

Epidemiological Week N^o 41 (7 - 13 Oct 2006)

1 Nov 06/ Vol. 47/ DEWS 2006-41

Contents

Reporting Units.....	2
Total number of consultations	2
DEWS Data, Epidemiological Week N ^o 41 2006.....	3
DEWS Data, Monthly Summary (Epidemiological Weeks N ^o 38-41)	4
Acute Watery Diarrhoea	5
Bloody Diarrhoea.....	6
Acute Jaundice Syndrome.....	6
Malaria	7
Measles	7
Acute Respiratory Infection	8
Other Reportable Diseases and Conditions	8
Outbreak Alert and Response	9
Number of reported cases and deaths per District, AJK	10
Number of reported cases and deaths per District, NWFP	11



Muzaffarabad: (Two girls carrying wood at Thori Park)
Picture by Torgrim Halvari

Highlights

- In the past month (Epidemiological weeks 38-41 inclusive), 159,682 health events under surveillance were reported including 90 deaths
- This week, there were 310 reporting units contributing to the report
- In week 41, Total 90,769 consultations were reported, with 25 deaths
- In week 41, there were three deaths from acute respiratory infection reported from Mansehra district
- Two suspected cases of measles reported this week, one case from Bagh and one case reported from Muzaffarabad district
- Malaria cases decreased by 11% over the number in week 40

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.

The WMMR is published by the World Health Organization (WHO),
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WHO Webpage: <http://www.whopak.org/disaster>

Reporting Units

The number of sites able to report decreased by 1 this week and the reporting timeliness of the DEWS systems also decreased compared to week 40. See Table 1 for summary statistics.

Table 1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 7 - 13 Oct 2006.

Area	Population	Reporting Health Facilities			
		16 – 22 Sept Week 38	23 – 29 Sept Week 39	30 Sept – 6 Oct Week 40	7 – 13 Oct Week 41
Muzaffarabad	894,364	107	102	105	100
Bagh	452,532	35	35	35	31
Poonch	633,712	56	59	66	72
Mansehra / Balakot	1,154,804	69	69	66	69
Battagram / Shangla	592,256	40	40	39	38
Total	3,727,668	307 (94%)	305 (94%)	311 (96%)	310(95%)

Total number of consultations

In week 41, there was a decrease in the number of reporting sites, and the number of consultations also decreased to 90,769. The highest number of consultations by district was in Muzaffarabad, with 31,062, and the lowest was in Battagram, at 7,401.

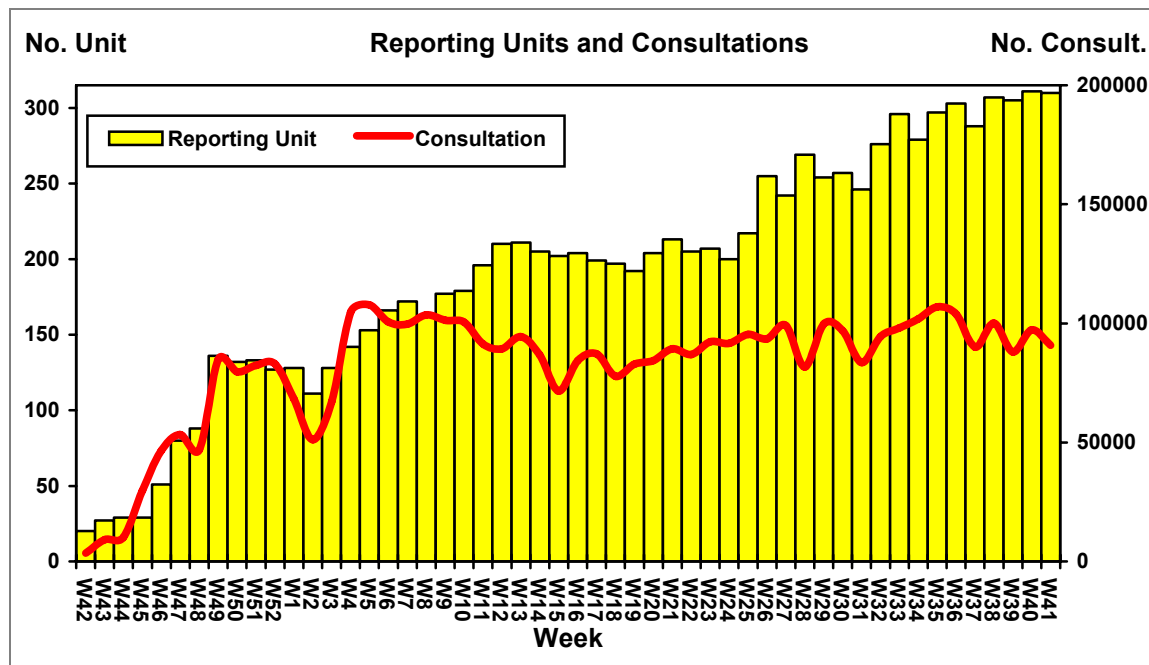


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 – 13 Oct 2006.

