WMMR

Weekly Morbidity and Mortality Report

Ministry of Health Pakistan

World Health Organization

Contents

Highlights

- **Disease Early Warning System (DEWS) put in place in earthquake affected districts: 44 of the 124 reporting units (35%) reported a total of 40,761 consultations.**

- **The main cause for consultations during the reporting week was injuries (20%), followed by Acute Respiratory Infection (14%), Acute Watery Diarrhoea (8%) and Fever of Unexplained Origin (4%).**

- **During the same period, there were 15 reported deaths. Fourteen deaths were reported form Balakot and one death form Muzaffarabad. In Balakot, the deaths included 5 injury related deaths, 1 BD, 1 ARI, 1 cardio-vascular, and 6 due to OTH causes. The one death reported from Muzaffarabad was ARI-related death.**

- **The Acute Watery Diarrhoea outbreak in Old University camp in Muzaffarabad has been successfully controlled.**

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

WMMR objective is to monitor the trend of heath conditions over a period of time, and is a tool that has been developed previously used in other emergencies such as Darfur Crisis. It provides vital information to all partners to monitor the health situation in the area.

WMMR is a snapshot of the health conditions in those facilities where events are registered and data collected. The WMMR does not reflect the situation from other health facilities.
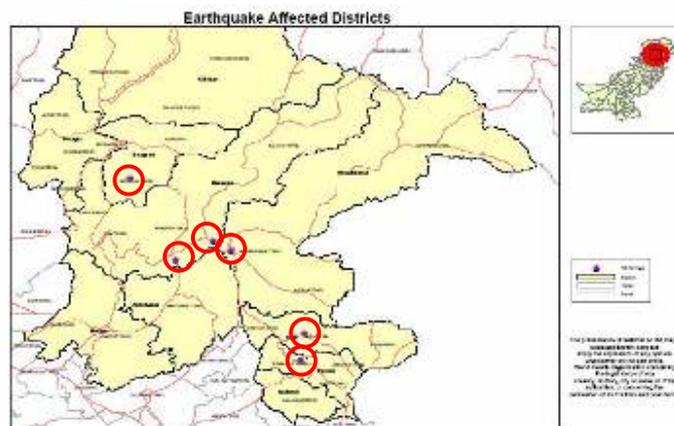
Introduction

After earthquake 8 October, 2005; the displacement of large segments of the population, coupled with limited access to safe water and shelter poses a great risk for epidemic prone diseases. In response to this threat, the Ministry of Health (MOH) and WHO have established Disease Early Warning System (**DEWS**) for epidemic-prone diseases. The main objective of the system is the early detection of epidemic-prone diseases and rapid response with appropriate disease control measures in order to reduce morbidity and mortality in the affected population.

This is the first report on disease early warning systems with compiled data from all areas in the earthquake-affected areas. Training has recently been conducted and it is anticipated that additional reporting sites will begin reporting data in the coming weeks. The MOH and WHO will provide timely feedback of this information on a weekly basis. The MOH would appreciate any input regarding the WMMR and encourages all providers and NGOs working in the region to participate in the DEWS.

Surveillance efforts have been prioritized to detect epidemic prone diseases for which effective control and prevention is possible and available. Due to living conditions in the outbreak, it is likely that epidemics will occur with regular frequency. A key objective of this surveillance system is the early detection and response to these infectious disease threats. The MOH and WHO have established a list of 12 priority diseases and have identified and trained reporting sources throughout the region. There are six WHO Field offices where MOH and WHO staff are collecting data on weekly basis. Reporting sources include numerous field hospitals, camps, mobile clinics, as well as functional MOH facilities.

To facilitate data management, software has been developed and a data base established for all 6 WHO hubs. Through this software, local epidemiologists are able to generate reports at the sub-district and reporting unit level to provide feedback to reporting source. Local epidemiologists and MOH staff have been trained on standardized data collection tools and outbreak response. Data is being sent to the national level by email on a weekly basis where it is merged into a unified file and analyzed for summary reports. A Global Information

Location of WHO sub offices, earthquake affected areas

System (GIS) Unit has been established and is actively mapping disease patterns in the earthquake affected areas.

Reporting Units

The total number of trained reporting units for DEWS is 124. In the last 4 weeks, 44 of these sites (35%) have sent their surveillance data on time at the epidemiological week 46 (12-18 November 2005). The reporting timeliness of the DEWS system has increased by 20% at the current epidemiological compared with the previous week (Epidemiological week 45).

