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Bagh: Hangrai base after heavy snowfall
Picture by: Dr. Fawad Khan



Highlights

- In the past month (Epidemiological weeks 05-08 inclusive), 125,751 health events under surveillance were reported including 81 deaths
- This week, there were 320 (98%) reporting units contributing to the report.
- In week 8, Total 83,221 consultations were reported, with 16 deaths
- The rate of acute watery diarrhoea has increased from week 7 (24%)
- The ARI rate is two percentage point higher in week 8 of 2007 to that of week 8 of 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 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 number of sites able to report increased by sixteen percentage point this week. The number of reporting units will return to a normal level in this week.

See Table 1 for summary statistics.

Table 1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 27 Jan - 23 Feb 2007.

Area	Population	Reporting Health Facilities			
		27 Jan-2 Feb Week-5	3 - 9 Feb Week-6	10-16 Feb Week-7	17-23 Feb Week-8
Muzaffarabad	894,364	101	103	104	103
Bagh	452,532	37	36	19	40
Poonch	633,712	66	58	37	69
Mansehra / Balakot	1,154,804	68	68	69	72
Battagram / Shangla	592,256	30	35	39	36
Total	3,727,668	302(93%)	302(93%)	268(82%)	320(98%)

Total number of consultations

In week 8 there was an increase in the number of reporting sites, and the number of consultations also increased to 83,221 from 62,364. The highest number of consultations by district was in Muzaffarabad, with 27,542 and the lowest was in Bagh, at 6,640.

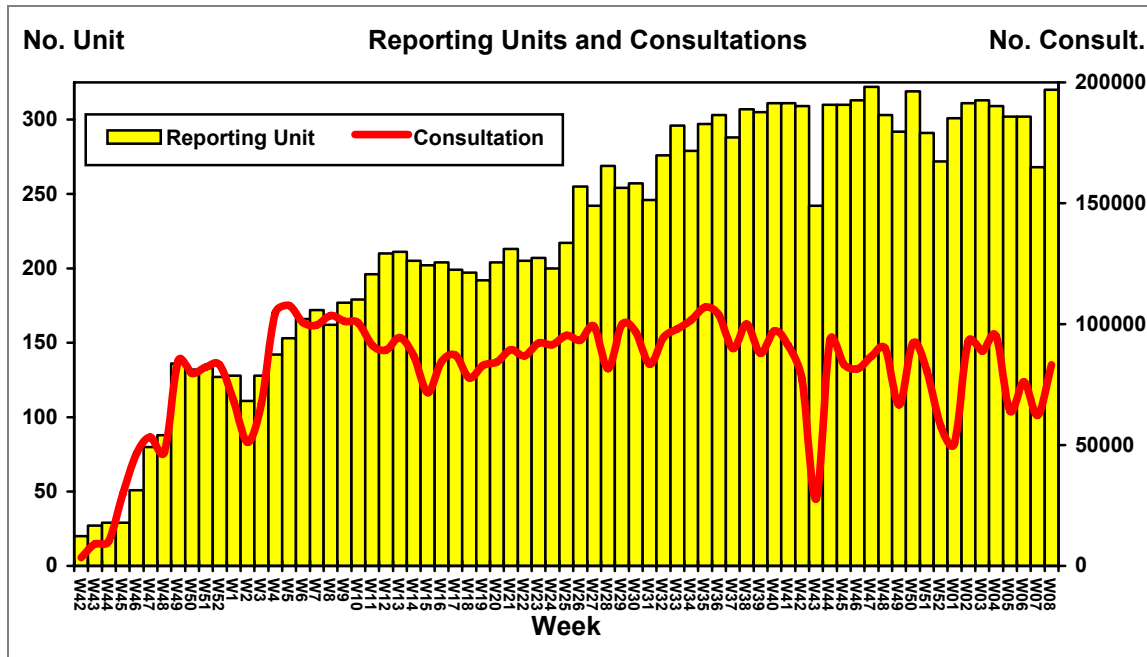


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 – 23 February 2007.

DEWS Data, Epidemiological Week No. 08, 2007

Between 17-23 Feb 2007, **83,221** consultations were reported through DEWS. Overall, **28%** (23,287) were due to acute respiratory infections (**ARI**), two percentage point higher than the rate in week 8 of 2006. **5%** of consultations (4,180) were due to acute watery diarrhoea (**AWD**), **6%** (4,590) due to fever of unknown origin (**FUO**), and **4%** (3,282) due to injuries (**INJ**). All of these percentages are almost identical to the rate seen in this week last year. **ARI** in patients under five years is 1% less than in week 8 of 2007 compared to that of week 8 of 2006. At **24%** of consultations in patients 5 or more years old, the rate of ARI is 3% higher in this age group as the rate seen in this week last year. All other reportable conditions each represented less than 1% of the total consultations in week 7.

