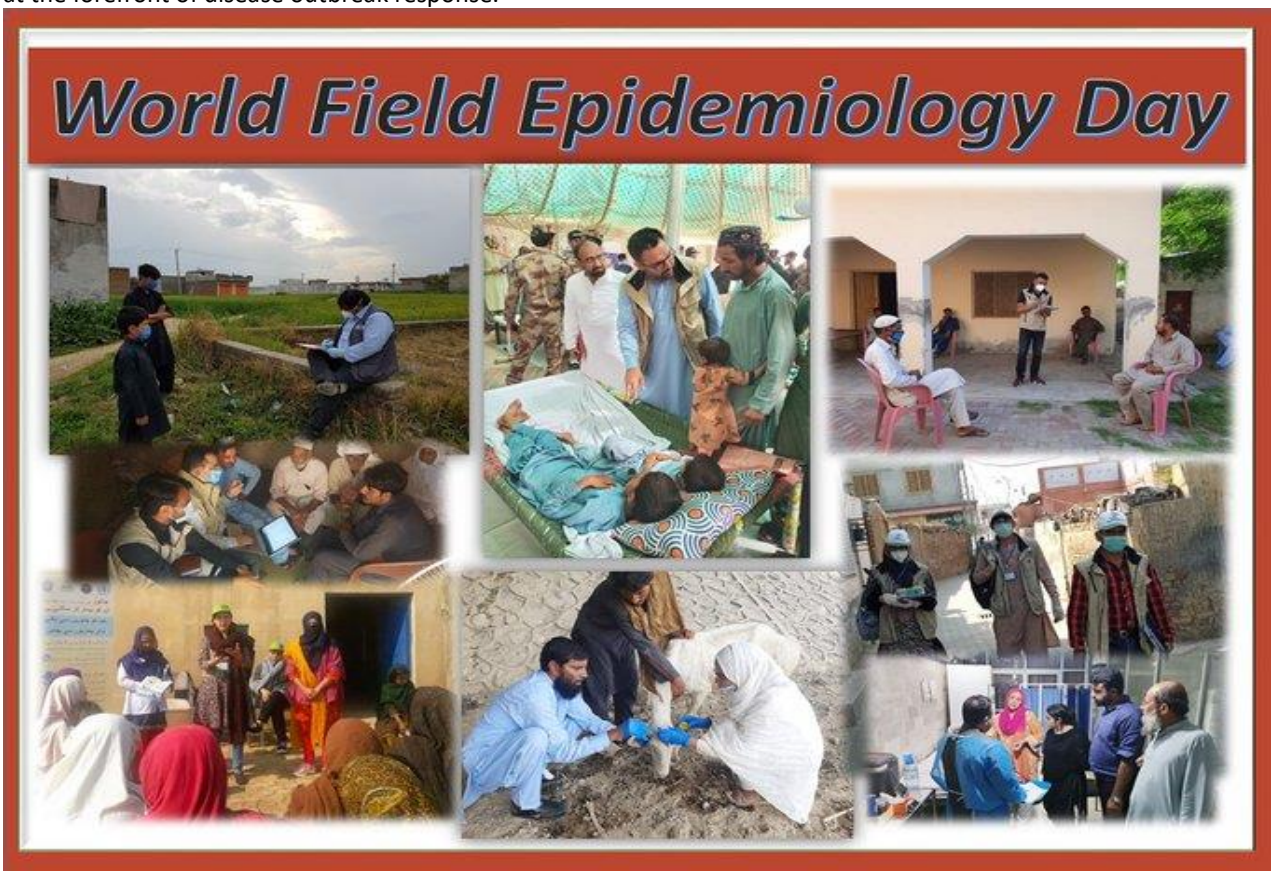
Field epidemiology is essential for the control of diseases and the protection of public health. Field epidemiologists work to identify the causes of diseases, track their spread, and develop and implement interventions to prevent and control them. Field epidemiology is important for understanding the distribution and determinants of diseases, identifying and responding to disease outbreaks early, and evaluating the effectiveness of prevention and control interventions.

Here are some specific examples of how field epidemiology has been used to control diseases and protect public health:

- Field epidemiologists played a crucial role in the eradication of smallpox in the 1970s.
- Field epidemiologists have been at the forefront of the response to the COVID-19 pandemic.
- Field epidemiologists are working to control diseases such as HIV/AIDS, malaria, and tuberculosis.
- Field epidemiologists are also working to prevent and control emerging infectious diseases such as Zika and Ebola.
- Field epidemiology is a vital tool for disease control and the protection of public health.
- Field epidemiologists work tirelessly to identify and respond to disease outbreaks, develop and implement effective prevention and control strategies, and evaluate the effectiveness of these strategies.

WORLD FIELD EPIDEMIOLOGY DAY ACTIVITIES, 2023

Pakistan FETP-CDC, NIH is celebrated the invaluable role of Field Epidemiologists and salutes those who have been at the forefront of disease outbreak response.



