

Contents

Reporting Units	2
Total number of consultations	2
DEWS Data, Epidemiological Week No. 35, 2007	3
DEWS Data, Monthly Summary (Epidemiological Weeks No. 32-35)	4
Acute Watery Diarrhoea	5
Acute Jaundice Syndrome	6
Malaria	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

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



Highlights

- There were 363 cases of bloody diarrhoea reported in week 35.
- Malaria cases increased by 27% from week 34 (W34=583 & W35=743)
- Acute watery diarrhoea cases decreased by 11% from week 34 (W34=10,848 & W35=9,798)
- There were no measles cases reported from any district in week 35
- There were no alerts from any district this week
- The acute watery diarrhea outbreak reported from Raheemkot in week 35 is now under control

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 produced with the financial support of AAI Australia, Americares, CIDA, Denmark, DFID, ECHO, Ireland, Italy, Japan, Korea, Monaco, Norway, SIDA, Slovak Republic, Switzerland, Turkey, USAID



The WMMR is published by the World Health Organization (WHO),
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 268; the reporting timeliness of the DEWS system has decreased by 6% at current epidemiological week 35 compared with the previous week (epidemiological week 34).

See Table 1 for summary statistics.

Table 1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 4 to 31 Aug 2007.

Area	Population	Reporting Health Facilities			
		4-10 Aug Week-32	11-17 Aug Week-33	18-24 Aug Week-34	25-31 Aug Week-35
Bagh	452,532	41	39	42	41
Battagram	592,256	31	34	30	33
Mansehra	1,154,804	70	70	71	70
Muzaffarabad	894,364	84	91	84	70
Poonch	633,712	71	66	61	54
Total	3,727,668	297(89%)	300(90%)	288(86%)	268(80%)

Total number of consultations

In week 35, there was a 6% decrease in the number of reporting sites, and the number of consultations also decreased from 93,888 to 87,692. The highest number of consultations was reported from Muzaffarabad, with 28,896, and the lowest from Battagram district, at 8,746. The weekly trend of reporting units participating in the DEWS and the number of consultations is shown in figure 1.

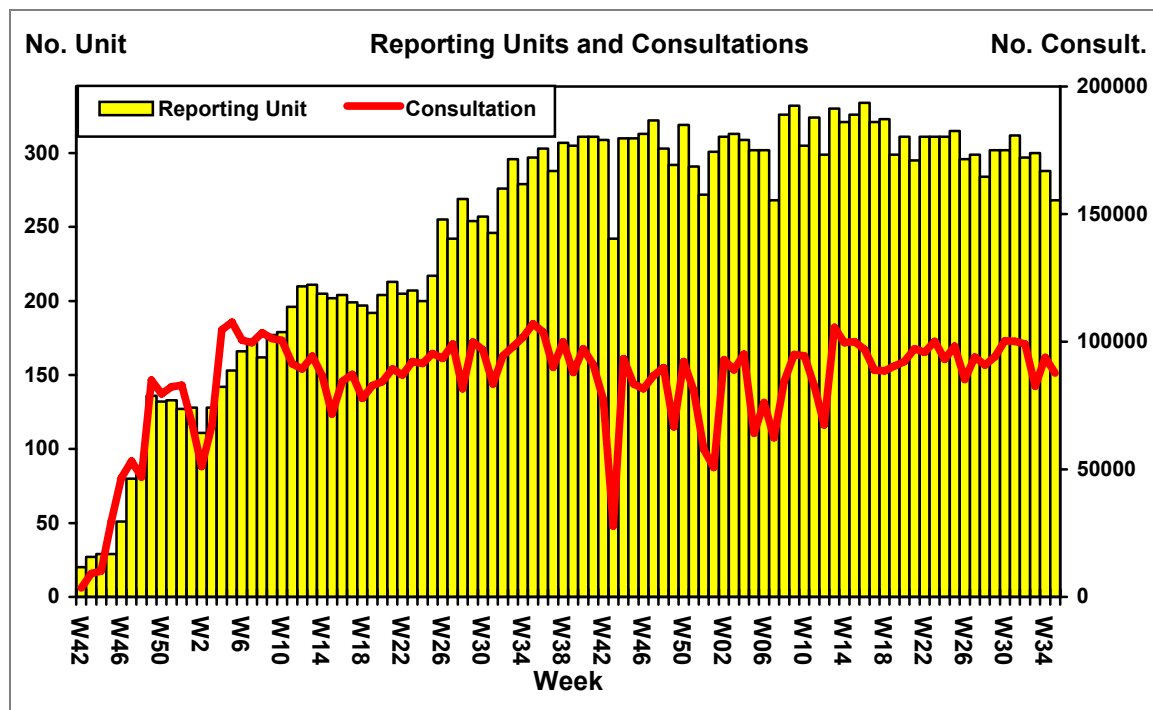


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 - 31 Aug 2007.