DEWS Data, Epidemiological Week No. 41, 2006

Between 6 to 13 Oct 2006, **90,769** consultations were reported through DEWS. Overall, **21%** (19,032) were due to Acute Respiratory Infections (**ARI**), **9%** (7,770) due to Acute Watery Diarrhoea (**AWD**), **7%** (6,423) due to Fever of Unknown Origin (**FUO**), and **5%** (4,746) due to Injuries (**INJ**). **ARI** accounted for **27%** and **19%** of consultations in the less than 5 years old and 5 or more years old respectively. All other reportable conditions each represented less than 1% of the total consultations in week 41.

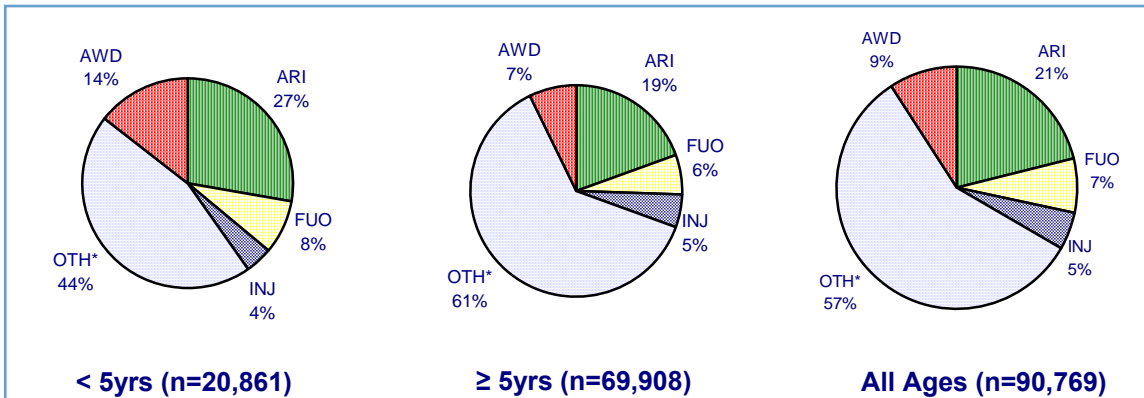


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 6 - 13 Oct 2006.

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

DEWS Data, Epidemiological Week No. 40, 2006: Consultations by age

Children under five represent approximately 20% of the population in the earthquake affected districts. However, for most of the conditions under surveillance, this age group makes up a disproportionate percentage of the consultations. Diseases that are most common in childhood, such as measles and suspected polio, are particularly skewed towards the younger population, with over half of the consultations for these conditions in patients under 5 years old. Suspected hemorrhagic fever also appears to have a high proportion of consultations in the under five age group, however 11 of the 19 cases recorded in patients under 5 were false reports, making the proportion misleading. See figure 3.

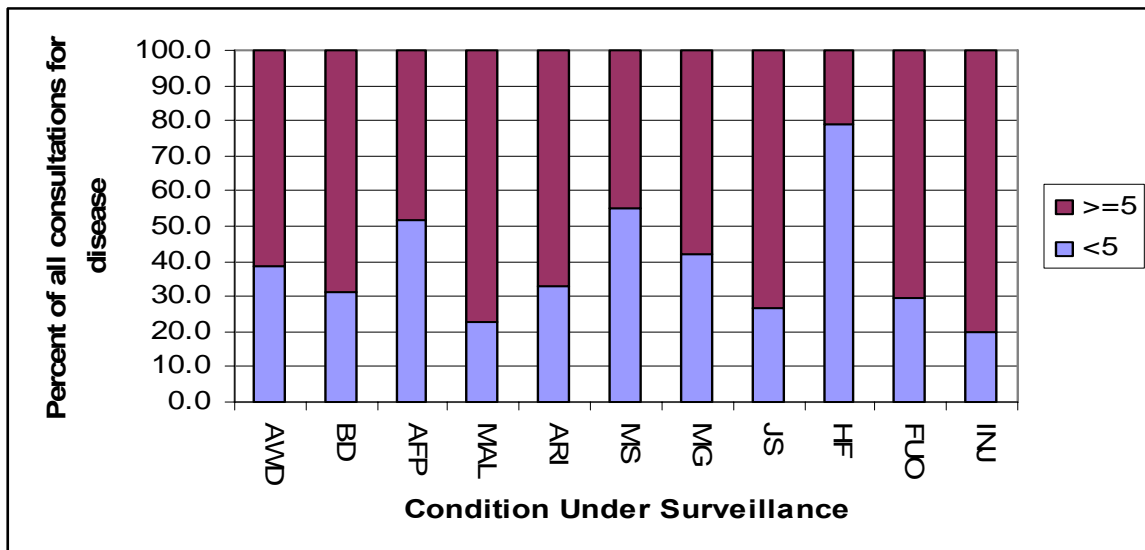


Figure 3: Proportion by age, of consultations for conditions under surveillance, Earthquake Affected Areas, Pakistan, October 15, 2005 – October 13, 2006

