

Epidemiological Week No. 36 (1 - 7 Sep)

September 18/ Vol. 94/ DEWS 2007-36

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Bagh: Polio Vaccination campaign
Pictured by: Dr. Fawad Khan



Highlights

- There were 376 cases of bloody diarrhoea reported in this week 36.
- Malaria cases decreased from week 35 (W35=741 & W36=490)
- Acute watery diarrhoea cases decreased from week 35 (W35=9,715 & W36=8,768)
- Three cases of acute watery diarrhoea were reported from DHQ hospital, Bagh district.
- Three suspected cases of measles reported from Bagh, Mansehra and Muzaffarabad districts. One case from each district.
- Four suspected cases of AFP were reported in this week 3 cases from Mansehra and 1 case reported from Bagh 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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Health Emergency Operation Centre, National Park Road, Chak Shehzad, Islamabad, Pakistan.

For More Information, please contact:

Dorcas Taylor, Epidemiologist, WHO/EHA/Pakistan; taylor@pak.emro.who.int or
Dr. Birjees Mazher Kazi, Chief, Public Health Laboratories Division, NIH MOH; kazis@isb.paknet.com.pk or
WHO Webpage: <http://www.whopak.org/disaster>

Reporting Units

The number of reporting sites able to report this week was 286, a 5% increase compared to last week.

See Table 1 for summary statistics.

Table 1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 11 Aug to 7 Sep 2007.

Area	Population	Reporting Health Facilities			
		11-17 Aug Week-33	18-24 Aug Week-34	25-31 Aug Week-35	1-7 Sep Week-36
Bagh	452,532	39	42	41	39
Battagram	592,256	34	30	34	28
Mansehra	1,154,804	70	71	70	71
Muzaffarabad	894,364	91	85	73	82
Poonch	633,712	66	61	54	66
Total	3,727,668	300(90%)	289(86%)	272(81%)	286(85%)

Total number of consultations

In week 36, there was a 5% increase in the number of reporting sites, but the number of consultations was decreased from 89,115 to 82,872. The highest number of consultations was reported from Muzaffarabad, with 27,572, and the lowest from Battagram district, at 6,070. The weekly trend of reporting units participating in the DEWS and the number of consultations is shown in figure 1.

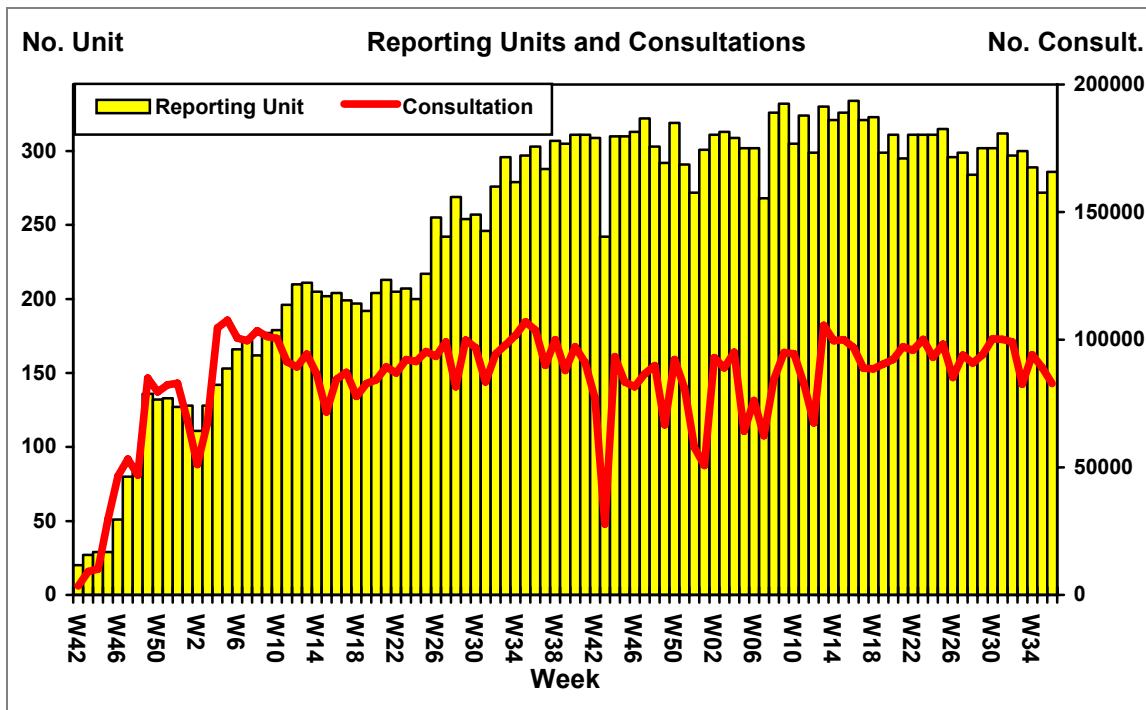


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 - 7 Sep 2007.

