

Epidemiological Week No. 389 (22 - 28 Sep)

October 8/ Vol. 97/ DEWS 2007-39

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Komikot, Muzaffarabad: Health education providing after an AWD outbreak



Highlights

- There were 382 cases of bloody diarrhoea reported in this week 39.
- Malaria cases decreased by less than 1% from week 38 (W38=496 & W39=493)
- Acute watery diarrhoea cases decreased 9% from week 38 (W38=7,783 & W39=7,373)
- Two suspected cases of Measles were reported from DHQ hospital, Mansehra district and three suspected cases reported from Rawalakot district.
- Two suspected cases of acute flaccid paralysis were reported from Mansehra district.

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 sites for the DEWS in the earthquake affected areas remains 335. 309 (92%) sent their surveillance data on time during the epidemiological week 39 (22-28 Sept 2007). See Table 1 for summary statistics.

Table 1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 1 to 28 Sep 2007.

Area	Population	Reporting Health Facilities			
		1-7 Sep Week-36	8-14 Sep Week-37	15-21 Sep Week-38	22-28 Sep Week-39
Bagh	452,532	40	41	40	40
Battagram	592,256	30	34	34	37
Mansehra	1,154,804	71	71	70	68
Muzaffarabad	894,364	89	87	92	96
Poonch	633,712	66	64	69	68
Total	3,727,668	296(88%)	297(89%)	305(91%)	309(92%)

Total number of consultations

The total number of units reporting increased by 4 this week, over the previous week (from 305 units last week to 309 units this week), the total number of consultations reported throughout DEWS increased by 2% compared with the previous week (83,462 to 85,248). The weekly trend of reporting units participating in the DEWS and the number of consultations is shown in figure 1.

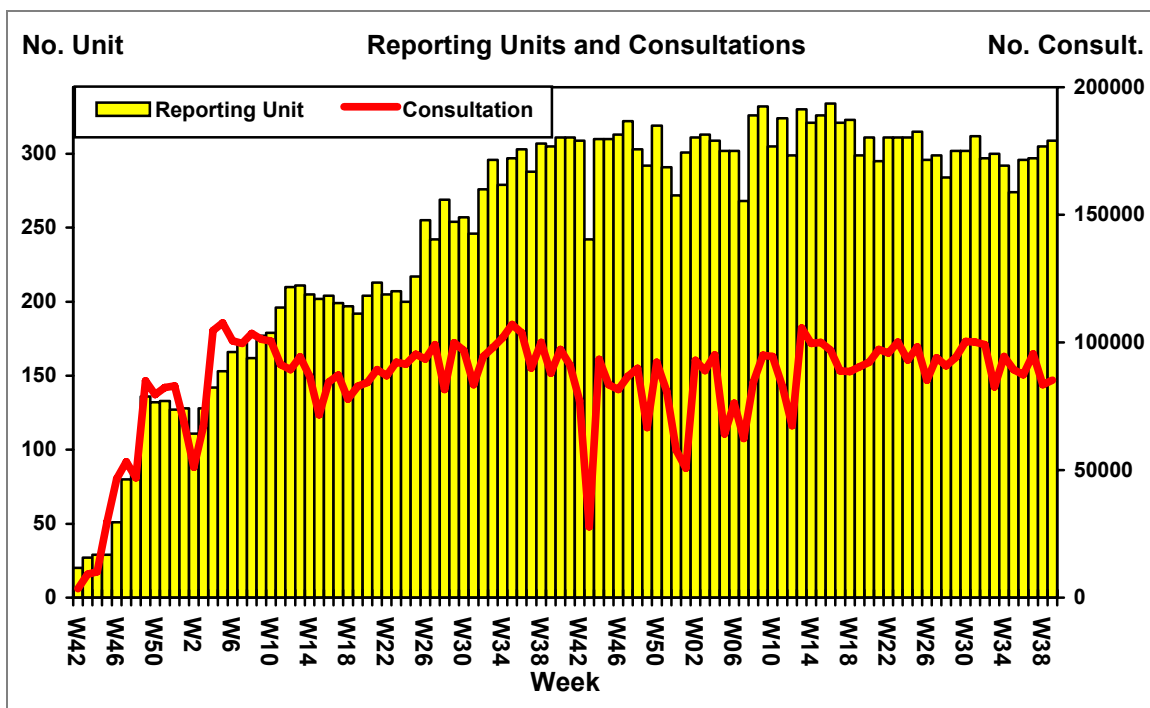


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 - 28 Sep 2007.

