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Bagh: Water sampling as a part of preparedness for monsoon season.
Pictured by: Dr. Musa Rahim / Engr. Imran



Highlights

- In the past month (Epidemiological weeks 07-10 inclusive), 143,853 health events under surveillance were reported including 80 deaths
- This week, there were 303 (90%) reporting units contributing to the report.
- In week 10, Total 94,080 consultations were reported, with 17 deaths
- This week rate of acute watery diarrhoea has increased as compare with last week (13%)
- The ARI this week is less than 1 percentage point higher than the rate in week 10 of 2006
- There were no cases of acute flaccid paralysis, tetanus or haemorrhagic fever reported in this week.

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 decreased by twenty-eight this week because of rain and heavy snowfall creating road blockage in several parts of the area.

See Table 1 for summary statistics.

Table1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 10 Feb - 9 Mar 2007.

Area	Population	Reporting Health Facilities			
		10-16 Feb Week-7	17-23 Feb Week-8	24 Feb-2 Mar Week-9	3 - 9 Mar Week-10
Muzaffarabad	894,364	104	103	104	83
Bagh	452,532	19	44	42	42
Poonch	633,712	37	69	77	77
Mansehra / Balakot	1,154,804	69	72	71	70
Battagram / Shangla	592,256	39	38	35	31
Total	3,727,668	269(80%)	326(97%)	331(99%)	303(90%)

Total number of consultations

In week 10 there was a decrease in the number of reporting sites, and the number of consultations also decreased to 94,080 from 95,004. The highest number of consultations by district was in Muzaffarabad, with 33,067 and the lowest was in Bagh, at 6,078.

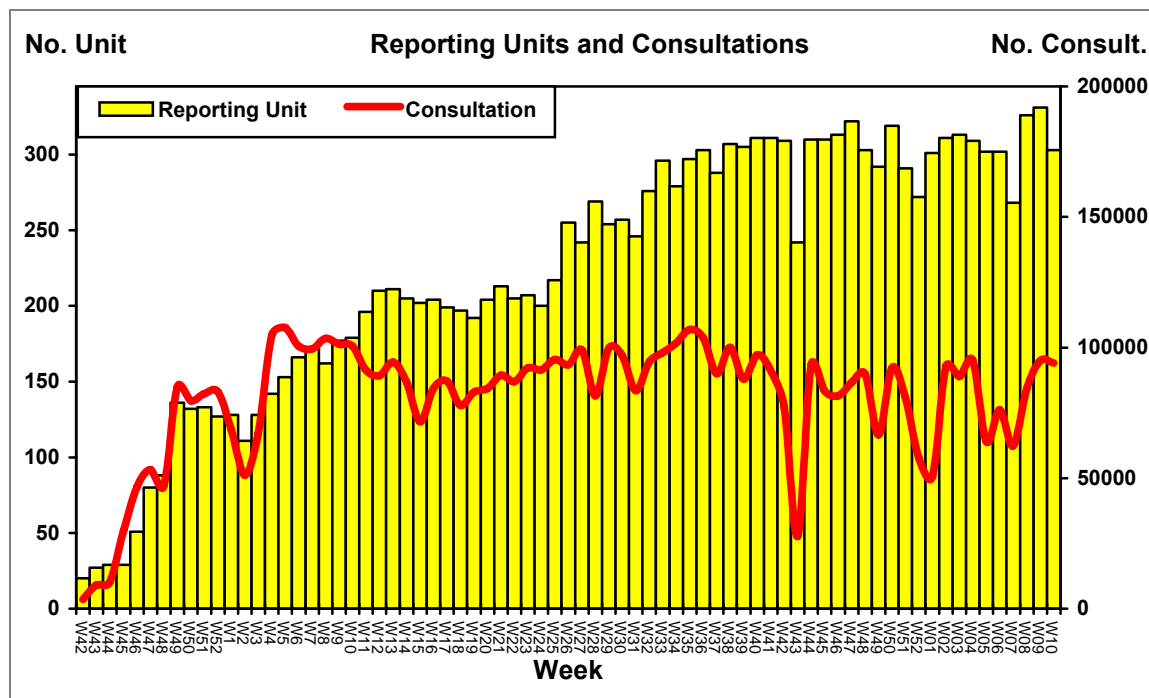


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 - 9 March 2007.

