

Integrated Disease Surveillance & Response (IDSR) Report

Center of Disease Control
National Institute of Health, Islamabad

<http://www.phb.nih.org.pk/>

Integrated Disease Surveillance & Response (IDSR) Weekly Public Health Bulletin is your go-to resource for disease trends, outbreak alerts, and crucial public health information. By reading and sharing this bulletin, you can help increase awareness and promote preventive measures within your community.



Public Health Bulletin

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Overview

IDSR Reports

Ongoing Events

Field Reports

Public Health Bulletin - Pakistan, Week 51, 2023

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

Disease trends: Despite the seasonal decline, Acute Diarrhea (Non-Cholera) remains the dominant illness, followed by Malaria, Influenza-like Illness (ILI), Acute Lower Respiratory Infection (ALRI) in under-fives, Tuberculosis (TB), and other communicable diseases. Verification of all suspected cases is crucial.

Regional focus: Notably, TB cases reported in AJK, KPK, and Sindh have risen this week. Thorough field investigations are essential to confirm these cases.

Special reports: This edition sheds light on two concerning situations: The Mumps outbreak in District Jhal Magsi in December and the suspected Measles-related child deaths in Village Mohammad Panah Mahar, Sukkur.

Public awareness: The Public Health team emphasizes the importance of raising awareness about Tuberculosis, a persistent global threat. Recognizing symptoms and seeking prompt medical attention are crucial for effective control.

Our public health team reiterates the importance of vigilance and immediate medical consultation for any suspected infections. By working together, we can effectively safeguard the health of our communities.

Sincerely,
The Chief Editor

- During week 51, most frequent reported cases were of Acute Diarrhea (Non-Cholera) followed by Malaria, ILI, ALRI <5 years, TB, B. Diarrhea, VH (B&C), SARI and dog bite.
- Despite the drop-in temperature across country, AD remains the most frequently reported cases. All are suspected cases and need field verification.
- An increase in TB cases reported from AJK, KPK and Sindh this week. Field investigation required to verify cases.

IDSR compliance attributes

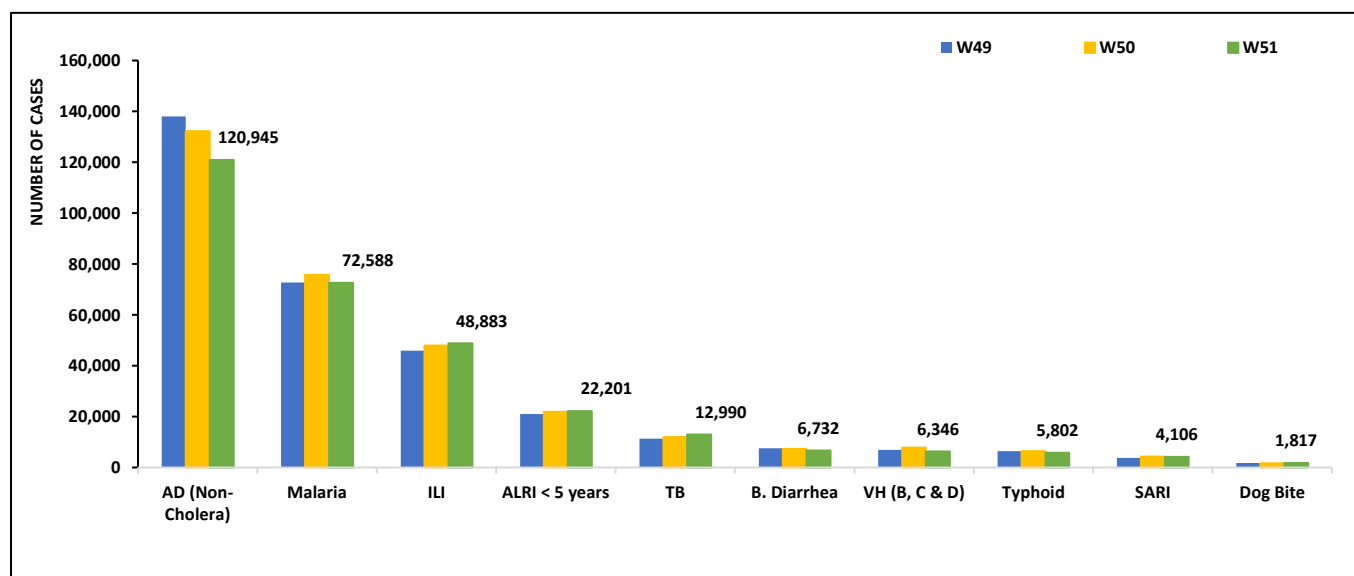
- The national compliance rate for IDSR reporting in 124 implemented districts is 74%
- AJK and Sindh are the top reporting region with a compliance rate of 96% and 90% followed by Gilgit Baltistan 79% and Baluchistan with 78%
- The lowest compliance rate was observed in KPK.

Region	Expected Reports	Received Reports	Compliance (%)
Khyber Pakhtunkhwa	2689	1477	55
Azad Jammu Kashmir	382	368	96
Islamabad Capital Territory	70	54	77
Balochistan	1178	918	78
Gilgit Baltistan	390	309	79
Sindh	2092	1875	90
National	6801	5001	74

Table 1: Province/Area wise distribution of most frequently reported suspected cases during week 51, Pakistan.

Diseases	AJK	Balochistan	GB	ICT	KP	Punjab	Sindh	Total
AD (Non-Cholera)	1,218	5,720	366	212	13,329	66,048	34,052	120,945
Malaria	117	7,264	0	5	4,203	3,381	57,618	72,588
ILI	3,702	9,797	601	2,401	7,303	2	25,077	48,883
ALRI < 5 years	1,982	2,771	745	12	2,948	NR	13,743	22,201
TB	103	119	40	11	556	NR	12,261	12,990
B.Diarrhea	59	1,569	50	8	536	1,554	2,956	6,732
VH (B, C & D)	7	72	9	1	120	NR	6,137	6,346
Typhoid	46	745	47	1	554	3,149	1,260	5,802
SARI	489	1,328	340	0	1,596	NR	353	4,106
Dog Bite	38	109	0	0	200	NR	1,470	1,817
Mumps	41	84	46	0	78	NR	333	582
AWD (S. Cholera)	38	270	79	0	14	NR	91	492
CL	0	141	0	0	279	10	8	438
Measles	9	70	9	0	244	NR	57	389
AVH(A&E)	22	16	5	0	143	NR	116	302
Gonorrhea	0	82	0	0	90	NR	8	180
Chickenpox/ Varicella	1	7	17	2	72	43	25	167
Meningitis	2	97	8	0	20	NR	10	137
Pertussis	2	62	22	0	30	NR	2	118
Dengue	2	0	8	0	5	NR	89	104
Rubella (CRS)	0	14	8	0	1	NR	28	51
Syphilis	0	13	0	0	1	NR	16	30
AFP	5	1	0	0	15	NR	6	27
VL	0	10	0	0	5	NR	0	15
Diphtheria (Probable)	1	1	1	0	10	NR	0	13
HIV/AIDS	6	0	0	0	3	NR	4	13
Leprosy	0	0	0	0	8	NR	2	10
Brucellosis	0	1	0	0	6	NR	0	7
NT	0	0	1	0	2	NR	0	3
Chikungunya	0	2	0	0	0	NR	0	2

Figure 1: Most frequently reported suspected cases during week 51, Pakistan.

