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Bagh: Unprotected Water sources can be a danger

Pictured by: Dr. Musa Rahim / Engr. Imran



Highlights

- In the past month (Epidemiological weeks 08-11 inclusive), 152,186 health events under surveillance were reported including 69 deaths
- This week, there were 322 (96%) reporting units contributing to the report.
- In week 11, Total 82,368 consultations were reported, with 12 deaths
- This week rate of acute watery diarrhoea has 1% decreased as compare with last week
- The rate of ARI this week is 1 percentage point higher than the rate in week 11 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 increased by eighteen this week. After a week of low reporting, the rate has returned to normal, despite heavy rains and landslides in the earthquake affected districts.

See Table 1 for summary statistics.

Table 1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 17 Feb - 16 Mar 2007.

Area	Population	Reporting Health Facilities			
		17-23 Feb Week-8	24 Feb-2 Mar Week-9	3 - 9 Mar Week-10	10-16 Mar Week-11
Muzaffarabad	894,364	103	104	83	101
Bagh	452,532	44	42	43	40
Poonch	633,712	69	77	77	77
Mansehra / Balakot	1,154,804	72	71	70	70
Battagram / Shangla	592,256	38	35	31	34
Total	3,727,668	326(97%)	331(99%)	304(91%)	322(96%)

Total number of consultations

In week 11 there was an increase in the number of reporting sites, but the number of consultations decreased to 82,368 from 94,282. The highest number of consultations by district was in Muzaffarabad, with 28,739 and the lowest was in Battagram, at 4,673.

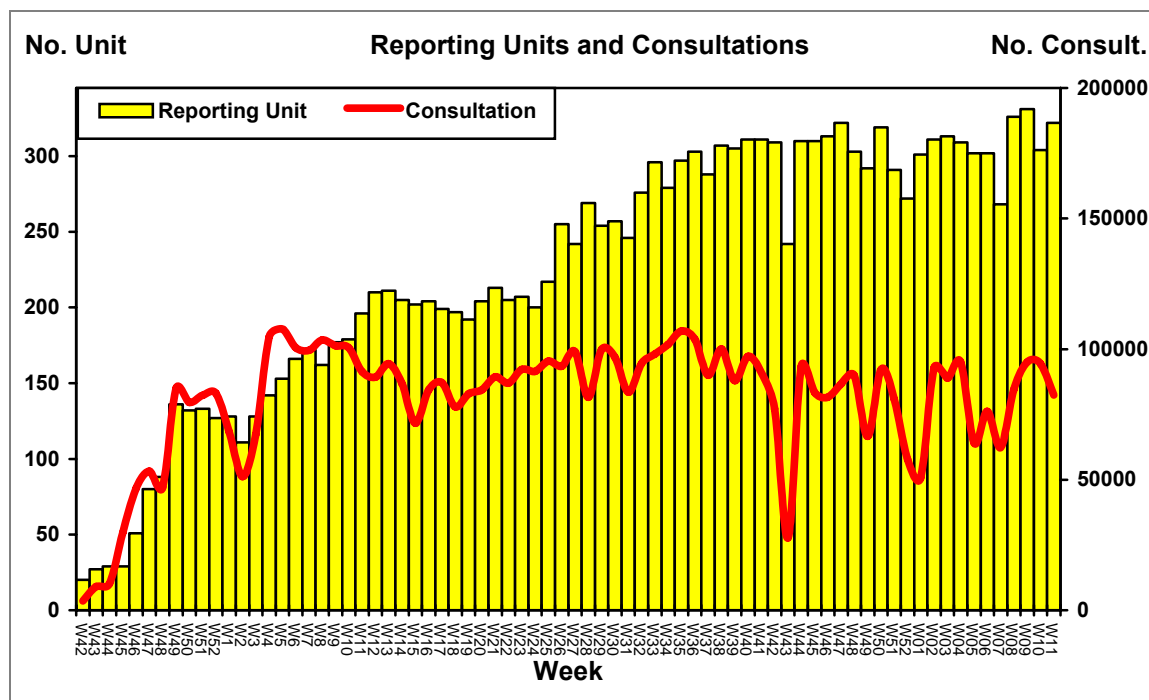


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 - 16 March 2007.

