

## Contents

Reporting Units.....	2
DEWS Data, Epidemiological Week N <sup>o</sup> 5, 2006.....	2
DEWS Data, Monthly Summary.....	4
Acute Watery Diarrhoea.....	6
Acute Respiratory Infection.....	7
Outbreak Alert and Response.....	8
Mansehra.....	8
Battagram.....	8
Bagh.....	8
Balakot.....	8
Islamabad.....	9



## Highlights

- In the past month (Epidemiological weeks 2-5 inclusive), a total of 311,728 health events under surveillance including 63 reported deaths.
- This week, 153 of the 185 reporting units (83%) reported a total of 98,379 consultations, including 8 deaths.
- The main causes for consultations this week are Acute Respiratory Infection (28%), Acute Watery Diarrhoea (6%), injuries (5%) and Fever of Unexplained Origin (4%).
- One case of Acute Flaccid Paralysis was reported from Mansehra.
- ARI continues to contribute significantly to the overall consultations in all reporting districts. A total of 28,947 ARI cases and 2 related deaths were reported in the current week.
- A total of 6,609 acute diarrhoea (AWD) cases were reported with an increase in the number of reported cases compared to the previous week.
- Twenty two cases of clinically diagnosed measles were reported. Fifty percent (11/22) were under 5 years old.

*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 and NGOs 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 objectives are 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 publication that has been developed for emergencies and previously used in other areas such as the Darfur Crisis.*

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## Reporting Units

The total number of reporting units trained for DEWS in the earthquake affected areas are 185 units; 153 (83%) have sent their surveillance data on time during the epidemiological week 5 (28 January – 3 February 2006). The reporting timeliness of the DEWS system has increased by 6% compared with the previous week (Epidemiological week 4). The reporting timeliness of the DEWS system was increased in all districts except for Mansehra district which reported the same number of reporting units in the last 2 weeks. (Table 1)

Table 1. Number of reporting units by district, Earthquake Affected Areas, Pakistan, 8 January - 3 February 2006.

Area	Population	Reported Sites/ Weeks/Year 2006			
		Week 2	Week 3	Week 4	Week 5
Muzaffarabad	894,364	24	29	40	29
Bagh	452,532	18	23	25	27
Poonch	633,712	8	16	8	24
Balakot	253,390	18	14	15	17
Mansehra	1,107,642	37	38	42	42
Battagram / Shangla	592,256	6	8	12	14
<b>Total</b>	<b>3,933,896</b>	<b>111(60%)</b>	<b>128 (69%)</b>	<b>142 (77%)</b>	<b>153 (83%)</b>

## DEWS Data, Epidemiological Week N<sup>o</sup> 5, 2006

Between 28 January and 3 February 2006, a total of 98,379 consultations for events under surveillance were reported through DEWS. Overall, 28% (28,947) were due to Acute Respiratory Infections (ARI), 6% (6,609) due to Acute Diarrhoea (AWD), 5% (4,137) due to Injuries (INJ), and 4% (3,794) due to Fever of Unknown Origin (FUO). ARI represented 41% and 26% in the less than 5 years old and 5 or more years old respectively. AWD was found to be higher in those less than 5 years old and represented 10% of the total consultations (Figure 1). In the same period, there were 10 reported deaths; of them 20% (2/10) were ARI-related, 1 Meningitis (MEN) related death, 1 was an injury-related death and 60% (6/10) were due to other (OTH) causes.

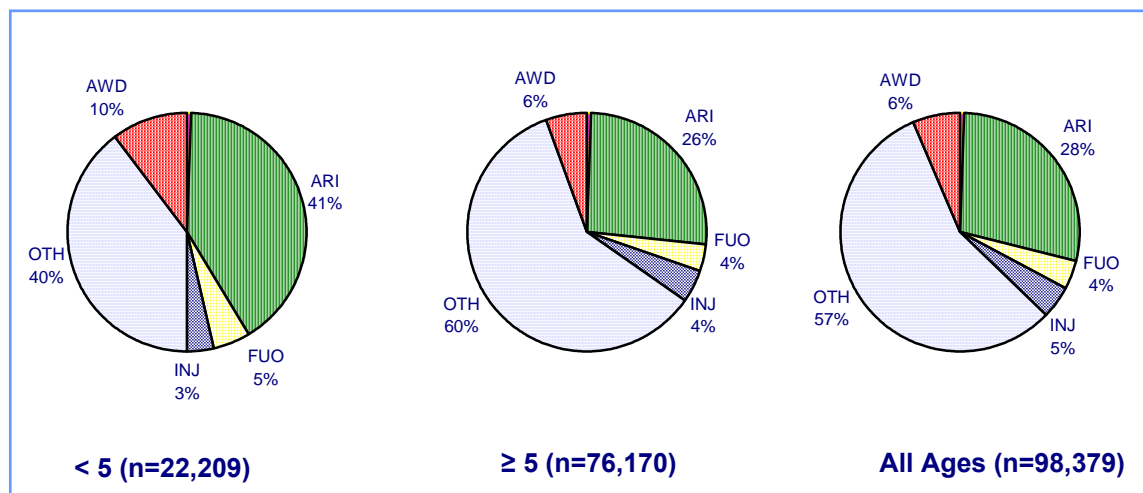


Figure 1. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 28 January – 3 February 2006.