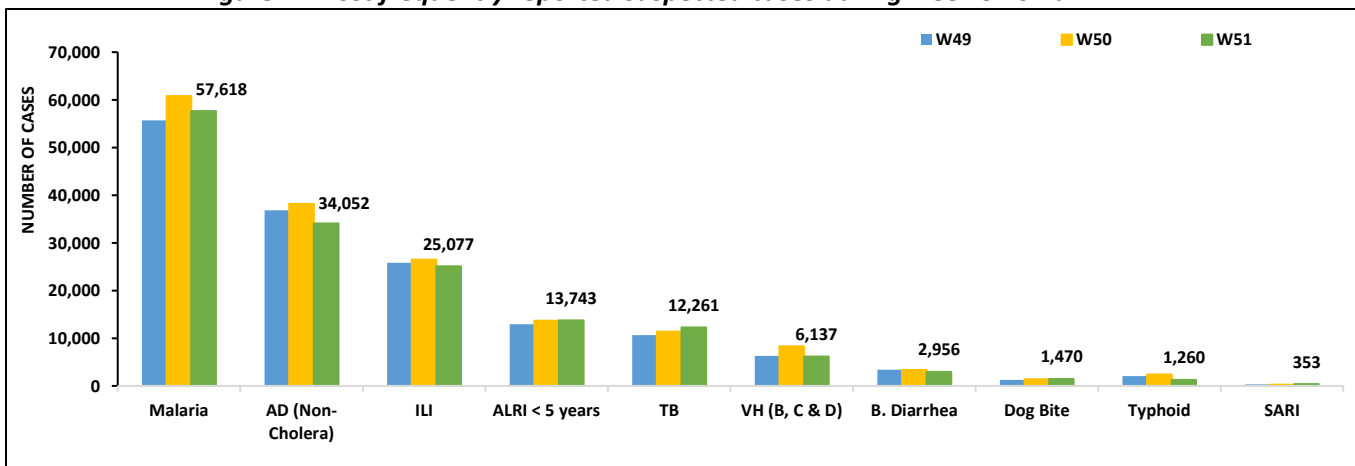


- Malaria cases were maximum followed by AD (Non-Cholera), ILI, ALRI<5 Years, TB, VH (B, C, D), B. Diarrhea, dog bite, Typhoid and SARI.
- There is a decline trend in cases observed for ILI, AD and Malaria cases this week.
- Malaria cases are from Larkana, Dadu and K Lambar whereas AD cases are mostly from Badin, Tharparkar and Khairpur.
- Surge in TB cases observed from Sanghar and Khairpur. Field investigation is required to verify cases for a response.

Table 2: District wise distribution of most frequently reported suspected cases during week 51, Sindh

DISTRICTS	Malaria	AD (Non-Cholera)	ILI	ALRI < 5 years	TB	VH (B, C & D)	B. Diarrhea	Dog Bite	Typhoid	SARI
Badin	2,316	2,065	679	718	837	442	172	72	45	1
Dadu	5,585	2,731	0	1,069	495	2	401	52	331	25
Ghotki	454	667	0	696	234	311	97	189	0	0
Hyderabad	188	706	352	35	118	63	23	0	16	0
Jacobabad	2,540	833	640	774	226	294	129	95	14	64
Jamshoro	2,434	1,280	136	198	256	129	104	9	64	2
Kamber	4,398	1,418	0	553	785	274	131	31	50	0
Karachi Central	71	818	2,110	87	660	313	19	0	64	37
Karachi East	105	629	477	71	67	0	9	4	4	1
Karachi Keamari	4	259	131	25	0	0	1	0	1	0
Karachi Korangi	63	235	242	3	8	0	1	0	0	0
Karachi Malir	46	532	2,108	158	14	11	53	19	22	19
Karachi South	37	82	0	0	0	0	0	0	0	0
Karachi West	175	896	896	277	129	32	48	37	36	32
Kashmore	2,465	567	1,122	370	247	49	63	212	25	0
Khairpur	6,159	2,533	2,830	1,465	1253	365	372	134	207	72
Larkana	6,764	1,609	10	734	842	194	266	0	7	0
Matiari	1,237	1,291	44	704	623	356	70	18	14	1
Mirpurkhas	3,311	2,057	4,335	929	847	173	75	91	8	0
Naushero Feroze	995	746	1,150	166	350	92	52	100	59	0
Sanghar	3,110	1,750	104	756	1309	978	55	150	27	16
Shaheed Benazirabad	1,536	1,735	0	587	338	146	88	43	168	0
Shikarpur	3,088	978	2	281	21	299	157	103	2	9
Sujawal	711	607	0	34	26	2	2	0	9	0
Sukkur	3,173	1,231	2,236	496	671	452	185	67	7	0
Tando Allahyar	1,182	1,098	1,236	429	418	405	112	2	11	0
Tando Muhammad Khan	807	758	0	220	572	114	63	0	2	1
Tharparkar	2,240	2,068	3,092	1,034	527	56	108	3	42	39
Thatta	979	968	1,145	423	25	75	50	39	9	34
Umerkot	1,445	905	0	451	363	510	50	0	16	0
Total	57,618	34,052	25,077	13,743	12,261	6,137	2,956	1,470	1,260	353