DEWS Data, Epidemiological Week No. 39, 2007

During the last week (22 to 28 Sep, 2007), **85,248** consultations were reported through DEWS. Acute Respiratory Infections (**ARI**) accounted for **23%** (19,940) of consultations, which was 2 percentage points higher compared to the same week last year. Acute Watery Diarrhoea (**AWD**) was **9%** of consultations (7,373), **7%** (6,089) were due to Fever of Unknown Origin (**FUO**) and less than **1%** (35) due to Injuries (**INJ**). The **AWD** rate in patients under five years old was less than 1 percentage point lower in week 39 of 2007 compared to the same week last year. In patients aged five and above, **AWD** made up **7%** of consultations which was 1 percentage point lower than the rate reported in the same week last year. All other reportable conditions each represented less than **1%** of the total consultations in week 39.

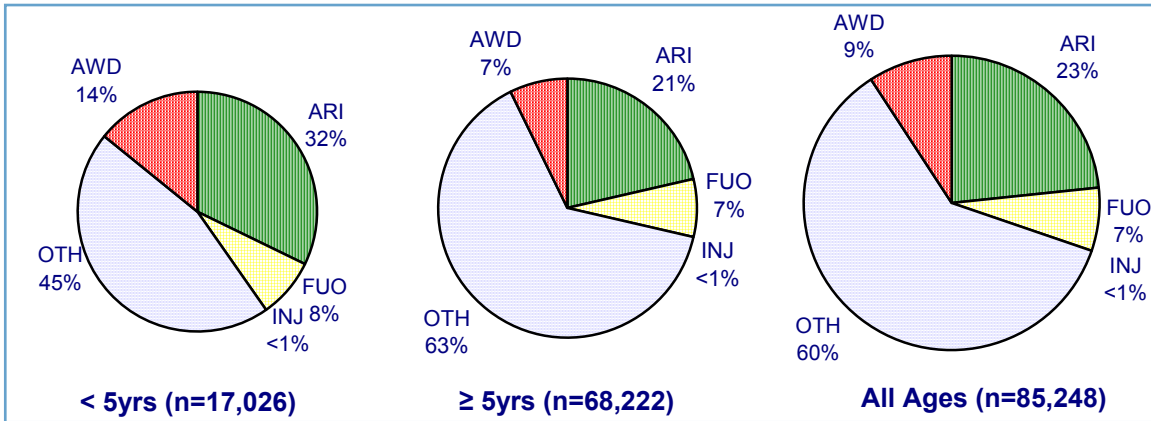


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 22 - 28 Sep 2007.

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

DEWS Data, Epidemiological Week No. 39, 2007: Consultations by age

During the reporting week 39, there were 7,373 cases of acute watery diarrhoea reported out of which 4,942 cases were over five years of age group and 2,431 cases were less than five year age group. There was one death less than five year of age reported from Muzaffarabad district. The distribution of the percentage of consultations is shown in Figure 3.

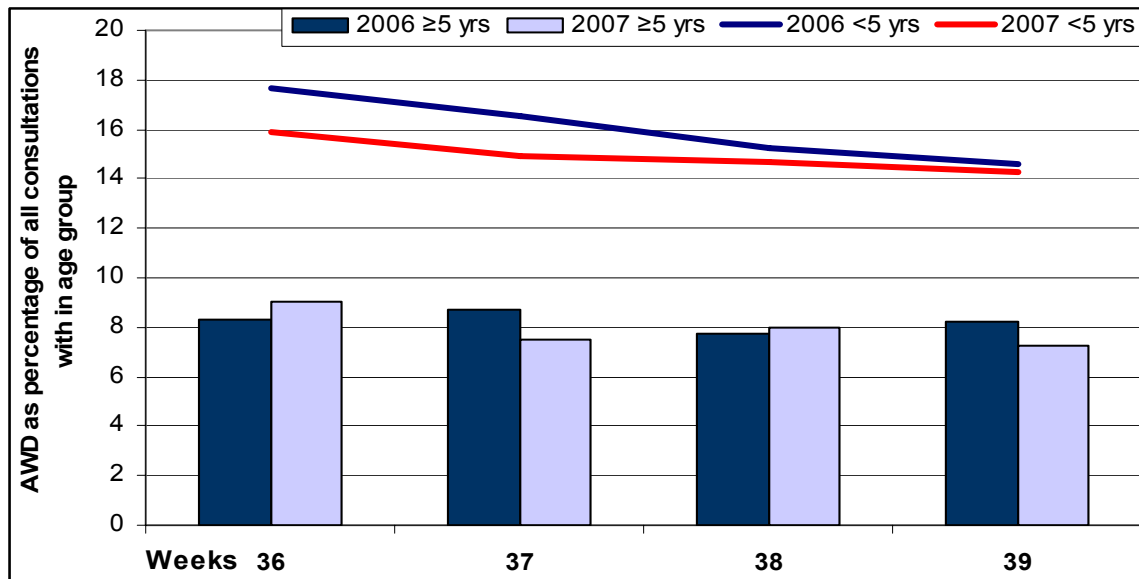


Figure 3: AWD as a percent of all consultations with in age group, Earthquake Affected Areas, Pakistan. 2-29 Sep 2006 and 1-28 Sep 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 36-39)

During the period, 1 to 28 Sep, 2007 (Epidemiological weeks 36 to 39 inclusive), 143,626 consultations relating to health conditions under surveillance were reported, out of the total of 351,536 consultations. **23%** (79,568) of consultations were due to acute respiratory infection (**ARI**), **9%** (32,700) acute watery diarrhoea (**AWD**), **8%** (27,260) unexplained fever (**FUO**) and less than **1%** (420) Injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 1 – 28 Sep 2007.