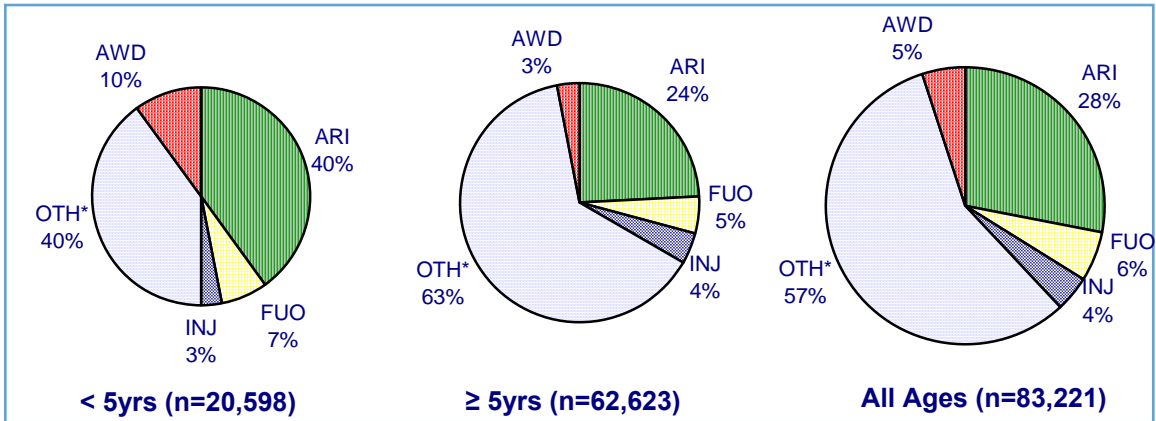


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 17 – 23 Feb 2007.

*OTH includes all other reportable conditions, plus all other consultations for conditions not under surveillance

DEWS Data, Epidemiological Week No. 08, 2007: Consultations by age

There have been heavy rains in many of the earthquake affected areas in recent weeks. This often leads to an increase in the rate of diarrheal disease. In the past four weeks, the rate of acute watery diarrhea in patients under five years old has increased to almost 10% of consultations, while in patients five years and older the rate has remained steady. See figure 3.

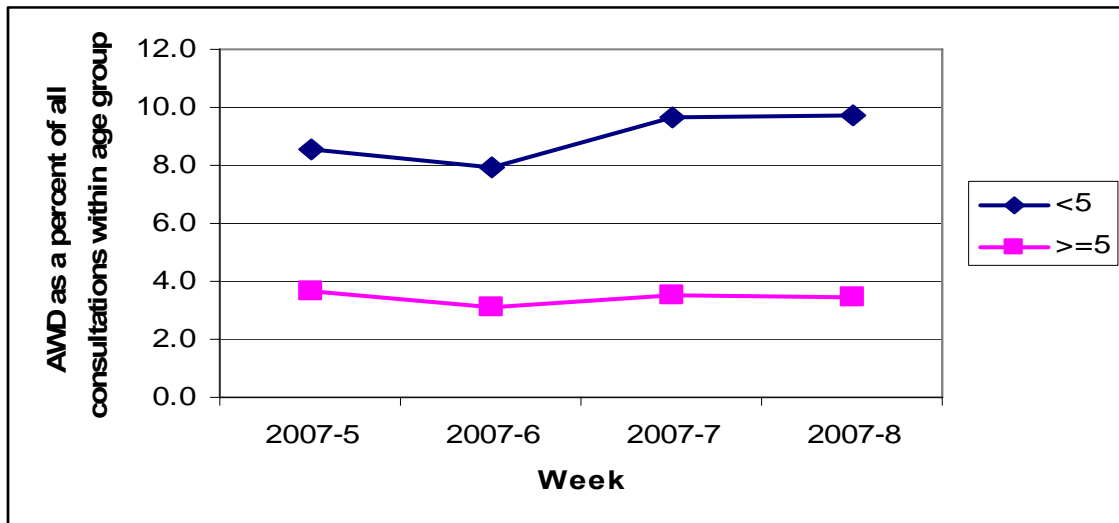


Figure 3: Trend in AWD as a percent of all consultations, by age group, Earthquake Affected Areas, Pakistan, 27 January – 23 February 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 05-08)

In the past four weeks between 27 Jan - 23 Feb 2007 (Epidemiological weeks 05-08 inclusive), 125,751 consultations for health conditions under surveillance were reported, out of a total 285,870 consultations. **28%** (80,059) of consultations were due to acute respiratory infection (**ARI**), **5%** (13,823) acute watery diarrhoea (**AWD**), **6%** (18,052) unexplained fever (**FUO**) and **4%** (12,166) injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 27 Jan - 23 Feb 2007.