ARI was the most common health event reported among 5 years of age and older, with no related death. **Three hundred thirty seven** cases of clinically diagnosed bloody diarrhoea (**BD**) were reported; of them 34% (113/337) were reported from Mansehra. **Eleven** clinically diagnosed measles (**MES**) were reported; **7** from Battagram and **4** from Muzaffarabad district. **Four** clinically diagnosed meningitis cases (**MEN**) were reported including **1** death with the highest Case Fatality Rate (**CFR**, 25.00). **One** acute flaccid paralysis (**AFP**) more than 5 years old case was reported from Mansehra district (Figure 2).

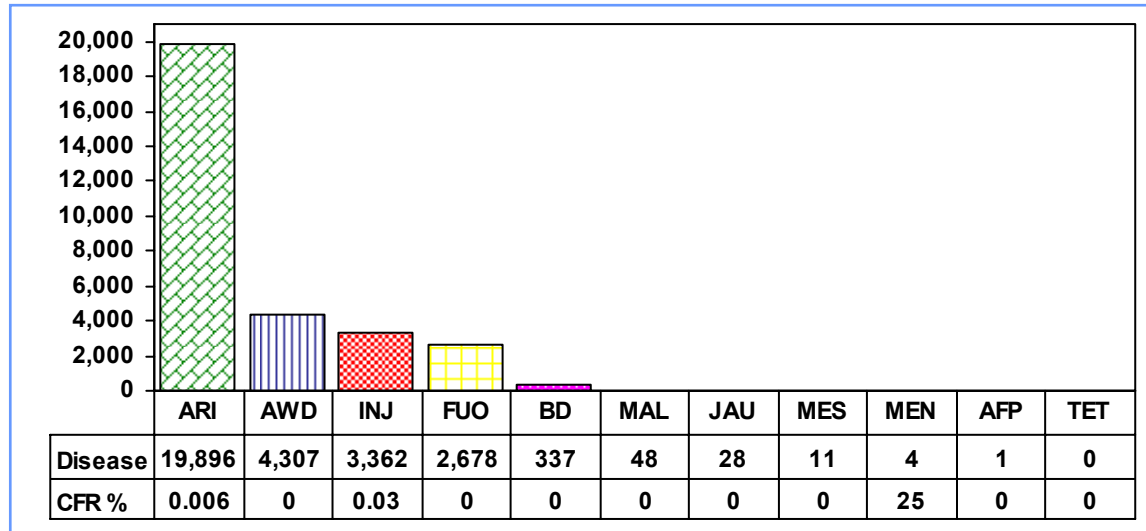


Figure 2. Primary causes for the reported cases and weekly CFRs, 5 years of age and older, Earthquake Affected Areas, Pakistan, 28 January – 3 February 2006.

In the less than 5 year age group, **22,209** consultations were reported; **38%** (9,051) of these reports were attributed to **ARI** with **2** related deaths (**CFR 0.022**) while **10%** (2,302) were due to **AWD** with **no** related deaths. **One hundred eighteen** cases of clinically diagnosed bloody diarrhoea (**BD**) were reported; of them **26%** from Mansehra and followed by **25%** and **22%** from Muzaffarabad and Bagh respectively. **Eleven** cases of clinically diagnosed measles (**MES**) were reported; **six** from Muzaffarabad and **5** from Battagram district. **Three** cases of clinically diagnosed Meningitis (**MEN**) were reported; **2** from Muzaffarabad and **1** from Mansehra district (Figure 3).