Week	WEEK 36		WEEK 37		WEEK 38		WEEK 39		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	9082	2	8462	1	7783	0	7373	1	32700	4	0.012
BD	391	0	309	0	336	0	382	0	1418	0	0.000
AFP	4	0	0	0	3	0	2	0	9	0	0.000
MAL	502	0	625	0	496	0	493	0	2116	0	0.000
ARI	18897	1	21127	4	19604	2	19940	5	79568	12	0.015
MES	4	0	0	0	5	0	2	0	11	0	0.000
MEN	0	0	1	1	0	1	1	0	2	2	100
JAU	42	0	35	0	25	0	19	0	121	0	0.000
TET	0	0	0	0	0	0	0	0	0	0	0.000
AHF	0	0	1	0	0	0	0	0	1	0	0.000
FUO	7040	0	7332	0	6799	0	6089	0	27260	0	0.000
INJ	152	0	158	0	75	0	35	0	420	0	0.000
OTH	51267	12	57395	10	48336	19	50912	10	207910	51	0.025
TOTAL	87381	15	95445	16	83462	22	85248	16	351536	69	
RU	296		297		305		309				

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, **68,422** consultations were reported in children less than 5 years of age, (19% of the total consultations), of which **ARI** was **30%** (20,804), **AWD** **15%** (10,244), **FUO** **8%** (5,757) and **INJ** was less than **1%** (88).

Table 3. Total number of reported cases, deaths and monthly Case Fatality Rate (CFR), less than 5 years old, Earthquake Affected Areas, Pakistan 1 – 28 Sep 2007.

Week	WEEK 36		WEEK 37		WEEK 38		WEEK 39		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	2732	1	2663	1	2418	0	2431	1	10244	3	0.029
BD	83	0	63	0	70	0	75	0	291	0	0.000
AFP	3	0	0	0	2	0	1	0	6	0	0.000
MAL	64	0	72	0	69	0	53	0	258	0	0.000
ARI	4908	1	5490	4	5005	2	5401	5	20804	12	0.058
MES	2	0	0	0	4	0	1	0	7	0	0.000
MEN	0	0	1	0	0	1	1	0	2	1	50.00
JAU	7	0	7	0	1	0	2	0	17	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	1479	0	1433	0	1416	0	1429	0	5757	0	0.000
INJ	38	0	33	0	13	0	4	0	88	0	0.000
OTH	7845	6	8040	3	7435	14	7628	7	30948	30	0.097
TOTAL	17161	8	17802	8	16433	17	17026	13	68422	46	
RU	296		297		305		309				

There was a 5% decrease in the number of AWD cases from 7,783 to 7,373 since last week, but there was an increase in the number of ARI cases from 19,604 to 19,940 since last week. The weekly proportion of ARI and AWD is shown in figure 4.

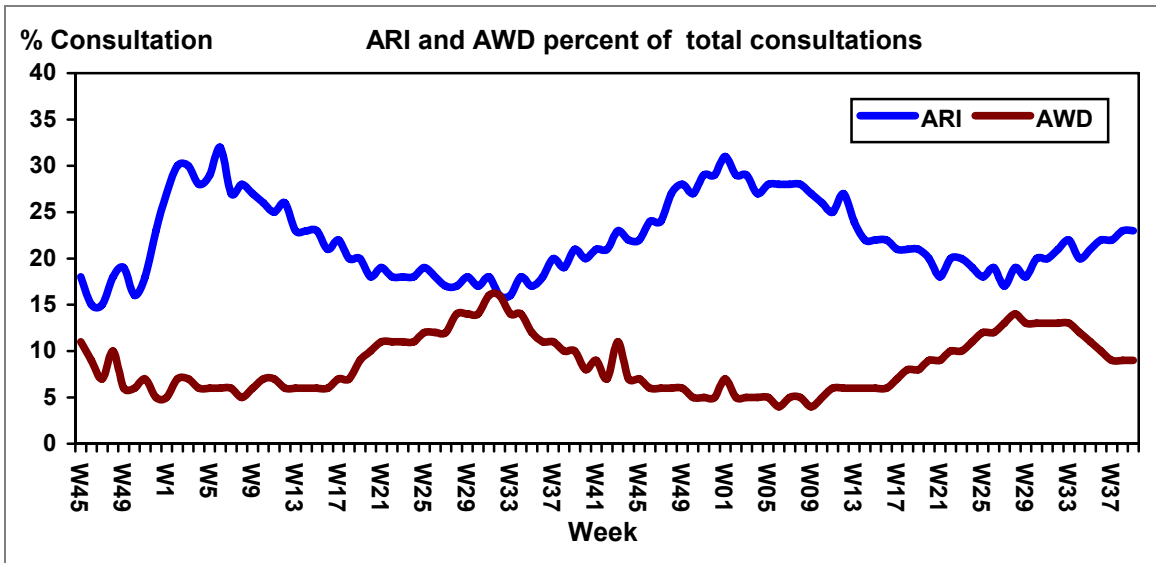


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 15 October 2005 – 28 Sep 2007.