DEWS Data, Epidemiological Week No. 11, 2007

Between 10 - 16 Mar 2007, **82,368** consultations were reported through DEWS. Overall, **25%** (20,806) were due to acute respiratory infections (**ARI**), 1 percentage point higher than the rate in week 11 of 2006. **6%** of consultations (4,720) were due to acute watery diarrhoea (**AWD**), **7%** (6,007) due to fever of unknown origin (**FUO**), and **4%** (3,062) 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 4% higher in week 11 of 2007 when compared to that same age group of week 11 of 2006. At **22%** of consultations in patients 5 or more years old, the rate of ARI is almost same in this age group as compare last year. All other reportable conditions each represented less than 1% of the total consultations in week 11.

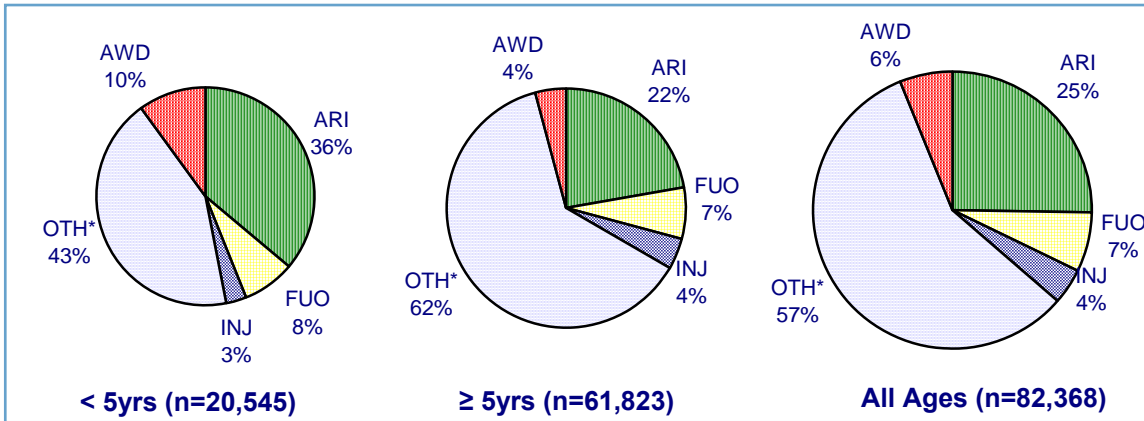


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 10 - 16 March 2007.

*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 remained almost identical, with only a slight increase in patients under five, and a slight decrease in patients five and over. The stability of the rate of ARI throughout the winter is notable. See figure 3.

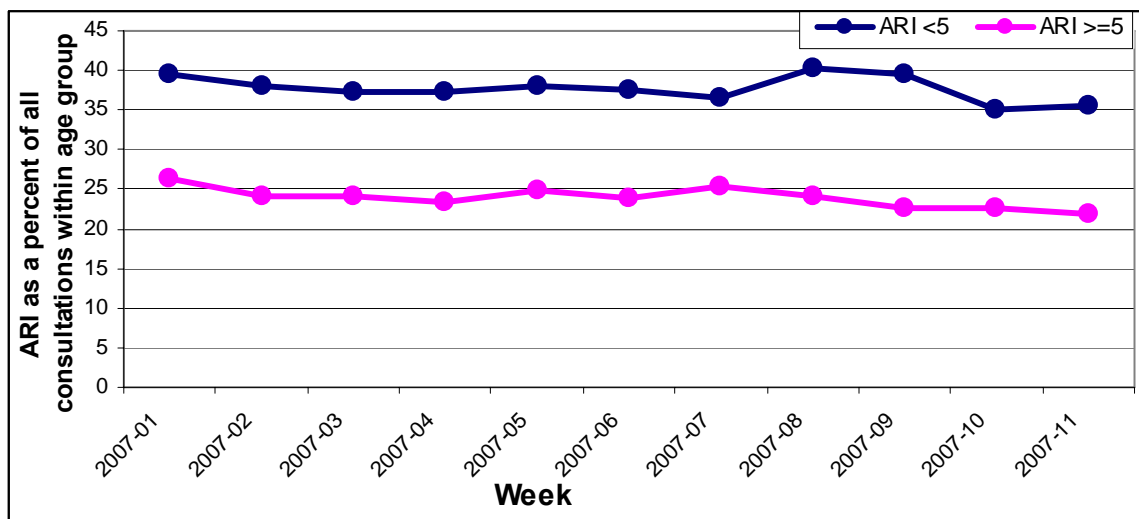


Figure 3: Trend in ARI as a percent of all consultations, by age group, Earthquake Affected Areas, Pakistan, 30 December 2006 – 16 March 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 08-11)

In the past four weeks between 17 Feb - 16 Mar 2007 (Epidemiological weeks 08-11 inclusive), 152,186 consultations for health conditions under surveillance were reported, out of a total 356,150 consultations. **26%** (93,985) of consultations were due to acute respiratory infection (**ARI**), **5%** (17,900) acute watery diarrhoea (**AWD**), **7%** (23,757) unexplained fever (**FUO**) and **4%** (14,374) injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 17 Feb –16 March 2007.