DEWS Data, Epidemiological Week No. 34, 2007

During the last week (25 to 31 Aug, 2007), **87,692** consultations were reported through DEWS. Acute Respiratory Infections (**ARI**) accounted for **21%** (18,291) of consultations, which was 4 percentage points higher compared to the same week last year. Acute Watery Diarrhoea (**AWD**) was **11%** of consultations (9,798), **8%** (7,190) were due to Fever of Unknown Origin (**FUO**) and less than **1%** (112) due to Injuries (**INJ**). The **AWD** rate in patients under five years was less than 1 percentage points higher in week 35 of 2007 compared to the same week last year. In patients aged five and above, **AWD** made up **8%** of consultations which was the same rate reported in the same week last year. All other reportable conditions each represented less than **1%** of the total consultations in week 34.

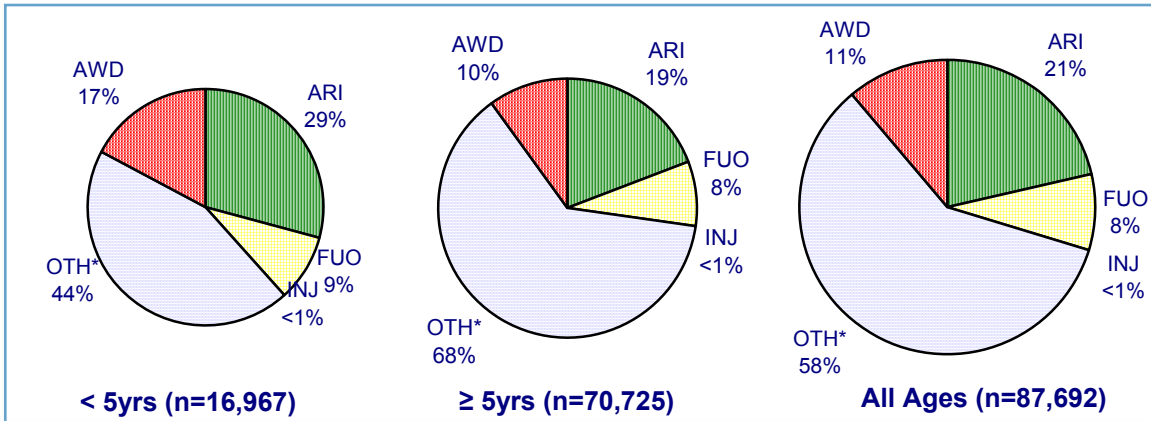


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 25 - 31 Aug 2007.

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

DEWS Data, Epidemiological Week No. 35, 2007: Consultations by age

The rate of AWD in patients five years and older was consistently lower in last four weeks of 2007 compared with the same weeks last year. The rate in patients less than five years has also been lower in these four weeks of 2007. The distribution of the percentage of consultations is shown in Figure 3.