Acute Watery Diarrhoea

During week 39, there were 7,373 cases (9% of all consultations) of AWD reported, out of which 2,431 cases were in patients less than 5 years of age and 4,942 cases were in patients 5 years and over. There was one death in a patient less than five years of age reported from Muzaffarabad district. The rate of AWD by district in week 39 or 2006 and 2007 is almost identical except for Muzaffarabad, where the rate was much higher in 2006, and Poonch, where the rate is slightly higher in 2007. The rate of AWD percentage by district is shown on figure 5.

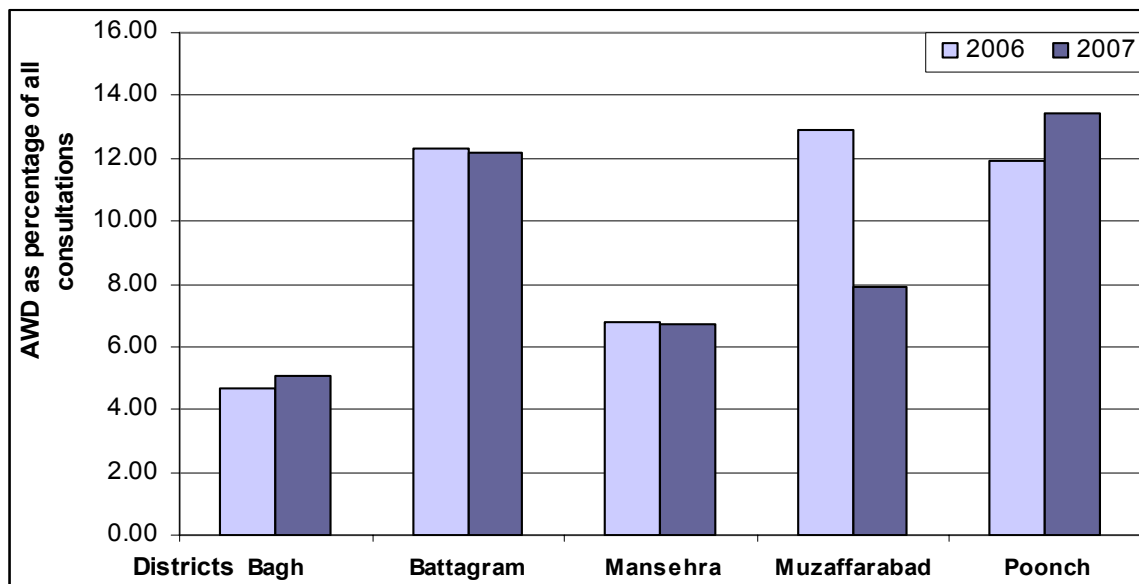


Figure 5: AWD as a percent of all consultations by district, Earthquake Affected Areas, Pakistan. 2-29 Sep 2006 and 1-28 Sep 2007.

Bloody Diarrhoea

During week 39, there were 382 cases of bloody diarrhoea reported. There were no associated deaths reported from any district. In last four weeks the rate of bloody diarrhoea is lower compared to the same weeks last year, though the rate has been rising over the last two weeks. See figure 6.