DEWS Data, Epidemiological Week No. 36, 2007

During the last week (1 to 7 Sep, 2007), **82,872** consultations were reported through DEWS. Acute Respiratory Infections (**ARI**) accounted for **21%** (17,814) of consultations, which was 3 percentage points higher compared to the same week last year. Acute Watery Diarrhoea (**AWD**) was **11%** of consultations (8,768), **8%** (7,001) were due to Fever of Unknown Origin (**FUO**) and less than **1%** (125) due to Injuries (**INJ**). The **AWD** rate in patients under five years was 2 percentage points lower in week 36 of 2007 compared to the same week last year. In patients aged five and above, **AWD** made up **9%** of consultations which was 1 percentage points higher reported in the same week last year. All other reportable conditions each represented less than **1%** of the total consultations in week 36.

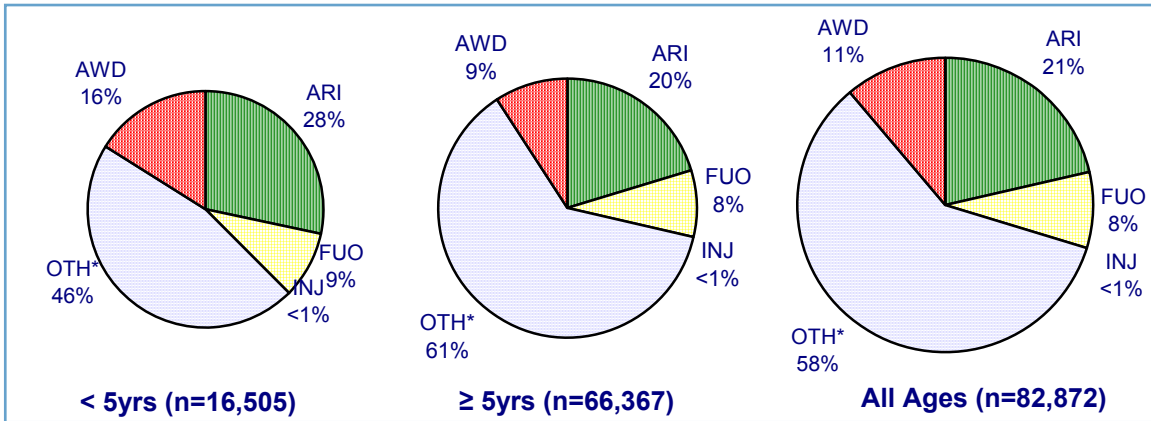


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 1 - 7 Sep 2007.

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

DEWS Data, Epidemiological Week No. 36, 2007: Consultations by age

The rate of acute watery diarrhoea differs by age group, with young children typically having a much higher rate than older children or adults. Though Battagram has a very high rate of AWD in children, for surveillance, the high rate in older children and adults that is present in Poonch district may be more of a cause for investigation than the rate in Battagram. Figure 3.

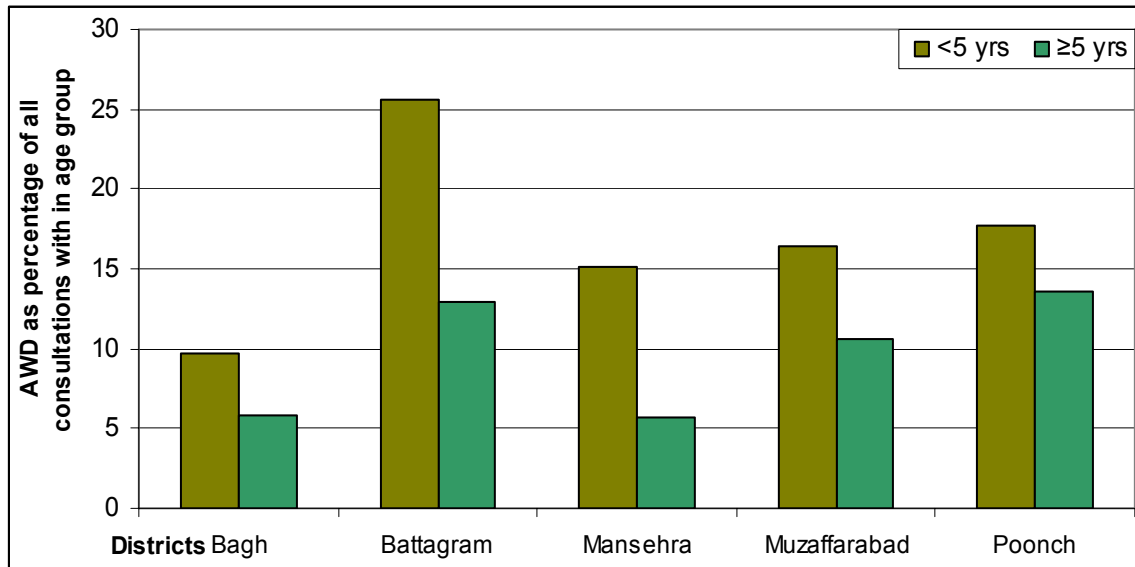


Figure 3: Rate of AWD by age and district, Earthquake Affected Areas, Pakistan, 1 - 7 Sep 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 33-36)

During the period, 11 Aug to 7 Sep, 2007 (Epidemiological weeks 33 to 36 inclusive), 145,396 consultations relating to health conditions under surveillance were reported, out of the total of 348,668 consultations. **21%** (73,130) of consultations were due to acute respiratory infection (**ARI**), **11%** (39,791) acute watery diarrhoea (**AWD**), **8%** (27,489) unexplained fever (**FUO**) and less than **1%** (743) Injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 11 Aug – 7 Sep 2007.