DEWS Data, Monthly Summary (Epidemiological Weeks No. 38-41)

In the past four weeks, between 16 Sept to 13 October (Epidemiological weeks 38-41 inclusive), 159,682 consultations for health conditions under surveillance were reported, out of a total 376,076 consultations. **20%** (76,553) of consultations were due to acute respiratory infection (**ARI**), **9%** (34,247) acute watery diarrhoea (**AWD**), **6%** (23,932) unexplained fever (**FUO**) and **5%** (19,037) Injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 16 Sept - 13 Oct 2006.

Week Event	WEEK 38		WEEK 39		WEEK 40		WEEK 41		TOTAL		CFR%
	C	D	C	D	C	D	C	D	C	D	
AWD	9577	1	8637	1	8263	0	7770	0	34247	2	0.006
BD	664	0	516	0	629	0	636	0	2445	0	0.000
AFP	0	0	1	0	1	0	1	0	3	0	0.000
MAL	765	0	760	0	806	0	724	0	3055	0	0.000
ARI	19085	2	18650	3	19786	2	19032	3	76553	10	0.013
MES	1	0	5	0	14	0	2	0	22	0	0.000
MEN	6	0	3	1	3	0	3	1	15	2	0.000
JAU	102	1	80	0	102	0	86	0	370	1	0.000
TET	0	0	1	0	2	0	0	0	3	0	0.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	6034	0	5528	0	6423	0	5947	0	23932	0	0.000
INJ	4964	0	4703	0	4823	0	4547	0	19037	0	0.000
OTH	58858	23	49080	12	56435	19	52021	21	216394	75	0.035
TOTAL	100056	27	87964	17	97287	21	90769	25	376076	90	
RU	307		305		311		310				

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, **90,415** consultations were reported in the **less than 5 years** old group, (**24%** of the total consultations), of which **27%** (24,028) were due to **ARI**, **15%** (13,126) due to **AWD**, **8%** (7,397) due to **FUO** and **4%** (3,782) 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 16 Sept - 13 Oct 2006.

Week Event	WEEK 38		WEEK 39		WEEK 40		WEEK 41		TOTAL		CFR%
	C	D	C	D	C	D	C	D	C	D	
AWD	3759	1	3226	1	3180	0	2961	0	13126	2	0.015
BD	169	0	177	0	220	0	237	0	803	0	0.000
AFP	0	0	1	0	1	0	0	0	2	0	0.000
MAL	115	0	133	0	152	0	137	0	537	0	0.000
ARI	5977	0	6031	2	6296	2	5724	2	24028	6	0.025
MES	1	0	0	0	7	0	1	0	9	0	0.000
MEN	2	0	2	1	0	0	1	0	5	1	0.000
JAU	29	1	16	0	28	0	24	0	97	1	0.000
TET	0	0	0	0	1	0	0	0	1	0	0.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	1910	0	1750	0	1978	0	1759	0	7397	0	0.000
INJ	1013	0	1000	0	850	0	919	0	3782	0	0.000
OTH	11746	9	9737	6	10047	6	9098	6	40628	27	0.066
TOTAL	24721	11	22073	10	22760	8	20861	8	90415	37	
RU	307		305		311		310				

In the current week, there was a decrease in the number of cases of **AWD** with **8,263** last week and **7,770** this week. In the current week, **ARI** decreased in the total number of cases as compared with the previous week, (**19,786** last week and **19,032** this week). The weekly proportion of ARI and AWD is shown in figure 4.