Figure 2: Most frequently reported suspected cases during week 51 Sindh

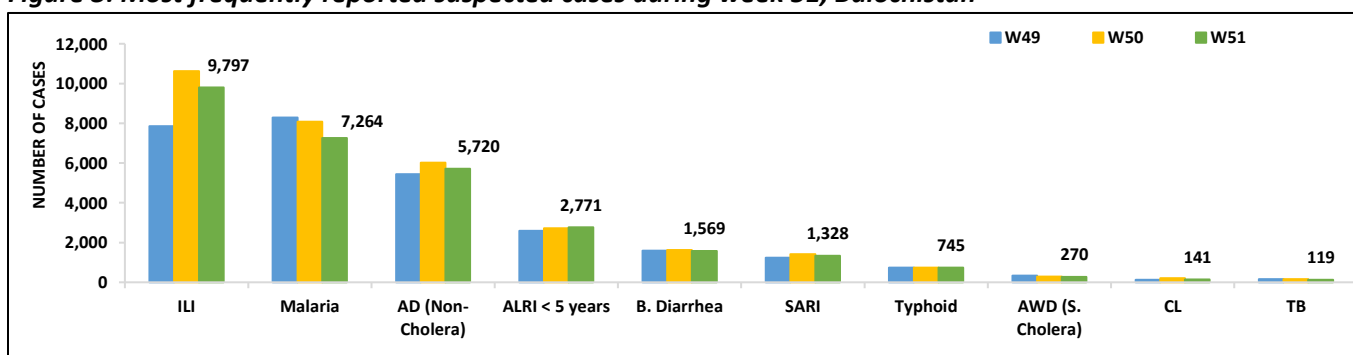


- ILI, Malaria, AD (Non-Cholera), ALRI <5 years, B. Diarrhea, SARI, Typhoid, AWD (S. Cholera), CL and TB were the most frequently reported diseases from Balochistan province.
- Trend for ILI, AD and Malaria cases showed a decline this week.
Cases of SARI were reported in high numbers from Kohlu, Loralai, Sherani and Mastong. 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 51, Balochistan

Districts	ILI	Malaria	AD Non-Cholera)	ALRI < 5 years	B. Diarrhea	SARI	Typhoid	AWD (S.Cholera)	CL	TB
Awaran	13	14	9	0	4	0	0	0	0	0
Barkhan	220	56	115	170	20	7	49	7	0	9
Chagai	322	29	134	0	63	4	14	15	0	0
Chaman	207	5	96	8	81	54	31	11	4	0
Dera Bugti	36	234	64	64	56	39	8	5	0	0
Duki	72	33	101	48	71	60	8	13	3	3
Gwadar	865	112	399	30	56	0	55	0	3	0
Harnai	30	97	88	265	80	0	7	4	1	0
Hub	118	241	209	45	39	90	8	0	4	4
Jaffarabad	172	574	360	41	29	22	4	0	30	11
Jhal Magsi	331	869	314	84	13	11	12	1	3	11
Kachhi (Bolan)	276	388	306	29	52	73	56	18	5	6
Kalat	36	19	48	16	20	3	36	3	0	4
Kech (Turbat)	1,237	530	399	181	51	9	3	NR	NR	NR
Kharan	417	53	120	0	61	7	9	10	0	0
Khuzdar	109	45	66	0	35	3	5	0	0	0
Killa Saifullah	0	138	61	158	42	24	24	0	5	4
Kohlu	723	175	261	98	190	215	46	51	3	0
Lasbella	62	454	227	114	10	46	4	0	15	1
Loralai	389	51	130	44	44	141	15	0	3	0
Mastung	226	33	125	43	35	125	31	6	4	7
Musa Khel	83	131	66	34	29	33	22	22	0	0
Naseerabad	0	481	223	28	16	0	28	0	6	10
Nushki	99	0	89	0	21	11	0	0	0	0
Panjgur	112	246	94	96	36	7	8	19	2	1
Pishin	103	1	22	19	11	0	4	0	6	0
Quetts	1,361	22	313	80	64	10	33	17	17	0
Sherani	166	4	24	2	20	134	11	0	3	0
Sibi	909	446	260	73	56	47	44	35	12	0
Sohbat pur	36	902	301	149	75	40	58	0	11	8
Surab	139	59	80	56	0	23	66	0	0	0
Usta Muhammad	218	696	365	340	55	7	14	0	0	0
Washuk	138	19	48	0	43	0	0	8	0	0
Zhob	247	76	129	400	49	75	13	2	0	39
Ziarat	325	31	74	56	42	8	19	23	1	1
Total	9,797	7,264	5,720	2,771	1,569	1,328	745	270	141	119

Figure 3: Most frequently reported suspected cases during week 51, Balochistan

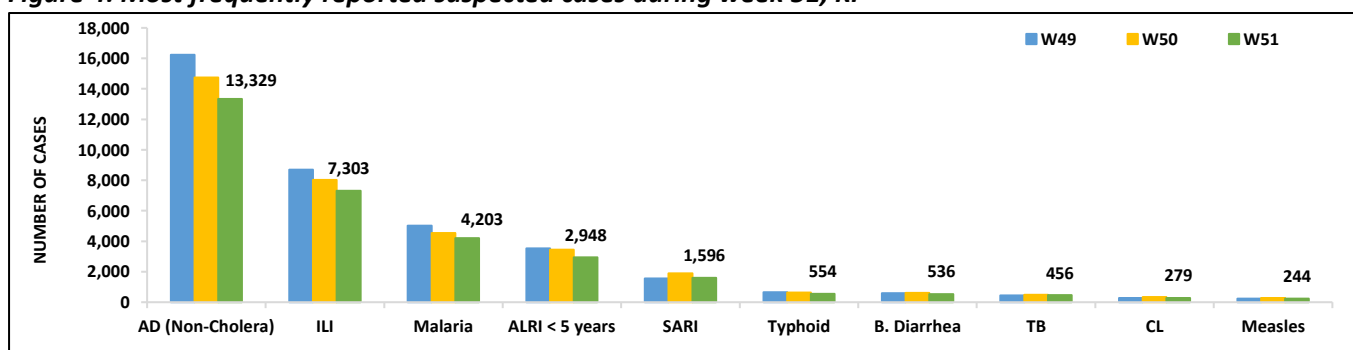


- Cases of AD (Non-Cholera) were maximum followed by ILI, Malaria, ALRI<5 Years, SARI, Typhoid, B. Diarrhea, TB, CL and Measles cases.
- Malaria, AD and ILI cases showed a decline trend this week.
- A rise in TB cases observed from Peshawar, Shangla and Haripur. These are suspected cases, and a field investigation is required to verify cases.

