

Epidemiological Week No. 19 (5 -11 May)

May 18/ Vol. 77/ DEWS 2007-19

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Abbaspur: Cleaning and Chlorination of drinking water tank.
Pictured by: Dr. Fawad



Highlights

- In the past month (Epidemiological weeks 16-19 inclusive), 145,567 health events under surveillance were reported including 76 deaths
- This week, there were 298 (89%) reporting units contributing to the report.
- In week 19, Total 89,961 consultations were reported, with 13 deaths
- Two alerts for measles were reported one found positive
- Alerts for suspected hepatitis were received from four out of the five districts
- The rate of AWD climbed 5% in week 19, when compared to week 18

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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WHO Webpage: <http://www.whopak.org/disaster>

Reporting Units

The numbers of reporting sites able to report this week was 298, a 7% decrease compared to the previous week, and reporting timeliness of the DEWS system has also decreased compared with last week.

See Table 1 for summary statistics.

Table 1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 14 April – 11 May 2007.

Area	Population	Reporting Health Facilities			
		14-20 April Week-16	21-27 April Week-17	28Apr-04May Week-18	5-11 April Week-19
Muzaffarabad	894,364	104	100	99	93
Bagh	452,532	43	37	37	35
Poonch	633,712	81	74	77	66
Mansehra / Balakot	1,154,804	72	73	73	68
Battagram / Shangla	592,256	34	38	36	36
Total	3,727,668	334(99%)	322(96%)	322(96%)	298(89%)

Total number of consultations

In week 19 there was a decrease in the number of reporting sites, but the number of consultations increased to 89,961 from 88,637. The highest number of consultations by district was in Muzaffarabad, with 30,409, and the lowest was in Battagram, at 7,193. The weekly trend of reporting units participating in the DEWS and the number of consultations is shown in figure 1.

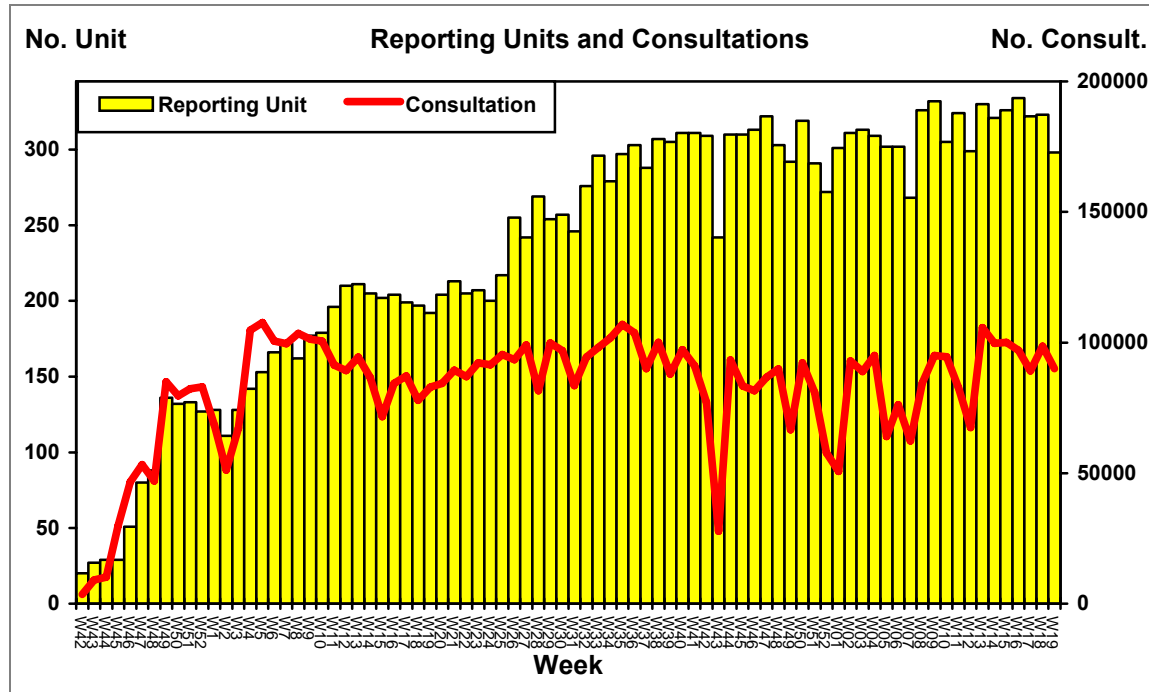


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 - 4 May 2007.