WHO field office	Population	Total no. of reporting sites	sites reporting 12-18 Nov 2005
Muzaffarabad	**894,364**	**18**	**6**
Bagh	**452,532**	**18**	**10**
Poonch	**633,712**	**50**	**11**
Balakot	**253,390**	**16**	**9**
Mansehra	**1,107,642**	**16**	**7**
Battagram	**319,973**	**6**	**1**
Total	**3,661,613**	**124**	**44 (35%)**

Proportion of primary causes for cases and deaths in Earthquake Affected Areas

Between 12 and 18 November 2005, a total of **40,761** consultations for events under surveillance were reported through DEWS of which, **20%** (8,049) were due to **injuries**, **14%** (5579) acute respiratory Infection (**ARI**), **8%** (3,360) due to acute watery diarrhoea (**AWD**), **4%** (1,621) due to unexplained fever Injuries (**UFV**) and **2%** (729) due to bloody diarrhoea (**BD**). During the same period, there were **15** reported deaths. Fourteen deaths were reported form Balakot and one death form Muzaffarabad. In Balakot, the deaths included **5 injury** related deaths, **1 BD**, **1 ARI**, 1 **cardio-vascular**, and **6** due to other (**OTH**) causes. The **one** death reported from Muzaffarabad was **ARI**-related death.

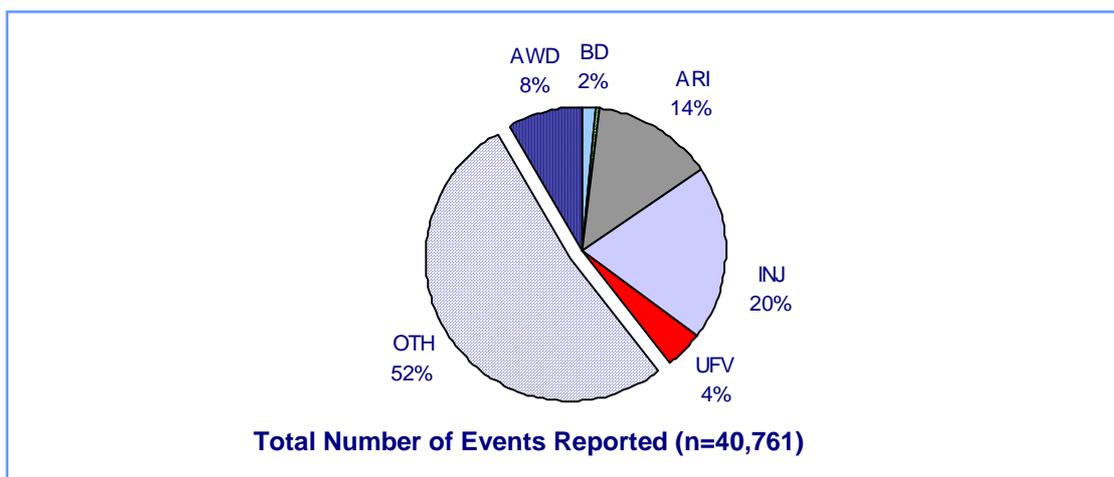**Total Number of Events Reported (n=40,761)**

Figure 1. Proportion of primary causes for all reported cases, Earthquake Affected areas, Pakistan, 12-18 November 2005. (ARI: Acute Respiratory Tract Infection, AWD: Acute Water Diarrhoea, BD: Bloody Diarrhoea, INJ: Injuries, FUO: Fever of Unexplained Origin, OTH: Others)

Distribution of reported cases and CFR in the Earthquake Affected Areas

INJ was the most common health event reported among persons > 5 years of age and had the highest CFR (0.02%) among all reportable conditions in this age group (Figure 2). Other common conditions included ARI, AWD, and UFV without any related mortality.