Table 4: District wise distribution of most frequently reported suspected cases during week 51, KP

Districts	AD (Non-Cholera)	ILI	Malaria	ALRI <5 Years	SARI	Typhoid	B. Diarrhea	TB	CL	Measles
Abbottabad	340	74	2	26	17	8	1	17	0	5
Bajaur	188	29	90	62	30	0	15	1	0	1
Bannu	745	16	1,194	19	2	74	11	47	0	18
Battagram	92	465	0	0	10	0	0	0	0	1
Buner	271	3	137	86	0	3	2	1	0	0
Charsadda	649	279	393	102	110	28	12	3	0	7
Chitral Lower	141	155	15	53	75	13	13	7	4	0
Chitral Upper	80	19	4	34	7	16	8	6	0	0
D.I. Khan	682	0	289	84	8	1	13	19	0	42
Dir Lower	767	2	540	244	7	40	57	17	3	13
Dir Upper	144	373	5	17	9	25	6	15	6	3
Hangu	152	145	303	24	23	23	2	12	20	8
Haripur	677	734	12	285	117	58	8	44	1	0
Karak	166	52	109	12	5	10	0	8	39	28
Khyber	59	136	25	62	5	3	31	8	16	3
Kohat	33	13	17	0	1	0	0	0	3	0
Kohistan Lower	59	0	1	4	0	2	13	0	0	3
Kohistan Upper	296	15	2	6	45	14	3	0	1	15
Kolai Palas	52	0	0	7	70	0	2	0	0	0
L & C Kurram	13	23	12	0	0	3	5	0	0	0
Lakki Marwat	284	0	176	70	0	8	8	1	11	3
Malakand	368	2	16	81	10	15	25	4	10	19
Mansehra	441	1,014	1	114	75	9	13	7	0	1
Mardan	630	84	19	775	2	0	19	3	1	2
Mohmand	102	114	93	8	37	9	24	0	98	0
NWA	0	0	0	5	0	0	0	1	0	NR
Nowshera	800	440	47	12	20	11	26	4	6	2
Peshawar	1,975	1,314	24	305	85	56	103	128	17	15
SD DI Khan	14	0	7	0	0	1	0	0	0	0
SD Peshawar	0	0	0	1	0	0	0	0	0	0
SD Tank	1	0	1	0	0	0	1	0	0	0
Shangla	391	30	147	14	29	26	2	70	4	7
SWA	174	82	64	98	74	26	22	0	17	6
Swabi	570	895	14	244	80	8	5	0	0	13
Swat	1,416	229	10	54	0	1	11	16	0	6
Tank	353	95	409	7	0	39	2	13	10	5
Tor Ghar	67	0	20	8	17	5	25	0	12	5
Upper Kurram	137	471	5	25	626	19	48	4	0	13
Total	13,329	7,303	4,203	2,948	1,596	554	536	456	279	244

Figure 4: Most frequently reported suspected cases during week 51, KP



ICT: The most frequently reported cases from Islamabad were ILI followed by AD (Non-Cholera) and ALRI <5years. 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, TB, B. Diarrhea, Typhoid, Mumps and AWD (S. Cholera). Trend for ALRI <5 years cases showed slight rise in cases.

GB: ALRI<5 years cases were the most frequently reported diseases followed by ILI, AD (Non. Cholera), SARI, AWD, B. Diarrhea, Typhoid and Mumps. There is a slight rising trend observed for ALRI <5 years this week.