DEWS Data, Epidemiological Week No. 18, 2007

In the last week (5 - 11 May 2007), there were **89,961** consultations reported through DEWS. Overall, **21%** (18,570) were due to acute respiratory infections (**ARI**), one percentage point higher than the same week last year. **8%** (7,447) of consultations were due to acute watery diarrhoea (**AWD**), **7%** (5,980) were due to fever of unknown origin (**FUO**) and **2%** (2,150) due to injuries (**INJ**). All of these percentages are almost identical to the rate seen in the same week last year. **ARI** in patients under five years is 3% higher in week 19 of 2007 compared to that same age group in the same week last year. At **18%** of consultations in patients 5 or more years old, the rate of ARI is one percentage point higher than in the same week last year. All other reportable conditions each represented less than 1% of the total consultations in week 19.

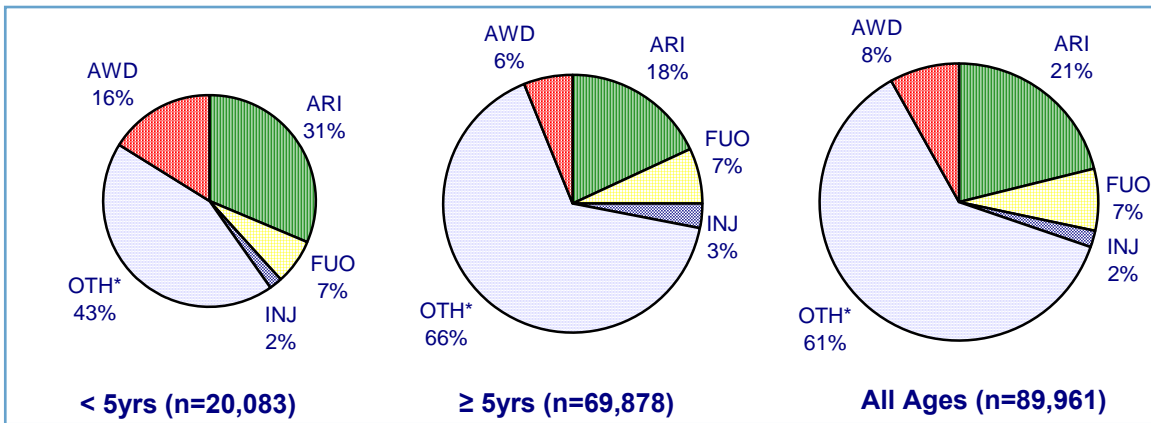


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 5 – 11 May 2007.

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

DEWS Data, Epidemiological Week No. 19, 2007: Consultations by age

With warmer weather, rates of diarrhoeal disease can be expected to rise. Since early spring, the rate of acute watery diarrhoea has increased in both age groups, though the rise has been much larger in patients under five years old. See figure 3.