DEWS Data, Epidemiological Week No. 10, 2007

Between 3 - 9 Mar 2007, **94,080** consultations were reported through DEWS. Overall, **26%** (24,121) were due to acute respiratory infections (**ARI**), less than 1 percentage point higher than the rate in week 10 of 2006. **5%** of consultations (4,795) were due to acute watery diarrhoea (**AWD**), **7%** (6,252) due to fever of unknown origin (**FUO**), and **4%** (3,947) 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 2% lower in week 10 of 2007 with compared to that age group of week 10 of 2006. At **23%** of consultations in patients 5 or more years old, the rate of ARI is less than 1% higher in this age group than the rate seen in this week last year. All other reportable conditions each represented less than 1% of the total consultations in week 10.

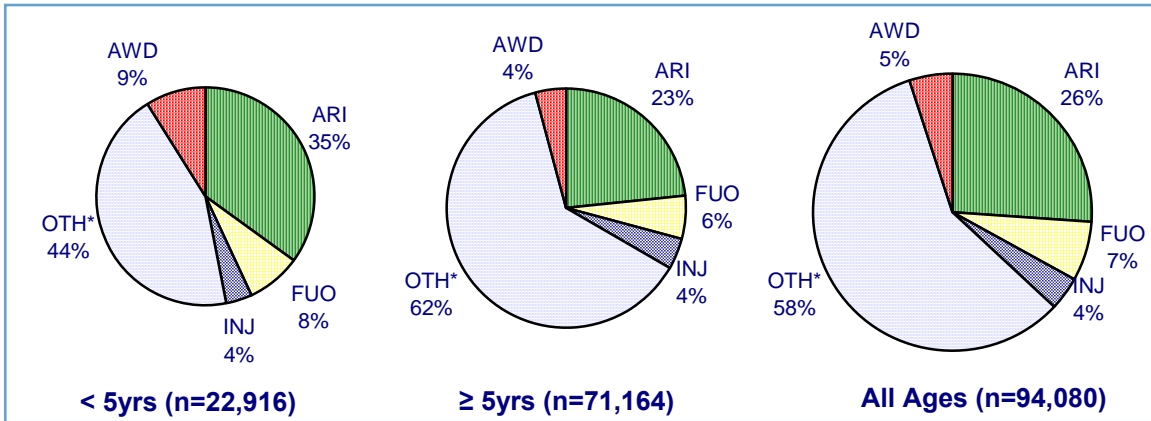


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 3 – 9 March 2007.

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

DEWS Data, Epidemiological Week No. 10, 2007: Consultations by age

Despite an improvement in the weather in recent weeks, the rate of ARI has declined but not very significantly, and has seen a minor decrease in patients under five. The rate in patients five years and over has almost remained same between week 9 and week 10. See figure 3.

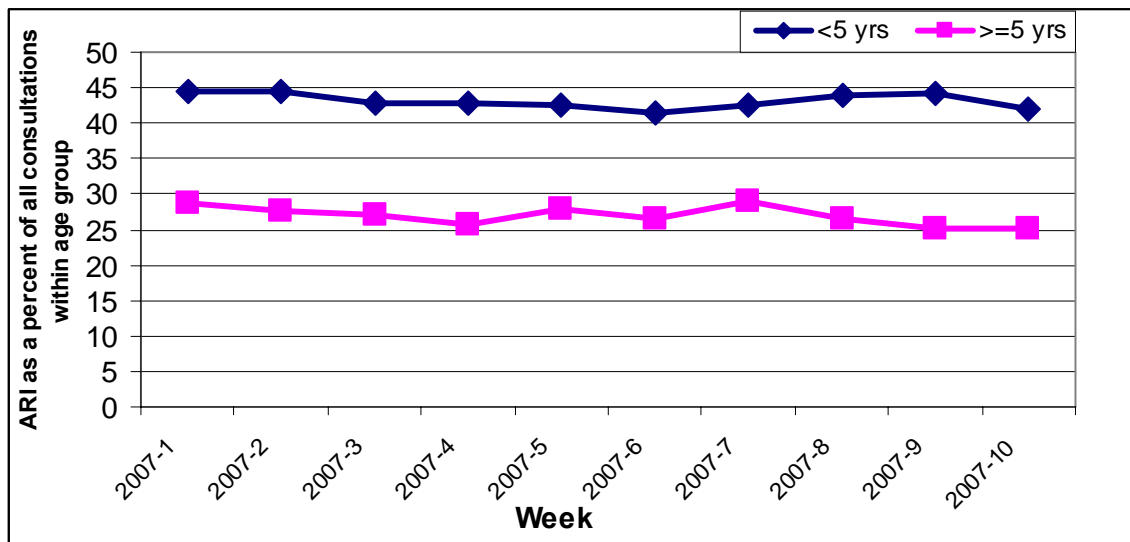


Figure 3: Trend in ARI as a percent of all consultations, by age group, Earthquake Affected Areas, Pakistan, 30 December 2006 – 9 March 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 07-10)

In the past four weeks between 10 Feb - 09 Mar 2007 (Epidemiological weeks 07-10 inclusive), 143,853 consultations for health conditions under surveillance were reported, out of a total 335,944 consultations. **27%** (90,673) of consultations were due to acute respiratory infection (**ARI**), **5%** (16,329) acute watery diarrhoea (**AWD**), **6%** (21,144) unexplained fever (**FUO**) and **4%** (13,786) Injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 10 Feb – 9 March 2007.