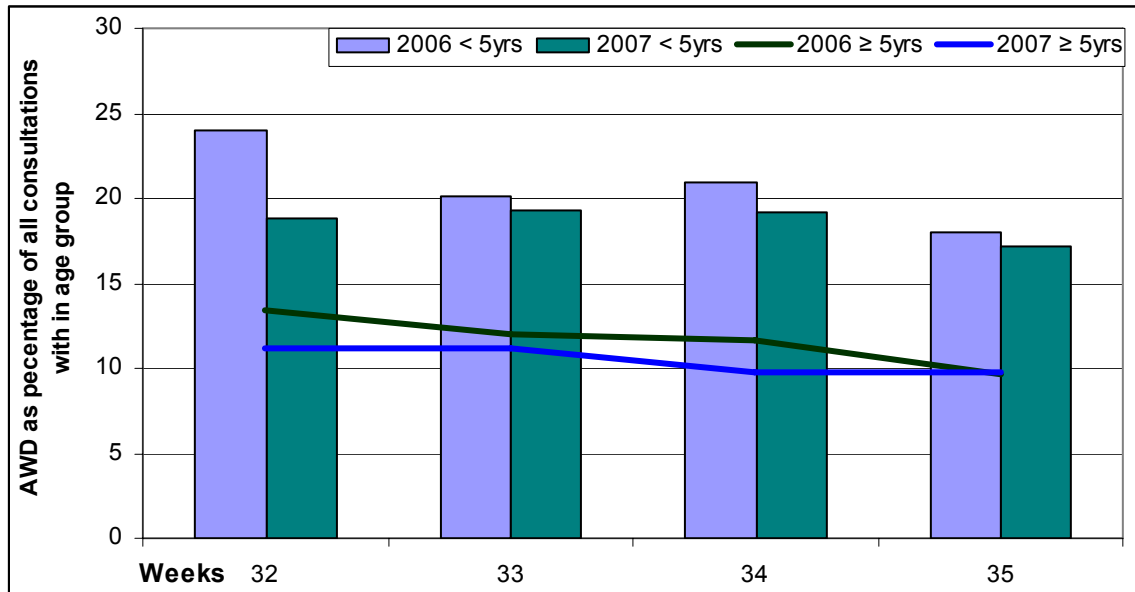


Figure 3: The total number of consultations by age and district, Earthquake Affected Areas, Pakistan, 5 Aug – 1 Sep 2007 to 5 - 31 Aug 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 32-35)

During the period, 4 to 31 Aug, 2007 (Epidemiological weeks 32 to 35 inclusive), 153,378 consultations relating to health conditions under surveillance were reported, out of the total of 363,203 consultations. **21%** (75,682) of consultations were due to acute respiratory infection (**ARI**), **12%** (43,608) acute watery diarrhoea (**AWD**), **8%** (28,164) unexplained fever (**FUO**) and less than **1%** (1,353) Injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 4 – 31 Aug 2007.

Week	WEEK 32		WEEK 33		WEEK 34		WEEK 35		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	12514	1	10448	2	10848	0	9798	1	43608	4	0.009
BD	545	0	444	0	463	0	363	0	1815	0	0.000
AFP	0	0	2	0	0	0	0	0	2	0	0.000
MAL	680	0	644	0	583	0	743	0	2650	0	0.000
ARI	20723	4	17820	2	18848	2	18291	0	75682	8	0.011
MES	2	0	1	0	0	0	0	0	3	0	0.000
MEN	0	0	1	0	0	0	0	0	1	0	0.000
JAU	27	0	19	0	29	0	25	0	100	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	7674	0	6506	0	6794	0	7190	0	28164	0	0.000
INJ	769	0	91	0	381	0	112	0	1353	0	0.000
OTH	56136	21	46577	15	55942	25	51170	22	209825	83	0.040
TOTAL	99070	26	82553	19	93888	27	87692	23	363203	95	
RU	297		300		288		268				

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, **68,149** consultations were reported in children less than 5 years of age, (19% of the total consultations), of which **ARI** was **27%** (18,536), **AWD 19%** (12,688), **FUO 9%** (6,144) and **INJ** was less than **1%** (242).

Table 3. Total number of reported cases, deaths and monthly Case Fatality Rate (CFR), less than 5 years old, Earthquake Affected Areas, Pakistan 4 – 31 Aug 2007.

Week	WEEK 32		WEEK 33		WEEK 34		WEEK 35		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	3436	1	2958	2	3385	0	2909	1	12688	4	0.032
BD	154	0	105	0	135	0	97	0	491	0	0.000
AFP	0	0	2	0	0	0	0	0	2	0	0.000
MAL	96	0	55	0	85	0	114	0	350	0	0.000
ARI	4691	4	4207	2	4796	1	4842	0	18536	7	0.038
MES	1	0	1	0	0	0	0	0	2	0	0.000
MEN	0	0	0	0	0	0	0	0	0	0	0.000
JAU	3	0	5	0	3	0	4	0	15	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	1598	0	1517	0	1520	0	1509	0	6144	0	0.000
INJ	129	0	3	0	87	0	23	0	242	0	0.000
OTH	8089	12	6470	7	7651	8	7469	11	29679	38	0.128
TOTAL	18197	17	15323	11	17662	9	16967	12	68149	49	
RU	297		300		288		268				

There was a 10% decrease in the number of AWD cases from 10,848 in week 34 to 9,798 this week, and there was also a decrease in the number of ARI cases from 18,848 to 18,291 since last week. The weekly proportion of ARI and AWD is shown in figure 4.