Week	WEEK 05		WEEK 06		WEEK 07		WEEK 08		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	3158	0	3327	2	3158	0	4180	0	13823	2	0.014
BD	226	0	251	0	237	0	297	0	1011	0	0.000
AFP	2	0	0	0	1	0	2	0	5	0	0.000
MAL	166	0	115	0	97	0	137	0	515	0	0.000
ARI	18194	6	21039	3	17539	10	23287	5	80059	24	0.030
MES	1	0	1	0	0	0	0	0	2	0	0.000
MEN	7	2	6	1	2	0	3	0	18	3	17.000
JAU	15	0	34	1	31	0	20	0	100	1	1.000
TET	0	0	0	0	0	1	0	0	0	1	0.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	4443	0	5625	0	3394	0	4590	0	18052	0	0.000
INJ	3006	0	3403	2	2475	0	3282	0	12166	2	0.016
OTH	34898	16	42368	9	35430	12	47423	11	160119	48	0.030
TOTAL	64116	24	76169	18	62364	23	83221	16	285870	81	
RU	302		302		268		320				

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 **73,199** consultations were reported in the **less than 5 years old** group, (**26%** of the total consultations), of which **38%** (27,928) were due to **ARI**, **9%** (6,547) due to **AWD**, **7%** (5,154) due to **FUO** and **3%** (2,270) were reported as injuries (**INJ**).

Table 3. Total number of reported cases, deaths and monthly Case Fatality Rate (CFR), less than 5 years old, Earthquake Affected Areas, Pakistan 27 Jan - 23 Feb 2007.

Week	WEEK 05		WEEK 06		WEEK 07		WEEK 08		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	1425	0	1593	2	1528	0	2001	0	6547	2	0.003
BD	83	0	78	0	79	0	82	0	322	0	0.000
AFP	2	0	0	0	1	0	1	0	4	0	0.000
MAL	27	0	15	0	19	0	15	0	76	0	0.000
ARI	6343	5	7584	2	5776	9	8225	5	27928	21	0.008
MES	1	0	0	0	0	0	0	0	1	0	0.000
MEN	2	2	1	1	0	0	0	0	3	3	10.000
JAU	2	0	5	0	4	0	1	0	12	0	0.000
TET	0	0	0	0	0	1	0	0	0	1	0.000
AHF	0	0	0	0	0	0	5	0	5	0	0.000
FUO	1148	0	1637	0	965	0	1404	0	5154	0	0.000
INJ	580	0	620	0	472	0	598	0	2270	0	0.000
OTH	7008	6	8630	5	6973	3	8266	2	30877	16	0.005
TOTAL	16621	13	20163	10	15817	13	20598	7	73199	43	
RU	302		302		268		320				

In the current week, there was an increase in the number of cases of **AWD** with **3,158** last week and **4,180** this week. In the current week, **ARI** also increased in the total number of cases as compared with the previous week, (**17,539** last week and **23,287** this week). The weekly proportion of ARI and AWD is shown in figure 4.

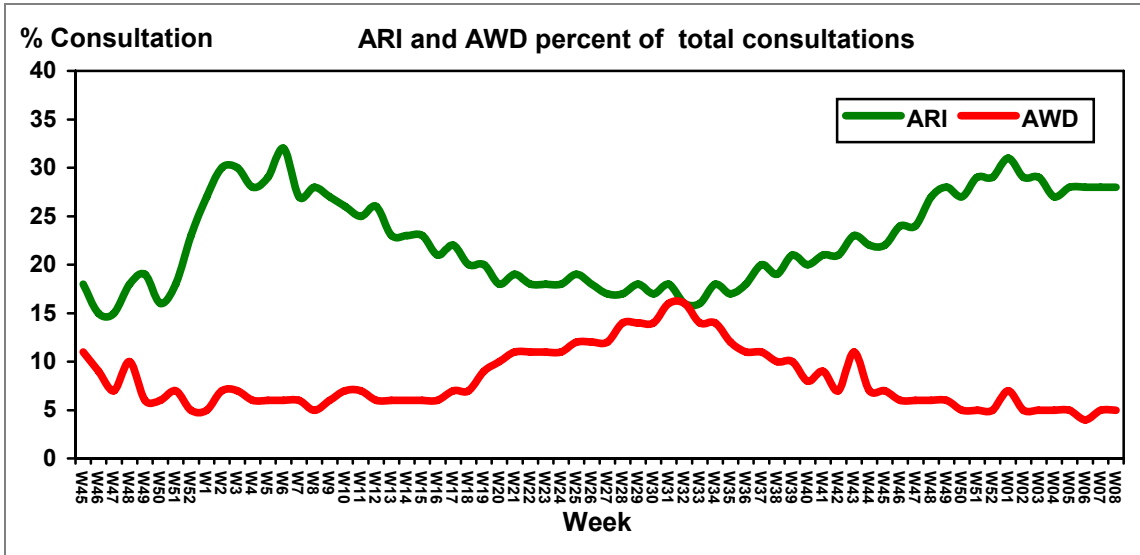


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 5 November 2005 – 9 Feb 2007.