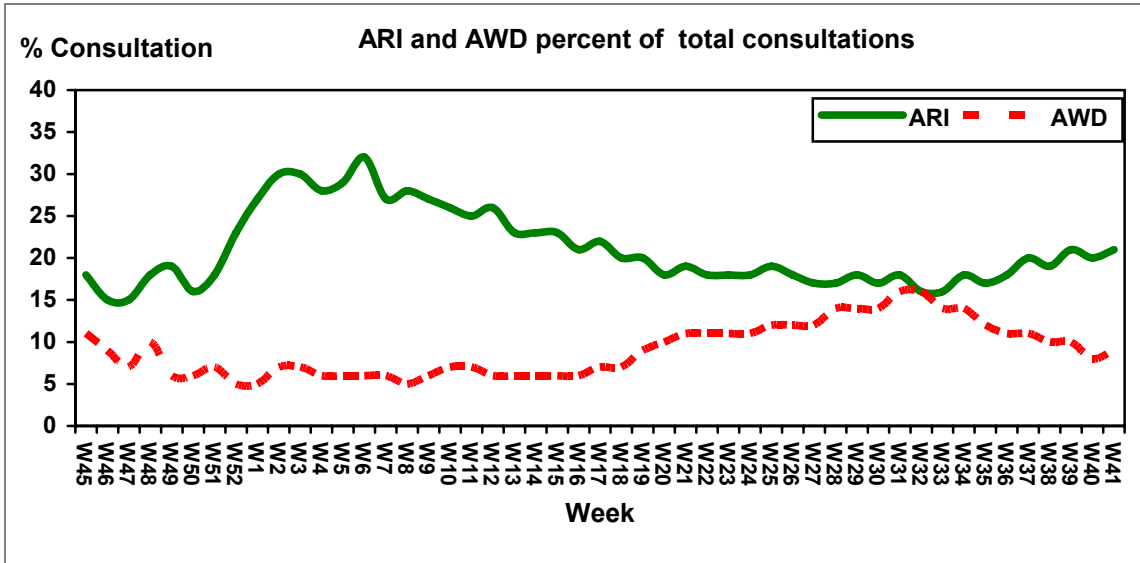


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 5 November - 13 October 2006.

Acute Watery Diarrhoea

In week 41, there were 7,770 cases of AWD reported, a decrease of 6% from week 40. There were no deaths from AWD reported in week 41. The rate of AWD, as a percent of all consultations continues to decline in most districts, though the rate of decline has decreased. See Figure 5.

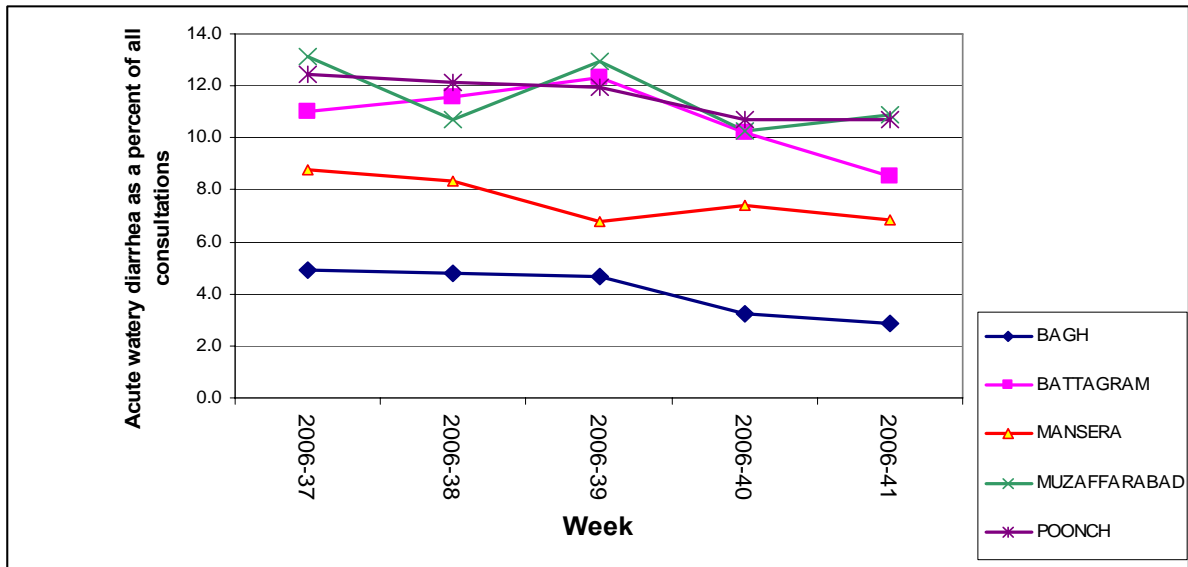


Figure 5: Trend in AWD by district, Earthquake Affected Areas, Pakistan, 9 September – 13 October, 2006

Bloody Diarrhoea

In week 41, there were 636 cases of bloody diarrhoea reported, an increase of 7 cases over week 40. There were no associated deaths. The overall number of bloody diarrhoea cases has remained steady for the last two months, fluctuating between the high 200's and low 300's weekly, however the trend differs between age groups. Patients under five have seen a gradual increase in cases per reporting site, while patients five years of age and older have seen a marked decrease. See figure 6