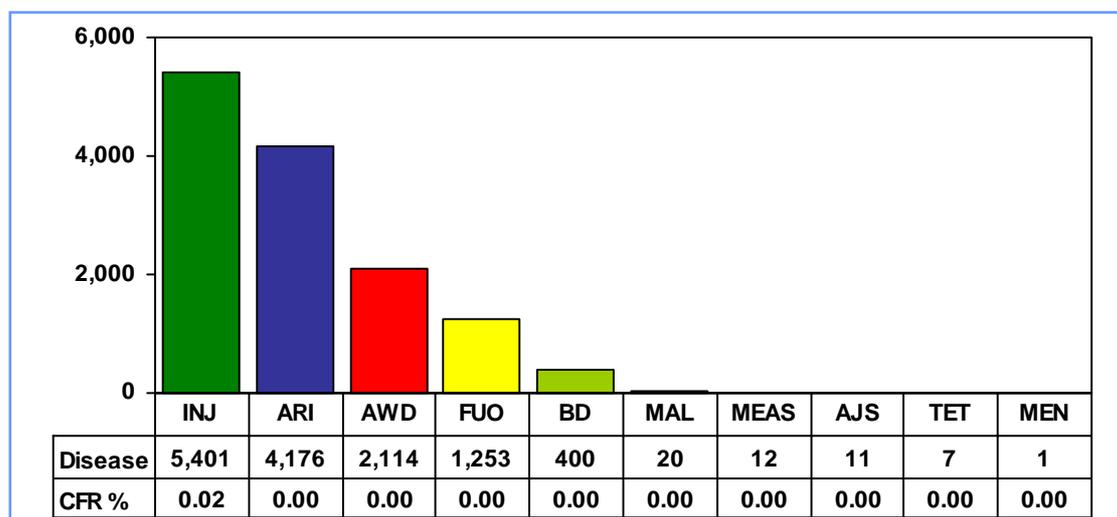|	INJ	ARI	AWD	FUO	BD	MAL	MEAS	AJS	TET	MEN
Disease	5,401	4,176	2,114	1,253	400	20	12	11	7	1
CFR %	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Figure 2. Primary causes for the reported cases and their CFRs, five or more than 5 years old of age, Earthquake Affected Areas, Pakistan, 12-18 November 2005. (INJ: Injuries, ARI: Acute Respiratory Tract Infection, AWD: Acute Water Diarrhoea, FUO: Fever of Unexplained Origin, BD: Bloody Diarrhoea, MAL: Malaria, MEAS: Measles, AJS: Acute Jaundice Syndrome, TET: Tetanus, MEN: Meningitis)

In the under-5 year age group, 10,726 health events were reported, constituting 26% of the total consultations; 25% (2,647) of these reports were attributed to INJ while 13% (1,402) were ARI (Figure 3). Other common reported events in this age group were included diarrhoeal disease. Of the 15 total deaths reported during the reporting period, 9 (60%) occurred among children under-5 years.

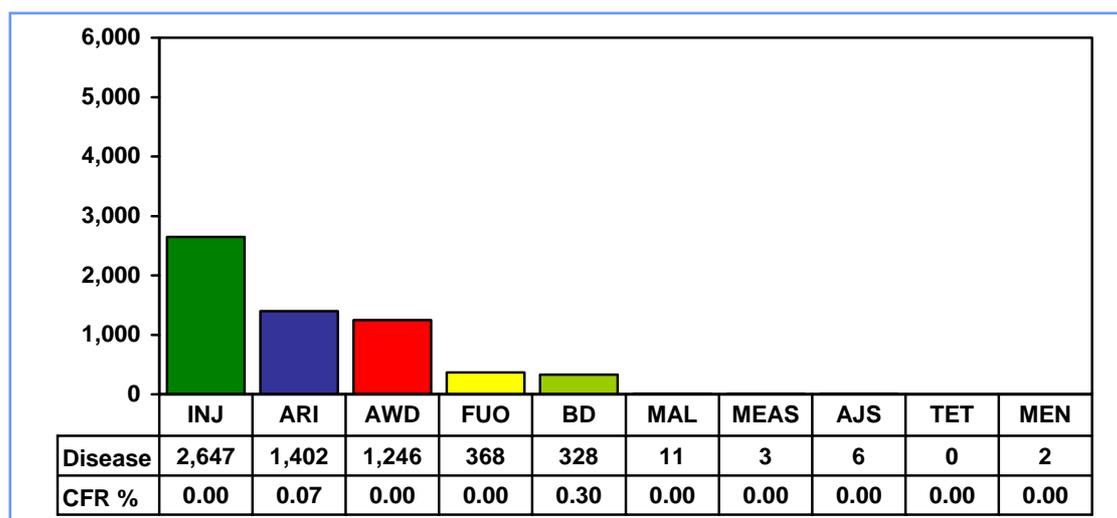|	INJ	ARI	AWD	FUO	BD	MAL	MEAS	AJS	TET	MEN
Disease	2,647	1,402	1,246	368	328	11	3	6	0	2
CFR %	0.00	0.07	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00

Figure 3. Primary causes for the reported cases and their CFRs, LESS than 5 years old of age, Earthquake Affected Areas, Pakistan, 12 -18 November 2005.