Acute Watery Diarrhoea

In week 8 there were 4,180 cases of AWD reported a 24% increase over week 7. There were no associated deaths reported from any district. The rate of AWD has remained steady in most districts over the last four weeks, with the exception of Poonch district, where there has been large fluctuations in the rate. See Figure 5.

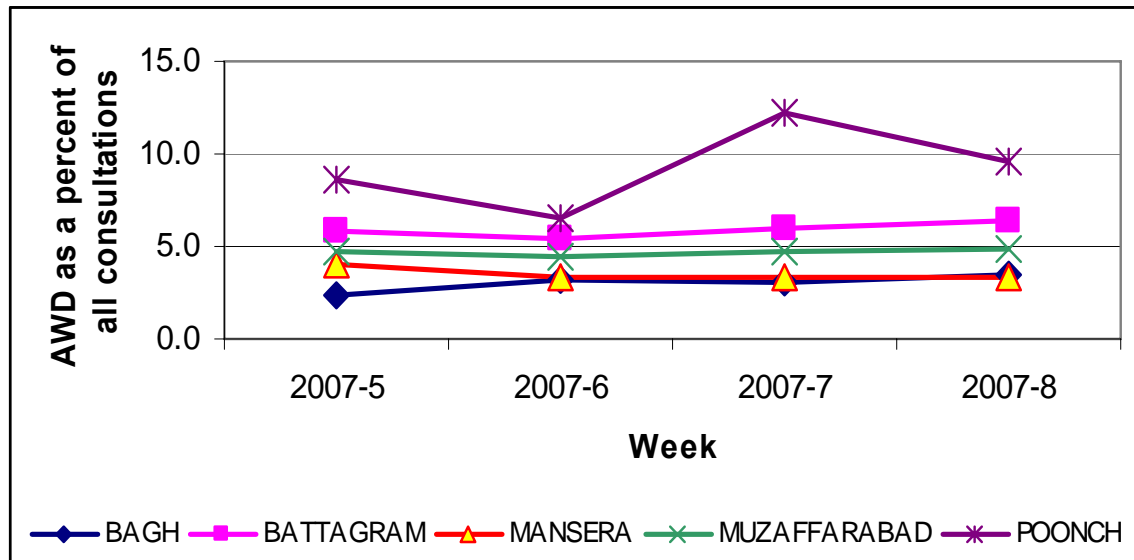


Figure 5: Trend in AWD as a percent of all consultations, by district, Earthquake Affected Areas, Pakistan, 27 January – 23 February 2007

Bloody Diarrhoea

In week 8, there were 297 cases of bloody diarrhoea reported, a 20% increase over week 7. There were no associated deaths. Muzaffarabad, Mansehra, and Bagh districts have all seen increases in the rate of bloody diarrhoea in recent weeks, while Battagram has decreased and Poonch district has maintained a steady rate. See figure 6

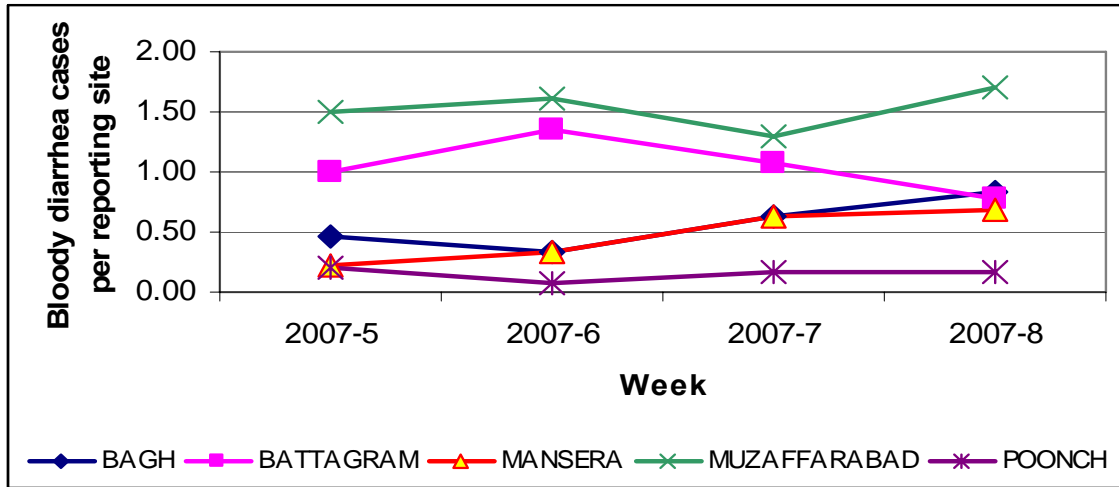


Figure 6: Trend in bloody diarrhoea cases per reporting site, by district, Earthquake Affected Areas, Pakistan, 27 January – 23 February 2007

Acute Jaundice Syndrome

In week 8 there were 20 cases of suspected hepatitis, 35% less than the number of cases in the previous week. There were no associated deaths. The rate of suspected hepatitis cases per reporting site fluctuates more than rates of many of the other diseases under surveillance. In most weeks, the rate in 2007 has been lower than that of 2006. See figure 7.