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

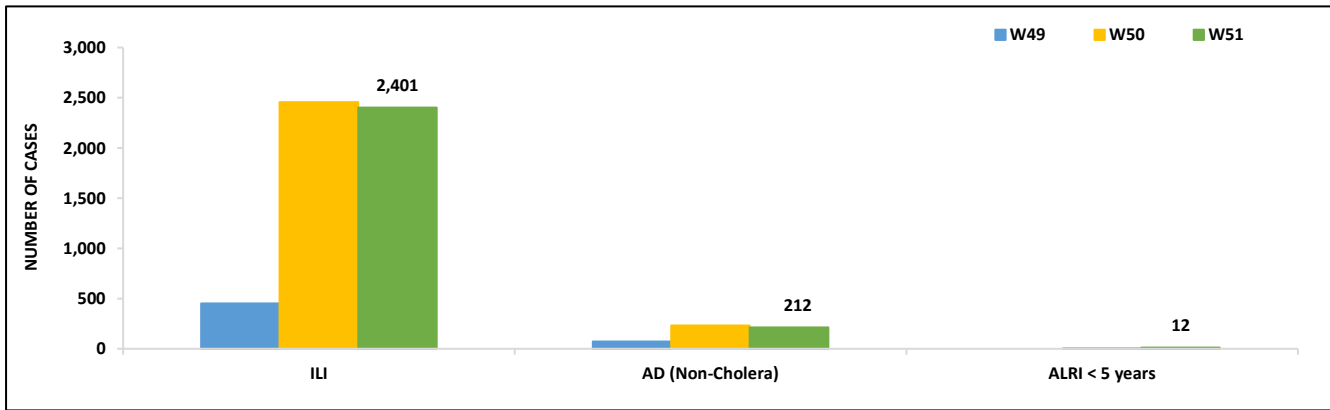


Figure 6: Week wise reported suspected cases of ILI, ICT

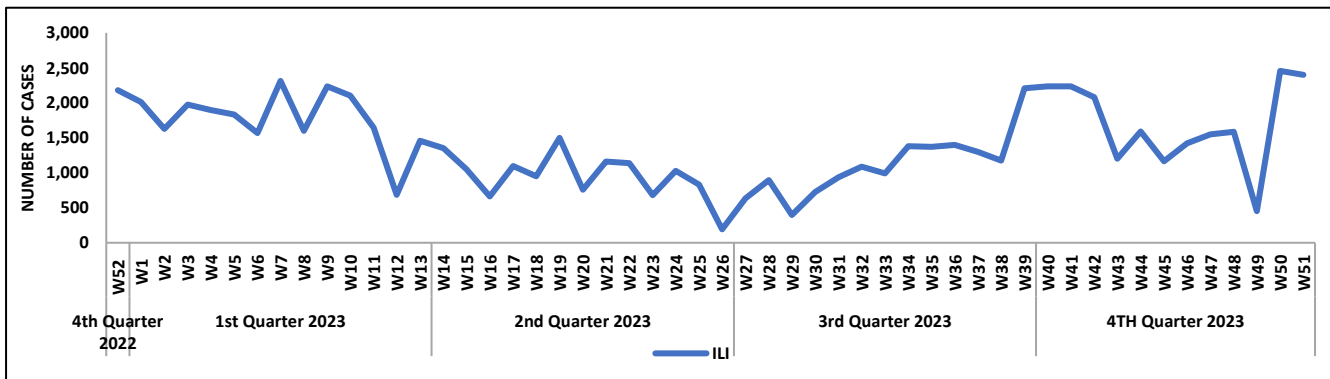


Figure 7: Most frequently reported suspected cases during week 51, AJK

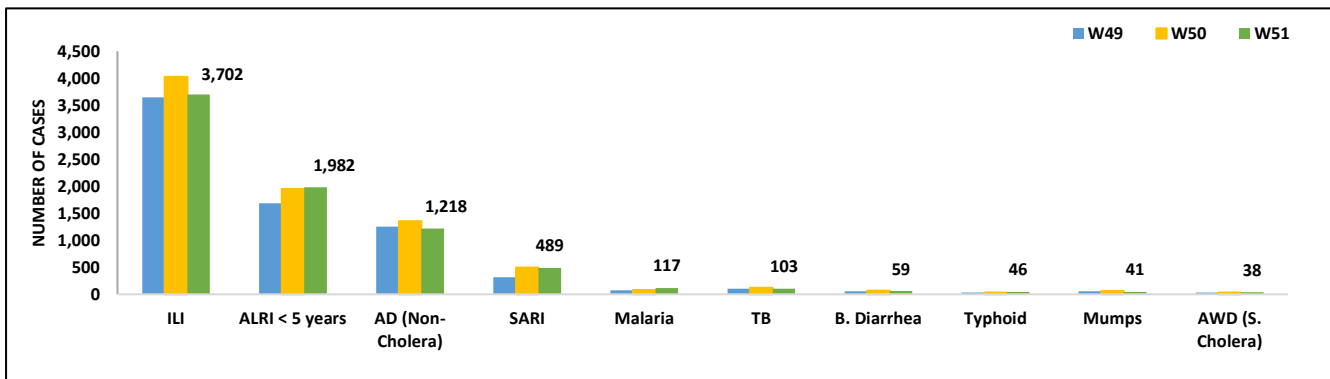


Figure 8: Week wise reported suspected cases of ILI and ALRI<5 years AJK

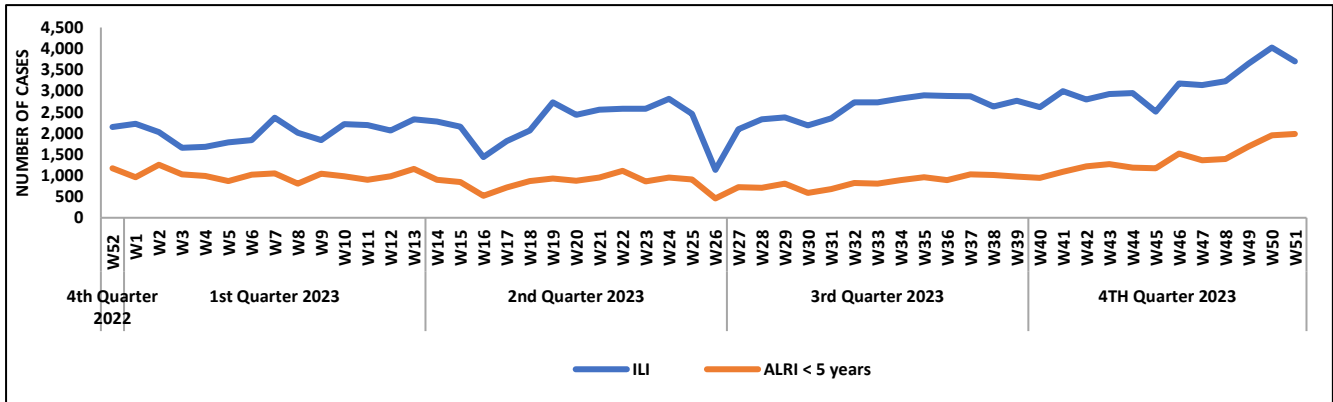


Figure 9: Most frequent cases reported during WK 51, GB

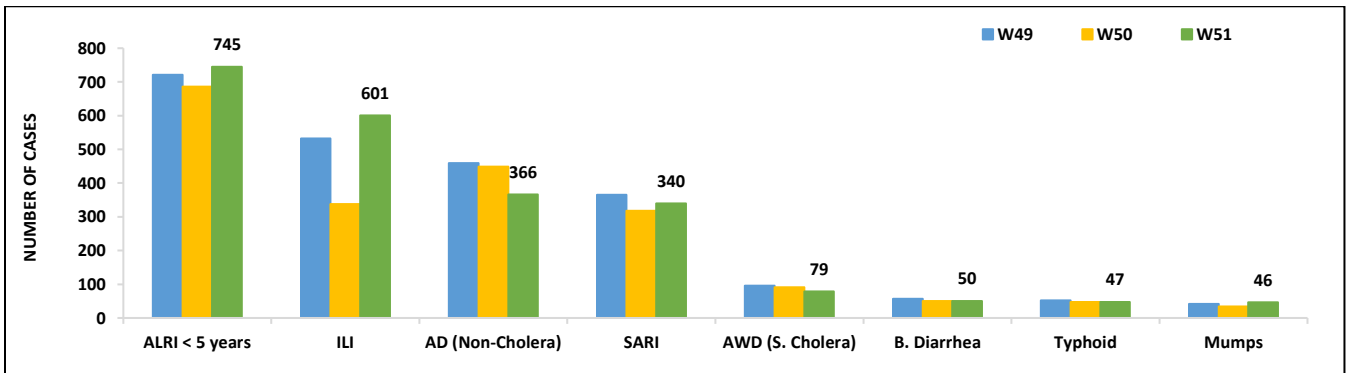
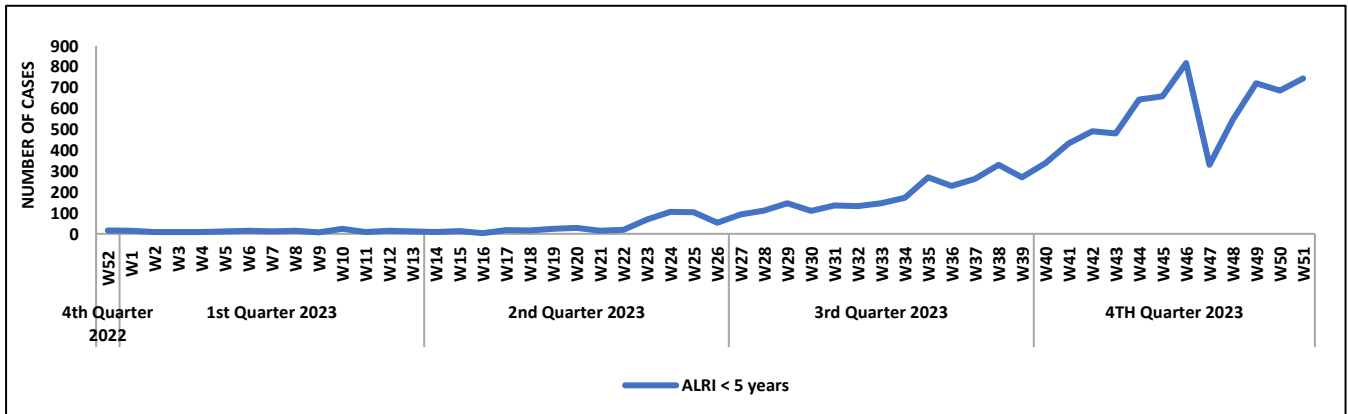