Week	WEEK 08		WEEK 09		WEEK 10		WEEK 11		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	4223	0	4154	1	4803	0	4720	0	17900	1	0.006
BD	312	0	307	0	374	0	380	0	1373	0	0.000
AFP	2	0	0	0	0	0	0	0	2	0	0.000
MAL	149	0	169	0	156	0	206	0	680	0	0.000
ARI	23738	5	25275	9	24166	5	20806	1	93985	20	0.021
MES	0	0	0	0	0	0	1	0	1	0	0.000
MEN	3	0	2	1	8	1	7	3	20	5	25.000
JAU	20	0	21	0	30	0	23	0	94	0	0.000
TET	0	0	0	0	0	0	0	0	0	0	0.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	4633	0	6865	0	6252	0	6007	0	23757	0	0.000
INJ	3300	0	4064	0	3948	1	3062	0	14374	1	0.007
OTH	48116	11	54147	13	54545	10	47156	8	203964	42	0.021
TOTAL	84496	16	95004	24	94282	17	82368	12	356150	69	
RU	326		331		304		322				

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 **87,260** consultations were reported in the **less than 5 years old** group, (**25%** of the total consultations), of which **38%** (32,731) were due to **ARI**, **9%** (8,162) due to **AWD**, **8%** (6,852) due to **FUO** and **3%** (2,649) 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 17 Feb – 16 March 2007.

Week	WEEK 08		WEEK 09		WEEK 10		WEEK 11		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	2029	0	1933	1	2100	0	2100	0	8162	1	0.012
BD	92	0	98	0	120	0	117	0	427	0	0.000
AFP	1	0	0	0	0	0	0	0	1	0	0.000
MAL	16	0	18	0	17	0	19	0	70	0	0.000
ARI	8373	5	9059	9	8002	3	7297	1	32731	18	0.055
MES	0	0	0	0	0	0	0	0	0	0	0.000
MEN	0	0	0	1	3	0	0	1	3	2	67.000
JAU	1	0	2	0	2	0	5	0	10	0	0.000
TET	0	0	0	0	0	0	0	0	0	0	0.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	1417	0	2078	0	1728	0	1629	0	6852	0	0.000
INJ	599	0	695	0	827	0	528	0	2649	0	0.000
OTH	8294	2	9060	6	10151	2	8850	2	36355	12	0.033
TOTAL	20822	7	22943	17	22950	5	20545	4	87260	33	
RU	326		331		304		322				

In the current week, there was a decrease in the number of cases of **AWD** with **4,803** last week and **4,720** this week. In the current week, **ARI** decreased in the total number of cases as compared with the previous week, (**24,166** last week and **20,806** this week). The weekly proportion of ARI and AWD is shown in figure 4.