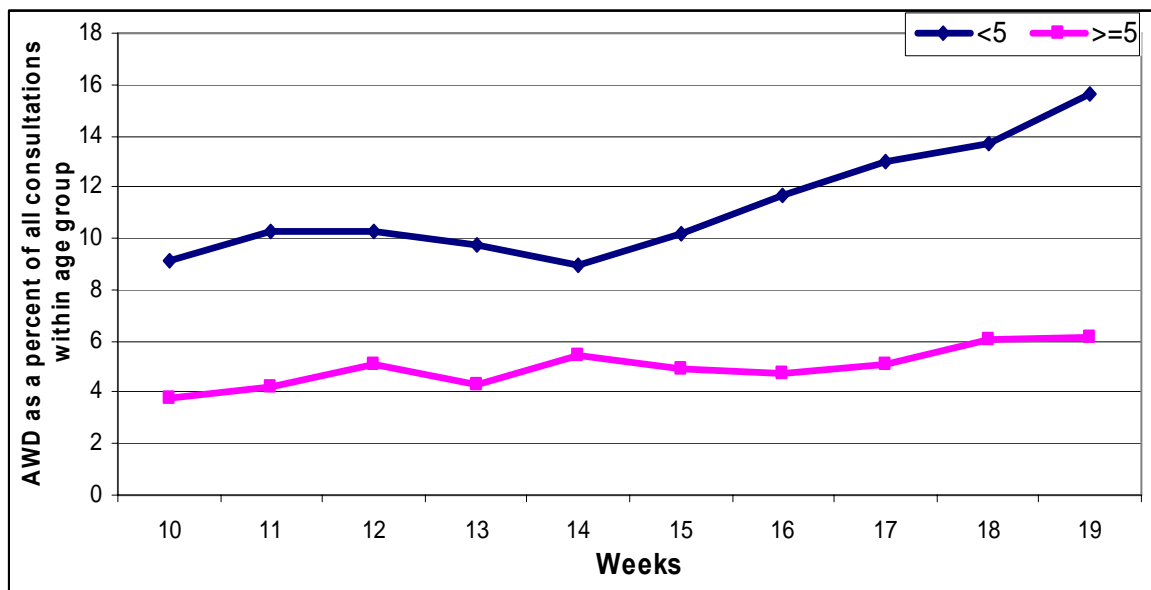


Figure 3: Trend in AWD as a percent of all consultations, by age group, Earthquake Affected Areas, Pakistan, 3 March - 11 May 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 16-19)

In the past four weeks from 14 April to 11 May 2007 (Epidemiological weeks 16-19 inclusive), 145,567 consultations for health conditions under surveillance were reported, out of a total 364,298 consultations. **21%** (76,464) of consultations were due to acute respiratory infection (**ARI**), **7%** (25,745) unexplained fever (**FUO**), **7%** (27,037) acute watery diarrhoea (**AWD**) and **3%** (12,522) Injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 14 April – 11 May 2007.

Week	WEEK 16		WEEK 17		WEEK 18		WEEK 19		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	6295	0	6223	0	7072	1	7447	1	27037	2	0.007
BD	416	0	381	0	520	0	406	0	1723	0	0.000
AFP	0	0	0	0	1	0	1	0	2	0	0.000
MAL	505	0	481	0	491	0	377	0	1854	0	0.000
ARI	20898	3	18343	4	18653	2	18570	2	76464	11	0.014
MES	3	0	0	0	4	0	1	0	8	0	0.000
MEN	4	1	6	1	0	0	0	0	10	2	20.000
JAU	24	0	62	0	52	0	64	1	202	1	0.495
TET	0	0	0	0	0	0	0	0	0	0	50.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	6938	0	5604	0	7223	0	5980	0	25745	0	0.000
INJ	3947	1	3557	2	2868	0	2150	0	12522	3	0.024
OTH	57842	17	54171	15	51753	16	54965	9	218731	57	0.026
TOTAL	96872	22	88828	22	88637	19	89961	13	364298	76	
RU	334		322		323		298				

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 **87,798** consultations were reported in the **less than 5** years old group, (**24%** of the total consultations), of which **31%** (27,030) were due to **ARI**, **13%** (11,783) due to **AWD**, **8%** (7,117) due to **FUO** and **3%** (2,388) 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 14 April – 11 May 2007.

Week	WEEK 16		WEEK 17		WEEK 18		WEEK 19		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	2845	0	2789	0	3010	1	3139	1	11783	2	0.017
BD	128	0	117	0	152	0	134	0	531	0	0.000
AFP	0	0	0	0	1	0	0	0	1	0	0.000
MAL	98	0	98	0	106	0	56	0	358	0	0.000
ARI	7693	3	6521	3	6604	2	6216	2	27030	10	0.037
MES	2	0	0	0	1	0	1	0	4	0	0.000
MEN	0	0	1	0	0	0	0	0	1	0	0.000
JAU	2	0	1	0	2	0	4	1	9	1	11.000
TET	0	0	0	0	0	0	0	0	0	0	50.000
AHF	0	0	0	0	0	0	0	0	0	0	0.000
FUO	2038	0	1622	0	2036	0	1421	0	7117	0	0.000
INJ	775	0	687	0	545	0	381	0	2388	0	0.000
OTH	10730	5	9600	4	9515	5	8731	0	38576	14	0.036
TOTAL	24311	8	21436	7	21972	8	20083	4	87798	27	
RU	334		322		323		298				

In the current week, there was an increase in the number of **AWD** cases with **7,072** last week and **7,447** this week. In the current week, **ARI** decreased in the total number of cases compared with the previous week, (**18,653** last week and **18,570** this week). The weekly proportion of ARI and AWD is shown in figure 4.