Figure 10: Week wise reported suspected cases of ALRI, GB



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

Figure 11: District wise distribution of most frequently reported suspected cases during week 51, Punjab

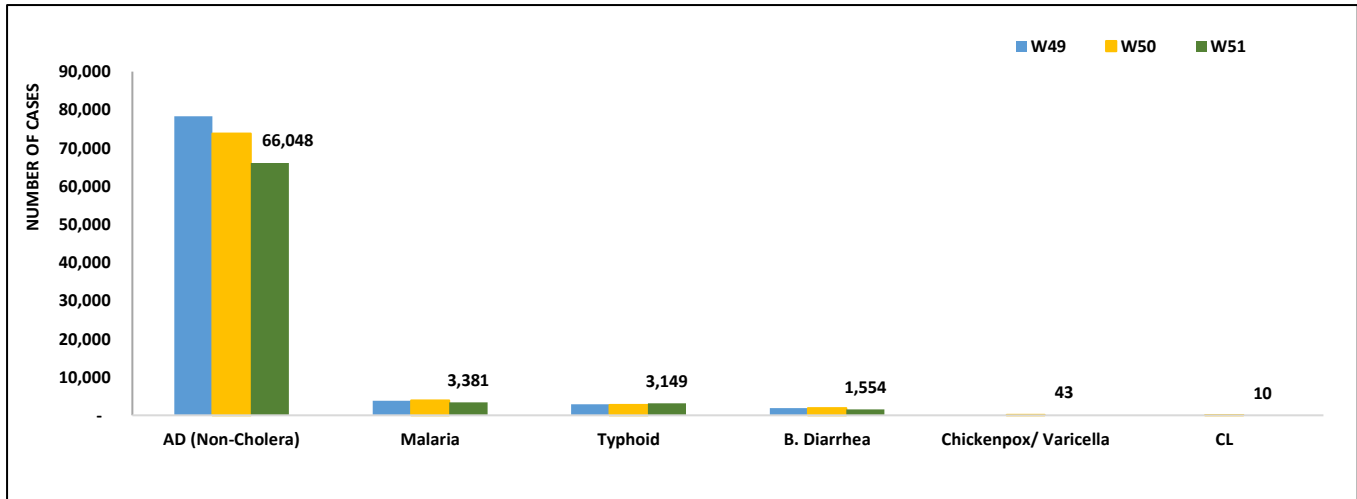


Table 5: Public Health Laboratories confirmed cases of IDSR Priority Diseases during Epid Week 51

Diseases	Status	Sindh	Balochistan	Punjab	KPK	ISL	Gilgit
Acute Watery Diarrhea (S. Cholera)	Suspected	88	0	-	-	0	0
	Confirmed	0	0	-	-	0	0
Acute Diarrhea(non-cholera)	Suspected	88	0	-	-	1	0
	Confirmed	0	0	-	-	0	0
Malaria	Suspected	875	0	-	-	0	1
	Confirmed	35	0	-	-	0	0
CCHF	Suspected	0	8	-	-	0	0
	Confirmed	0	0	-	-	0	0
Dengue	Suspected	431	0	-	-	0	0
	Confirmed	22	0	-	-	0	0
MPOX	Suspected	0	0	-	-	0	0
	Confirmed	0	0	-	-	0	0
Acute Viral Hepatitis(B)	Suspected	0	0	-	-	31	112
	Confirmed	0	0	-	-	0	0
Acute Viral Hepatitis(C)	Suspected	0	26	-	-	31	112
	Confirmed	0	9	-	-	0	1
Typhoid	Suspected	556	0	-	-	9	0
	Confirmed	2	0	-	-	1	0
Covid 19	Suspected	0	92	-	-	0	0
	Confirmed	0	2	-	-	0	0
TB	Suspected	0	0	-	-	0	0
	Confirmed	0	0	-	-	0	0
HIV	Suspected	0	0	-	-	0	0
	Confirmed	0	0	-	-	0	0
Meningitis	Suspected	0	0	-	-	0	0
	Confirmed	0	0	-	-	0	0
Syphilis	Suspected	0	0	-	-	0	0
	Confirmed	0	0	-	-	0	0

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 51

Provinces/Regions	Districts	Total Number of Reporting Sites	Number of Reported Sites for current week	Compliance Rate (%)
Khyber Pakhtunkhwa	Abbottabad	110	101	92%
	Bannu	244	104	43%
	Battagram	63	17	27%
	Buner	34	24	71%
	Bajaur	44	17	39%
	Charsadda	59	54	92%
	Chitral Upper	34	28	82%
	Chitral Lower	35	34	97%
	D.I. Khan	94	93	99%
	Dir Lower	74	72	97%
	Dir Upper	52	34	65%
	Hangu	22	22	100%
	Haripur	71	63	89%
	Karak	32	32	100%
	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	7	18%
	Upper Kurram	42	13	31%
	Malakand	48	36	75%
	Mansehra	136	74	54%
	Mardan	80	74	93%
	Nowshera	54	51	94%
	North Waziristan	380	1	0%
	Peshawar	153	119	78%
	Shangla	65	16	25%
	Swabi	62	50	81%
	Swat	76	66	87%
	South Waziristan	133	43	32%
	Tank	34	32	94%
	Torghar	14	14	100%
Mohmand	86	29	34%	
SD DI Khan	19	2	11%	
SD Peshawar	5	2	40%	
SD Tank	58	1	2%	
FATA	Mirpur	37	36	97%
	Bhimber	20	20	100%
	Kotli	60	60	100%
	Muzaffarabad	45	43	96%
	Poonch	46	46	100%
	Haveli	39	34	87%