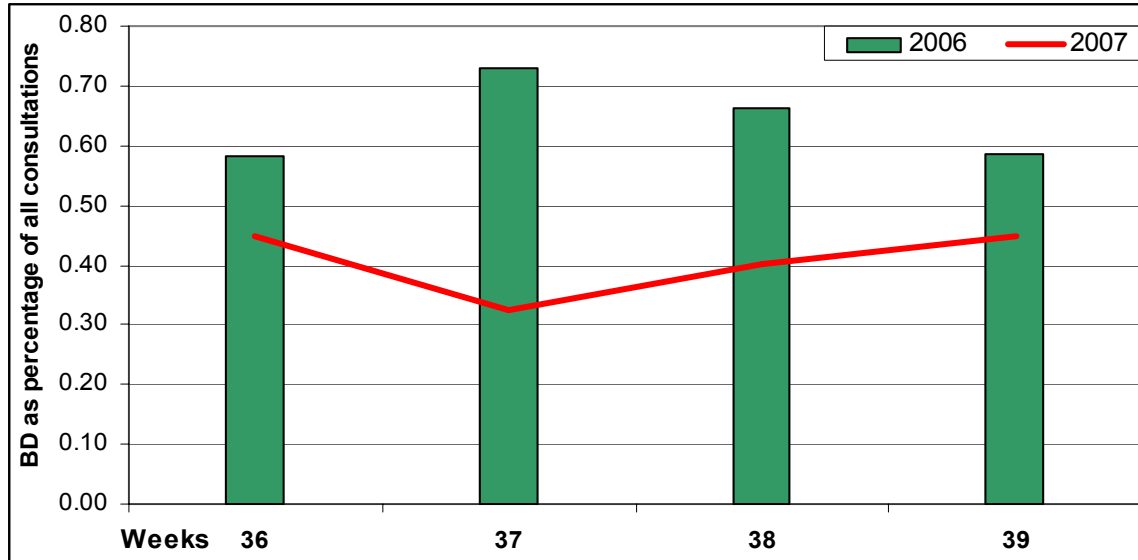


Figure 6: comparison of bloody diarrhoea as percentage of all consultations with in age group, Earthquake Affected Areas, Pakistan, 2-29 Sep 2006 and 1-28 Sep 2007.

Acute Jaundice Syndrome

In week 39, there were 19 cases of suspected hepatitis reported out of which 9 cases were from Battagram, 4 cases from Rawalakot, 3 cases were reported from Mansehra district and 3 cases reported from Bagh district. There were no associated deaths reported from any district. The rate of AJS has been consistently lower in 2007 than that seen in the same weeks of year 2006, and has been on a steady downward trend the last four weeks. See figure 7.

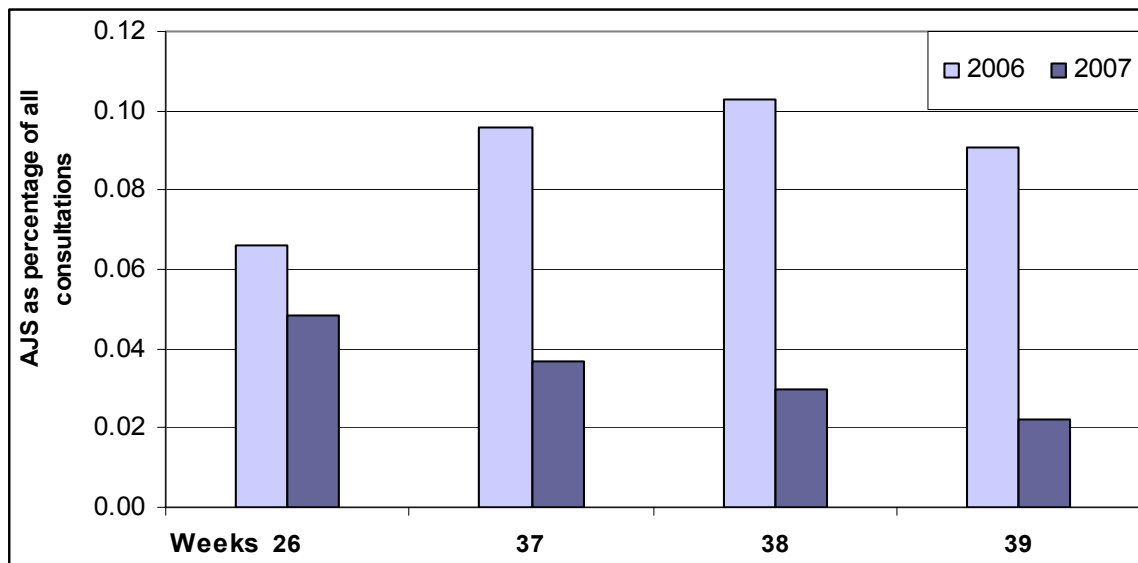


Figure 7: Suspected hepatitis percentage of all consultations, Earthquake Affected Areas, Pakistan, 2-29 Sep 2006 and 1-28 Sep 2007.

Malaria

In week 39, there were 493 suspected cases of malaria reported, out of which 440 cases were over five years of age and 53 cases were less than five years of age. There were no associated deaths reported from any district. The rate of Malaria has been lower in 2007 when compared to the same weeks last year. See figure 8.