Week	WEEK 07		WEEK 08		WEEK 09		WEEK 10		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	3158	0	4223	0	4154	1	4794	0	16329	1	0.006
BD	237	0	312	0	307	0	374	0	1230	0	0.000
AFP	1	0	2	0	0	0	0	0	3	0	0.000
MAL	97	0	149	0	169	0	156	0	571	0	0.000
ARI	17539	10	23738	5	25275	9	24121	5	90673	29	0.032
MES	0	0	0	0	0	0	0	0	0	0	0.000
MEN	2	0	3	0	2	1	8	1	15	2	13.333
JAU	31	0	20	0	21	0	30	0	102	0	0.000
TET	0	1	0	0	0	0	0	0	0	1	0.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	3394	0	4633	0	6865	0	6252	0	21144	0	0.000
INJ	2475	0	3300	0	4064	0	3947	1	13786	1	0.007
OTH	35430	12	48116	11	54147	13	54398	10	192091	46	0.024
TOTAL	62364	23	84496	16	95004	24	94080	17	335944	80	
RU	269		326		329		303				

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 **82,498** consultations were reported in the **less than 5 years old** group, (**25%** of the total consultations), of which **38%** (31,187) were due to **ARI**, **9%** (7,586) due to **AWD**, **8%** (6,188) due to **FUO** and **3%** (2,593) 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 10 Feb – 9 March 2007.

Week	WEEK 07		WEEK 08		WEEK 09		WEEK 10		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	1528	0	2029	0	1933	1	2096	0	7586	1	0.013
BD	79	0	92	0	98	0	120	0	389	0	0.000
AFP	1	0	1	0	0	0	0	0	2	0	0.000
MAL	19	0	16	0	18	0	17	0	70	0	0.000
ARI	5776	9	8373	5	9059	9	7979	3	31187	26	0.083
MES	0	0	0	0	0	0	0	0	0	0	0.000
MEN	0	0	0	0	0	1	3	0	3	1	33.333
JAU	4	0	1	0	2	0	2	0	9	0	0.000
TET	0	1	0	0	0	0	0	0	0	1	0.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	965	0	1417	0	2078	0	1728	0	6188	0	0.000
INJ	472	0	599	0	695	0	827	0	2593	0	0.000
OTH	6973	3	8294	2	9060	6	10144	2	34471	13	0.038
TOTAL	15817	13	20822	7	22943	17	22916	5	82498	42	
RU	269		326		329		303				

In the current week, there were an increase in the number of cases of **AWD** with **4,154** last week and **4,794** this week. In the current week, **ARI** decreased in the total number of cases as compared with the previous week, (**25,275** last week and **24,121** this week). The weekly proportion of ARI and AWD is shown in figure 4.

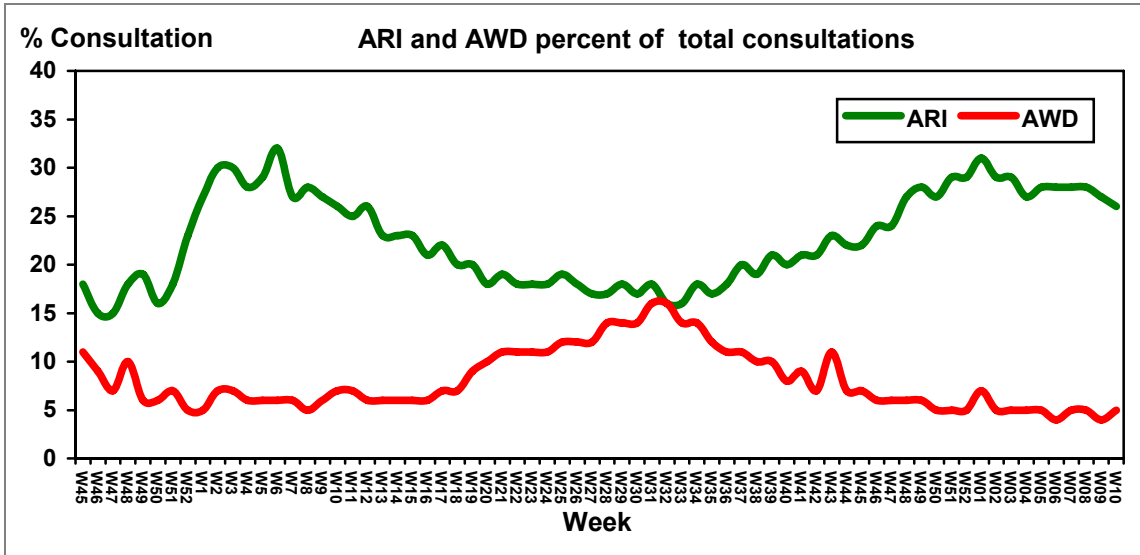


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 5 November 2005 – 9 Mar 2007.