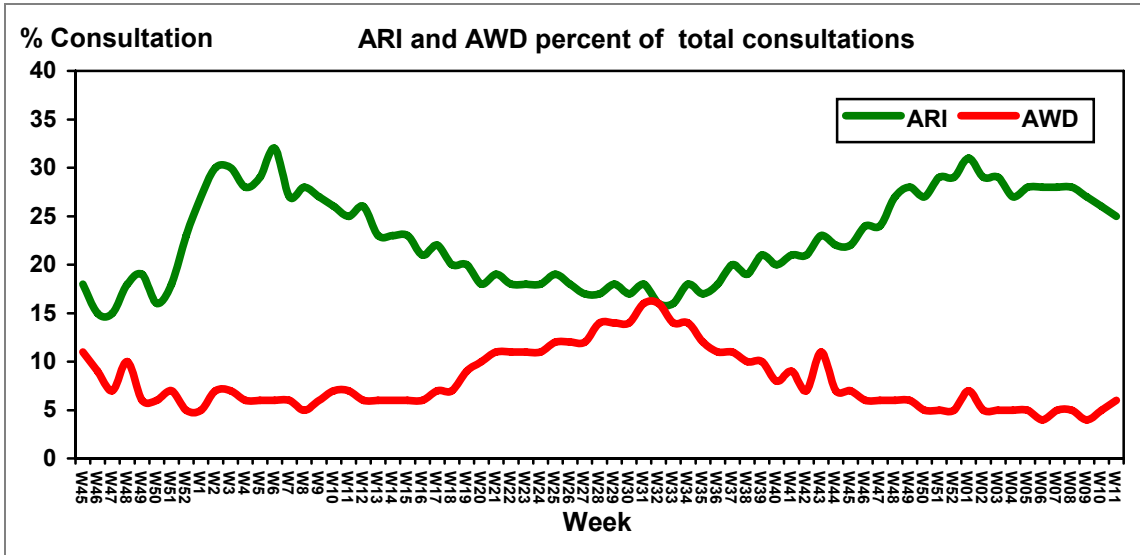


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 5 November 2005 – 16 March 2007.

Acute Watery Diarrhoea

In week 11 there were 4,720 cases of AWD reported; a 2% decrease over week 10. There were no associated deaths reported from any district. The rate of AWD in 2007 is lower than that of 2006 for most weeks. However, the rate of AWD has been climbing in the past three weeks, and has almost met that of 2006 in week 10. See Figure 5.

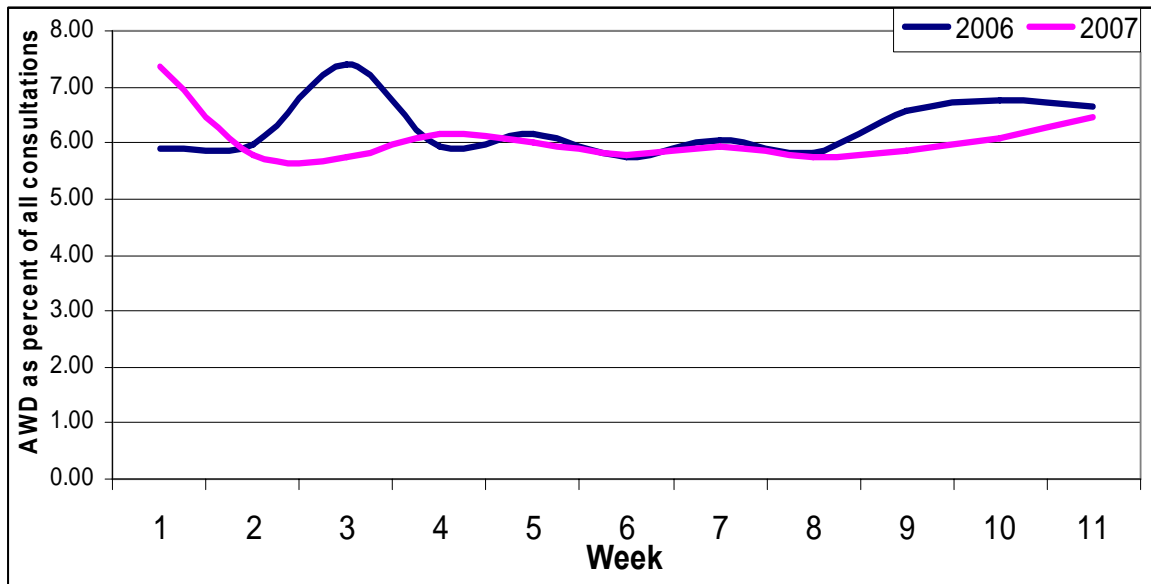


Figure 5: Trend in AWD as a percent of all consultations, 2006 and 2007, Earthquake Affected Areas, Pakistan, 30 December 2005 – 3 March 2006 and 31 December 2006 – 16 March 2007

Bloody Diarrhoea

In week 11, there were 380 cases of bloody diarrhoea reported, a 2% increase over week 10. There were no associated deaths. The rate of bloody diarrhoea is lower and has less fluctuation in 2007 than in 2006. See figure 6

