

Epidemiological Week N^o 6 (4-10 February 2006)

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Contents

Number of sites reporting	2
Distribution of reported cases by Age group	2
Case Fatality Rate (CFR %)	3
District-wise percentage of consultations	4
DEWS Data , Monthly Summary	5
Acute Diarrhea and Acute Respiratory Infections	6
Outbreak Alerts and Response by District	6



Earthquake damage at Rural Health Center- Abbaspur, Poonch, Kashmir, Pakistan

Highlights

- § Acute Respiratory Tract Infection (ARI) was the most common reason for consultation - 33% (29472/90016) of total consultations. Among patients less than 5 years of age ARI contributed to 42% (10349/24751) while 29% ARI (19122/ 65255) occurred among patients age 5 years and older.
- § This week there were ten reported deaths, of which 5 were under age 5 years. One of the childhood death was considered to be due to ARI while 9 deaths were due to other diseases and conditions.
- § This week 157 reporting sites submitted their reports out of total 184 trained reporting sites making 85% reporting.
- § One AFP case (10 year old boy) was reported from BHU Matiyara, Muzaffarabad, and the case was from DollaYar village.
- § No cases of measles have been reported from Mansehra and Bagh districts since 1st January 2006.

The Weekly Morbidity and Mortality Report (WMMR) is published by the Ministry of Health of Pakistan (MOH) and the World Health Organization (WHO). The WMMR is built on surveillance data that health service providers transmit on a weekly basis from health facilities and hospitals in those areas affected by the earthquake that struck Pakistan on 8 October 2005.

The WMMR objective is to monitor the trend of health conditions over a period of time and provide vital information to all health partners. The WMMR is only a snapshot of the health conditions in those facilities where events are registered and data collected and does not necessarily reflect the situation from other health facilities. The WMMR is a tool that has been developed for emergencies and previously used in other areas such as the Darfur Crisis.

Number of sites reporting

The total number of reporting sites trained for DEWS in the earthquake affected areas increased to 184; 157 of these sites (85%) sent their surveillance data on time during the epidemiological week 6 (04-10 February, 2006), as shown in table 1. WHO extended the Disease Early Warning System to Shangla District and now there are three trained reporting sites in Shangla district where data is compiled through Battagram office. During this week, the Battagram and Bagh Sub offices received 100% of reports on time.

Table-1. Number of sites reporting by district and week in earthquake affected areas, 04-10 February 2006

Area	Population	Trained sites (Week 6)	Sites reporting		
			Week 4	Week 5	Week 6
Muzaffarabad	894,364	32	40	29	31
Bagh	452,532	27	25	27	27
Poonch	633,712	45	8	24	26
Balakot	253,390	18	15	17	18
Mansehra	1,107,642	47	42	42	40
Battagram/Shangla	592,256	15	12	14	15
Total	3,933,896	184	142(77%)	153(83%)	157(85%)

Distribution of reported cases by Age group

Acute Respiratory Infection (ARI) was found to be the most common reason for consultation during this week (4-10 February 2006) among both the population under 5 years of age (<5) and the population age 5 years and above (5+). For those less than 5 years of age, **24,751** consultations were reported; **42% (10,349)** of these consultations were for **ARI** while **8% (1946)** were for Acute Watery Diarrhoea (**AWD**). Among population of 5 years of age and older, **65,255** consultations were reported; **29% (19122)** of these consultations were for **ARI** while **5% (3080)** were for **AWD**. (Fig-1 and Table 2)

No cases were reported for Suspected Tetanus and Suspected Viral Hemorrhagic Fever. One case of Acute Flaccid Paralysis (AFP), four cases of Suspected Meningitis (MEN), 19 cases of Suspected Measles (MEA) and 43 cases of Suspected Hepatitis (JAU) were reported through the weekly surveillance system.

In summary, from 4-10 February, 2006, a total of **90,016** consultations were reported. Among all ages **33% (29472)** of the consultations were for **acute respiratory infection (ARI)**; **4% (3974)** for **injuries (INJ)**; and **6% (5026)** were for **acute diarrhoea (AWD)** and Fever of unexplained origin (FUO) cases were **4% (4043)** of the consultations. (Figure-1)