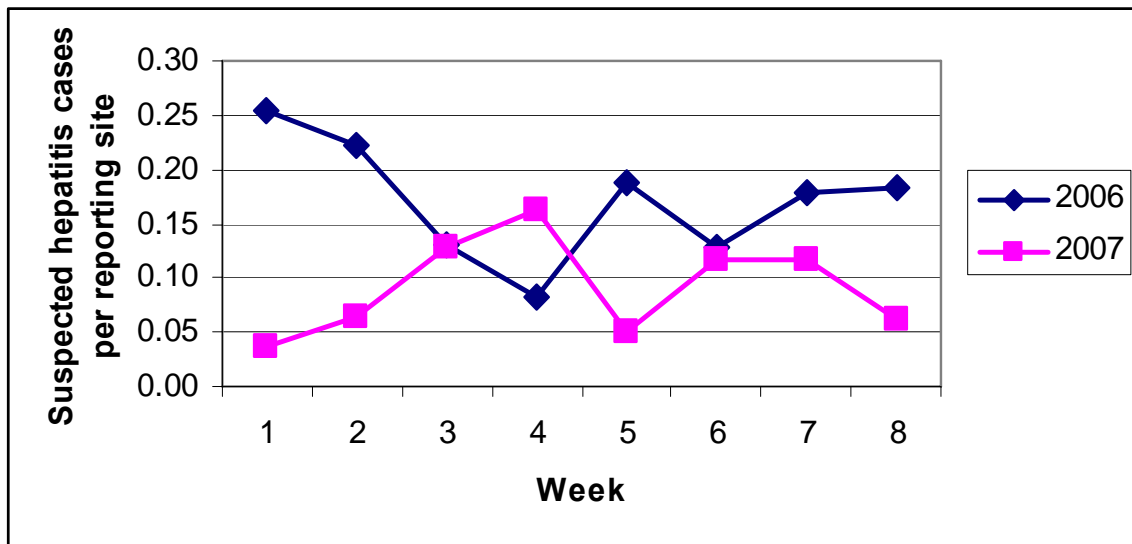


Figure 7: Trend in suspected hepatitis cases per reporting site, 2006 and 2007, Earthquake Affected Areas, Pakistan , 31 December 2005 – 24 February and 30 December 2006 – 23 February 2007

Malaria

In week 8, there were 137 malaria cases reported, an increase of 29% from week seven. There were no associated deaths. Malaria has a seasonal pattern, but the rate of malaria in winter 2006-2007 has been higher than that of winter 2005-2006. See figure 8.

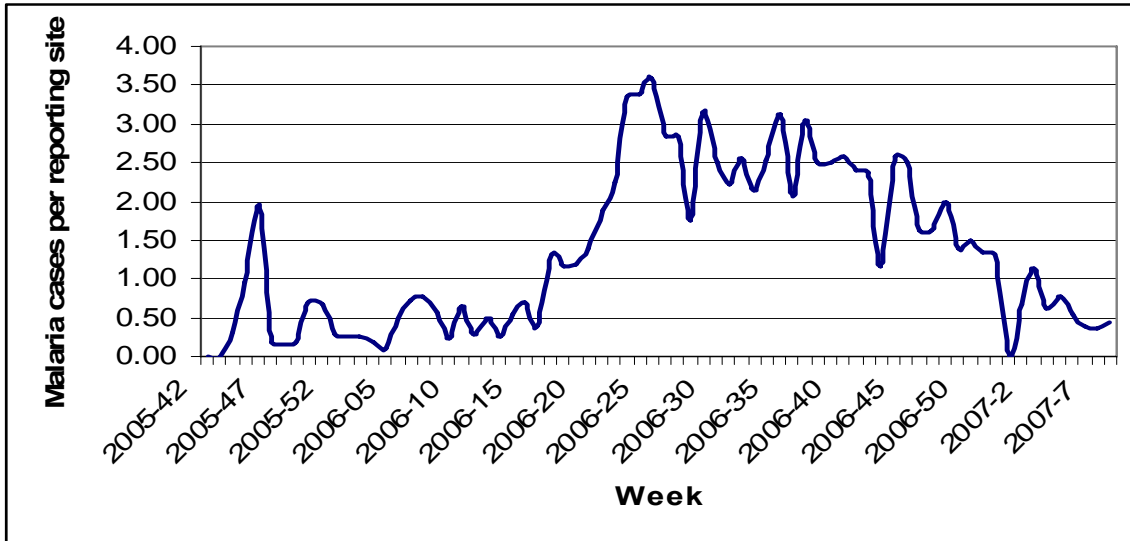


Figure 8: Trend in malaria cases per reporting site, Earthquake Affected Areas, Pakistan, 15 October 2005 – 23 February 2007