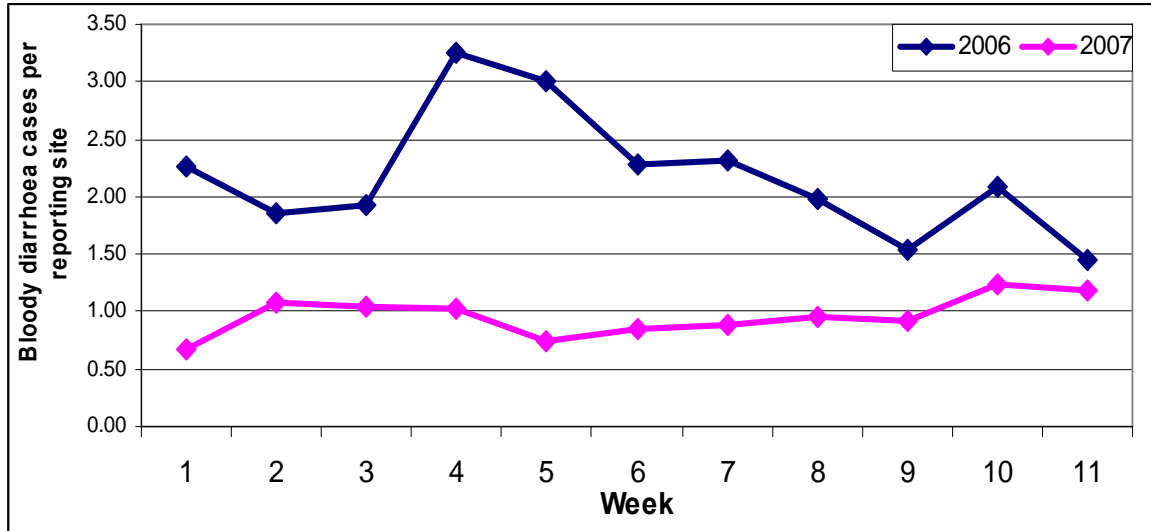


Figure 6: Trend in bloody diarrhoea cases per reporting site, 2006 and 2007, Earthquake Affected Areas, Pakistan, 31 December 2005 – 10 March 2006 and 30 December 2006 – 16 March 2007

Acute Jaundice Syndrome

In week 11 there were 23 cases of suspected hepatitis, 23% lower than the number of cases in the previous week. There were no associated deaths. In the first 9 weeks of 2007 and week 11, Battagram has had a much higher rate of suspected hepatitis than any other district, but 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.

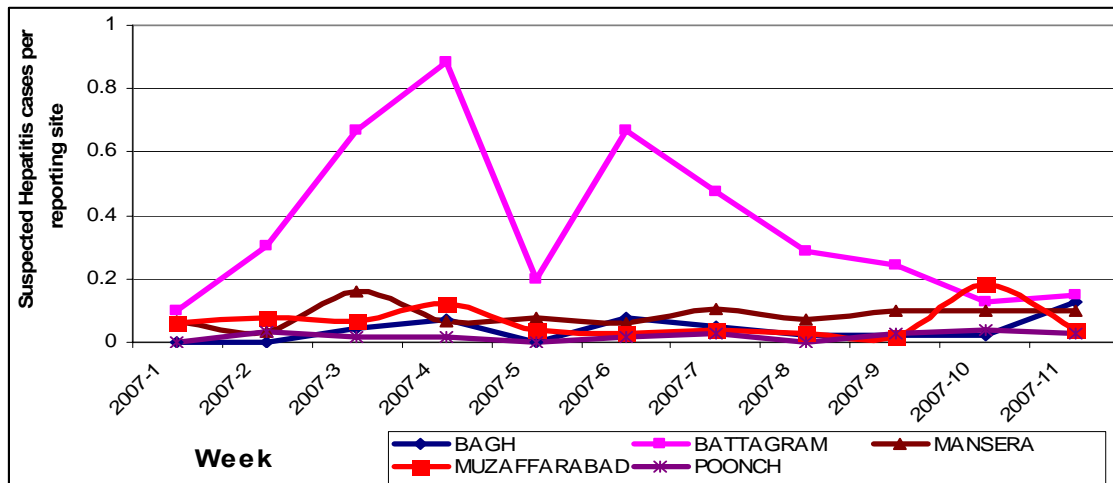


Figure 7: Trend in suspected hepatitis cases per reporting site, by district, Earthquake Affected Areas, Pakistan, 30 December 2006 – 16 March 2007

Malaria

In week 11, there were 206 malaria cases reported, an increase of 24% from week 10. 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.