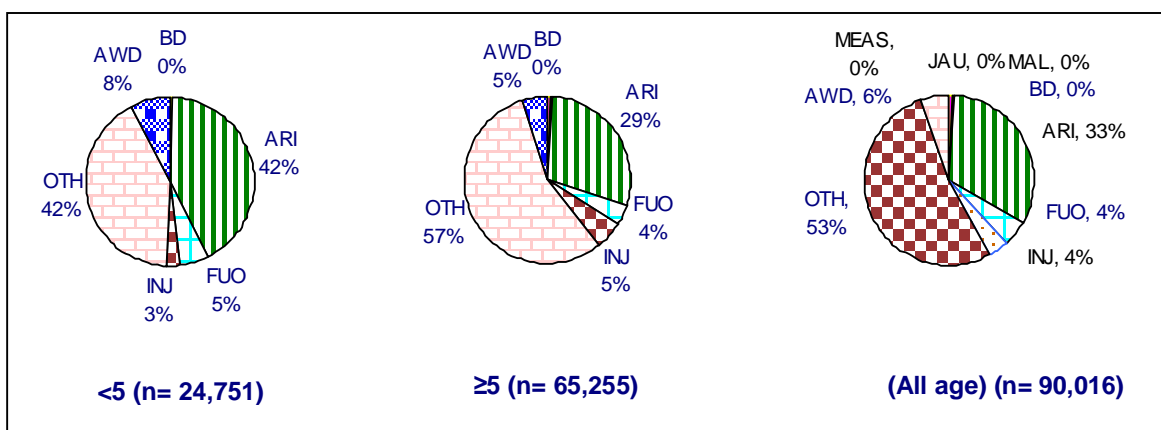


Fig-1. Proportion of primary causes for all reported cases, earthquake affected areas Pakistan, 04-10 February, 2006

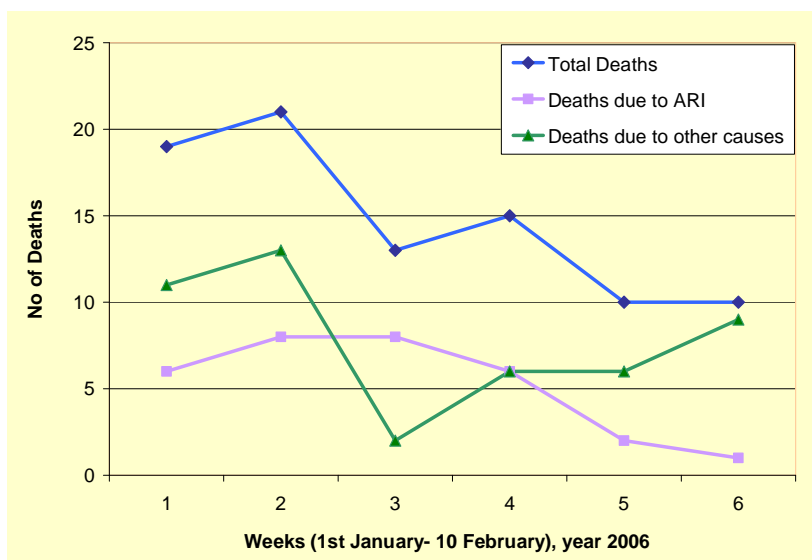
Case Fatality Rate (CFR %)

In the current epidemiological week, 10 deaths were reported, of which 50% (5) occurred among the population under age 5 years. Case Fatality Rate (CFR) calculation reveals 0.001% for acute respiratory tract infections (ARI) among patients under age 5 years, and 0.04% for those with other diseases. Among population age 5 years and above, CFR was 0.014% among patients with other diseases. Total CFR % found to be 0.01 %. (Table-2).

Table-2. Total number of reported cases, % morbidity, deaths and Case Fatality Rate (CFR %) by age groups, in earthquake affected areas, Pakistan, 04-10February, 2006.

Event/ Week 6	Age <5 years			Age 5 years and above			All age		
	Cases	Deaths	CFR %	Cases	Deaths	CFR %	Cases	Deaths	CFR %
AWD	1946	0	0	3080	0	0	5026	0	0
BD	112	0	0	274	0	0	386	0	0
AFP	0	0	0	1	0	0	1	0	0
MAL	31	0	0	153	0	0	184	0	0
ARI	10349	1	0.001	19122	0	0	29472	1	0.003
MES	12	0	0	7	0	0	19	0	0
MEN	2	0	0	2	0	0	4	0	0
JAU	9	0	0	34	0	0	43	0	0
TET	0	0	0	0	0	0	0	0	0
AHF	0	0	0	0	0	0	0	0	0
FUO	1361	0	0	2682	0	0	4043	0	0
INJ	652	0	0	3322	0	0	3974	0	0
OTH	10,277	4	0.04	36,578	5	0.014	46864	9	0.02
TOTAL	24,751	5	0.02	65,255	5	0.008	90016	10	0.01

AWD - Acute Diarrhoea, BD - Bloody Diarrhoea, AFP - Acute Flaccid Paralysis, MAL - Malaria, ARI - Acute Respiratory Infection, MES - Measles, Men - Meningitis, JAU - Acute Jaundice Syndrome, TET - Neonatal Tetanus, AHF - Acute Hemorrhagic Fever, FUO - Unexplained fever, INJ - Injuries, OTH - Others.