Measles

There was no case of measles reported in week 8. Poonch has had the lowest rate of measles, with over 85% of reporting weeks having zero cases. Bagh and Mansehra have had measles cases in approximately 50% of weeks, while Battagram and Muzaffarabad have had the least number of weeks without measles cases, at approximately 30%. See figure 9.

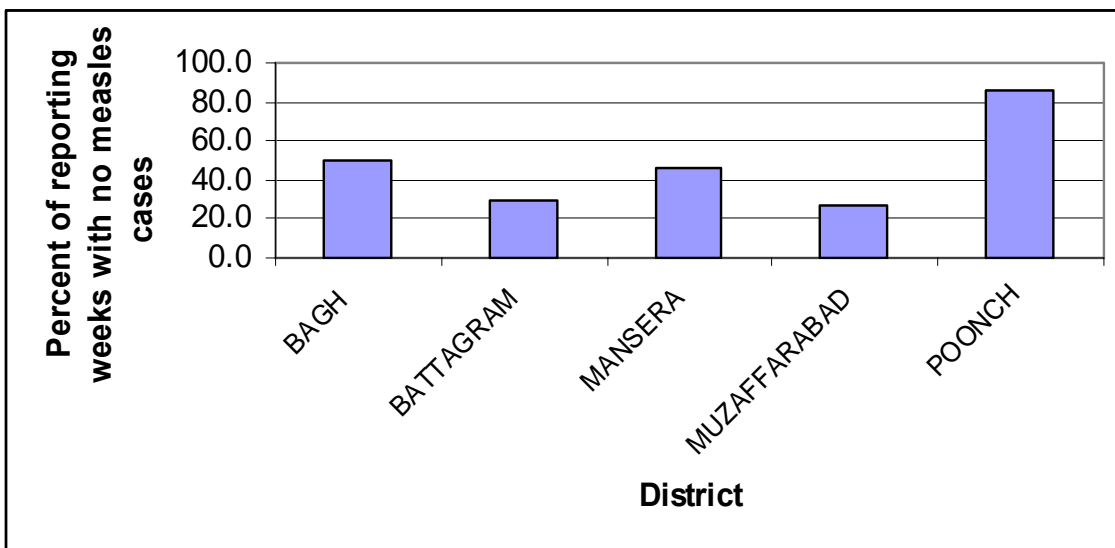


Figure 9: Percentage of reporting weeks with no measles cases, by district, Earthquake Affected Areas, Pakistan, 15 October 2005 – 23 February 2007

Acute Respiratory Infection

In week 8, there were 23,287 consultations for ARI reported through the DEWS. There were five associated deaths all under five years of age, 3 at Mansehra district, and 1 from Muzaffarabad, and 1 death reported from Rawalakot district. The rate of ARI in 2007 has remained relatively stable in the districts, though the rate between districts differs. See Figure 10.

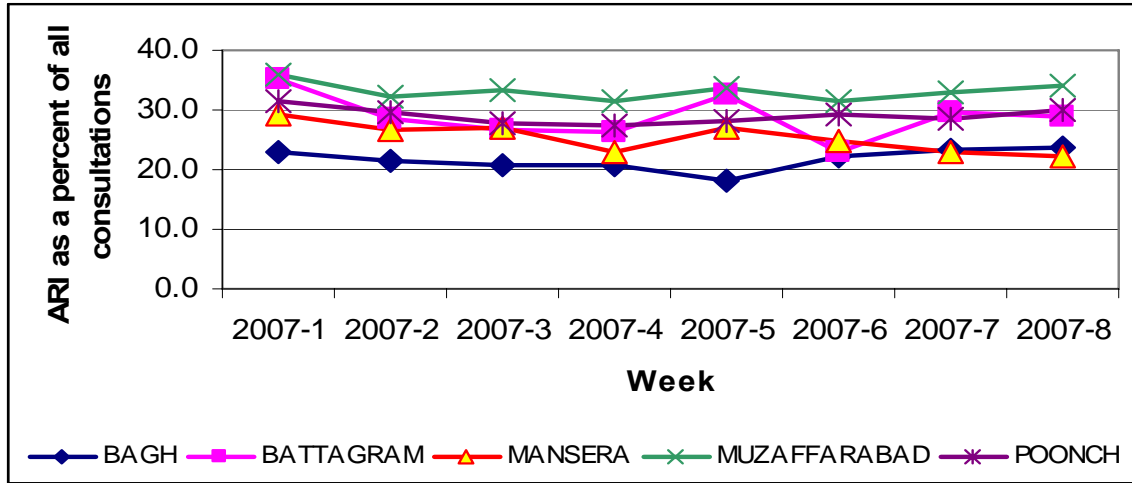


Figure 10: Trend in ARI as a percent of all consultations,, by district, Earthquake Affected Areas, Pakistan, 30 December 2006 – 23 February 2007