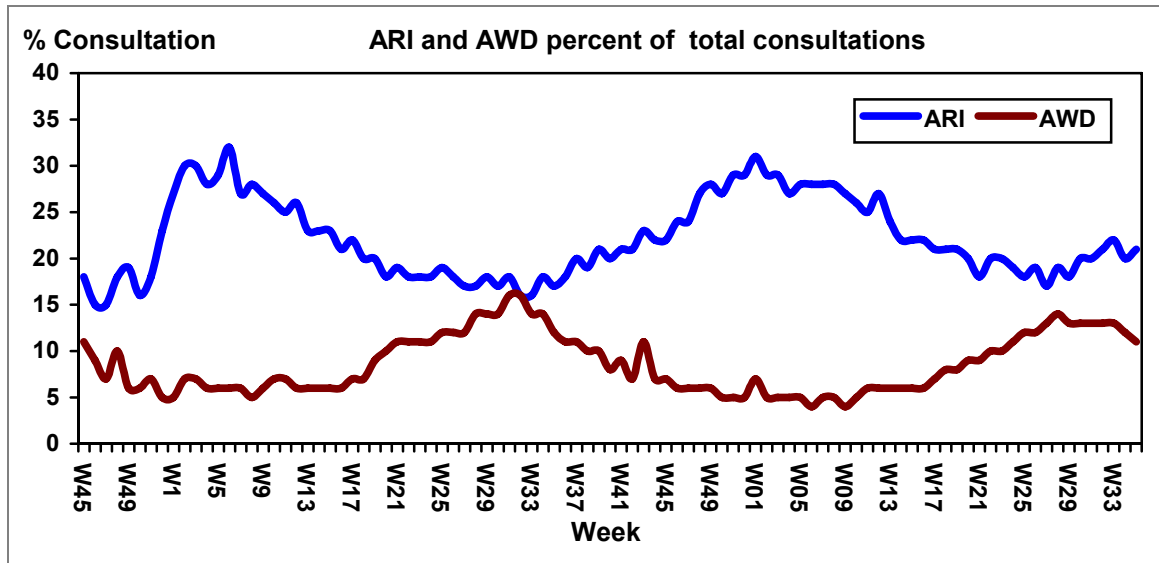


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 15 October 2005 – 31 Aug 2007.

Acute Watery Diarrhoea

During week 35, there were 9,798 cases of AWD reported, out of which 2,909 cases were in patients less than 5 years of age and 6,889 cases were over 5 years of age. There was one death in a patient less than five years old reported from Muzaffarabad district. Though Battagram has the highest rate of AWD, it is in patients under five years old, which is less of a concern than diarrhoea seen in older children or adults. Poonch has the highest rate in patients five and over, which may indicate a possible problem. See figure 5.

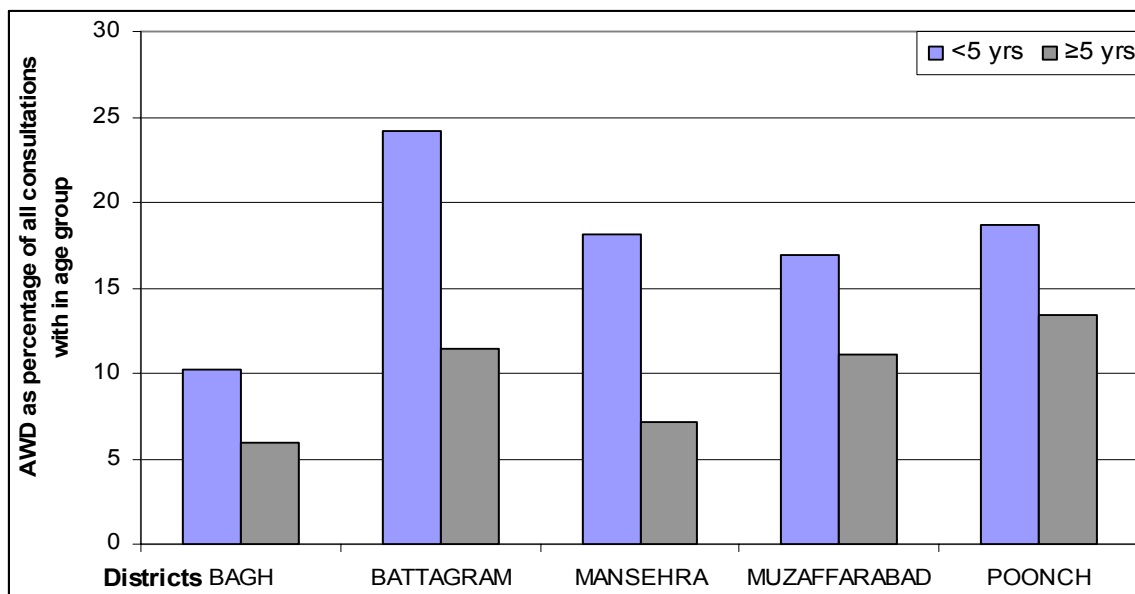


Figure 5: Trend in AWD as a percent of all consultations, 2007, Earthquake Affected Areas, Pakistan, 5-31 Aug 2007

Bloody Diarrhoea

During week 35, there were 363 suspected cases of bloody diarrhoea reported, 22% less than week 34. There were no associated deaths reported from any district. In the last four weeks, Battagram has had the highest rate of bloody diarrhoea of all of the districts, and is more than four times the rate seen in Poonch, Mansehra, and Bagh. See figure 6.