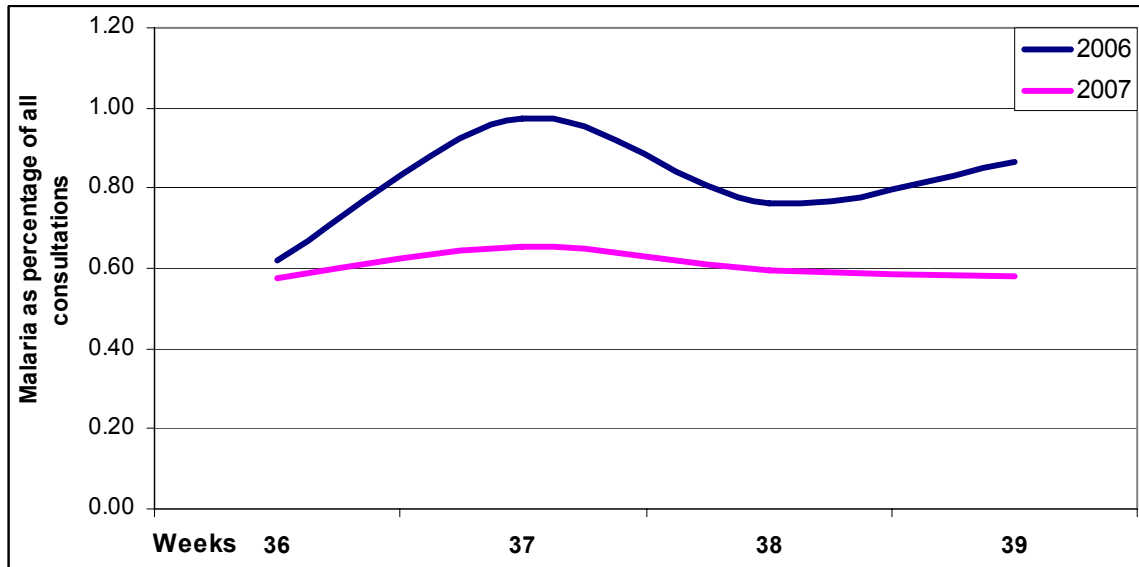


Figure 8: Malaria as percentage of all consultations with in districts, Earthquake Affected Areas, Pakistan, 2-29 Sep 2006 and 1-28 Sep 2007.

Measles

There were 2 suspected cases of measles reported in week 39; both cases reported from Mansehra district. In one week of the last four there have been more measles cases in 2007 than in 2006. See Figure 9.

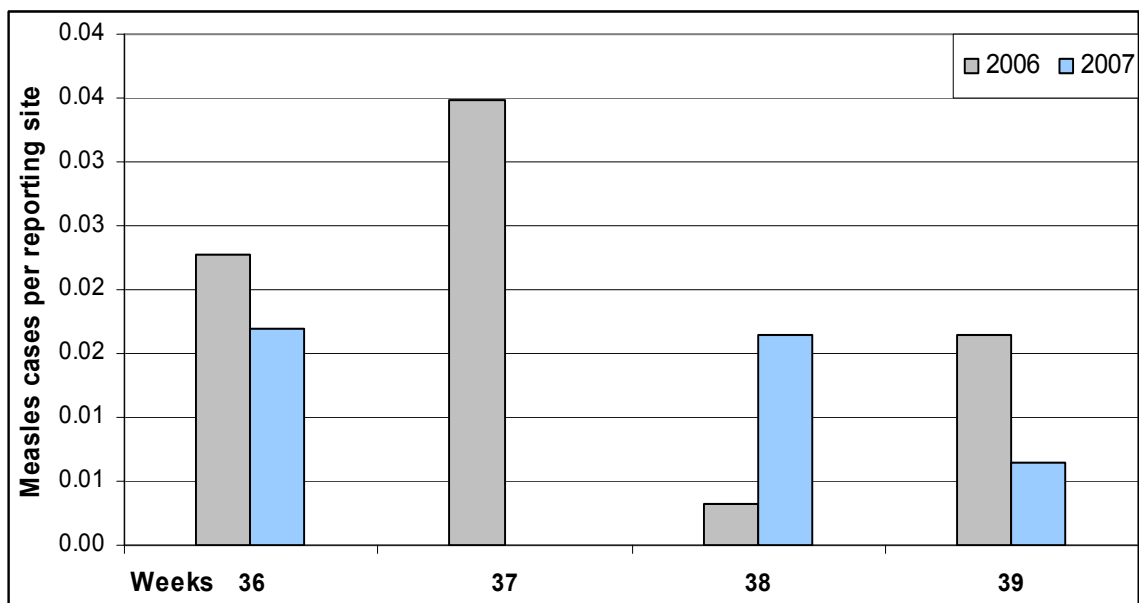


Figure 9: Trend in measles cases per reporting site, Earthquake Affected Areas, Pakistan, 2-29 Sep 2006 and 1-28 Sep 2007.

Acute Respiratory Infection

In week 39, there were 19,940 consultations for ARI reported through the DEWS system. There were 5 deaths in patients less than five years of age reported out of which 3 death were reported from Mansehra, 1 death reported from Muzaffarabad district and 1 death reported from Bagh district. The rate of ARI has been consistently higher in last four weeks of 2007 than that seen in the same weeks of 2006. See Figure 10.