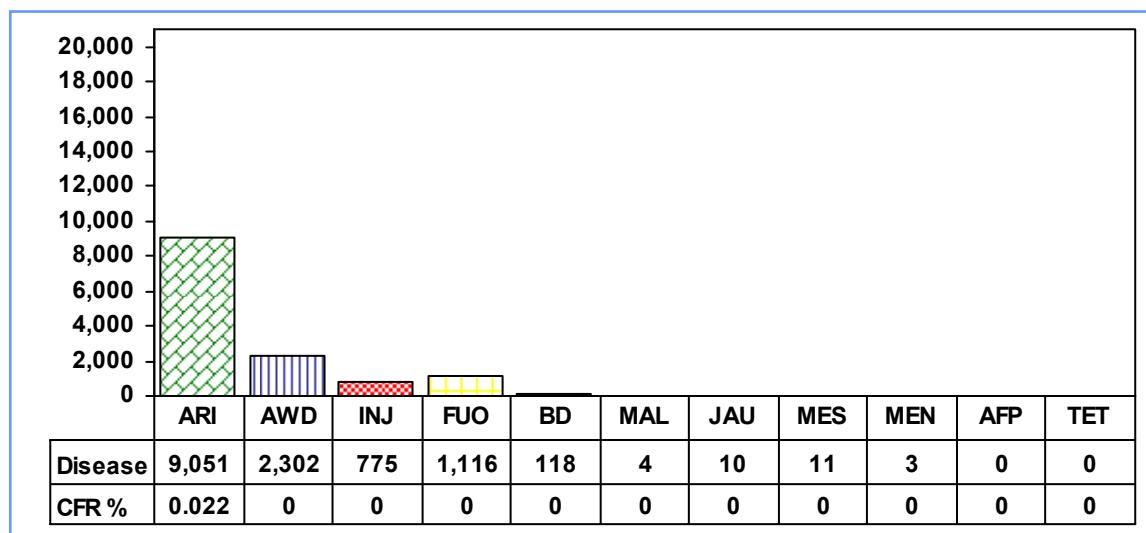


Figure 3. Primary causes for the reported cases and their weekly CFRs, LESS than 5 years old, Earthquake Affected Areas, Pakistan, 28 January – 3 February 2006.

**DEWS Data, Monthly Summary (Epidemiological Weeks No 2-5)**

In summary, for the past month between 6 January and 3 February 2006 (Epidemiological weeks 2-5 inclusive), a total of **311,728** health events under surveillance were reported, of which **29%** (90,643) acute respiratory infection (**ARI**), **6%** (19,955) acute diarrhoea (**AWD**), **5%** (14,219) **Injuries (INJ)** and **5%** (14,140) Unexplained fever (**FUO**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 6 January – 3 February 2006.

Week Event	WEEK 2		WEEK 3		WEEK 4		WEEK 5		TOTAL		CFR%
	C	D	C	D	C	D	C	D	C	D	
<b>AWD</b>	3235	0	4284	2	5827	0	6609	0	<b>19955</b>	<b>2</b>	<b>0.010</b>
<b>BD</b>	278	0	320	0	512	2	455	0	<b>1565</b>	<b>2</b>	<b>0.128</b>
<b>AFP</b>	0	0	0	0	1	0	1	0	<b>2</b>	<b>0</b>	<b>0.000</b>
<b>MAL</b>	37	0	43	0	14	0	52	0	<b>146</b>	<b>0</b>	<b>0.000</b>
<b>ARI</b>	14675	8	19479	8	27542	8	28947	2	<b>90643</b>	<b>26</b>	<b>0.029</b>
<b>MES</b>	11	0	4	0	15	0	22	0	<b>52</b>	<b>0</b>	<b>0.000</b>
<b>MEN</b>	7	0	2	1	1	0	6	1	<b>16</b>	<b>2</b>	<b>12.500</b>
<b>JAU</b>	31	0	23	0	19	1	38	0	<b>111</b>	<b>1</b>	<b>0.901</b>
<b>TET</b>	0	0	0	0	1	0	0	0	<b>1</b>	<b>0</b>	<b>0.000</b>
<b>AHF</b>	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>	<b>0.000</b>
<b>FUO</b>	2651	0	3617	0	4078	0	3794	0	<b>14140</b>	<b>0</b>	<b>0.000</b>
<b>INJ</b>	2418	0	3002	0	4662	0	4137	1	<b>14219</b>	<b>1</b>	<b>0.007</b>
<b>OTH</b>	25118	13	33751	2	57691	8	54318	6	<b>170878</b>	<b>29</b>	<b>0.017</b>
<b>TOTAL</b>	<b>48461</b>	<b>21</b>	<b>64525</b>	<b>13</b>	<b>100363</b>	<b>19</b>	<b>98379</b>	<b>10</b>	<b>311728</b>	<b>63</b>	
<b>RU</b>	<b>111</b>		<b>128</b>		<b>142</b>		<b>153</b>				

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 - Acute 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 **79,853** consultations were reported in the less than 5 years old group, (26% of the total consultations), of which **38%** (30,616) were due to **ARI**, **10%** (8,144) due to **AWD**, **6%** (4,639) due to **FUO** and **3%** (2,713) were reported as injuries.