Week	WEEK 33		WEEK 34		WEEK 35		WEEK 36		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	10448	2	10860	0	9715	1	8768	2	39791	5	0.013
BD	444	0	468	0	372	0	376	0	1660	0	0.000
AFP	2	0	0	0	0	0	4	0	6	0	0.000
MAL	644	0	583	0	741	0	490	0	2458	0	0.000
ARI	17820	2	18878	2	18618	0	17814	1	73130	5	0.007
MES	1	0	0	0	0	0	4	0	5	0	0.000
MEN	1	0	0	0	0	0	0	0	1	0	0.000
JAU	19	0	29	0	27	0	38	0	113	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	6506	0	6794	0	7188	0	7001	0	27489	0	0.000
INJ	91	0	381	0	146	0	125	0	743	0	0.000
OTH	46577	15	56135	25	52308	22	48252	10	203272	72	0.035
TOTAL	82553	19	94128	27	89115	23	82872	13	348668	82	
RU	300		289		272		286				

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, **66,637** consultations were reported in children less than 5 years of age, (19% of the total consultations), of which **ARI** was **28%** (18,551), **AWD** **18%** (11,882), **FUO** **9%** (6,020) and **INJ** was less than **1%** (153).

Table 3. Total number of reported cases, deaths and monthly Case Fatality Rate (CFR), less than 5 years old, Earthquake Affected Areas, Pakistan 11 Aug – 7 Sep 2007.

Week	WEEK 33		WEEK 34		WEEK 35		WEEK 36		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	2958	2	3387	0	2933	1	2604	1	11882	4	0.034
BD	105	0	135	0	97	0	82	0	419	0	0.000
AFP	2	0	0	0	0	0	3	0	5	0	0.000
MAL	55	0	85	0	116	0	64	0	320	0	0.000
ARI	4207	2	4803	1	4891	0	4650	1	18551	4	0.022
MES	1	0	0	0	0	0	2	0	3	0	0.000
MEN	0	0	0	0	0	0	0	0	0	0	0.000
JAU	5	0	3	0	4	0	6	0	18	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	1517	0	1520	0	1509	0	1474	0	6020	0	0.000
INJ	3	0	87	0	29	0	34	0	153	0	0.000
OTH	6470	7	7667	8	7543	11	7586	4	29266	30	0.103
TOTAL	15323	11	17687	9	17122	12	16505	6	66637	38	
RU	300		289		272		286				

There was a 11% decrease in the number of AWD cases from 9,715 to 8,768 since last week, and there was also decrease in number of ARI cases from 18,618 to 17,814 since last week. The weekly proportion of ARI and AWD is shown in figure 4.

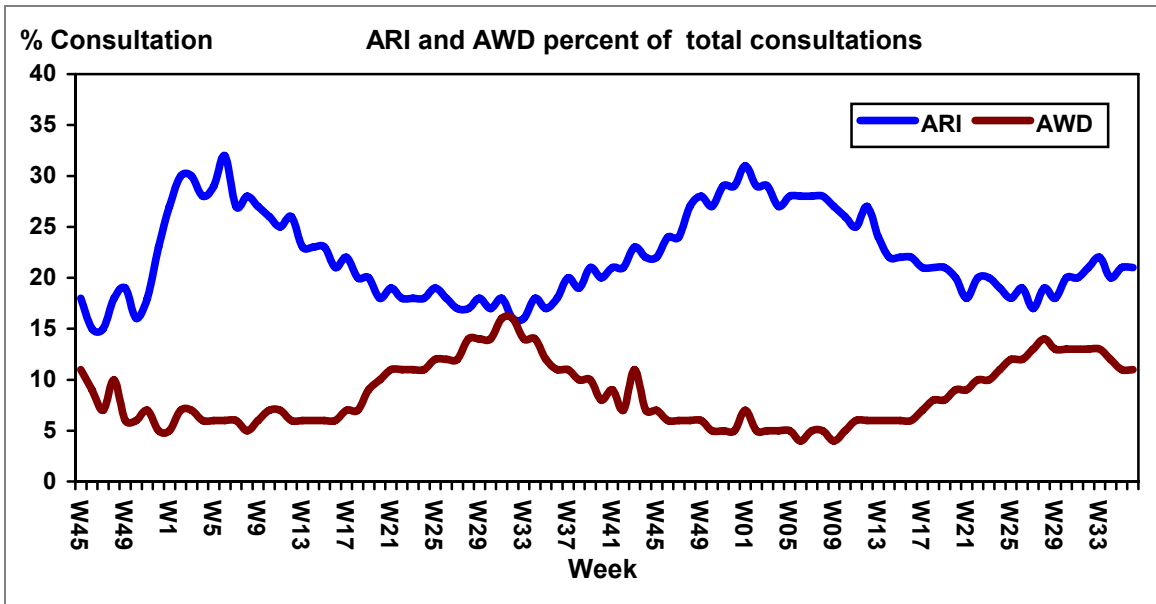


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 15 October 2005 – 7 Sep 2007.