Acute Watery Diarrhoea

In week 10 there were 4,794 cases of AWD reported a 15% increase over week 9. There were no associated deaths reported from any district. The rate of AWD in 2007 is lower than that of 2006 for most weeks. The two rates converged in week 8, but the rates have diverged since.. See Figure 5.

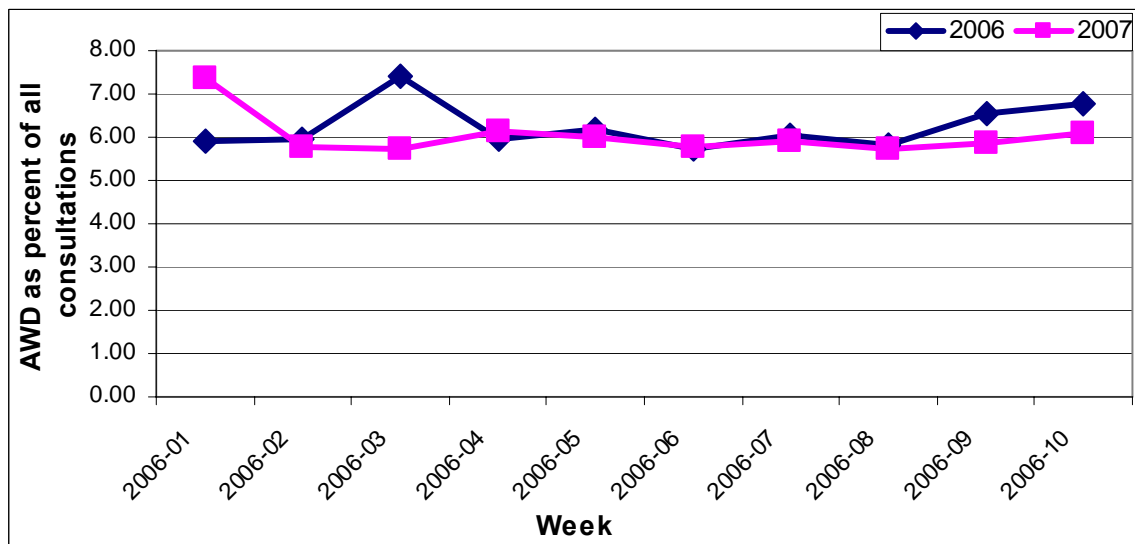


Figure 5: Trend in AWD as a percent of all consultations, 2006 and 2007, Earthquake Affected Areas, Pakistan, 30 December 2005 – 3 March 2006 and 31 December 2006 – 9 March 2007

Bloody Diarrhoea

In week 10, there were 374 cases of bloody diarrhoea reported, a 21% increase over week 9. There were no associated deaths. The rate of bloody diarrhoea is lower and has less fluctuation in 2007 than in 2006. See figure 6