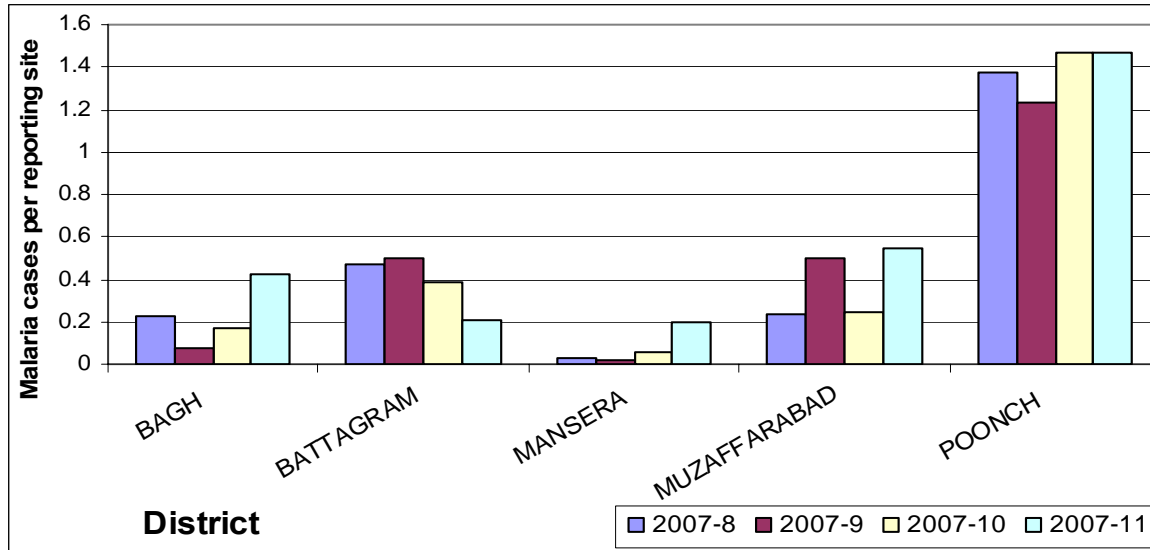


Figure 8: Trend in malaria cases per reporting site, by district, Earthquake Affected Areas, Pakistan, 10 – 16 March 2007

Measles

There was one suspected case of measles reported in week 11 from Battagram district. The number of measles cases has declined considerably over time. It reached a peak in mid 2006, but since the beginning of 2007, there have been only 5 cases in total. See figure 10.

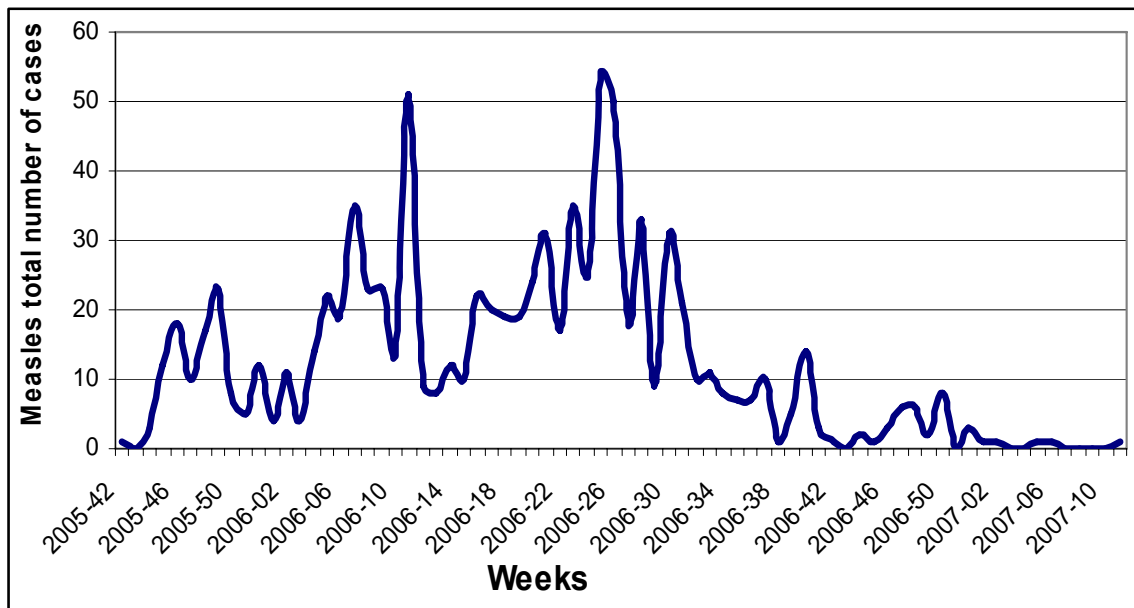


Figure 9: Measles total number of cases, 30 December 2006 – 16 March 2007

Acute Respiratory Infection

In week 11, there were 20,806 consultations for ARI reported through the DEWS. There was one associated death under five from Muzaffarabad 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, but lower again in week 10. See Figure 10.