Distribution of reported events by district

During the reporting week, 20% of all reportable conditions were from Mansehra district. Most of these events were injury-related, followed by Muzzafarabad and Balakot (12% and 7% respectively) as shown in Figure 4-5.
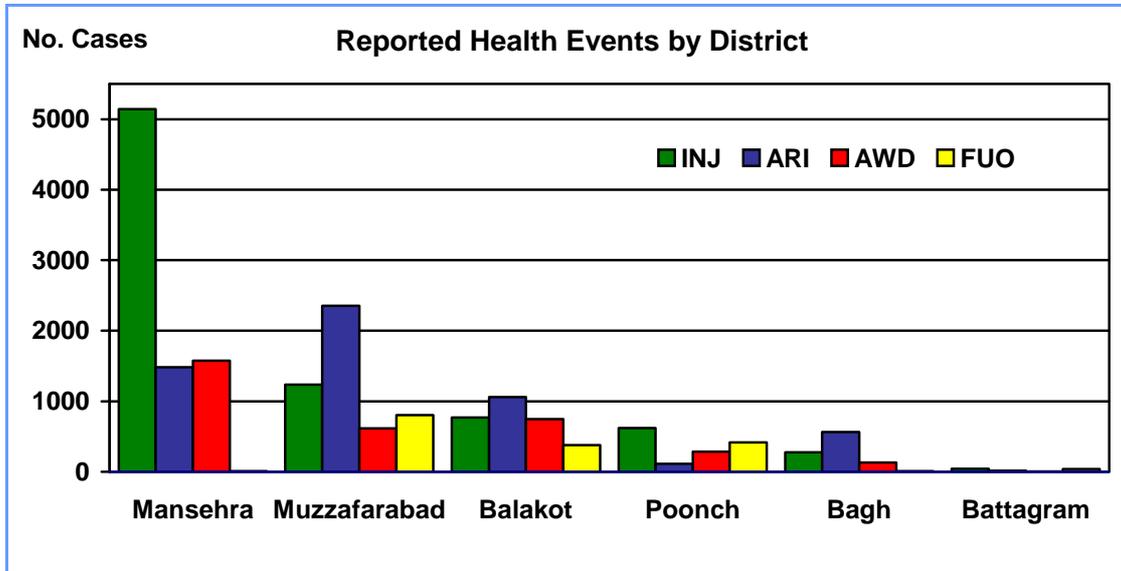

Figure 4. The distribution of reported heath events by district, Earthquake Affected Areas, Pakistan, 12 -18 November 2005.
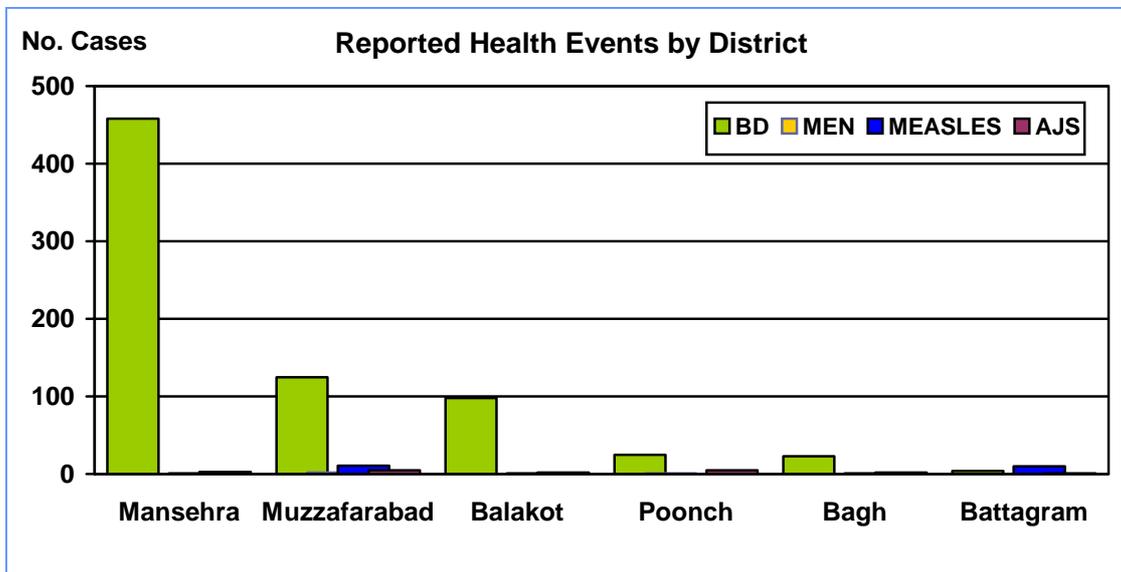

Figure 5. The distribution of reported heath events by district, Earthquake Affected Areas, Pakistan, 12 -18 November 2005.