Acute Watery Diarrhoea

During week 36, there were 8,768 cases of AWD reported. There were two deaths reported from Muzaffarabad district. Almost all districts are showing a higher rate of AWD in week 36 of 2007 than then did in the same week of 2006. See figure 5.

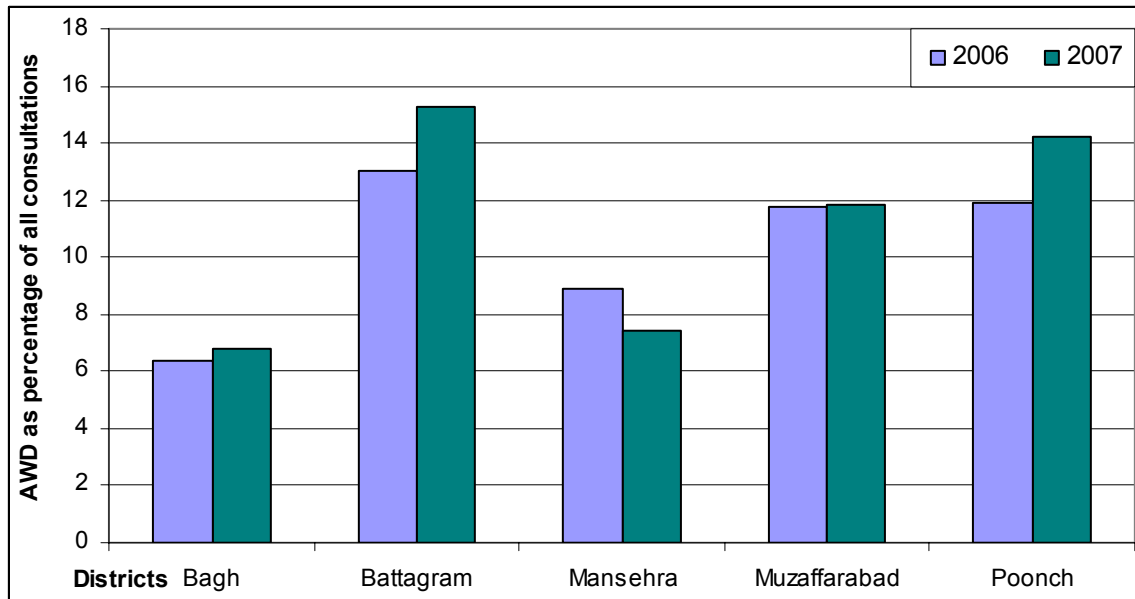


Figure 5: AWD as a percent of all consultations by district, 2007, Earthquake Affected Areas, Pakistan, 2-8 Sept 2006 and 1 - 7 Sept 2007

Bloody Diarrhoea

During week 36, there were 376 suspected cases of bloody diarrhoea reported. There were no associated deaths reported from any district. Battagram district has a very high rate of blood diarrhoea relative to the other districts, though there have been no alerts for the condition reported. See figure 6.

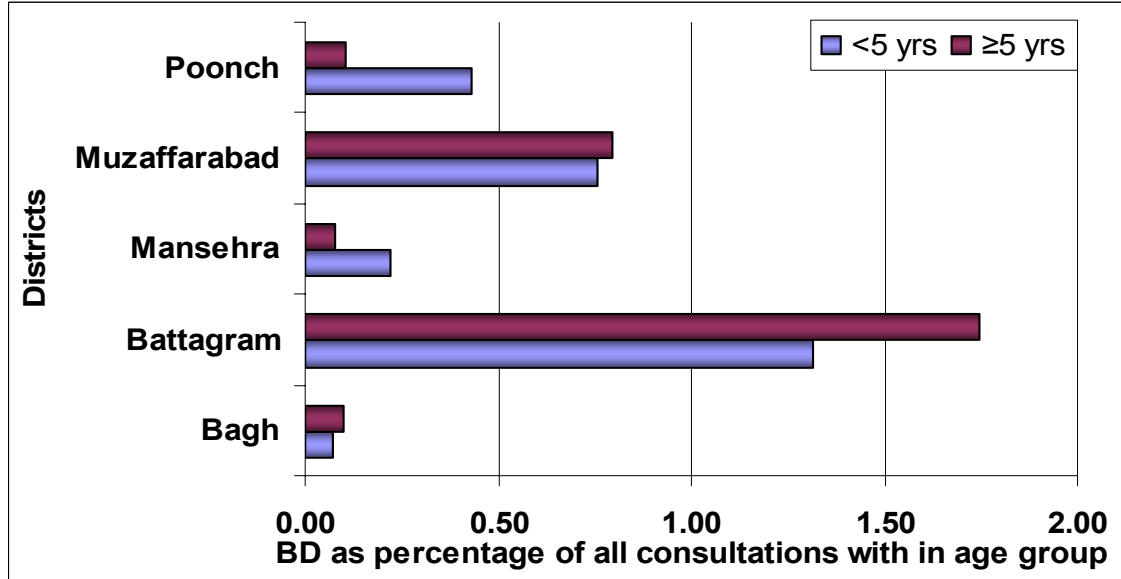


Figure 6: comparison of bloody diarrhoea as percentage of all consultations, Earthquake Affected Areas, Pakistan, Week-36, 2007

Acute Jaundice Syndrome

In week 36, there were 38 cases of suspected hepatitis reported out of which 16 cases were from Battagram, 14 cases from Mansehra, 4 cases were reported from Muzaffarabad district, 2 cases reported from Bagh, and 2 cases reported from Poonch 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 2006. See figure 7.