Table 3. Total number of reported cases, deaths and monthly Case Fatality Rate (CFR), less than 5 years old, Earthquake Affected Areas, Pakistan, 6 January – 3 February 2006.

Week Event	WEEK 2		WEEK 3		WEEK 4		WEEK 5		TOTAL		CFR%
	C	D	C	D	C	D	C	D	C	D	
<b>AWD</b>	1506	0	1765	2	2571	0	2302	0	<b>8144</b>	<b>2</b>	<b>0.025</b>
<b>BD</b>	129	0	102	0	178	1	118	0	<b>527</b>	<b>1</b>	<b>0.190</b>
<b>AFP</b>	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>	<b>0.000</b>
<b>MAL</b>	10	0	11	0	3	0	4	0	<b>28</b>	<b>0</b>	<b>0.000</b>
<b>ARI</b>	5478	8	6784	5	9303	6	9051	2	<b>30616</b>	<b>21</b>	<b>0.069</b>
<b>MES</b>	9	0	2	0	9	0	11	0	<b>31</b>	<b>0</b>	<b>0.000</b>
<b>MEN</b>	4	0	2	1	1	0	3	0	<b>10</b>	<b>1</b>	<b>10.000</b>
<b>JAU</b>	9	0	7	0	3	1	10	0	<b>29</b>	<b>1</b>	<b>3.448</b>
<b>TET</b>	0	0	0	0	1	0	0	0	<b>1</b>	<b>0</b>	<b>0.000</b>
<b>AHF</b>	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>	<b>0.000</b>
<b>FUO</b>	961	0	1255	0	1307	0	1116	0	<b>4639</b>	<b>0</b>	<b>0.000</b>
<b>INJ</b>	556	0	588	0	794	0	775	0	<b>2713</b>	<b>0</b>	<b>0.000</b>
<b>OTH</b>	5817	5	7300	1	11179	2	8819	6	<b>133115</b>	<b>14</b>	<b>0.011</b>
<b>TOTAL</b>	<b>14479</b>	<b>13</b>	<b>17816</b>	<b>9</b>	<b>25349</b>	<b>10</b>	<b>22209</b>	<b>8</b>	<b>79853</b>	<b>40</b>	
<b>RU</b>	<b>111</b>		<b>128</b>		<b>142</b>		<b>153</b>				

**ARI** continues to contribute significantly to the overall consultations in all reporting districts and showing a slight decrease comparing to the last week (28% and 30% respectively). In the current week (epidemiological week 5), **28,947 ARI** cases were reported with **2** related deaths. In the

same period, **6,609 AWD** cases with **no** related deaths were reported. The weekly proportion of **ARI** and **AWD** is shown in figure 4.

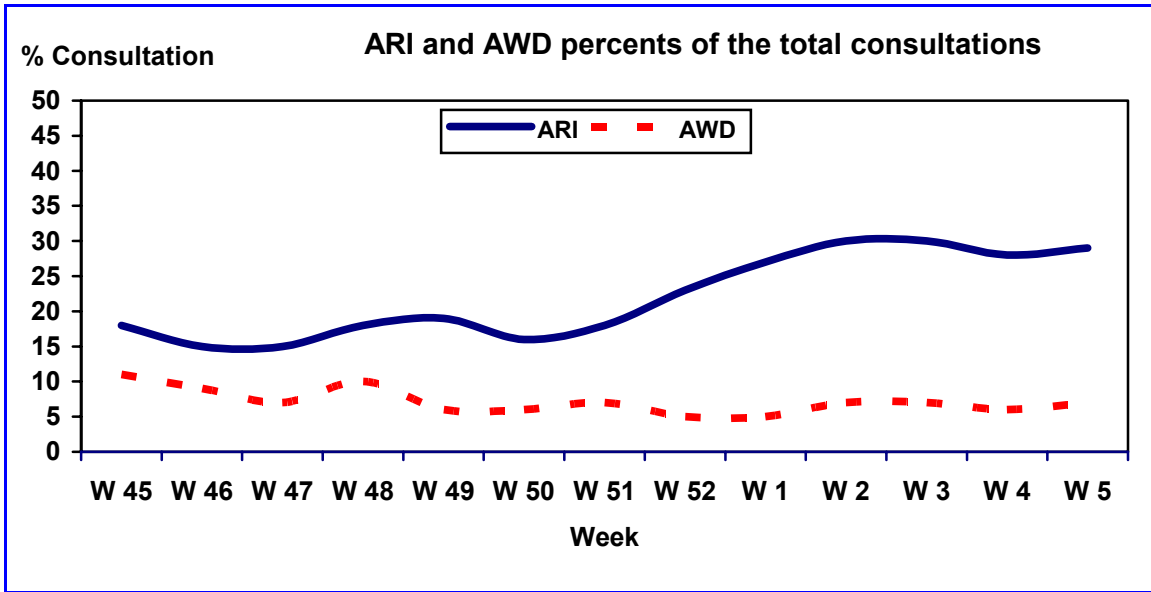


Figure 4. Weekly distribution of percent consultations of reported ARI and AWD cases, Earthquake Affected Areas, Pakistan, 5 November 2005 – 3 February 2006.