Pakistan FETP-CDC, NIH is celebrating "World Field Epidemiology Day" to recognize the contribution of field epidemiologists in protecting the health of people around the globe.

World Field Epidemiology Day with Respected Dr. Muhammad Asif Syed Team Lead PDSRU DGHS Sindh Celebrated at Hyderabad Sindh

UK Health Security Agency

World Health Organization

USAID

safetynet

Such significant date as we celebrate the "World Field Epidemiology day" to recognize and honor disease detectives the world over.

In any disease threat, a field epidemiologist will run in when others are running out.

For investigation, early detection and rapid response.

Being part of this team is super-fulfilling.

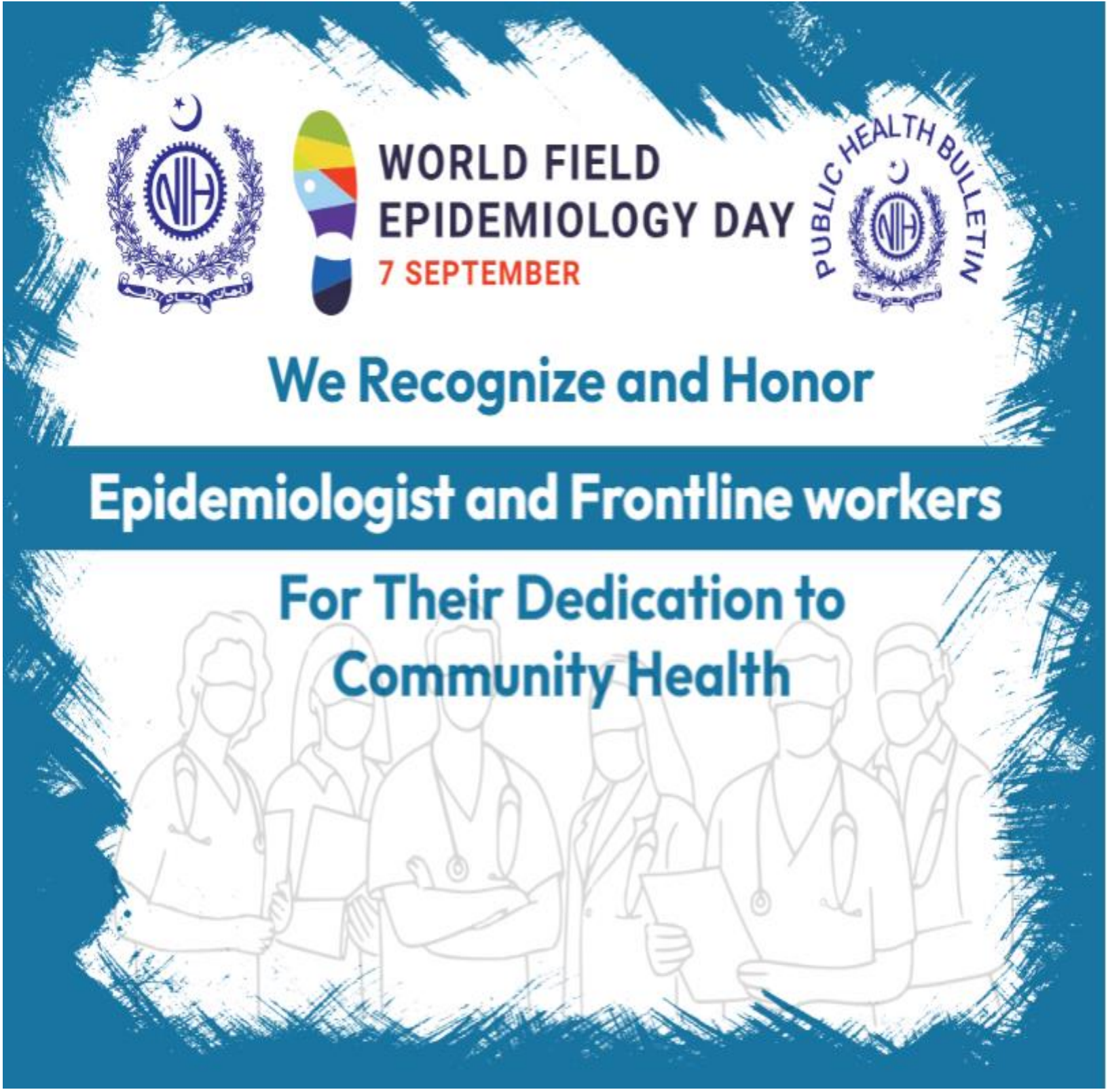
Dr Muhammad Moosa
2nd Cohort

Dr Vivekanand
14th Cohort

Field Epidemiology Day is celebrated at PDSRU Balochistan Among the Seniors Of Health Department Balochistan

World field epidemiology day celebration at GHD|EMPHNET Pakistan office. Special thanks to @Dr Abid Saeed & @Dr Waheed Lashari for joining

World field epidemiology day celebration at DGHS, Peshawar, KPK



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