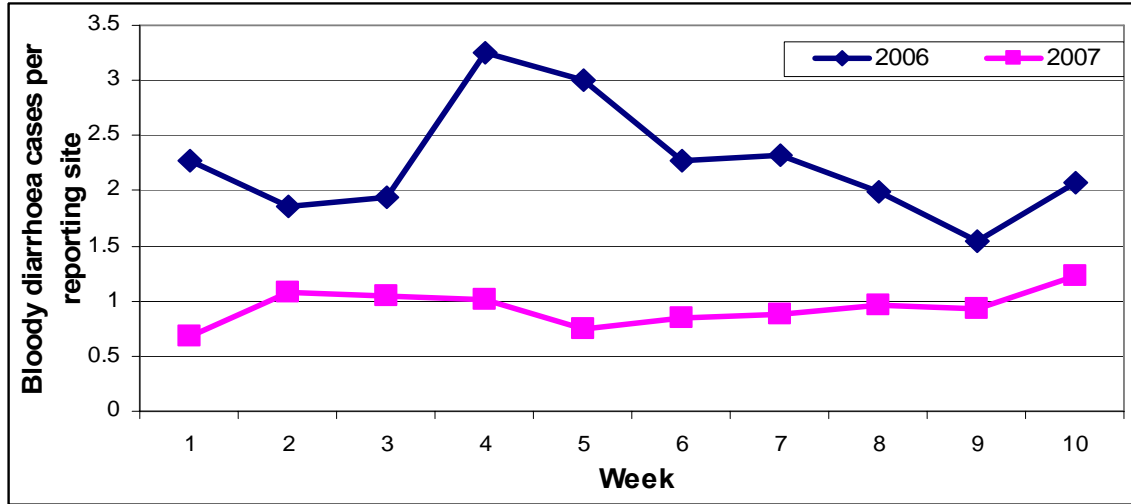


Figure 6: Trend in bloody diarrhoea cases per reporting site, 2006 and 2007, Earthquake Affected Areas, Pakistan, 31 December 2005 – 3 March 2006 and 30 December 2006 – 9 March 2007

Acute Jaundice Syndrome

In week 10 there were 30 cases of suspected hepatitis, nine cases higher than the number of cases in the previous week. There were no associated deaths. In the first 9 weeks of 2007, Battagram has had a much higher rate of suspected hepatitis than any other district, but it has since declined, and in week 10 Muzaffarabad district had higher rate than any other district. However, it should be noted that the rate in all the districts is still less than one case per reporting site on average. See figure 7.

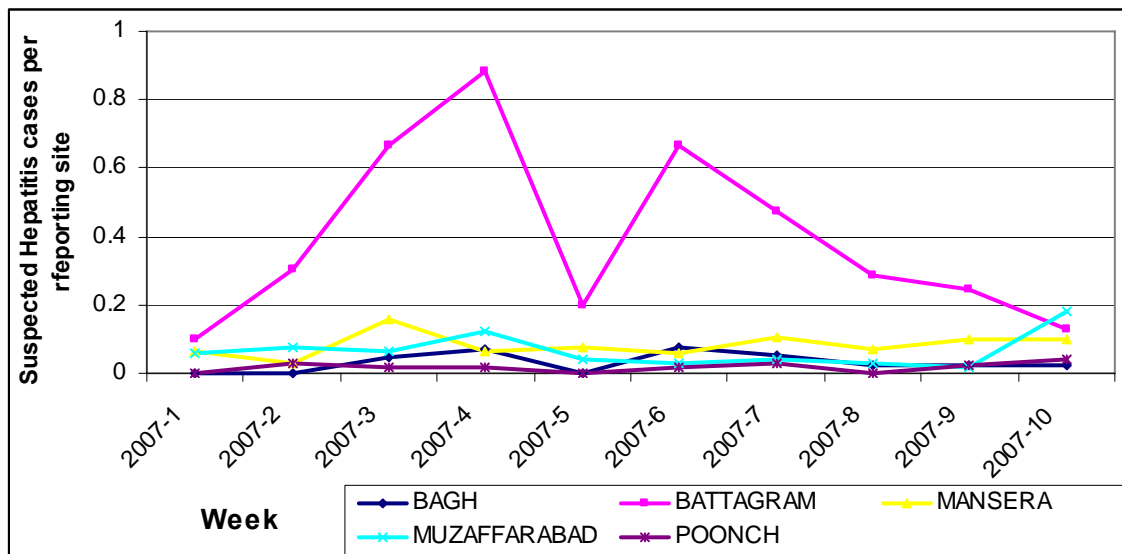


Figure 7: Trend in suspected hepatitis cases per reporting site, by district, Earthquake Affected Areas, Pakistan, 30 December 2006 – 9 March 2007

Malaria

In week 10, there were 156 malaria cases reported, a decrease of 8% from week nine. There were no associated deaths. The rate of malaria differs by district, and Poonch district has a rate 3 to 4 times higher than the other districts for last four weeks. See figure 8.