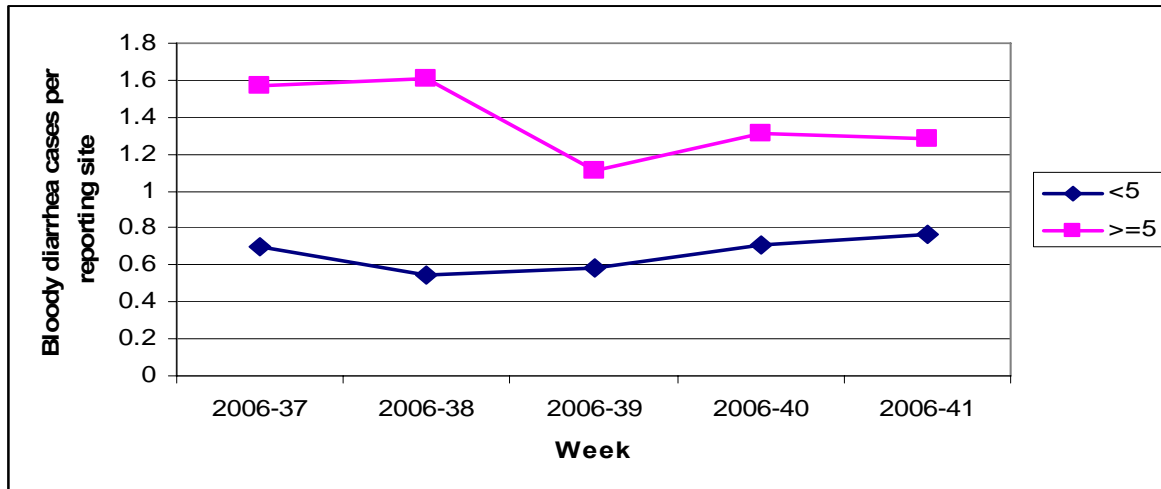


Figure 6: Trend in bloody diarrhoea cases per reporting site, by age group, Earthquake Affected Areas, Pakistan, 9 September – 13 October, 2006

Acute Jaundice Syndrome

86 cases of suspected hepatitis were reported in week 41, a 16% decrease from week 40. While most districts are showing a gradual decline in acute jaundice cases, Bagh has shown a marked increase from week 39. See figure 7.

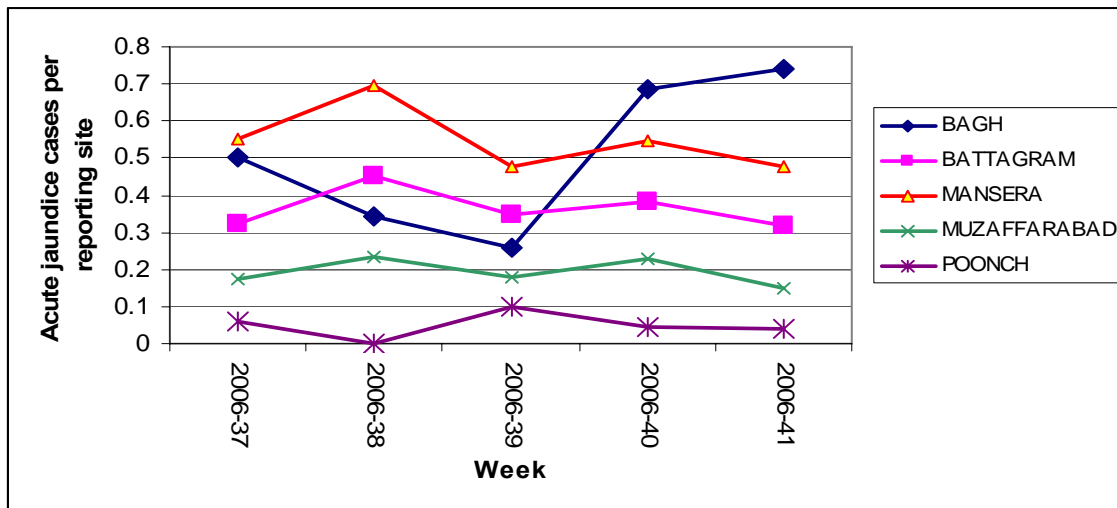


Figure 7: Suspected hepatitis cases per reporting site by district, Earthquake Affected Areas, Pakistan, 9 September – 13 October, 2006

Malaria

In week 41, there were 724 malaria cases reported, with no associated deaths. This is a 10% decrease from the 806 cases reported in week 40. Though there has been an outbreak of dengue fever in Pakistan, suggesting mosquito-borne disease is on the rise, only Bagh district has had a consistent increase in malaria cases per reporting site, while Poonch and Muzaffarabad have had inconsistent fluctuations, and Battagram and Mansehra have had a gradual decrease in cases per reporting site. (See figure 8).