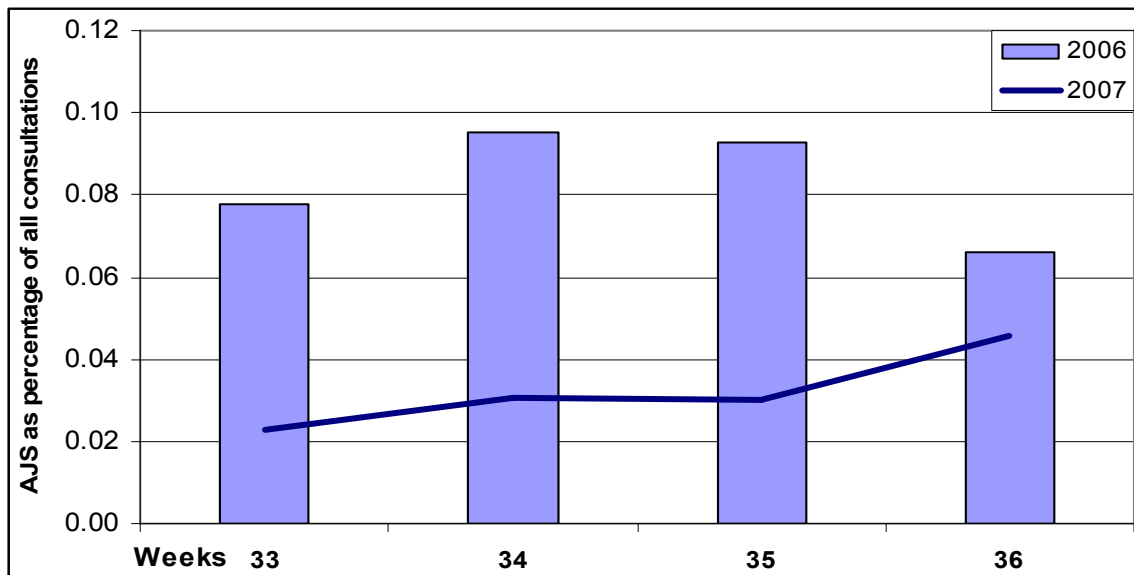


Figure 7: Suspected hepatitis number of cases, Earthquake Affected Areas, Pakistan, 12 Aug- 8 Sep 2006 to 11 Aug-7 Sep 2007.

Malaria

In week 36, there were 490 suspected cases of malaria reported, out of which 426 cases were in patients over five years of age and 64 in patients less than five years of age. There were no associated deaths reported from any district. The rate of malaria in the last four weeks of 2007 closely mirrors the rate in the same weeks of 2006. The percentage of malaria cases by district shown on figure 8.

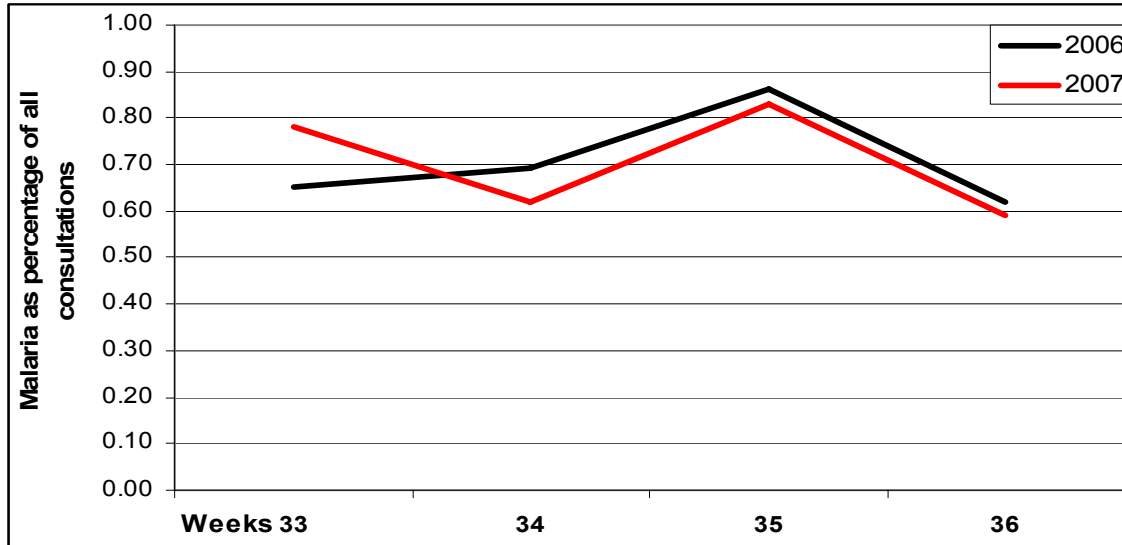


Figure 8: Malaria percentage of cases by district, Earthquake Affected Areas, Pakistan, 12 Aug- 8 Sep 2006 to 11 Aug-7 Sep 2007.