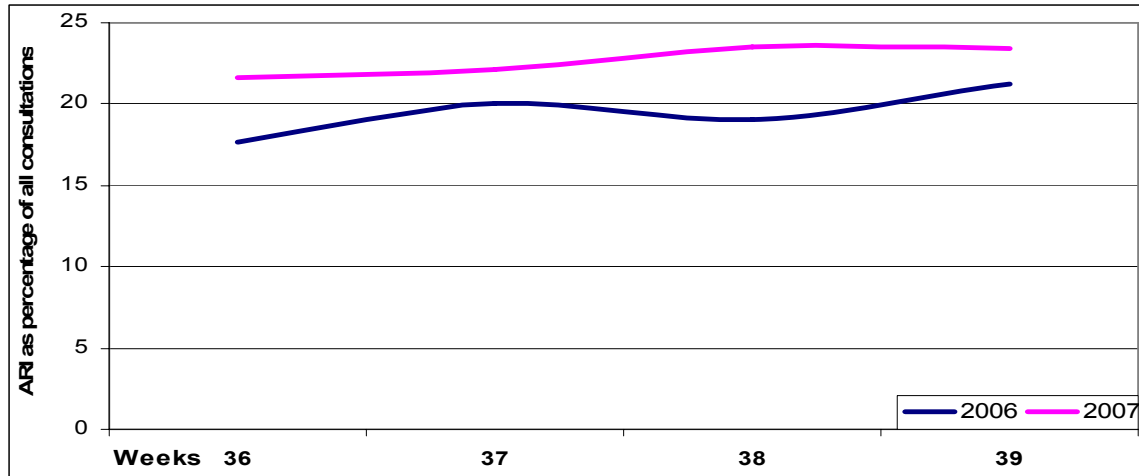


Figure 10: ARI as percent of all consultations, Earthquake Affected Areas, Pakistan, 2-29 Sep 2006 to 1-28 Sep 2007.

Other Reportable Diseases and Conditions

There were 6,089 cases (7% of all consultations) of Fever of Unknown Origin (FUO) and 35 cases of injuries reported in week 39. There were no deaths reported from any district. There was one suspected case of meningitis reported in this week from Mansehra district. There were no cases of tetanus or hemorrhagic fever reported from any district in week 39.

The rate of fever is higher in 2007 than that seen in 2006, but may represent a better application of case definitions, as fevers are often diagnosed as suspected malaria, and the malaria rate is lower than that seen in 2006. See figure 11.

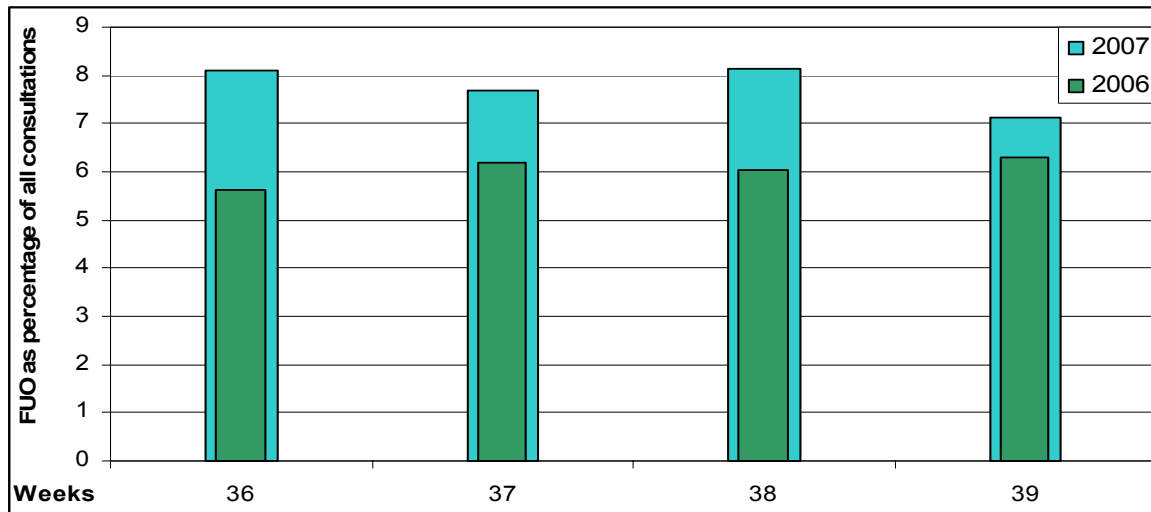


Figure 11: Unexplained fever as a percentage of all consultations, Earthquake Affected Area, Pakistan, 2-29 Sep 2006 and 1-28 Sep 2007.

Outbreak Alert and Response¹

Measles

Mansehra

Two suspected cases of measles were reported from DHQ hospital Mansehra. The patients were a 15 month old male child resident of Shahnawaz Chowk, Mansehra and a ten year old male resident of Muhalla Chanai, Mansehra. On investigation both the patients were unable to be located due to incomplete address. DHQ hospital staff requested to note proper and complete addresses or location.

Acute Jaundice Syndrome

Poonch

Three cases of suspected measles were reported from RHC Alisojil. No details were given, so the investigation team visited the facility to determine whether there was a cluster that would need further investigation. There were only two cases in the OPD register, and both were in villages located a significant distance apart, therefore there was no alert.