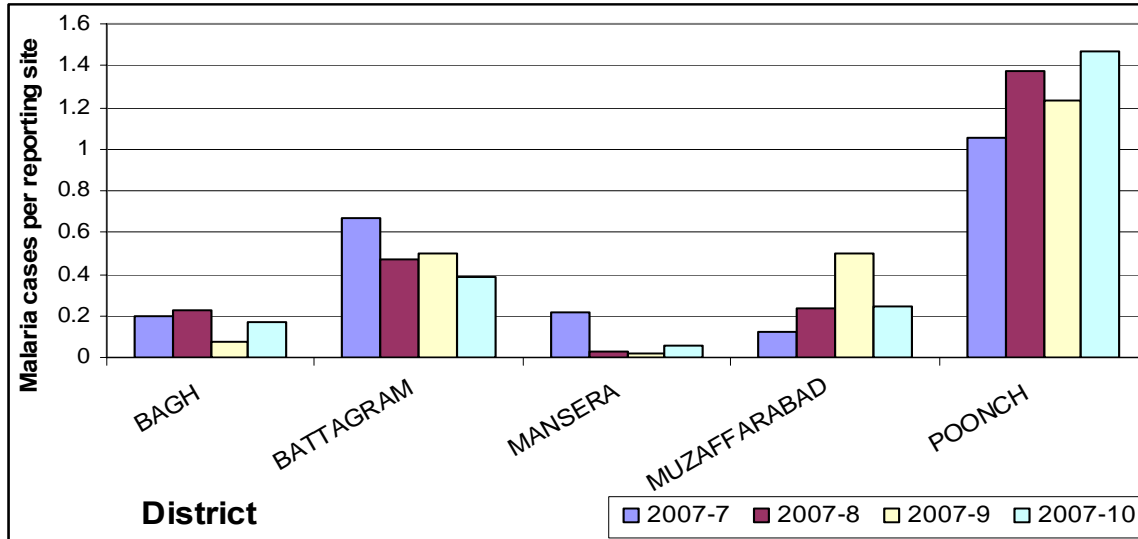


Figure 8: Trend in malaria cases per reporting site, by district, Earthquake Affected Areas, Pakistan, 10 February – 9 March 2007

Measles

There were no cases of measles reported in week 10. Measles cases have declined precipitously from week 42, and there now have been many weeks with no cases reported at all. See figure 10.

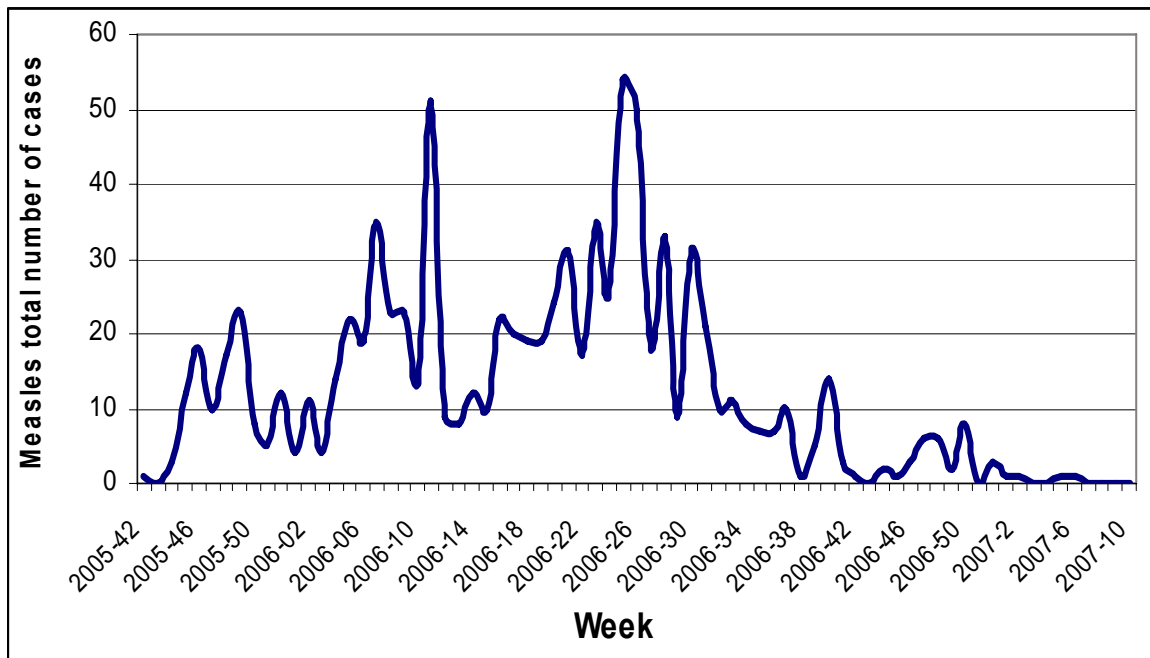


Figure 9: Trend in measles cases, Earthquake Affected Areas, Pakistan, 15 October 2005 – 9 March 2007

Acute Respiratory Infection

In week 10, there were 24,121 consultations for ARI reported through the DEWS. There were five associated deaths three over five and two under five years of age group, 3 in Muzaffarabad district, 1 from Mansehra, and 1 death reported from Rawalakot district. Though in the first 3 weeks of the year, the case fatality rate was higher for 2006 than for 2007, the rate in 2006 declined steadily, while in 2007 it has fluctuated considerably, and been consistently higher than that of 2006 since week 4. In week 10 however, the case fatality rate of 2007 once again dipped below that of 2006. See Figure 10.