Measles

There were 3 cases of suspected measles reported, from Muzaffarabad, Mansehra and Poonch districts. A fourth case was identified in Bagh district, though not reported through the reporting form. Despite the large measles campaign that has been ongoing in the districts, there are still sporadic cases.

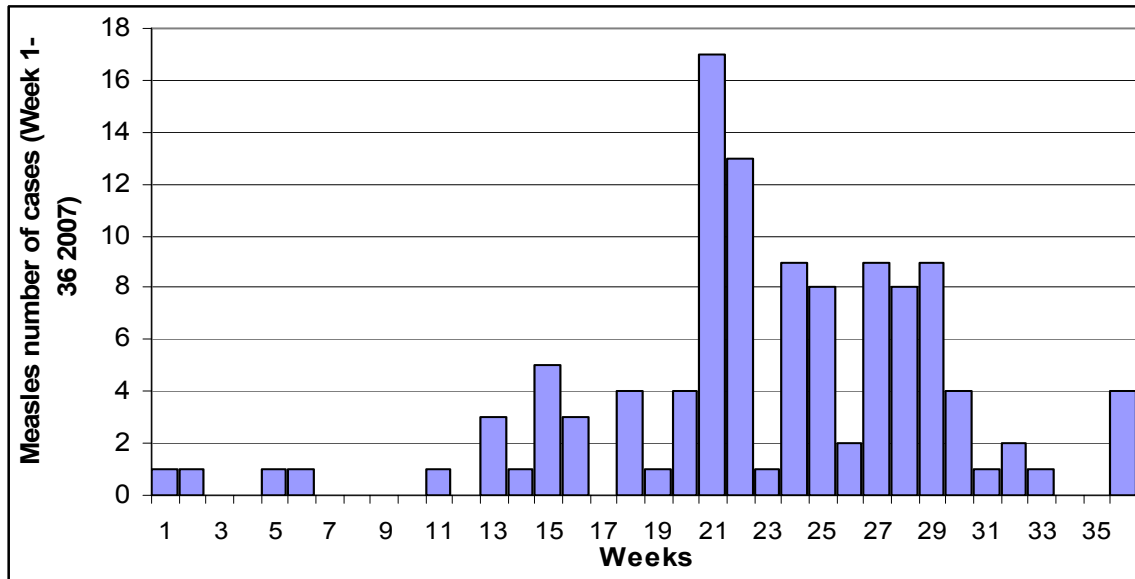


Figure 9: Trend in measles number of cases, Earthquake Affected Areas, Pakistan, 31 Dec 06 – 7 Sep, 2007

Acute Respiratory Infection

In week 36, there were 17,814 consultations for ARI reported through the DEWS system. There was 1 death reported from Muzaffarabad district in week 36. The rate of ARI has been consistently higher in 2007 than that seen in the same weeks of 2006. See Figure 10.

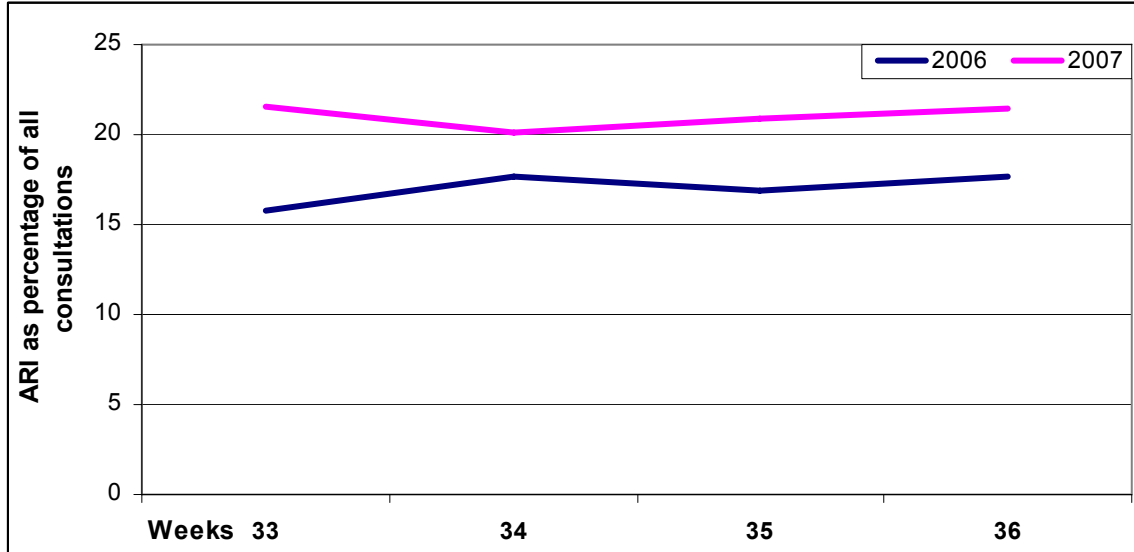


Figure 10: ARI as a percent of all consultations, Earthquake Affected Areas, Pakistan, 12 Aug- 8 Sep 2006 to 11 Aug-7 Sep 2007.