Acute Watery Diarrhoea Outbreak, Muzzafarabad District

A key function of DEWs surveillance is rapid response to outbreaks. On the 7th of November 2005, WHO received a report from Humanity First, a German NGO, of 170 cases of diarrhoea, both bloody and watery, in the spontaneous camp known as Old University in Muzaffarabad. The camp is located in the centre of Muzaffarabad town; the estimated population of the camp is about 1800 (300 facilities). The heath services in the camp are provided only by one heath clinic operated by Humanity First (Germany).

WHO epidemiologists were requested to investigate the outbreak; a team of Epidemiologist, Environmental Engineer and Public Health Officer visited the camp at the same day. The following were observed during the outbreak investigation; 80% of the cases were more than 5 years old, and 10% (17/170) of the cases were dehydrated and required IV therapy. There were no related deaths. Also the water sanitation facilities in the camp were inadequate (1 water tank and no latrines).

On the 8th of November, the Health cluster was briefed on the situation at the camp regarding AWD cases, WATSAN insufficiencies at the camp, and the need for vigilance in other camps. Between the 7th and 18th of November, a total 760 acute watery diarrhoea cases were reported form the Old University Camp. No deaths were recorded during the outbreak. Control measures included 1) establishment of a treatment facility with 24 hour service, 2) improving access to safe water with 1 additional tank; 3) changing the source of water for the tanks to fully purified provided by the Australian Army; 4) distribution of hygiene kits and health education materials and 5) building new latrines. After these measures, the outbreak abruptly stopped (Figure 6). Although the outbreak response was successful, the MOH and WHO continue to closely monitor the situation to ensure that preventive measures are maintained.
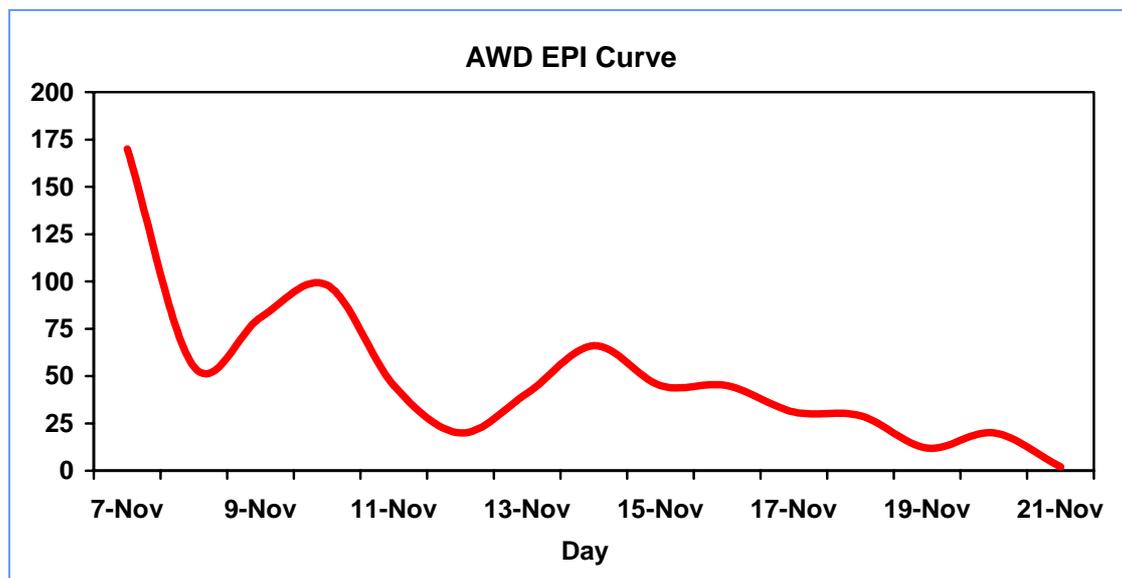

Figure 6.Daily distribution of Acute Watery Diarrhoea (AWD) cases, Old University camp, Muzzafarabad, Pakistan, 7-21 November, 2005.

This intervention highlights the importance of establishing an early warning system for this highly vulnerable population. We thank all reporting sources for their participation.