During the reporting week, **25%** (25,073/98,379) of all reportable conditions were reported from Muzaffarabad followed by Mansehra and (17% and 16% respectively). **ARI** was the most common health event reported among all districts, as shown in Figure 5.

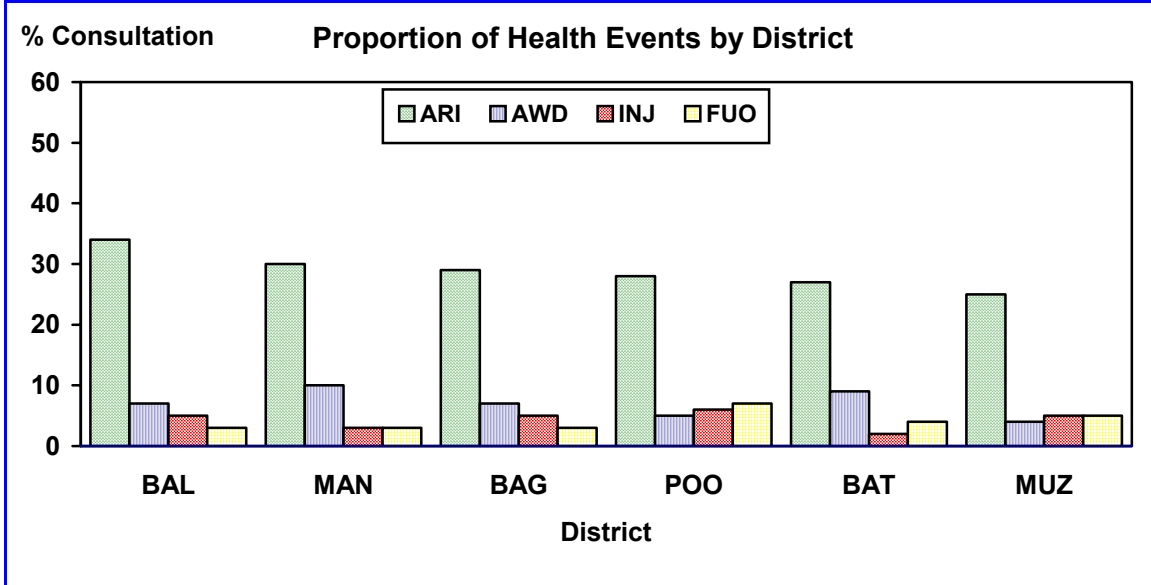


Figure 5. The distribution of the proportion of reported health events by district, Earthquake Affected Areas, Pakistan, 28 January – 3 February 2006.

**Acute Watery Diarrhoea**

During the epidemiological week 5, in all districts, the number of **AWD** cases over 5 years old is greater than the number under 5 years of age (**4,307** and **2,302** respectively). The distribution of reported AWD cases by age and district is shown in figure 6.