Other Reportable Diseases and Conditions

There were 7,001 cases of Fever of Unknown Origin (FUO) and 125 cases of injuries reported in week 36. There were no deaths reported from any district. There were no cases of meningitis, tetanus and acute hemorrhagic fever reported from any district in week 36. See figure 11.

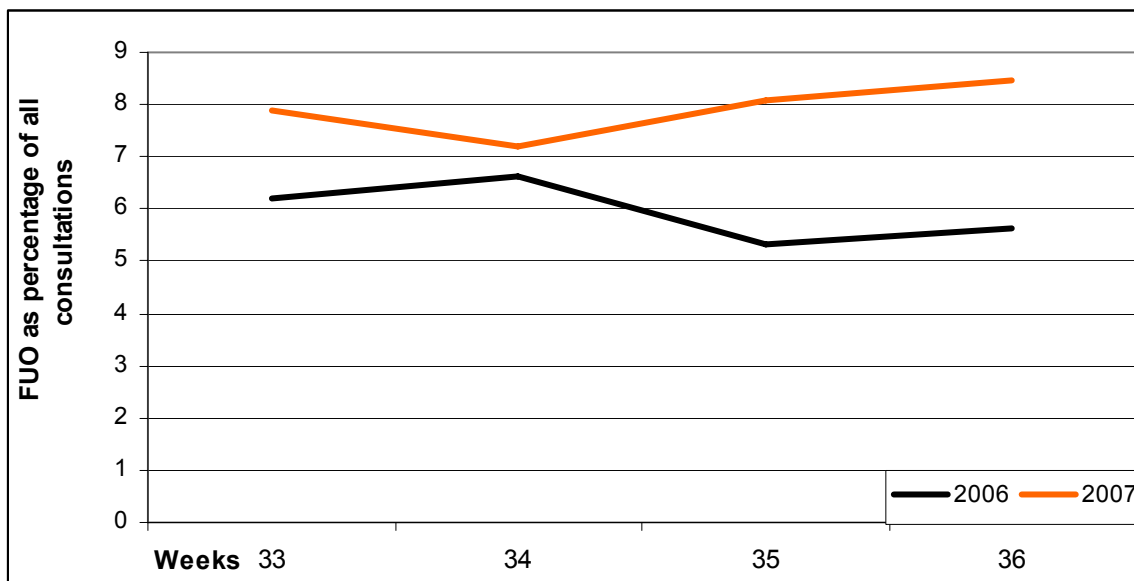


Figure 11: Unexplained fever as a percentage of all consultations, Earthquake Affected Areas, Pakistan, 12 Aug -8 Sep 2006 to 11 Aug - 7 Sept 2007

Outbreak Alert and Response¹

Acute Water Diarrhoea

Bagh

On 1st September 2007 DHQ hospital Bagh reported a case of acute watery diarrhoea. The patient was a 9 year old male resident of village Hurrot, Bagh presenting with complaints of profuse watery diarrhoea and vomiting of 1 day duration. On examination the patient had severe dehydration and was in shock. On active surveillance no other case was found with same signs and symptoms. Water samples were taken from local sources. Education on water disinfection and hygiene education was given to the community. Chlorine tablets were provided to the residents and they were advised on proper use. The local BHU administrator was also requested to keep follow up and promote hygiene education.

On 2nd September 2007 DHQ hospital Bagh reported a case of acute watery diarrhoea. The patient was a 35 year old female resident of village Mandri, Bagh who experienced a sudden onset of profuse watery diarrhoea and vomiting of one day duration. The patient was admitted in the DTC with severe dehydration and shock. A stool sample was taken and sent to NIH for laboratory confirmation. On active surveillance it was found that the sources of drinking water were two open unprotected natural springs. Water quality testing was undertaken. Chlorine tablets and hygiene promotion handbills were distributed in the community. The DHO was informed and briefed about the findings.

DHQ hospital Bagh reported a case of acute watery diarrhoea on 7th September 2007. The patient was a 40 year old female resident of Dhar Paille, Dhirkot, Bagh experiencing profuse watery diarrhoea and vomiting for two days. The patient was admitted in the DTC with severe dehydration and shock. A stool sample was taken and sent to NIH for laboratory confirmation. Water sampling and water quality testing was done and chlorine tablets were given to the residents and hygiene education were provided to the community.

Acute Flaccid Paralysis

Bagh

RHC Kafalgarh, Bagh reported a case of acute flaccid paralysis. The patient was a 16 month old male child resident of village Kachal Dhar, Bagh, admitted with sudden onset of fever and weakness on both legs. The patient was fully immunized for EPI diseases and received regular polio vaccine during polio day campaigns. The information shared with DHO and EPI coordinator.

Mansehra

DHQ hospital Mansehra reported three cases of acute flaccid paralysis. The patients were a 9 year old female resident of Shergarh, an 18 months old male baby resident of Baffa and a 13 months old female baby resident of Shikiari. WHO Polio team were contacted and stool samples were taken and sent to NIH for laboratory confirmation.