Azad Jammu Kashmir	Bagh	40	37	93%
	Neelum	39	36	92%
	Jhelum Vellay	29	29	100%
	Sudhnooti	27	27	100%
Islamabad Capital Territory	ICT	35	27	77%
	CDA	35	27	77%
Balochistan	Gwadar	25	25	100%
	Kech	39	21	54%
	Khuzdar	20	16	80%
	Killa Abdullah	20	0	0%
	Lasbella	55	55	100%
	Pishin	62	5	8%
	Quetta	43	19	44%
	Sibi	36	36	100%
	Zhob	39	32	82%
	Jaffarabad	16	16	100%
	Naserabad	32	32	100%
	Kharan	30	30	100%
	Sherani	15	15	100%
	Kohlu	75	73	97%
	Chagi	35	27	77%
	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	32	100%
	Mastung	45	45	100%
	Loralai	33	24	73%
	Killa Saifullah	28	27	96%
	Ziarat	29	20	69%
	Duki	31	29	94%
	Nushki	32	30	94%
	Dera Bugti	45	28	62%
	Washuk	46	12	26%
	Panjgur	38	19	50%
	Awaran	23	1	4%
	Chaman	24	23	96%
	Barkhan	20	18	90%
	Hub	33	32	97%
Usta Muhammad	34	33	97%	
Gilgit Baltistan	Hunza	32	17	53%
	Nagar	20	17	85%
	Ghizer	40	37	93%
	Gilgit	40	39	98%
	Diامر	78	42	54%
	Astore	54	54	100%
	Shigar	27	24	89%



	Skardu	52	43	83%
	Ganche	29	29	100%
	Kharmang	18	7	39%
Sindh	Hyderabad	73	30	41%
	Ghotki	64	64	100%
	Umerkot	43	32	74%
	Naushahro Feroze	107	63	59%
	Tharparkar	282	237	84%
	Shikarpur	60	60	100%
	Thatta	53	52	98%
	Larkana	67	63	94%
	Kamber Shadadkot	71	70	99%
	Karachi-East	23	22	96%
	Karachi-West	20	20	100%
	Karachi-Malir	37	14	38%
	Karachi-Kemari	18	8	44%
	Karachi-Central	11	8	73%
	Karachi-Korangi	18	14	78%
	Karachi-South	4	4	100%
	Sujawal	54	53	98%
	Mirpur Khas	106	102	96%
	Badin	127	118	93%
	Sukkur	64	62	97%
	Dadu	90	89	99%
	Sanghar	100	100	100%
	Jacobabad	44	42	95%
	Khairpur	169	163	96%
	Kashmore	59	59	100%
	Matiali	42	42	100%
	Jamshoro	68	68	100%
	Tando Allahyar	54	54	100%
	Tando Muhammad Khan	40	40	100%
	Shaheed Benazirabad	124	122	98%



A Note from Field Activities.

Investigation of a Mumps Outbreak in District Jhal Magsi, December 2023

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

Introduction:

In December 2023, an outbreak of mumps was reported by District Health Authorities in Jhal Magsi, Pakistan. The majority of cases originated from Gandawah town, Jhal Magsi town, and multiple Union Councils within the district. RHC Jhal Magsi and DHQ Gandawah initially reported these cases.

Objectives:

The investigation aimed to:

- Actively search for and initiate sampling of mumps cases.
- Determine the extent of the outbreak.
- Assess risk factors within affected communities.
- Contain the outbreak and propose recommendations for prevention and control.

Methods

The investigation employed a range of methods to elucidate the extent, origin, and contributing factors of the outbreak, paving the way for effective control and prevention strategies. Clinical criteria used to confirm mumps cases and Standardized case definitions incorporating signs, symptoms, location, and timelines were established to streamline data collection and analysis. A semi-structured questionnaire was developed and administered to gather detailed information from all identified cases. Thorough investigations were conducted for each confirmed case, and a total of 18 samples collected from 22 suspected cases for laboratory analysis and confirmation. These samples were promptly dispatched to designated laboratory for timely testing.

Findings:

The outbreak exhibited a slight male predominance with a male-to-female ratio of 3:2 among the 22 suspected cases. The age distribution of the outbreak revealed a clear trend, with 72% of cases occurring in children aged 5-15 years. This age group, characterized by close social interaction within schools and communities, likely served as the primary vehicle for transmission. The presence of cases outside the typical school-aged population, with 20% of cases occurring in individuals under five and 8% in those over 15, underscores the broader community transmission of the disease initiated within school environments. Beyond demographics, the absence of mumps vaccination within the routine immunization program left the population vulnerable and susceptible to infection. Geographical mapping of cases revealed the spatial distribution of the disease. Finally, the investigation identified suboptimal community nutrition as a potential contributing factor. While the exact link requires further research, it suggests that addressing prompt vaccination and underlying nutritional deficiencies could be crucial in strengthening communities' resilience against infectious diseases.

Recommendations:

To control the outbreak and prevent future occurrences, the following recommendations are proposed:

A. Immunization:

- Mumps vaccination should be incorporated into the routine immunization program for schoolchildren and communities in the affected areas, including Jhal Magsi and Gandawah.

B. Prevention:

- Respiratory hygiene: Individuals should practice proper respiratory hygiene by covering their nose and mouth when coughing, sneezing, or blowing their nose, and promptly disposing of used tissues. Frequent handwashing with soap and water or alcohol-based sanitizers is crucial.
- Staying home when sick: Individuals experiencing fever and cough should stay



home to avoid transmitting the virus to others.

- Seeking medical care: Prompt consultation with healthcare providers is essential for individuals suspected of having mumps to receive appropriate diagnosis, treatment, and advice on preventing further transmission.
- Masking: Wearing face masks when requested in healthcare settings can help curb the spread of the virus.

By implementing these recommendations, along with continued surveillance and public education efforts, the mumps outbreak in Jhal Magsi can be effectively controlled and prevented from future recurrence.

A Note from Field Activities.

Preliminary Investigation Report Of 02 Deaths of Children Due to Suspected Measles in Village Mohammad Panah Mahar, UC & Taluka Salehpat, District Sukkur, Dec 2023

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

Background

On 19-12-2023, team PDSRU-DGHSS was informed about Five suspected cases of measles and 02 deaths allegedly due to measles through the District Disease Surveillance and Response Unit Sukkur. A team lead by Fellows from FELTP Sindh was constituted by DGHSS Hyderabad Sindh, to investigate the situation:

Objectives:

1. To investigate the reported cases and to ensure their proper treatment
2. To investigate and confirm the reported deaths and to identify the cause of deaths

3. To identify the risk factors associated with the reported deaths in UC & Tehsil Salehpat
4. To find out additional cases or deaths on active search.
5. To recommend the preventive and control measures to prevent VPD-related deaths

Methodology

Face to face interview / Verbal autopsy from the deceased's family members were conducted to know the disease history and clinical course of the children. The status of routine immunization was assessed in the village. The active case search was carried out using the WHO standard case definition of measles to find other suspected cases and to evaluate the risk factors of Measles in the affected villages.