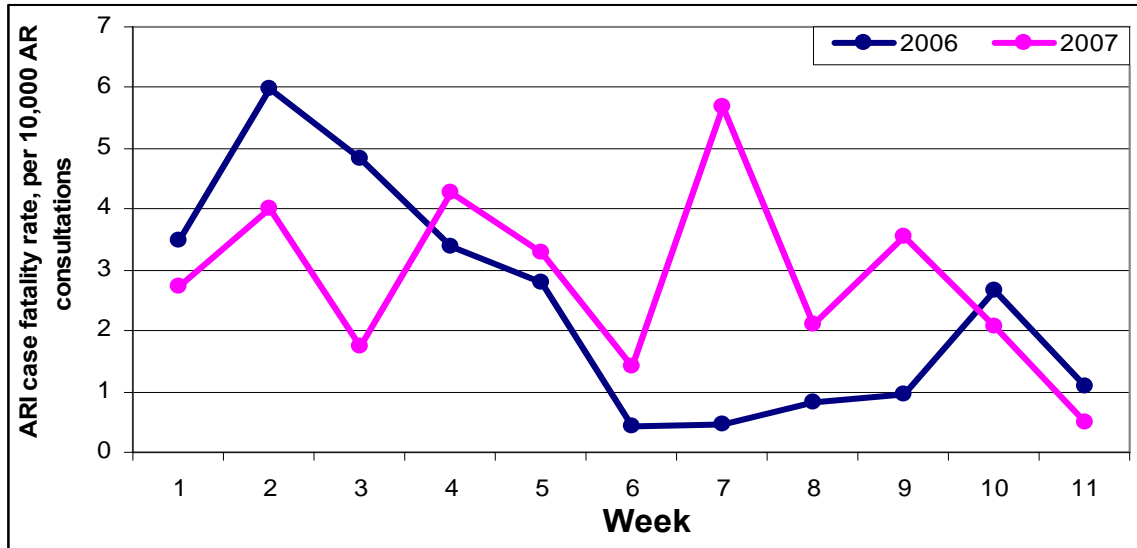


Figure 10: ARI case fatality rate per 10,000 ARI consultations, 2006 and 2007, Earthquake Affected Areas, Pakistan, 31 December 2005 – 10 March 2006 and 30 December 2006 – 16 March 2007.

Other Reportable Diseases and Conditions

There were 7 cases of suspected meningitis in week 11 reported: all cases reported from district Muzaffarabad. There were 3 deaths reported: 2 over five years of age reported from Muzaffarabad district and 1 under five years of age reported from Mansehra district. There were 6,007 cases of fever of unknown origin, and 3,062 cases of injuries. There were no cases of acute flaccid paralysis, tetanus or haemorrhagic fever reported in week 11. Though meningitis is generally considered to have 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.

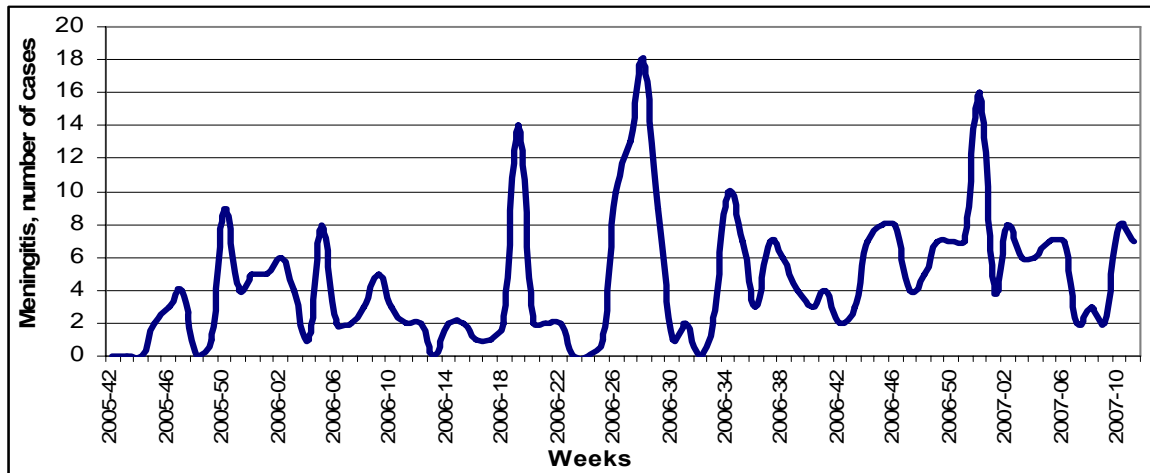


Figure 11: Trend in meningitis cases, Earthquake Affected Areas, Pakistan, 15 October 2005 – 16 March 2007