Measles

Bagh

DHQ hospital Bagh reported a case of suspected measles from village Seri Awerah on 4th September 2007. The case was reported through telephone, and did not appear on the surveillance report form. The patient was a 9 year old female. The symptoms were low grade fever of 5 days duration, cough, conjunctivitis, macupopular rash mainly on face, chest and upper limbs. Patient was fully immunized for all EPI diseases and received measles vaccine during measles vaccination campaign 2 weeks ago. A blood sample was taken and sent to NIH for laboratory confirmation. Parents were advised to isolate the patient from healthy children till the patient recovers completely.

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)

Measles**Mansehra**

DHQ hospital Mansehra reported a case of suspected measles. The patient was a 9 month old male baby resident of Kalabut colony, Haripur having fever and rashes on his whole body. The EPI coordinator was informed and a mass measles vaccination was done in Mansehra district.

Muzaffarabad

A suspected measles alert was received from BHU Rahimkot. On active surveillance there was no case in the patient's home or in the neighbourhood. There was a measles campaign in the area two days earlier and all the children were immunized.

Poonch

An alert for measles was received from RHC Paniola. On investigation the patient could not be located.

Number of reported cases and deaths per District, AJKTable 6. Number of reported cases and deaths, **Bagh District***, Earthquake Affected Areas, Pakistan, 11 Aug -7 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
33	880	0	30	0	0	0	76	0	1912	0	1	0	0	0	6	0	0	0	0	0	343	0	0	0	7735	2
34	1145	0	25	0	0	0	107	0	2130	0	0	0	0	0	11	0	0	0	0	0	341	0	0	0	11694	8
35	858	0	25	0	0	0	92	0	1851	0	0	0	0	0	7	0	0	0	0	0	270	0	0	0	9333	5
36	819	0	11	0	1	0	77	0	1715	0	0	0	0	0	2	0	0	0	0	0	182	0	0	0	9302	2
Total	3702	0	91	0	1	0	352	0	7608	0	1	0	0	0	26	0	0	0	0	0	1136	0	0	0	38064	17

Table 7. Number of reported cases and deaths, **Poonch District***, Earthquake Affected Areas, Pakistan, 11 Aug -7 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
33	2410	1	43	0	0	0	279	0	3514	0	0	0	0	0	1	0	0	0	0	0	2095	0	0	0	7732	3
34	2344	0	40	0	0	0	194	0	3437	1	0	0	0	0	0	0	0	0	0	0	2119	0	0	0	7416	4
35	2050	0	34	0	0	0	269	0	2940	0	0	0	0	0	0	0	0	0	0	0	1819	0	0	0	7179	3
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
Total	8893	1	141	0	0	0	980	0	13117	1	1	0	0	0	3	0	0	0	0	0	7691	0	0	0	29746	11

Table 8. Number of reported cases and deaths, **Muzaffarabad District***, Earthquake Affected Areas, Pakistan, 11 Aug -7 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
33	3960	1	232	0	0	0	150	0	8036	1	0	0	1	0	5	0	0	0	0	0	2611	0	88	0	17566	2
34	4029	1	248	0	0	0	165	0	7600	0	0	0	0	0	3	0	0	0	0	0	2864	0	373	0	17246	9
35	3512	1	166	0	0	0	133	0	7622	0	0	0	0	0	1	0	0	0	0	0	3293	0	44	0	14125	11
36	3262	2	217	0	0	0	95	0	7057	1	2	0	0	0	4	0	0	0	0	0	3258	0	125	0	12652	4
Total	14763	5	863	0	0	0	543	0	30315	2	2	0	1	0	13	0	0	0	0	0	12026	0	630	0	61589	26

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District***, Earthquake Affected Areas, Pakistan, 11 Aug -7 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
33	1255	0	118	0	0	0	90	0	1204	0	0	0	0	0	5	0	0	0	0	0	404	0	3	0	3503	0
34	1142	0	126	0	0	0	60	0	1449	0	0	0	0	0	9	0	0	0	0	0	437	0	8	0	4159	0
35	1230	0	126	0	0	0	187	0	1608	0	0	0	0	0	15	0	0	0	0	0	591	0	3	0	4986	0
36	928	0	101	0	0	0	54	0	1305	0	0	0	0	0	16	0	0	0	0	0	529	0	0	0	3137	0
Total	4555	0	471	0	0	0	391	0	5566	0	0	0	0	0	45	0	0	0	0	0	1961	0	14	0	15785	0

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 11 Aug -7 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
33	1943	0	21	0	2	0	49	0	3154	1	0	0	0	0	2	0	0	0	0	0	1053	0	0	0	10041	3
34	2188	0	24	0	0	0	57	0	4232	1	0	0	0	0	6	0	0	0	0	0	1033	0	0	0	15427	4
35	2148	0	12	0	0	0	62	0	4270	0	0	0	0	0	2	0	0	0	0	0	1217	0	65	0	15547	3
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
Total	7949	0	80	0	5	0	194	0	15267	2	1	0	0	0	24	0	0	0	0	0	4677	0	65	0	56757	13