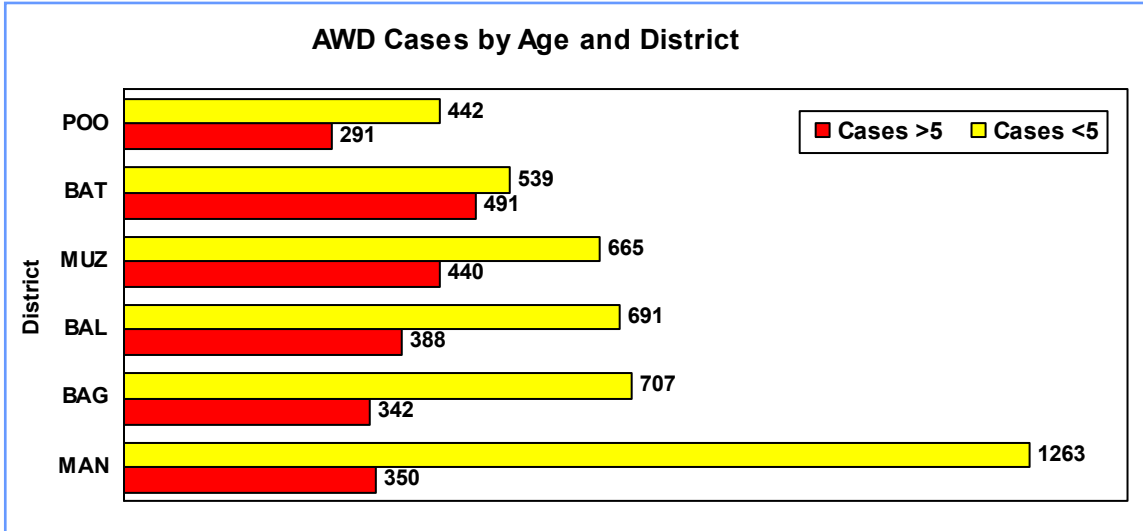


Figure 6. Distribution of AWD cases by age and district, Earthquake Affected Areas, Pakistan, 28 January – 3 February 2006.

In the current week, **6,609** cases were reported and showed **13%** increase compared to the previous week. Mansehra (**MAN**) district reported 24% (1,613/6,609) and showed a decrease in the number of reported cases compared to the previous week. Balakot and Battagram districts reported **16%** and **15%** respectively and showed an increase in the number of reported cases. Although Muzaffarabad district reported **17%** of all AWD cases (1,105/6,609) but it showed a marked decrease compared to the last week. The weekly distribution of AWD cases in the three districts mentioned above is shown in figure 7.

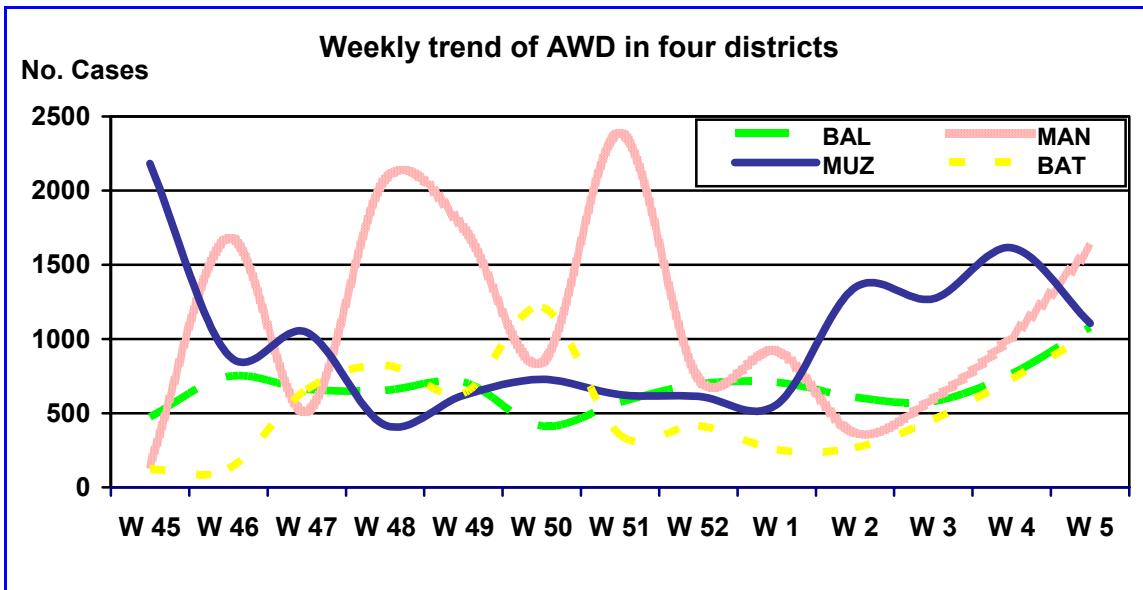


Figure 7. Weekly distribution of reported Acute Watery Diarrhoea cases in Mansehra, Balakot, Muzaffarabad and Battagram districts, Earthquake Affected Areas, Pakistan, 5 November 2005 – 3 February 2006.

**Acute Respiratory Infection**

In the last four epidemiological weeks, there was an increase of number of reported **ARI** cases in, **Balakot, Bagh, Poonch, and Battagram** districts, while a decrease in the number of cases was observed only in **Muzaffarabad** and **Mansehra**. Overall, the percentage of consultations for ARI increased by 1% compared to the last week (Figure 8).