Other Reportable Diseases and Conditions

There were 3 cases of suspected meningitis in week 8 reported: 2 cases from district Muzaffarabad and 1 from Mansehra. There were 4,590 cases of fever of unknown origin, and 3,282 cases of injuries. There were two cases of acute flaccid paralysis reported from Muzaffarabad district. There were no cases of tetanus or haemorrhagic fever reported in week 8.

The rate of unexplained fever showed a gradual upward trend followed by a levelling off since reporting began. The rate is now fairly stable, generally in the range of 6 to 7% of consultations each week. See figure 11.

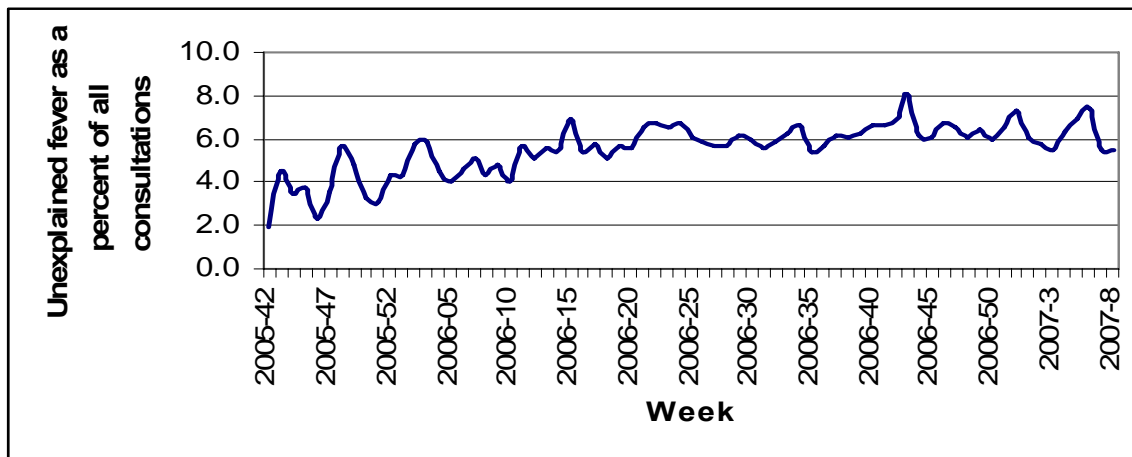


Figure 11: Trend in unexplained fever as a percent of all consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 – 23 February 2007

Outbreak Alert and Response¹

Meningitis

Mansehra

One case of suspected meningitis was reported from KBDO. The patient was a 35 year old woman who had been suffering from symptoms for one week before seeking treatment. She was referred to AMC Abbottabad.

Muzaffarabad

Two cases of suspected meningitis were reported from AIMS. CSF tests were taken and were normal; the patients were treated symptomatically.

Bloody Diarrhea

Mansehra

14 cases of bloody diarrhea were reported from Field Clinic Sohal. On investigation, it was found to be a typographical error, and only one case was present.

Acute Jaundice Syndrome

Muzaffarabad

2 cases of suspected hepatitis were reported from AIMS, and one from CD Police Line, however, they were from different locations and therefore there was no clustering.

Acute Flaccid Paralysis

Muzaffarabad

2 cases of acute flaccid paralysis were reported from AIMS. The first case was a boy of 10 years from Thalla Makri Muzaffarabad. Symptoms began on 18th of February, the team was notified on 20th February, and the investigation took place on the 21st. The polio surveillance team was notified, and stool samples were taken for confirmation. The treating pediatrician diagnosed Guillain-Barre Syndrome. The second case was a four and a half year old boy from Shahdara Hattian. His symptoms began on 17th February, the case was reported on 21st, and the investigation took place on the 21st. Samples were taken for confirmation.

¹ Outbreak Investigation and response of Suspected Viral Hepatitis, Malaria, and Bloody Diarrhoea and Watery Diarrhoea would only take place when a cluster of cases is identified or there is an increase in the incidence of the disease.
(Note: Single death due to Diarrhoea and single case of reported severe dehydration among >5 years would be investigated)

Number of reported cases and deaths per District, AJKTable 6. Number of reported cases and deaths, **Bagh District**, Earthquake Affected Areas, Pakistan, 17 - 23 Feb 2007.