Acute Flaccid Paralysis

Mansehra

Two suspected cases of AFP reported from DHQ hospital Mansehra, the patients were a 15 month old male child resident of Malikpur, Mansehra and 20 month old male child resident of Kotka Mansehra admitted with weakness in both legs for the last ten days and five days respectively. WHO EPI team investigated the cases and stool samples were taken and sent to NIH for laboratory confirmation.

Meningitis

Mansehra

One suspected case of meningitis reported from DHQ hospital Mansehra. The patient was a 5 year old male child resident of Bedadi, Shinkiari, Mansehra. He came to hospital with a high grade of fever, bulging fontanel and difficulty in breathing for the last five days. The patient was still under treatment of DHQ hospital and condition has improved. On active surveillance no other case was found from the surrounding area.

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, 1 -28 Sep 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
36	826	0	11	0	1	0	88	0	1931	0	1	0	0	0	5	0	0	0	0	0	182	0	0	0	10141	2
37	816	0	21	0	0	0	131	0	2276	0	0	0	0	0	6	0	0	0	0	0	251	0	0	0	11725	3
38	633	0	29	0	0	0	105	0	2151	0	1	0	0	0	3	0	0	0	0	0	304	0	0	0	9205	3
39	584	0	31	0	0	0	117	0	2233	1	0	0	0	0	3	0	0	0	0	0	269	0	0	0	8242	1
Total	2859	0	92	0	1	0	441	0	8591	1	2	0	0	0	17	0	0	0	0	0	1006	0	0	0	39313	9

Table 7. Number of reported cases and deaths, **Poonch District***, Earthquake Affected Areas, Pakistan, 1 -28 Sep 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
36	2089	0	24	0	0	0	238	0	3226	0	1	0	0	0	2	0	0	0	0	0	1658	0	0	0	7419	1
37	1903	0	20	0	0	0	211	0	3754	0	0	0	0	0	1	0	0	0	1	0	1902	0	0	0	7992	3
38	1954	0	32	0	0	0	164	0	3453	0	0	0	0	0	1	0	0	0	0	0	1899	0	0	0	7302	3
39	1930	0	17	0	0	0	147	0	3308	0	0	0	0	0	4	0	0	0	0	0	1827	0	0	0	7128	1
Total	7876	0	93	0	0	0	760	0	13741	0	1	0	0	0	8	0	0	0	1	0	7286	0	0	0	29841	8

Table 8. Number of reported cases and deaths, **Muzaffarabad District***, Earthquake Affected Areas, Pakistan, 1 -28 Sep 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
36	3497	2	230	0	0	0	103	0	8651	1	1	0	0	0	4	0	0	0	0	0	3297	0	152	0	14295	4
37	2905	1	137	0	0	0	175	0	9101	1	0	0	0	1	7	0	0	0	0	0	3284	0	149	0	16683	2
38	2837	0	171	0	0	0	176	0	8869	2	0	0	0	0	7	0	0	0	0	0	2980	0	66	0	15347	10
39	2284	1	228	0	0	0	174	0	8487	1	0	0	0	0	0	0	0	0	0	0	2344	0	35	0	15371	6
Total	11523	4	766	0	0	0	628	0	35108	5	1	0	0	1	18	0	0	0	0	0	11905	0	402	0	61696	22

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District***, Earthquake Affected Areas, Pakistan, 1 -28 Sep 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
36	1000	0	103	0	0	0	54	0	1478	0	0	0	0	0	17	0	0	0	0	0	529	0	0	0	3670	0
37	1229	0	105	0	0	0	53	0	1885	0	0	0	0	0	13	0	0	0	0	0	684	0	9	0	4873	0
38	1090	0	87	0	0	0	43	0	1731	0	1	0	0	0	5	0	0	0	0	0	505	0	9	0	4360	0
39	1160	0	73	0	0	0	35	0	1967	0	0	0	0	0	9	0	0	0	0	0	455	0	0	0	5799	0
Total	4479	0	368	0	0	0	185	0	7061	0	1	0	0	0	44	0	0	0	0	0	2173	0	18	0	18702	0

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 1 -28 Sep 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
36	1670	0	23	0	3	0	26	0	3611	0	1	0	0	0	14	0	0	0	0	0	1374	0	0	0	15742	3
37	1609	0	26	0	0	0	55	0	4111	3	0	0	1	0	8	0	0	0	0	0	1211	0	0	0	16122	2
38	1269	0	17	0	3	0	8	0	3400	0	3	0	0	1	9	0	0	0	0	0	1111	0	0	0	12122	3
39	1415	0	33	0	2	0	20	0	3945	3	2	0	1	0	3	0	0	0	0	0	1194	0	0	0	14372	2
Total	5963	0	99	0	8	0	109	0	15067	6	6	0	2	1	34	0	0	0	0	0	4890	0	0	0	58358	10