Outbreak Alert and Response¹

Measles:

Battagram:

One alert of suspected measles was reported from BHU Shungli Payeen, Battagram, a 9 years old female reported with high fever, which was associated with cough, running nose and red eyes, and then later she developed skin rashes on her face, followed by generalized rashes all over the body. The child was vaccinated previously. Blood sample was taken and sent to NIH, Islamabad for laboratory confirmation. No other cases were identified in surroundings.

WHO CSR team is continuously monitoring the situation, no other health problem is reported.

Meningitis:

Muzaffarabad:

Four suspected cases of meningitis were reported from Main Intensive care unit AIMS. Their details are as following:

- **Case No 1:** 35 yr old lady from Kumhar Bandi Mzd admitted with headache, aphasia and low grade fever, her cervical lymph nodes were palpable on clinical examination. CSF was clear with normal findings. X-ray findings were consistent for military tuberculosis; the patient is being treated for TB meningitis.
- **Case No2:** 22 yr old female from Garhi Dopatta admitted with high grade fever, fits and coma. Attendants refused CSF examination and patient referred to PIMS on request. According to physician the differential diagnosis was made for Encephalitis or Sub-arachnoid hemorrhage or less likely meningitis.
- **Case No3:** 14 year old male from Kel admitted on 16th March with history of fever, vomiting and epigastric burning. Neck stiffness +ve, Kerning's sign +ve, un vaccinated for BCG (no scar). His CSF findings were normal. He is being treated as TB Meningitis.
- **Case No.4:** 25 yrs old male from Ashkot District Neelum admitted on 1st March with headache, fever and vomiting. Later had seizures in hospital, neck stiffness +ve, Kerning's sign +ve, normal CSF, no history of TB in family. The patient is being treated as TB Meningitis.

Acute Jaundice Syndrome:

Muzaffarabad:

Four suspected cases of acute jaundice syndrome were reported from Alkhabrain camp, Chehla bandi. Blood sample were taken, hygiene promotion messages given to community and the environmental team will take water samples from both municipal and spring sources.

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 Feb – 16 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
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	653	0	39	0	0	0	7	0	3297	0	0	0	0	0	1	0	0	0	0	0	218	0	561	0	11264	2
11	559	0	26	0	0	0	17	0	2640	0	0	0	0	0	5	0	0	0	0	0	246	0	584	0	8511	0
Total	2038	0	144	0	0	0	37	0	11463	0	0	0	0	0	8	0	0	0	0	0	799	0	2313	0	36916	9

Table 7. Number of reported cases and deaths, **Poonch District**, Earthquake Affected Areas, Pakistan, 17 Feb – 16 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
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
11	1244	0	34	0	0	0	113	0	3856	0	0	0	0	0	2	0	0	0	0	0	2030	0	638	0	6694	2
Total	4603	1	123	0	0	0	416	0	15666	3	0	0	0	0	7	0	0	0	0	0	7776	0	2512	0	26344	9

Table 8. Number of reported cases and deaths, **Muzaffarabad District**, Earthquake Affected Areas, Pakistan, 17 Feb – 16 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
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
11	1580	0	250	0	0	0	55	0	7744	1	0	0	7	2	4	0	0	0	0	0	1852	0	1315	0	15932	2
Total	6146	0	835	0	2	0	151	0	37214	8	0	0	18	3	24	0	0	0	0	0	7664	0	6869	1	64349	12

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District**, Earthquake Affected Areas, Pakistan, 17 Feb – 16 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
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
11	261	0	33	0	0	0	7	0	1421	0	1	0	0	0	5	0	0	0	0	0	248	0	167	0	2530	1
Total	1427	0	133	0	0	0	55	0	7214	0	1	0	0	0	29	0	0	0	0	0	1422	0	739	0	13783	1

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 17 Feb – 16 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
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
11	1076	0	37	0	0	0	14	0	5145	0	0	0	0	1	7	0	0	0	0	0	1631	0	358	0	13489	0
Total	3650	0	138	0	0	0	21	0	22428	9	0	0	2	2	26	0	0	0	0	0	6096	0	1941	0	62574	5