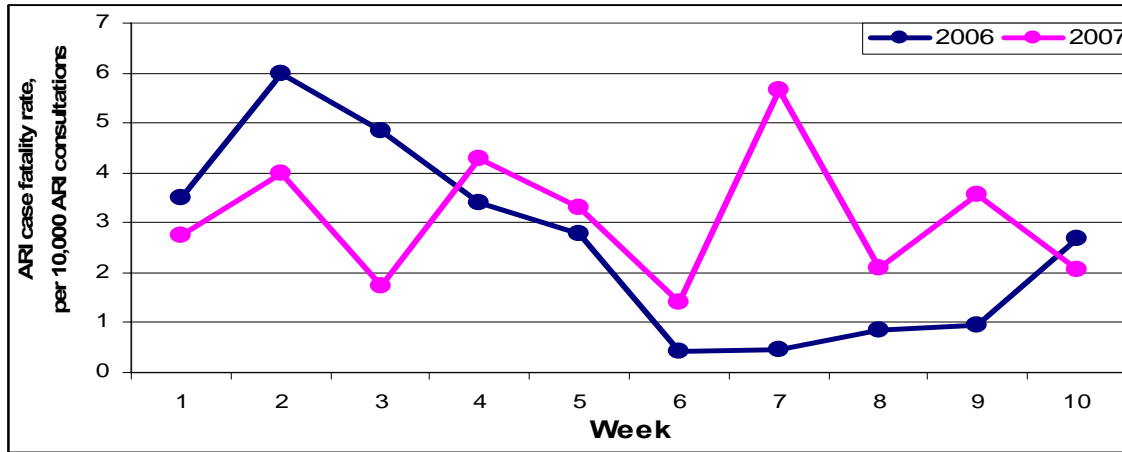


Figure 10: ARI case fatality rate per 10,000 ARI consultations, 2006 and 2007, Earthquake Affected Areas, Pakistan, 31 December 2005 – 3 March 2006 and 30 December 2006 – 9 March 2007.

Other Reportable Diseases and Conditions

There were 8 cases of suspected meningitis reported in week 10: 7 cases reported from district Muzaffarabad, 1 case reported from Mansehra district. There was 1 death over five years of age reported from Muzaffarabad district. There were 6,252 cases of fever of unknown origin, and 3,947 cases of injuries. There were no cases of acute flaccid paralysis, tetanus or haemorrhagic fever reported in week 10.

Though meningitis is generally considered to have a distinct seasonal pattern, this is not seen in the DEWS reported cases. There may be some difficulty in diagnoses of meningitis ; a majority of the suspected cases are negative when tested. See figure 11.

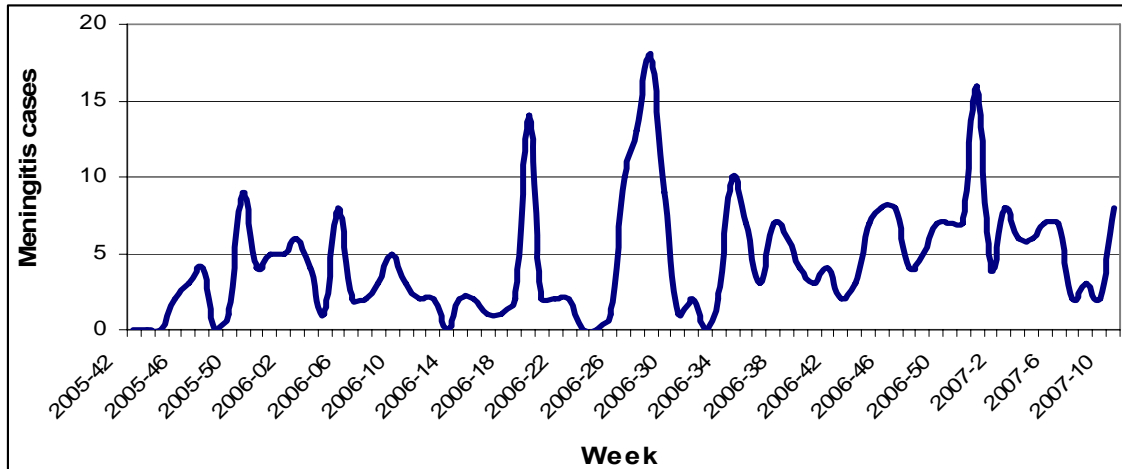


Figure 11: Trend in meningitis cases, Earthquake Affected Areas, Pakistan, 15 October 2005 – 9 March 2007

Outbreak Alert and Response¹

Acute Jaundice Syndrome

Muzaffarabad

An alert was received on 08-03-07 from Mousaid hospital Khubaib foundation for increased cases of acute viral hepatitis in Chela bandi.