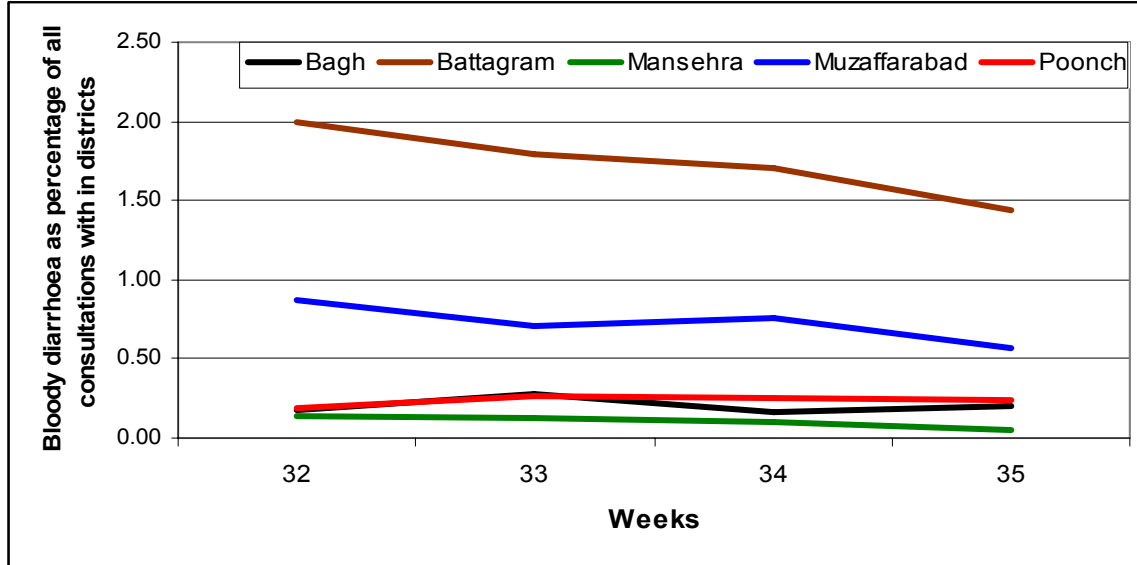


Figure 6: comparison of bloody diarrhoea as percentage of all consultations, Earthquake Affected Areas, Pakistan, 5 Aug – 1 Sept 2006 and 4 Aug – 31 Aug 2007

Acute Jaundice Syndrome

In week 35, there were 25 cases of suspected hepatitis reported out of which 15 cases were reported from Battagram, 7 cases reported from Bagh, 2 from Mansehra, and 1 case from Muzaffarabad 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.