During weeks 1-6, 2006, there have been a total of 88 reported deaths: 2 due to AWD, 2 deaths due to bloody diarrhoea, 31 deaths due to ARI, 2 deaths due to meningitis, 1 death due to jaundice, 3 deaths were due to Injuries while 47 deaths were due to other conditions. It is notable that decreasing number of deaths have been reported due to ARI and overall from Week 1 to Week 6. (Fig. 2)

Figure 2: Number of deaths due to ARI and other causes, Epidemiological Week 1 - 6, 2006 Earthquake Affected Areas.

District-wise percentage of consultations reported for different diseases

During reporting week 6, 31% (27,870) of all reported consultations were reported from Mansehra, 24% (21,970) from Muzaffarabad, 19% (16,812) from Bagh, 14% (13,084) from Poonch and 12% (10,270) were reported from Battagram.

Percentage of consultations for ARI in the different districts varied from 23% in Battagram District to 38% in Bagh. While AWD ranged from 4% of consultations in Poonch to 6% of consultations in Mansehra. (Fig. 3)

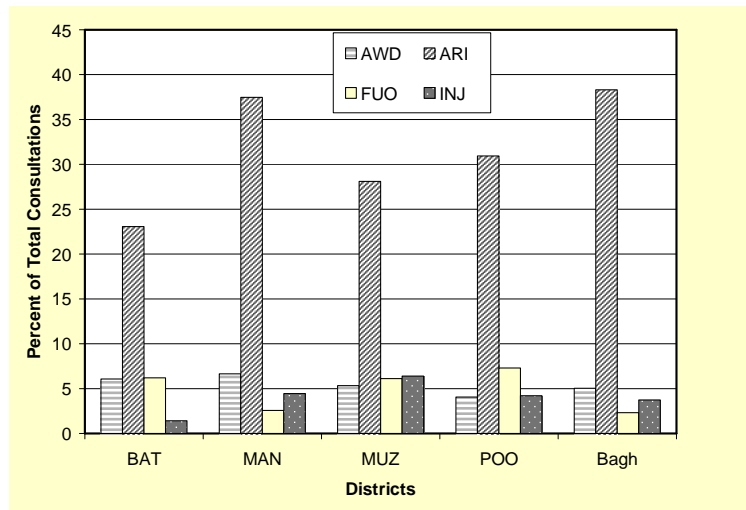


Figure 3. District-wise percentage of consultations reported for different diseases during and five earthquake affected districts. 4-10 February, 2006

Three out of 1000 (3/1000) consultations were due to Bloody Diarrhoea in Battagram, Muzaffarabad and Poonch districts. In Mansehra the rate was 5/1000 consultations, and Bagh reported the highest rate (8/1000 consultations). (Table 3)

Eighteen suspected measles cases were reported from Battagram, most of these related to the outbreak in Maira Camp. One case of measles was reported from Muzaffarabad (See Alerts Section).

No cases of measles have been reported from Mansehra and Bagh districts since 1st January 2006.

Table 3: Number of cases reported by disease and district, 4-10 February, 2006.

Health events	Bagh	Battagram	Mansehra	Muzaffarabad	Poonch
BD	131	27	132	60	36
AFP	0	0	0	1	0
MAL	39	1	117	27	0
MES	0	18	0	1	0
MEN	0	0	2	1	1
JAU	5	0	31	5	2
TET	0	0	0	0	0
AHF	0	0	0	0	0
TOTAL	175	46	282	95	39

DEWS Data, Monthly Summary (Epidemiological Weeks 3-6, 2006)

In summary for the month between 14 January and 10 February 2006, a total of 339,099 health events under surveillance were reported, of which 30% were attributed to ARI, 6% were due to Acute Watery Diarrhoea (AWD), 4% due to fever of unexplained origin (FUO) and 4% were due to injuries. Of the overall consultations 54% were due to other conditions not under surveillance (Table 4).

Table 4. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 14 January – 10 February 2006.