Results:

The investigative team determined that two children, an 11-month-old female and an 18-month-old male, tragically succumbed to suspected measles complications on the same day within Village Mohammad Panah Mahar. Verbal autopsies conducted with family members confirmed this preliminary diagnosis. Both children, as per extant records, had received only BCG vaccinations. A further six suspected cases were identified through an active case search and documented in an appended line list. Blood samples were collected from these individuals and transmitted to the National Institutes of Health (NIH) in Islamabad for further analysis.

The investigation identified a potential index case, a male child aged 12 months, who had a travel history and subsequently developed fever, cough, and a rash. Notably, the child did not possess a record of routine immunizations. The community's primary healthcare-seeking behavior was found to rely on local, potentially unlicensed practitioners, suggesting potential gaps in access to formal healthcare facilities.

Environmental conditions and personal hygiene practices were identified as potential risk factors. Specifically, observations revealed poor sanitation, open defecation, overcrowding, and inadequate hygiene practices. Additionally, the majority of children were found to be malnourished and lacking routine vaccinations.



Conclusion:

The investigation suggests a strong likelihood that the two reported deaths resulted from complications associated with suspected measles. Notably, both deceased children exhibited underlying vulnerabilities in the form of malnutrition and incomplete vaccination status. The active case search further revealed similar vulnerabilities among the six additional suspected cases, characterized by malnutrition, lack of routine immunization, and reliance on informal healthcare practices. This highlights a concerning gap in knowledge regarding disease transmission within the community.



Considering the remote location and potentially limited healthcare access in Village Mohammad Panah Mahar, immediate and decisive action is essential. Strengthening routine

immunization, optimizing the distribution of vaccinators, and implementing targeted social mobilization campaigns are crucial steps to address these vulnerabilities and prevent future outbreaks. The success of these endeavors hinges on the prompt and decisive intervention of the district administration.

Recommendations

1. The Union Council Salehpat has demonstrated Measles Outbreaks from time to time on consecutive basis.
2. The most need-based recommendations are to priorities Union Council Salehpat for Routine immunization as the area is hampered by a few human Resources for RMNCH program & Routine immunization.
3. The outreach activities should be conducted on priority basis as immunization status of uncovered population is very poor since long
4. The case response activities including targeted behavior change communication sessions through UNICEF partners and accelerated mop-up activity may be immediately conducted.
5. The healthcare providers may be sensitized to report suspected cases of measles.
6. The surveillance network must be expanded and strengthened based to include the informal healthcare providers based on the health seeking behavior of the community.
7. More vaccinators in Salehpat tehsil need to be deployed as the area is far-flung, hard to reach.
8. The lady health workers should be appointed in the area to help change the behavior of community and to strengthen the linkage between the people and the healthcare system.
9. The routine immunization needs to be strengthened prevent future outbreaks related to VPDs.

Knowledge Hub

Tuberculosis: A Persistent Threat to Global Health

Tuberculosis (TB), a centuries-old infectious disease caused by the bacterium *Mycobacterium tuberculosis*, continues to cast a significant shadow on global public health. Primarily affecting the lungs, though other organs are also vulnerable, TB remains a major concern, claiming millions of lives annually. Developing nations like Pakistan face particularly high burdens of this disease.

The Silent Menace:

Tuberculosis is primarily transmitted through the airborne route, specifically via aerosolized droplets expelled by individuals with active TB disease. These droplets are generated during activities like coughing, sneezing, singing, or even talking loudly. Once inhaled, the bacteria establish themselves in the lungs, triggering an immune response. While initial exposure often remains dormant, it can reactivate under conditions of weakened immunity, leading to active TB characterized by persistent cough, fever, weight loss, and night sweats.

MDR-TB: A Complicating Factor:

The emergence of multidrug-resistant TB (MDR-TB) further complicates TB control efforts. These strains resist standard antibiotic treatment, necessitating extended and harsher regimens with significant side effects. This resistance often arises from misuse or inadequate adherence to treatment, highlighting the importance of patient education and healthcare system strengthening.

Pakistan's TB Landscape: A Grim Reality:

Unfortunately, Pakistan ranks fifth globally in terms of TB burden, with a concerning prevalence of MDR-TB. Several factors contribute to this grim situation, including:

- **Limited access to quality healthcare:** Rural communities often lack adequate diagnostic and treatment facilities, leading to delayed diagnoses and treatment initiation.
- **Socioeconomic disparities:** Poverty, malnutrition, and substandard living

conditions weaken immune systems, increasing susceptibility to TB infection.

- **Stigma and discrimination:** Misconceptions surrounding TB can lead to social isolation and reluctance to seek help, hindering control efforts.

Rays of Hope: A Multifaceted Approach to Control:

Effectively combating TB requires a multi-pronged approach:

- **Universal access to early diagnosis and treatment:** Strengthening healthcare infrastructure, particularly in rural areas, is crucial. Rapid diagnostic tests and effective medications, including those for MDR-TB, must be readily available and affordable.
- **Patient education and adherence:** Empowering individuals with knowledge about TB transmission, prevention, and treatment adherence is vital. Patient support groups can play a significant role in combating stigma and ensuring completion of therapy.
- **BCG vaccination:** While not offering complete protection, the *Bacillus Calmette-Guérin* (BCG) vaccine helps reduce TB severity in children.
- **Improved living conditions:** Addressing poverty, improving sanitation, and promoting healthy hygiene practices can significantly reduce TB transmission risks.
- **Continuous research and development:** Investments in new diagnostics, drugs, and vaccines are essential for long-term success in controlling TB.

A Collective Responsibility:

The fight against TB demands a collective effort from governments, healthcare providers, NGOs, and individuals. By prioritizing prevention, ensuring comprehensive care, and addressing social determinants of health, we can break the chains of TB transmission and create a healthier future. Remember, a seemingly insignificant cough today could have dire consequences tomorrow. Let us raise awareness, break the stigma, and work together to turn the tide against this ancient disease.





TUBERCULOSIS

Beware of these symptoms!

Fatigue, weight loss, lack of appetite, fever, night sweats, coughing, chest pain, and the coughing up of blood.







TB control measures

Implementing a respiratory protection program
Training health care personnel on respiratory protection
Educating patients on respiratory hygiene and the importance of cough etiquette procedures

TB is Curable

Getting tested and treated for TB infection is a lot easier than it used to be.

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