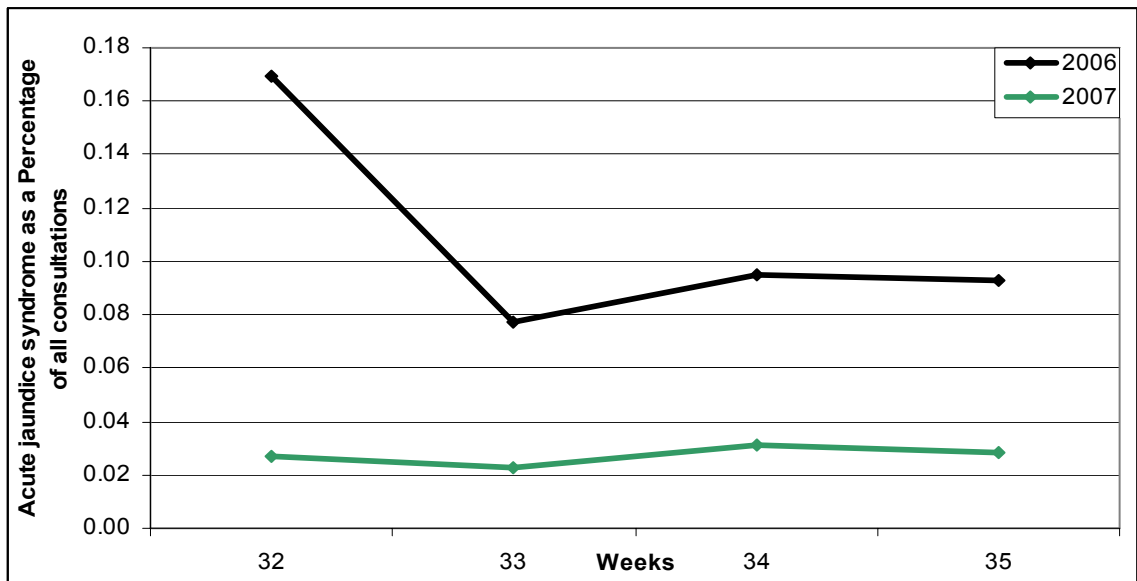


Figure 7: Suspected hepatitis number of cases, Earthquake Affected Areas, Pakistan, 5 Aug to 1 Sep 2006 and 4-31 Aug 2007.

Malaria

In week 35, there were 743 suspected cases of malaria reported, out of which 629 cases were in patients over five years of age and 114 in patients less than five years of age. There were no associated deaths reported from any district. Though Poonch does not have the highest population, it has the largest share of the malaria cases. Muzaffarabad, which has the highest overall population, has 18% of all malaria cases, while Poonch has 36%. The percentage of malaria cases by district shown on figure 8.

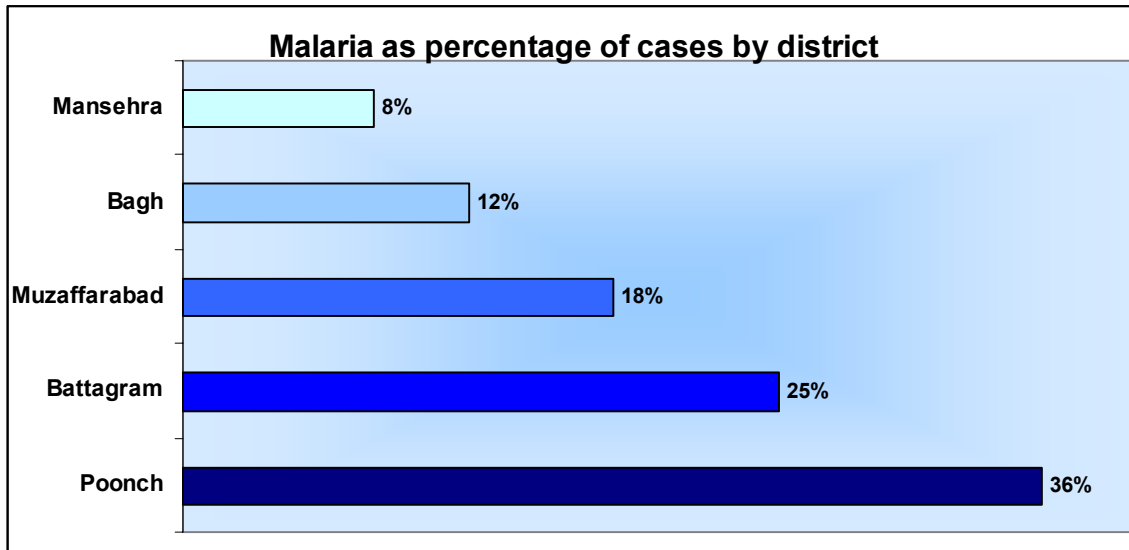


Figure 8: Malaria percentage of cases by district, Earthquake Affected Areas, Pakistan, 5 - 31 Aug, 2007.

Measles

There were no cases of measles reported from any of the earthquake affected district in week 35. There is a measles vaccination campaign in several of the earthquake affected districts, which should result in even lower rates of measles in the future. See Figure 9.