Week	AWD		BD		AFP		MAL		ARI		MEA		MEN		JAU		TET		AHF		UXF		INJ		OTH	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
05	254	0	17	0	0	0	0	0	1980	2	0	0	0	0	0	0	0	0	0	0	236	0	515	0	7872	7
06	265	0	12	0	0	0	6	0	1882	0	0	0	0	0	3	0	0	0	0	0	156	0	477	0	5671	2
07	176	0	12	0	0	0	4	0	1354	2	0	0	0	0	1	0	0	0	0	0	43	0	234	0	3944	2
08	360	0	33	0	0	0	4	0	2433	0	0	0	0	0	1	0	0	0	0	0	104	0	514	0	6855	5
Total	1055	0	74	0	0	0	14	0	7649	4	0	0	0	0	5	0	0	0	0	0	539	0	1740	0	24342	16

Table 7. Number of reported cases and deaths, **Poonch District**, Earthquake Affected Areas, Pakistan, 17 - 23 Feb 2007.

Week	AWD		BD		AFP		MAL		ARI		MEA		MEN		JAU		TET		AHF		UXF		INJ		OTH	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
05	1022	0	13	0	0	0	120	0	3346	2	1	0	1	1	0	0	0	0	0	0	1783	0	535	0	5128	1
06	643	0	4	0	0	0	66	0	2856	1	0	0	0	0	1	0	0	0	0	0	1389	0	436	0	4398	1
07	761	0	6	0	0	0	39	0	1778	0	0	0	0	0	1	0	0	0	0	0	1008	0	244	0	2415	1
08	1187	0	11	0	0	0	95	0	3697	1	0	0	0	0	0	0	0	0	0	0	1811	0	545	0	5052	3
Total	3613	0	34	0	0	0	320	0	11677	4	1	0	1	1	2	0	0	0	0	0	5991	0	1760	0	16993	6

Table 8. Number of reported cases and deaths, **Muzaffarabad District**, Earthquake Affected Areas, Pakistan, 17 - 23 Feb 2007.

Week	AWD		BD		AFP		MAL		ARI		MEA		MEN		JAU		TET		AHF		UXF		INJ		OTH	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
05	1025	0	151	0	0	0	23	0	7381	1	0	0	4	1	4	0	0	0	0	0	1277	0	1326	0	10620	5
06	1358	2	165	0	0	0	21	0	9638	1	1	0	5	1	2	1	0	0	0	0	2445	0	1793	2	15050	2
07	1160	0	134	0	0	0	13	0	7994	2	0	0	2	0	4	0	0	0	0	0	1115	0	1242	0	12557	7
08	1345	0	176	0	2	0	24	0	9372	1	0	0	2	0	3	0	0	0	0	0	926	0	1424	0	14268	0
Total	4888	2	626	0	2	0	81	0	34385	5	1	0	13	2	13	1	0	0	0	0	5763	0	5785	2	52495	14

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District**, Earthquake Affected Areas, Pakistan, 17 - 23 Feb 2007.

Week	AWD		BD		AFP		MAL		ARI		MEA		MEN		JAU		TET		AHF		UXF		INJ		OTH	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
05	232	0	30	0	0	0	8	0	1289	0	0	0	0	0	6	0	0	0	0	0	229	0	144	0	2013	1
06	369	0	47	0	0	0	8	0	1574	0	0	0	1	0	24	0	0	0	0	0	387	0	187	0	4216	1
07	401	0	42	0	0	0	26	0	1979	0	0	0	0	0	18	0	0	0	0	0	380	0	212	0	3596	0
08	420	0	28	0	0	0	12	0	1909	0	0	0	0	0	11	0	0	0	0	0	384	0	217	0	3644	0
Total	1422	0	147	0	0	0	54	0	6751	0	0	0	1	0	59	0	0	0	0	0	1380	0	760	0	13469	2

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 17 - 23 Feb 2007.

Week	AWD		BD		AFP		MAL		ARI		MEA		MEN		JAU		TET		AHF		UXF		INJ		OTH	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
05	640	0	15	0	2	0	15	0	4192	1	0	0	0	0	5	0	0	0	0	0	918	0	486	0	9249	2
06	692	0	27	0	0	0	14	0	5089	1	0	0	0	0	4	0	0	0	0	0	1248	0	510	0	13033	3
07	660	0	43	0	1	0	15	0	4434	6	0	0	0	0	7	0	0	1	0	0	848	0	543	0	12918	2
08	868	0	49	0	0	0	2	0	5876	3	0	0	1	0	5	0	0	0	0	0	1365	0	582	0	17604	0
Total	2860	0	134	0	3	0	46	0	19591	11	0	0	1	0	21	0	0	1	0	0	4379	0	2121	0	52804	7