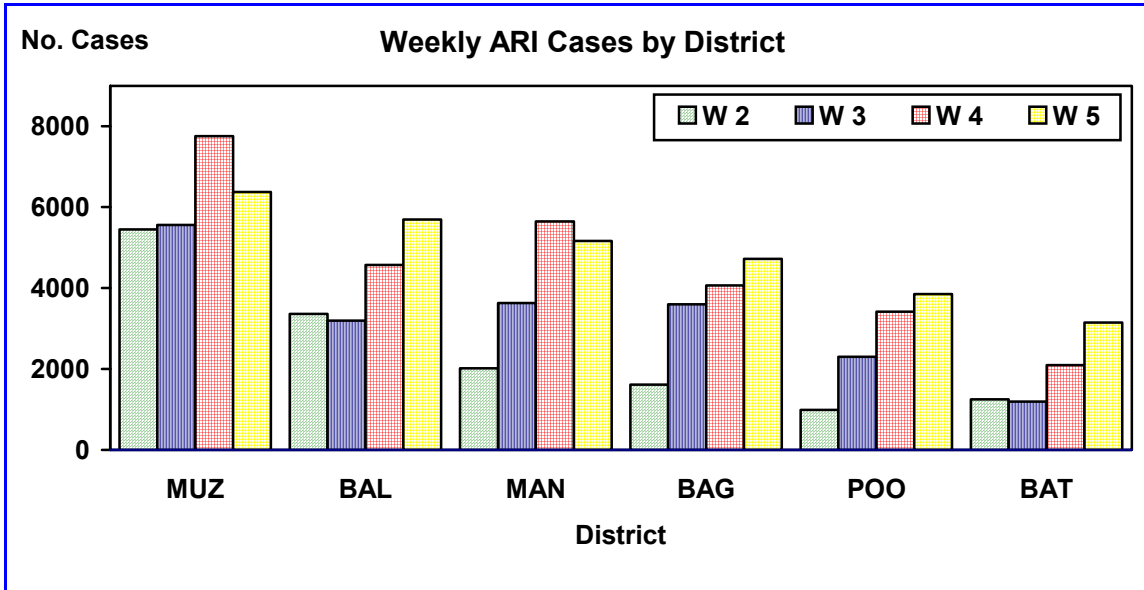


Figure 8. The weekly distribution of reported ARI cases by district, Earthquake Affected Areas, Pakistan, 31 December 2005 - 3 February 2006.

In the current week, in all reporting districts, the number of ARI cases over 5 years old is greater than the number under 5 years old of age (19,896 and 9,051 respectively). Muzaffarabad district reported **22%** (6,372/28,947) of all reported ARI cases of these; **62%** (4,359/6,372) were 5 years old and older. The distribution of reported ARI cases by age and district is shown in figure 9.

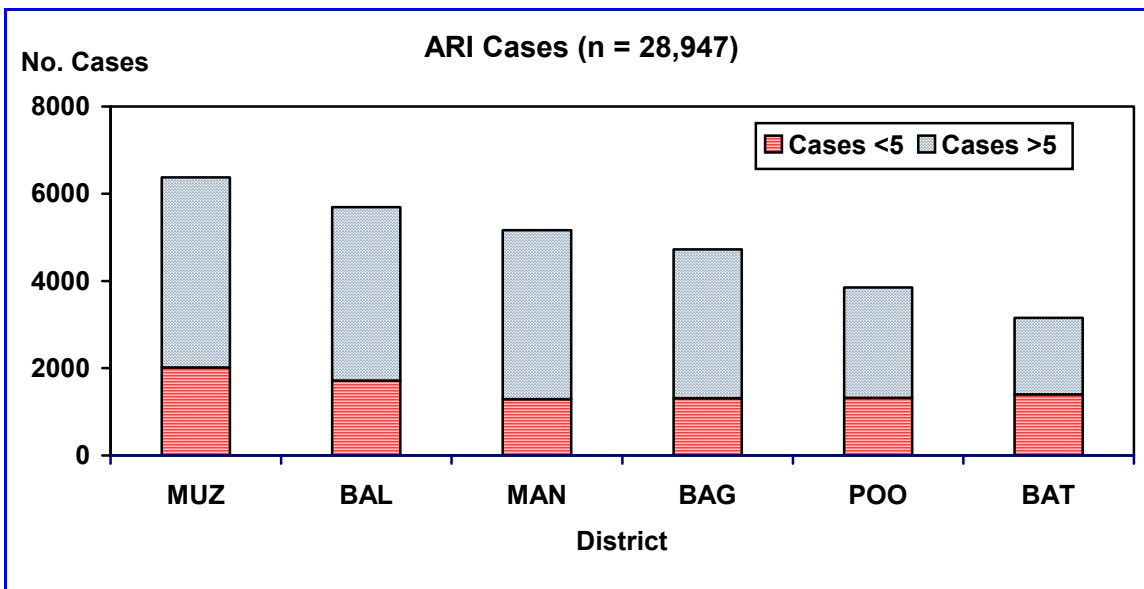


Figure 9. Distribution of ARI cases by age and district, Earthquake Affected Areas Pakistan, 28 January – 3 February 2006.