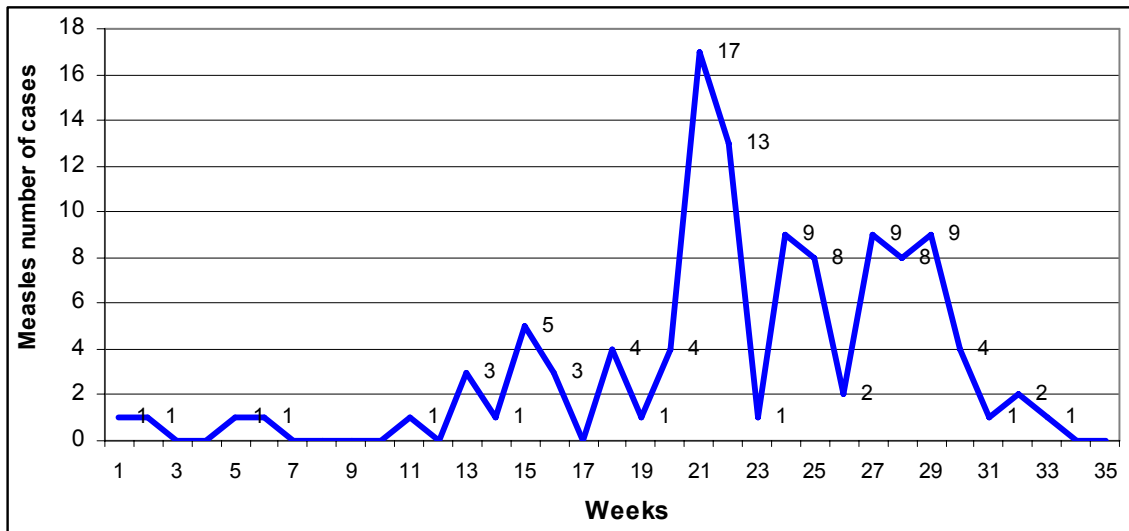


Figure 9: Trend in measles number of cases, Earthquake Affected Areas, Pakistan, 31 Dec 06 – 31 Aug, 2007

Acute Respiratory Infection

In week 35, there were 18,291 consultations for ARI reported through the DEWS system. There were no deaths reported from any district in week 35. The rate of ARI has been consistently higher in 2007 than that seen in the same weeks of 2006. See Figure 10.

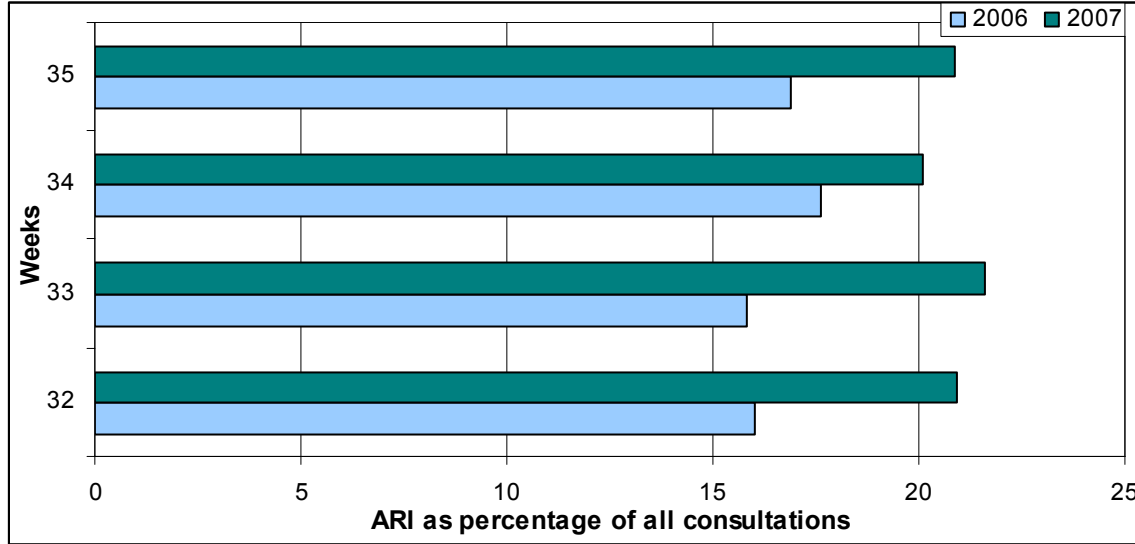


Figure 10: ARI as a percent of all consultations, by district, Earthquake Affected Areas, Pakistan, 5 Aug - 1 Sep 2006 to 5 - 31 Aug 2007

Other Reportable Diseases and Conditions

There were 7,190 cases of Fever of Unknown Origin (FUO) and 112 cases of injuries reported in week 35. There were no deaths reported from any district. There were no cases of meningitis, neonatal tetanus and acute hemorrhagic fever reported from any district in week 35. See figure 11.