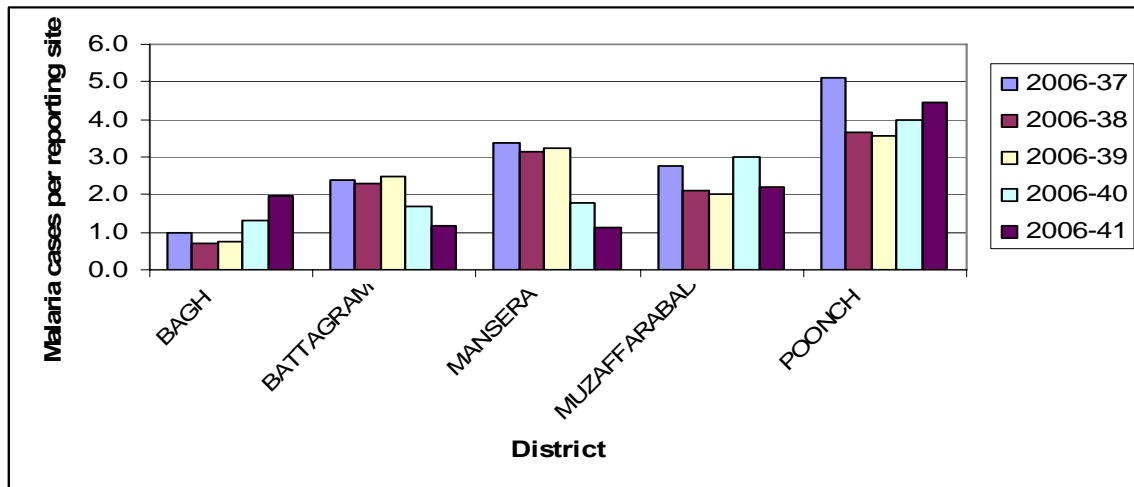


Figure 8: Trend in malaria cases per reporting site by district, Earthquake Affected Areas, Pakistan, August 9 September – 13 October, 2006

Measles

2 cases of suspected measles were reported in week 41, a large decrease over the 14 cases seen in week 40. One case was reported from Bagh, and one case from Muzaffarabad. Measles cases have been steadily dropping as more of the population is immunized. See figure 9.

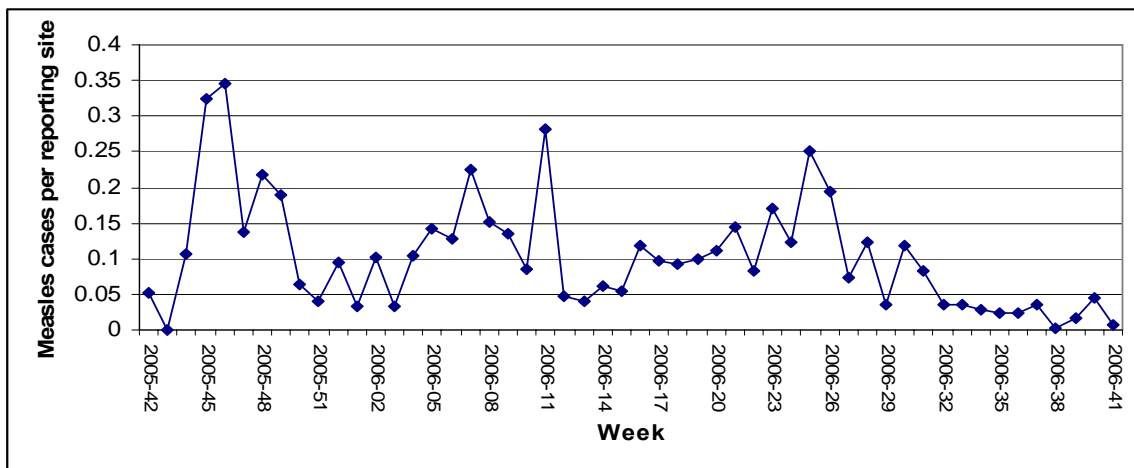


Figure 9: Trend in measles cases, Earthquake Affected Areas, Pakistan, 15 October 2005 – 13 October 2006.