Week	Week 3		Week 4		Week 5		Week 6		Total		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	4284	2	4772	0	6609	0	5026	0	20691	2	0,010
BD	320	0	492	2	455	0	386	0	1653	2	0,121
AFP	0	0	1	0	1	0	1	0	3	0	0,000
MAL	43	0	14	0	52	0	184	0	293	0	0,000
ARI	19479	8	24134	6	28947	2	29472	1	102032	17	0,017
MES	4	0	15	0	22	0	19	0	60	0	0,000
MEN	2	1	1	0	6	1	4	0	13	2	15,385
JAU	23	0	19	1	38	0	43	0	123	1	0,813
TET	0	0	1	0	0	0	0	0	1	0	0,000
AHF	0	0	0	0	0	0	0	0	0	0	0,000
FUO	3617	0	2921	0	3794	0	4043	0	14375	0	0,000
INJ	3002	0	3522	0	4137	1	3974	0	14635	1	0,007
OTH	33751	2	50287	6	54318	6	46864	9	185220	23	0,012
TOTAL	64525	13	86179	15	98379	10	90016	10	339099	48	0,014
RU	128		142		153		157				

C - cases, D - Deaths, AWD - Acute Diarrhoea, BD - Bloody Diarrhoea, AFP - Acute Flaccid Paralysis, MAL - Malaria, ARI - Acute Respiratory Infection, MES - Measles, Men - Meningitis, JAU - Jaundice Syndrome, TET - Neonatal Tetanus, AHF - Acute Hemorrhagic Fever, FUO - Unexplained Fever, INJ - Injuries, OTH - Others, RU - Reporting Units. Please note data from late reporting in previous weeks has been updated.

During the same reporting period, a total of 90,125 (27% of total) consultations were reported among children aged less than five years. Of these consultations, 39% were attributed to ARI, 9.5% were due to AWD, 6% were due to FUO and 3% were due to injuries. Forty-two (42%) percent of all consultations in children under 5 years were due to other conditions not under surveillance (Table 5).

Table 5. Comparison of the weekly distribution of reported cases, deaths and monthly CFR, Earthquake Affected Areas, Pakistan, 14 January – 10 February 2006 in children under 5 years of age.

Week	Week 3		Week 4		Week 5		Week 6		Total		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	1765	2	2571	0	2302	0	1946	0	8584	2	0,023
BD	102	0	178	1	118	0	112	0	510	1	0,196
AFP	0	0	0	0	0	0	0	0	0	0	0,000
MAL	11	0	3	0	4	0	31	0	49	0	0,000
ARI	6784	5	9303	6	9051	2	10349	1	35487	14	0,039
MES	2	0	9	0	11	0	12	0	34	0	0,000
MEN	2	1	1	0	3	0	2	0	8	1	12,500
JAU	7	0	3	1	10	0	9	0	29	1	3,448
TET	0	0	1	0	0	0	0	0	1	0	0,000
AHF	0	0	0	0	0	0	0	0	0	0	0,000
FUO	1255	0	1307	0	1116	0	1361	0	5039	0	0,000
INJ	588	0	794	0	775	0	652	0	2809	0	0,000
OTH	7300	1	11179	2	8819	6	10277	4	37575	13	0,035
TOTAL	17816	9	25349	10	22209	8	24751	5	90125	32	0,036
RU	128		142		153		157				

Acute Diarrhea and Acute Respiratory Infections

This week, the number of consultations for ARI increased from 29% in Week 5 to 32%. Acute Diarrhoea decreased 1% and Bloody Diarrhoea remained the same compared to the last week's reports. (Figure-4)