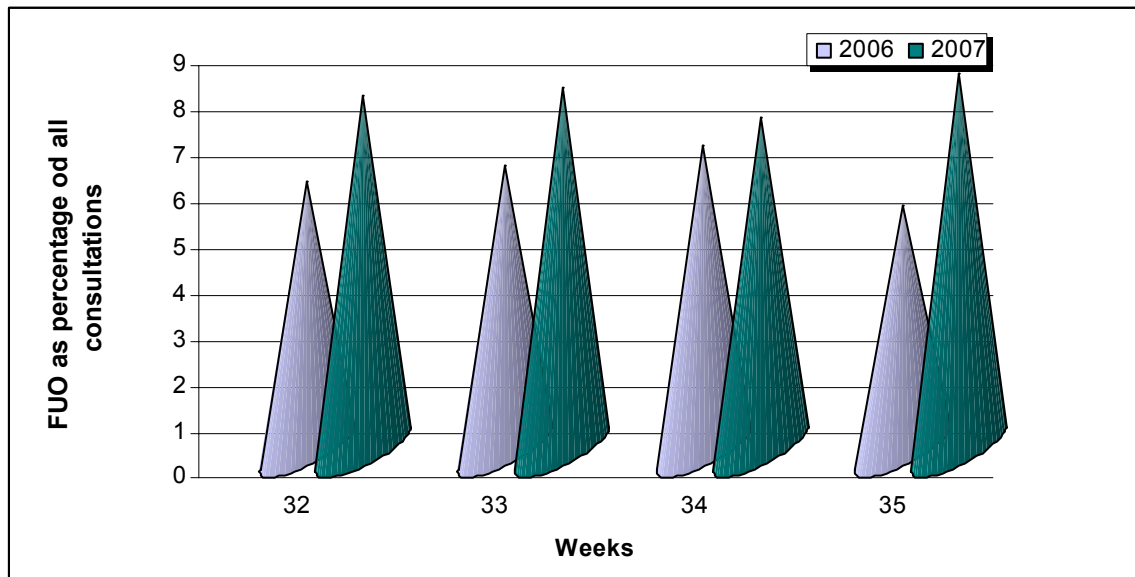


Figure 11: Unexplained fever as a percentage of all consultations, Earthquake Affected Areas, Pakistan, 5 Aug -1 Sep 2006 to 4 - 31 Aug 2007

Outbreak Alert and Response¹

Muzaffarabad

Update on AWD Outbreak Activity on Raheemkot, Muzaffarabad District

An outbreak of acute watery diarrhoea was reported on 19th August 2007 at Raheemkot, Muzaffarabad. BHU Raheemkot reported this sudden increase in the number of acute watery diarrhoea cases to DHO and a supply of medicine was requested. The WHO surveillance team immediately responded to BHU Raheemkot with a sufficient supply of medicine from the DHO warehouse and WHO warehouse to handle the situation. On active surveillance it was observed that the hygiene conditions were very poor and open defecation was a common practice, cattle were grazing beside the water sources and overall water and sanitation situation was poor. Four water samples from different sources proved to be coliform positive but two stool samples collected were negative. As the majority of the affected patients were children, health education activities in schools were conducted with the help of teachers. There was a demonstration on water purification using chlorine tablets by WHO staff. IRC is also undertaking a water scheme in the area that should rectify the water problems on a long-term basis. A recently formed water committee was encouraged to look after and monitor the water sources and garbage disposal activities. The number of cases has now decreased significantly, and the situation is under control.

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, 4 -31 Aug 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
32	1139	0	26	0	0	0	119	0	2089	1	0	0	0	0	7	0	0	0	0	0	324	0	14	0	10982	3
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
Total	4022	0	106	0	0	0	394	0	7982	1	1	0	0	0	31	0	0	0	0	0	1278	0	14	0	39744	18

Table 7. Number of reported cases and deaths, **Poonch District***, Earthquake Affected Areas, Pakistan, 4 -31 Aug 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
32	2377	0	29	0	0	0	292	0	3660	1	0	0	0	0	4	0	0	0	0	0	2121	0	0	0	7167	3
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
Total	9181	1	146	0	0	0	1034	0	13551	2	0	0	0	0	5	0	0	0	0	0	8154	0	0	0	29494	13

Table 8. Number of reported cases and deaths, **Muzaffarabad District***, Earthquake Affected Areas, Pakistan, 4 -31 Aug 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
32	5591	1	343	0	0	0	161	0	9716	0	1	0	0	0	10	0	0	0	0	0	3714	0	755	0	18950	10
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
Total	17092	4	989	0	0	0	609	0	32974	1	1	0	1	0	19	0	0	0	0	0	12482	0	1260	0	67887	32

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District***, Earthquake Affected Areas, Pakistan, 4 -31 Aug 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
32	1138	0	114	0	0	0	77	0	1060	0	0	0	0	0	6	0	0	0	0	0	340	0	0	0	2972	1
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
Total	4765	0	484	0	0	0	414	0	5321	0	0	0	0	0	35	0	0	0	0	0	1772	0	14	0	15620	1

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 4 -31 Aug 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
32	2269	0	33	0	0	0	31	0	4198	2	1	0	0	0	0	0	0	0	0	0	1175	0	0	0	16065	1
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
Total	8548	0	90	0	2	0	199	0	15854	4	1	0	0	0	10	0	0	0	0	0	4478	0	65	0	57080	11