## Outbreak Alert and Response

### Mansehra

#### Acute Flaccid Paralysis:

One case of AFP was identified through active review of the registration records in the Paediatric Ward of DHQ hospital. Seven year old child (resident of Mangloor, Khawari, District, Tehsil Mansehra) was admitted in DHQ hospital as a case of probable Guillan Barre Syndrome on the 1<sup>st</sup> of February 2006. EPI team in EDO Health Office investigated the case and collected stool sample for virology. The parents left this hospital on the same day and shifted their child to Shifa International hospital, Islamabad.

### Battagram

#### Measles

UNICEF informed WHO about occurrence of three new cases of clinically diagnosed measles in Meira Camp. WHO team investigated and WHO team was also able to confirm all three measles cases. The new patients are from Karachi and were brought in to stay with relatives in the Meira camp and developed symptoms within 48 hours of arrival. Patients are aged 5, 6 and 12 years and all three were unvaccinated. All children in the camp had been covered during mass vaccination campaign. Two samples were taken from the patients and sent to National Public Health Laboratory for testing. All three were assessed by staff at the Cuban hospital and none required admission. There are also 2 further suspected cases that had yet to be assessed.

#### Acute Haemorrhagic Fever

On 3<sup>rd</sup> Feb, French Red Cross from Kharari reported one case (45 year old female) as suspected of having hemorrhagic fever after presenting with haematemesis and epistaxis and fever. WHO investigated this alert on the same day but patient had already left for Abbottabad for further treatment. On the following day, the patient was seen by the WHO team and the patient reported that the consultant had diagnosed gastritis and some nasal problem.

### Bagh

#### Meningitis

Two cases with suspected meningitis were reported from DHQ Hospital. One case (18 years, Male) was from Naman Pura camp; CSF sample was taken and sent to NIH and patient referred to PIMS, Islamabad. Second case was 80 year, female from Somani village; patient died and LP was not done. Prophylaxis of close contacts was advised.

### Balakot

#### Meningitis

One meningitis case was reported from CMH. A routine CSF examination was performed suggestive of bacterial meningitis; culture could not be performed as patient already under antibiotics treatment. All close contacts were provided with chemoprophylaxis. Patient has been further referred to Pakistan Institute of Medical Sciences, Islamabad.



### **Acute Jaundice Syndrome**

Two jaundice cases were reported from BHU Rehara, Rawlakot. At this time no further information is available, but follow up will be undertaken.

### **Bloody Diarrhoea**

On the 3rd February the WHO team Rawalakot was informed by the WHO team Bagh about 13 cases of Bloody Diarrhea (**BD**) occurring in Jandala Village, District Poonch but reported to RHC in Bagh district. Jandala is a village in Rawalakot Tehsil of Poonch district but usually the population is served by the Arja Rural Health Center in Bagh.

The first case was reported on 26th January at Arja RHC from Jandala village, with an additional three cases reported on the same day and from the same village. The last reported case was on 3rd February at Mung Bajri village.

Joint investigation was undertaken to the affected villages on 4th February by epidemiologist and environmental health specialist from Rawalakot and Bagh. The team examined the water source which is a spring with good protection but in need of better cleaning around the spring box and vicinity of the spring box. Team observed poor hygiene conditions at the water source and water sample was collected.

Stool samples (n=11) have been taken and sent to NIH for confirmation. One sample from 1.5 years old female from Jandala village reported on 29th January has been confirmed as *Shigella flexneri*, antibiotic sensitivity tests revealed that the micro organism is resistance to Ampicilin, Chloramphenicol Doxycycline, Erythromycin and Tetracycline while sensitive to Ciprofloxacin, Gentamicin and nalidixic acid.

## **Islamabad**

### **Measles**

On 7<sup>th</sup> Jan. 2006 Medecins du Monde team working in H11 camp reported four suspected measles cases. WHO visited all the cases in the IDP camp at H-11. The first two cases (30 month and 5 years, males) were living in the same tent, and both were vaccinated against measles. Other two cases (10 and 1.5 years, female) were also living together in one tent, 60-F and of them 10 year old was vaccinated. The above two tents are at distance of approximately 300 m from one another. The fifth case (9 year, female) was living at a distance of about 600 m from these cases. Blood sample for confirmation were taken from the first and 3<sup>rd</sup> case. The block comprising of 300 tents was scanned by visiting very 5th for other cases. No other case of suspected measles was found in any of the tents. Health education campaign will be launched in the camp to vaccinate all the children under age 15 against measles.