Acute Respiratory Infection

In week 41, there were 19,032 consultations for ARI, a decrease over the number of cases in week 40. There were 3 associated deaths, all in Mansehra in patients under five years old. Over the course of the year since the earthquake, ARI cases have represented approximately 20% of all consultations. Of these consultations, over one quarter have been in patients under five. See figure 10

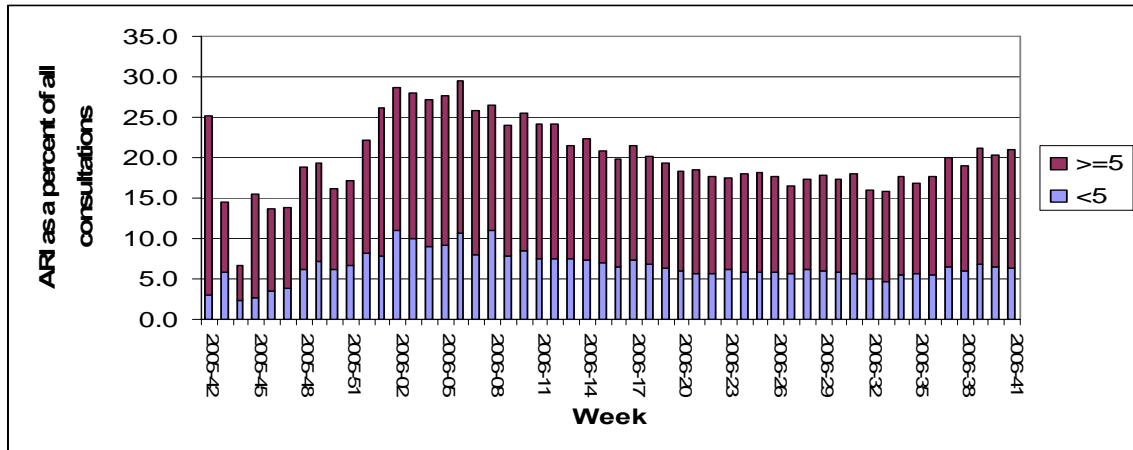


Figure 10: Trend in ARI as a percent of all consultations, by district, Earthquake Affected Areas, Pakistan, August 13 – 29 September, 2006

Other Reportable Diseases and Conditions

There were 3 cases of suspected meningitis in week 41; one from Mansehra, and two from Muzaffarabad. There was 1 case of suspected acute flaccid paralysis reported from Mansehra district. There were no cases of tetanus or suspected hemorrhagic fever. There were 5,947 cases of fever of unknown origin, a decrease over week 40. There were 4,547 cases of injuries.

If the dengue fever outbreak had reached the earthquake affected districts, fever cases could be expected to rise. However, there has not been a significant rise in fever cases in recent weeks, suggesting that the outbreak has not yet reached these districts. See figure 11.

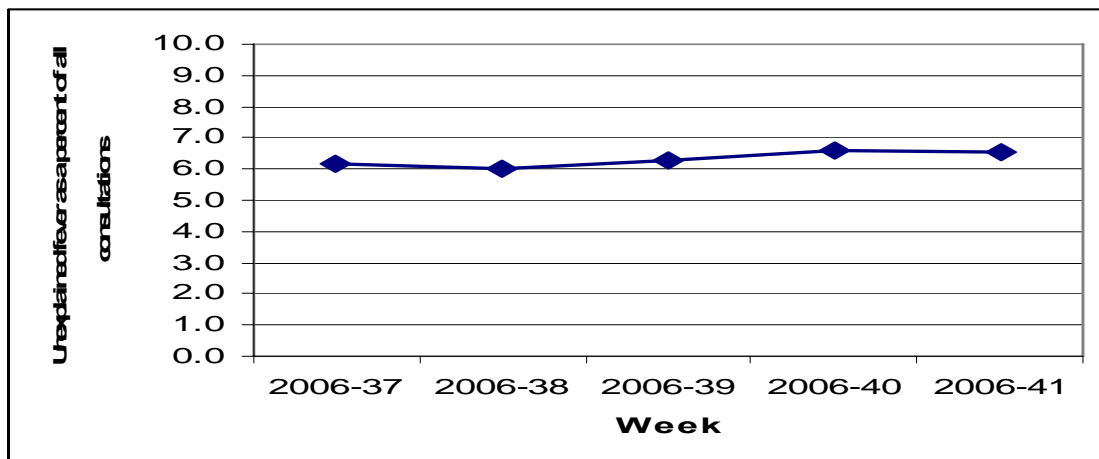


Figure 11: Trend in suspected meningitis cases per reporting site, by district, Earthquake Affected Areas, Pakistan, 15 October 2005 – 29 Sept 2006.

Outbreak Alert and Response¹

Acute Jaundice Syndrome:

Rawalakot

Three cases of suspected hepatitis were reported in Rawalakot district, one from RHC Abbaspur, one from BHU Chottagala, and one from BHU Jandala. The case in Chottagala was a 4 year old girl, who had fever from the 2nd of October and was reported by her family as having yellow eyes. When she was seen at the facility on 7th October, her eyes were clear. She was treated with calpol and released. The case in Abbaspur was an 18 year old male who had been suffering with symptoms of hepatitis for two weeks before seeking treatment. There had been two similar cases in his family in the previous month. The family water source was a spring. The local lady health worker was requested to undertake health education sessions in his community. The third case was a 30 year old woman. The symptoms reported were consistent with hepatitis (yellow coloration of urine and conjunctiva, white stools), but the patient could not be located to take a sample for confirmation.