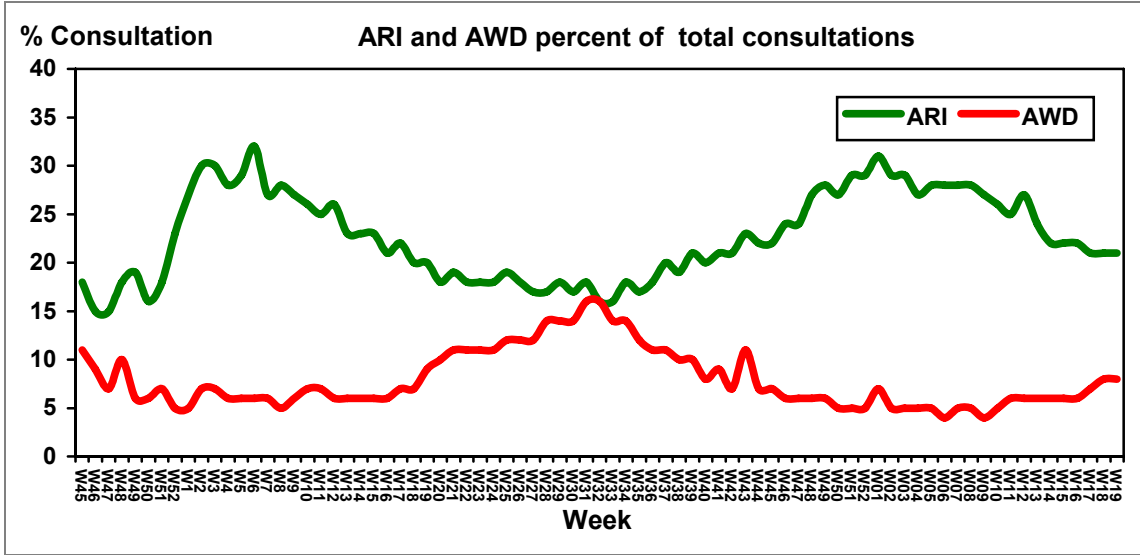


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 5 November 2005 – 11 May 2007.

Acute Watery Diarrhoea

In week 19 there were 7,447 cases of AWD reported, a 5% increase over week 18. There was one associated death in a patient less than five years of age reported from Mansehra district. Though the large increase in one week may seem unusual, the rate of AWD in 2007 has been almost identical to that of 2006, including the increases. See Figure 5.