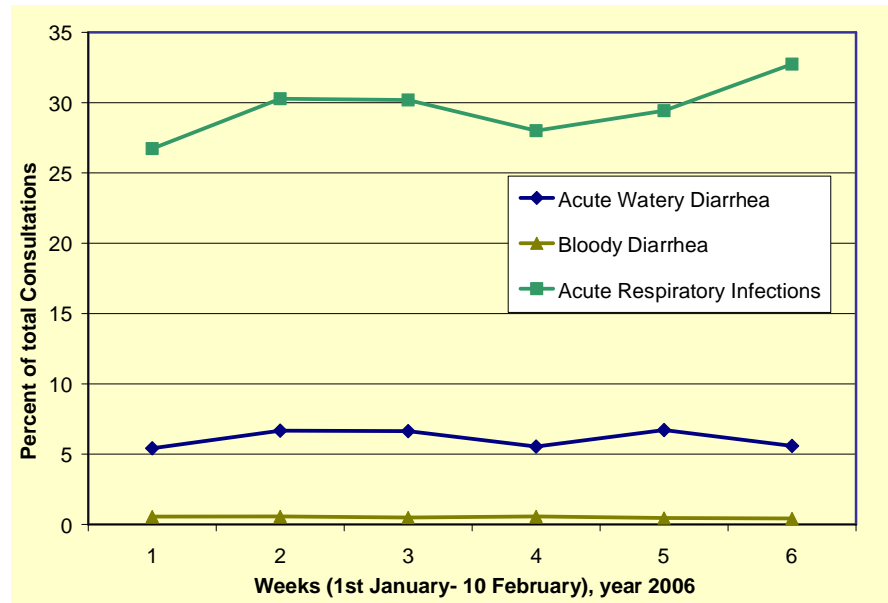


Figure 4: Percentage of consultations by disease for Epidemiological Week 1 – 6, 2006 Earthquake Affected Areas.

Outbreak Alerts and Response by District

Balakot

Meningitis

One suspected case of meningitis was reported on 5 February by Madni trust hospital. Case investigation revealed the patient did not suffer from Meningitis. Patient was transferred to the field hospital at Gari Habibullah for observation. A second case of suspected meningitis was reported from the field hospital at Gari Haibullah, but the patient had been discharged by the time the alert was received.

Batagram

Acute Flaccid Paralysis

A case of AFP was reported from Besham (Tehsil Shangla) on 8/2/2006. Due to the restricted movement, stool samples could not be taken for laboratory testing.

Measles

The localized measles vaccination campaign in Maira camp was completed to put a halt to the ongoing measles outbreak. One suspected case of measles was reported on 11/2/2006 by CH Thakot from Berserbanda village. The patient was not vaccinated. WHO is looking into improving the vaccination coverage of this and other areas.

Mansehra

Hemorrhagic Fever

Nine suspected cases of Haemorrhagic Fever were reported from the civil hospital in Baffa Tehsil. Case investigation revealed that the cases were of unexplained Fever.

Bagh

Meningitis

One suspected meningitis case (6 yrs Female) was reported on 06/02/06 from Harigal by the DHQ Hospital with onset of symptoms on 05/02/06. Patient was referred to the PIMS hospital in Islamabad.

Hepatitis

Two cases of Acute Jaundice reported from Sarbuland Bagh on 9/2/2006 by PIMA Field clinic. One was a 5 year old boy (onset 07/2/2006) and second patient was a 2 year old girl (onset 02/02/2006). Patients were treated and their conditions improved.

Muzaffarabad

Measles

One suspected measles case was reported from ICRC in Chinari (Hatian Tehsil). A 4 year old boy from Chanoian village presented symptoms compatible with measles on 7 February. It is unclear whether the boy was vaccinated. The two sisters of the patient were vaccinated against measles at BHU Chinari on 8 Feb 06. Vaccination coverage in this area in general is reported to be high. The family came from Karachi and may therefore not have been vaccinated earlier.

Acute Flaccid Paralysis

One case of AFP (10 year old boy) was reported from BHU Matiyara. The patient came from DollaYar village, with difficult access. Patient had received Polio vaccine when he was young but never received polio drops after that.

Poonch

Blood Diarrhoea

Follow up investigation from the alert in the previous week about 13 cases of bloody diarrhoea in Jandala shows that one stool sample was tested positive for *Shigella flexneri*. The other 11 samples tested negative for pathogen.

Meningitis

One suspected meningitis case was reported from CMH Rawalakot. Patient is a 5 year old girl and was previously discharged from CMH with diagnosis of neonatal sepsis.

Hepatitis

One suspected case of acute jaundice in a 56 year old male from Bagh District was reported from the CMH Rawalakot. After further investigation the lab tests performed were negative for both HBsAg and HCV. The patient was referred to the CMH in Rawalpindi.

Measles

200 cases of suspected measles were being reported for 7 consecutive weeks by the Cuban Hospital in Tain since December. Investigation revealed that reports had been filled out by an unauthorized person and no suspected measles case had actually been seen by this hospital since December 2005.

Islamabad

Measles

The NGO MDM reported 5 cases of measles on 8/2/2006 from the earthquake displaced camp in H-11, Islamabad. Two blood samples taken for laboratory verification were positive. Active case finding was initiated and an additional 41 cases were found within 3 days. A localized immunization campaign has been started targeting 4,425 children in the camp.