When investigated four (4) cases were found from 3 related families living in close vicinity to one another.

Blood samples were taken from 3 patients, each from a different family and sent to NIH, Islamabad for confirmation. Water was tested and found to adequate quality for drinking, both at the house hold level and spring source. Health promotion messages were given to suffering families.

The WHO surveillance team will continue active search in the area from which the cases are reported and on the area the affected families have travelled.

Meningitis

Muzaffarabad

Five cases of suspected meningitis were reported, one from AIMS hospital, two from JUD hospital and two cases reported from THQ Hattian Bala.

The first case from AIMS hospital was 12 years old female resident of Chimmian Kheter Pattika admitted on 05-03-07 with Aphasia and fever and neck stiffness. TBM and lumbar puncture awaited.

Two cases were reported from THQ Hattian Bala, both cases were from different places and diagnosed on clinical grounds. A lumbar puncture was not done due to unavailability of laboratory.

Two cases reported from JUD hospital will be investigated.

Mansehra

One case of meningitis was reported from the DHQ Paediatric ward. The patient was a 6 year old boy. Meningitis was confirmed by CSF testing. The child received treatment and is recovering.

Acute Respiratory Infection

Mansehra

An increase in ARI and scabies in Kastara IDP Camp was reported, including a death from pneumonia in a child. On investigation, the death was found to be due to dehydration after acute watery diarrhea. The surveillance team undertook a health education session in the camp with the help of the district health department and Church World Services (CWS) on the 5th of March.

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, 3 – 9 Mar 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
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	389	0	44	0	0	0	10	0	2817	0	0	0	0	0	1	0	0	0	0	0	107	0	530	0	7397	5
09	437	0	35	0	0	0	3	0	2709	0	0	0	0	0	1	0	0	0	0	0	228	0	638	0	9744	2
10	644	0	39	0	0	0	7	0	3252	0	0	0	0	0	1	0	0	0	0	0	218	0	560	0	11115	2
Total	1646	0	130	0	0	0	24	0	10132	2	0	0	0	0	4	0	0	0	0	0	596	0	1962	0	32200	11

Table 7. Number of reported cases and deaths, **Poonch District**, Earthquake Affected Areas, Pakistan, 24 Feb – 02 Mar 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
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
09	885	1	35	0	0	0	95	0	3921	1	0	0	0	0	2	0	0	0	0	0	1847	0	645	0	6802	1
10	1287	0	43	0	0	0	113	0	4192	1	0	0	0	0	3	0	0	0	0	0	2088	0	684	0	7796	3
Total	4120	1	95	0	0	0	342	0	13588	3	0	0	0	0	6	0	0	0	0	0	6754	0	2118	0	22065	8

Table 8. Number of reported cases and deaths, **Muzaffarabad District**, Earthquake Affected Areas, Pakistan, 24 Feb – 02 Mar 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
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
09	1509	0	183	0	0	0	52	0	10678	3	0	0	2	0	2	0	0	0	0	0	2821	0	2064	0	16613	6
10	1712	0	226	0	0	0	20	0	9420	3	0	0	7	1	15	0	0	0	0	0	2065	0	2066	1	17536	4
Total	5726	0	719	0	2	0	109	0	37464	9	0	0	13	1	24	0	0	0	0	0	6927	0	6796	1	60974	17

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District**, Earthquake Affected Areas, Pakistan, 24 Feb – 02 Mar 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
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	434	0	32	0	0	0	18	0	1976	0	0	0	0	0	11	0	0	0	0	0	424	0	219	0	3795	0
09	398	0	29	0	0	0	18	0	2025	0	0	0	0	0	9	0	0	0	0	0	374	0	189	0	4101	0
10	334	0	39	0	0	0	12	0	1792	0	0	0	0	0	4	0	0	0	0	0	376	0	164	0	3357	0
Total	1567	0	142	0	0	0	74	0	7772	0	0	0	0	0	42	0	0	0	0	0	1554	0	784	0	14849	0

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 24 Feb – 02 Mar 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
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
09	889	0	25	0	0	0	1	0	5942	5	0	0	0	1	7	0	0	0	0	0	1595	0	528	0	16887	4
10	817	0	27	0	0	0	4	0	5465	1	0	0	1	0	7	0	0	0	0	0	1505	0	473	0	14594	1
Total	3234	0	144	0	1	0	22	0	21717	15	0	0	2	1	26	0	0	1	0	0	5313	0	2126	0	62003	7