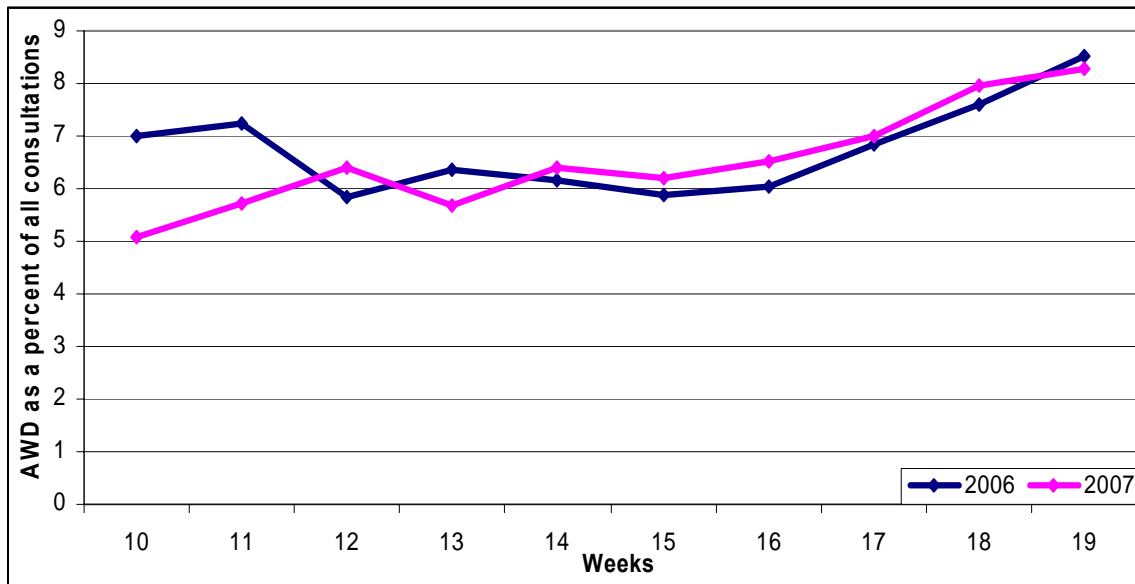


Figure 5: Trend in AWD as a percent of all consultations, 2006 and 2007, Earthquake Affected Areas, Pakistan, 25 March – 12 May 2006 and 24 March – 11 May 2007

Bloody Diarrhoea

In week 19, there were 406 cases of bloody diarrhoea reported, a 22% decrease compared to week 18. There were no associated deaths reported. The rate of bloody diarrhoea differs considerably by district. The rate has been declining in Muzaffarabad, Battagram, and Poonch, but increasing in Bagh and remaining stable in Mansehra. Rates range from over 2.5 cases per reporting site to below 0.5 cases per reporting site. See figure 6

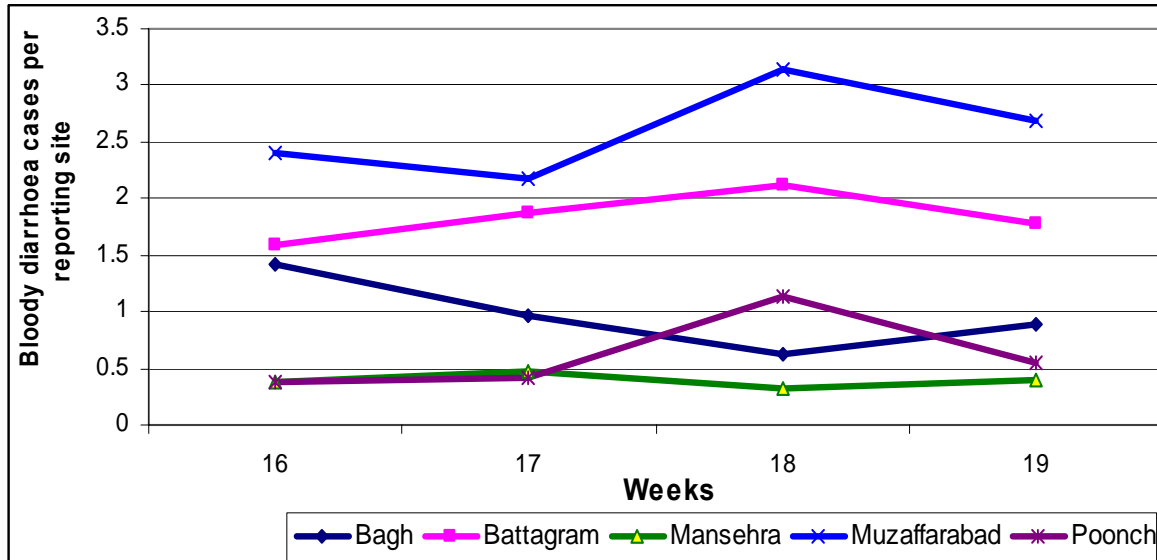


Figure 6: Trend in bloody diarrhoea cases per reporting site, 2006 and 2007, Earthquake Affected Areas, Pakistan, 11 March – 4 May 2006 and 14 April – 11 May 2007

Acute Jaundice Syndrome

In week 19 there were 64 cases of suspected hepatitis, with one associated death reported from Muzaffarabad district. In the past three weeks, there has been a large rise in the rate of suspected hepatitis. Despite being a waterborne disease, like diarrhoea, the rate of suspected hepatitis does not have the same clear seasonal pattern seen with diarrhoea. See figure 7.