Measles:

Battagram

One case of measles was reported from NCHD Field Clinic Batkul. The patient was a 6 year old girl who had presented at the clinic with symptoms of measles on 6th October. When the investigation team went to her home, they found that she had gone to another community 5 km away. All of the children in that community had been vaccinated. A sample was taken from the patient for confirmation, and family members were briefed about measles. A health education session was held.

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, 7 - 13 Oct 2006.

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
38	619	0	36	0	0	0	24	0	2800	0	0	0	0	0	12	0	0	0	0	0	221	0	736	0	8397	0
39	543	0	35	0	0	0	27	0	2759	0	0	0	0	0	9	0	0	0	0	0	238	0	736	0	7275	0
40	467	0	71	0	0	0	46	0	2763	0	1	0	0	0	24	0	0	0	0	0	300	0	594	0	10190	0
41	328	0	23	0	0	0	61	0	2863	0	1	0	0	0	23	0	0	0	0	0	349	0	477	0	7361	0
Total	1957	0	165	0	0	0	158	0	11185	0	2	0	0	0	68	0	0	0	0	0	1108	0	2543	0	33223	0

Table 7. Number of reported cases and deaths, **Poonch District**, Earthquake Affected Areas, Pakistan, 7 - 13 Oct 2006.

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
38	1932	0	24	0	0	0	206	0	3044	0	0	0	0	0	0	0	0	0	0	0	2193	0	726	0	7794	4
39	1961	0	25	0	1	0	209	0	3723	0	0	0	0	0	6	0	0	0	0	0	2356	0	766	0	7395	5
40	1661	0	39	0	0	0	264	0	3247	0	0	0	1	0	3	0	0	0	0	0	2281	0	788	0	7219	10
41	1721	0	21	0	0	0	321	0	3513	0	0	0	0	0	3	0	0	0	0	0	2130	0	836	0	7494	6
Total	7275	0	109	0	1	0	1000	0	13527	0	0	0	1	0	12	0	0	0	0	0	8960	0	3116	0	29902	25

Table 8. Number of reported cases and deaths, **Muzaffarabad District**, Earthquake Affected Areas, Pakistan, 7 - 13 Oct 2006.

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
38	3668	1	388	0	0	0	225	0	7222	1	0	0	6	0	24	1	0	0	0	0	1305	0	2191	0	19306	15
39	3681	1	338	0	0	0	202	0	6272	1	3	0	3	1	18	0	1	0	0	0	1093	0	2080	0	14821	5
40	3362	0	326	0	0	0	314	0	6993	0	2	0	2	0	24	0	0	0	0	0	1430	0	2290	0	18065	6
41	3388	0	399	0	0	0	218	0	6421	0	1	0	2	0	15	0	0	0	0	0	1433	0	1976	0	17199	10
Total	14099	2	1451	0	0	0	959	0	26908	2	6	0	13	1	81	1	1	0	0	0	5261	0	8537	0	69391	36

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District**, Earthquake Affected Areas, Pakistan, 7 - 13 Oct 2006.

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
38	962	0	107	0	0	0	92	0	1484	0	0	0	0	0	18	0	0	0	0	0	600	0	342	0	4711	2
39	732	0	50	0	0	0	99	0	1198	0	2	0	0	0	14	0	0	0	0	0	491	0	315	0	3055	0
40	792	0	69	0	0	0	65	0	1646	0	6	0	0	0	15	0	0	0	0	0	687	0	334	0	4143	0
41	629	0	61	0	0	0	45	0	1510	0	0	0	0	0	12	0	0	0	0	0	591	0	398	0	4155	2
Total	3115	0	287	0	0	0	301	0	5838	0	8	0	0	0	59	0	0	0	0	0	2369	0	1389	0	16064	4

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 7 - 13 Oct 2006.

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
38	2396	0	109	0	0	0	218	0	4535	1	1	0	0	0	48	0	0	0	0	0	1715	0	969	0	18650	2
39	1720	0	68	0	0	0	223	0	4698	2	0	0	0	0	33	0	0	0	0	0	1350	0	806	0	16534	2
40	1981	0	124	0	1	0	117	0	5137	2	5	0	0	0	36	0	2	0	0	0	1725	0	817	0	16818	3
41	1704	0	132	0	1	0	79	0	4725	3	0	0	1	1	33	0	0	0	0	0	1444	0	860	0	15812	3
Total	7801	0	433	0	2	0	637	0	19095	8	6	0	1	1	150	0	2	0	0	0	6234	0	3452	0	67814	10

*Data from Balakot Tehsil were merged with the data from Mansehra district.