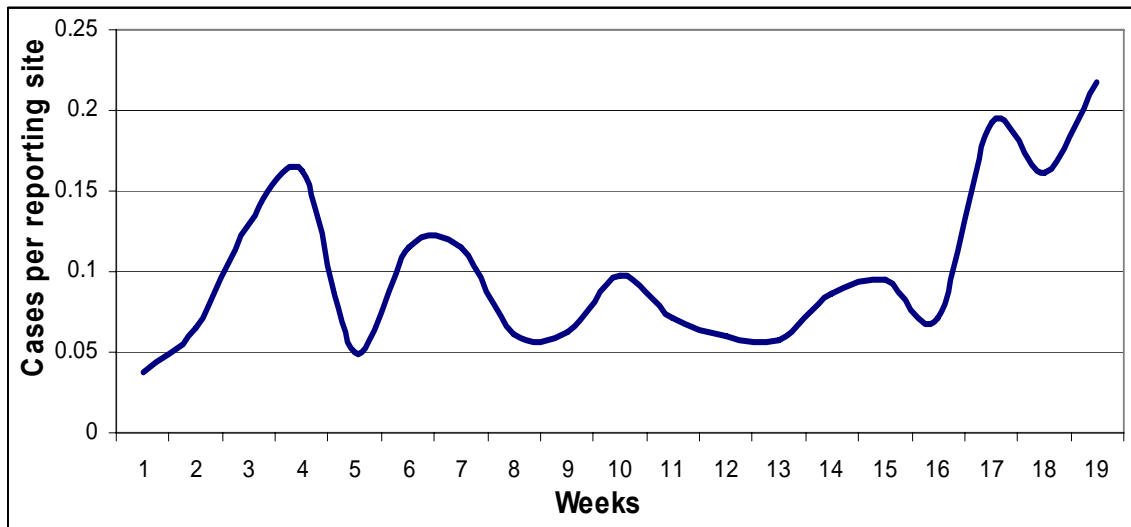


Figure 7: Trend in suspected hepatitis cases per reporting site, Earthquake Affected Areas, Pakistan, 31 December 2006 – 11 May 2007

Malaria

In week 19, there were 377 suspected malaria cases reported, 23% lower than week 18. There were no associated deaths reported. The rate of malaria in 2007 is higher than that of 2006, however, last three weeks it has stable and decreasing in week 19, while there were significant fluctuations in 2006. See figure 8.

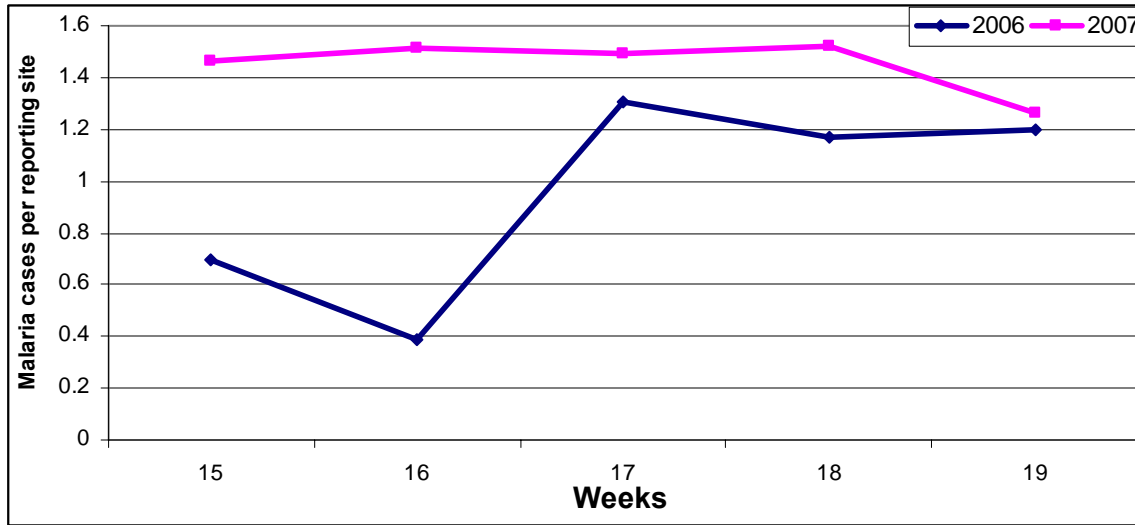


Figure 8: Trend in malaria cases per reporting site, 2006 and 2007, Earthquake Affected Areas, Pakistan, 8 April – 12 May 2006 and 7 April – 11 May 2007

Measles

There was 1 case of suspected measles reported in week 19, from Bagh district. After a time of almost no cases in the beginning of 2007, recently there have been a larger number of cases reported, including an outbreak. See Figure 9.

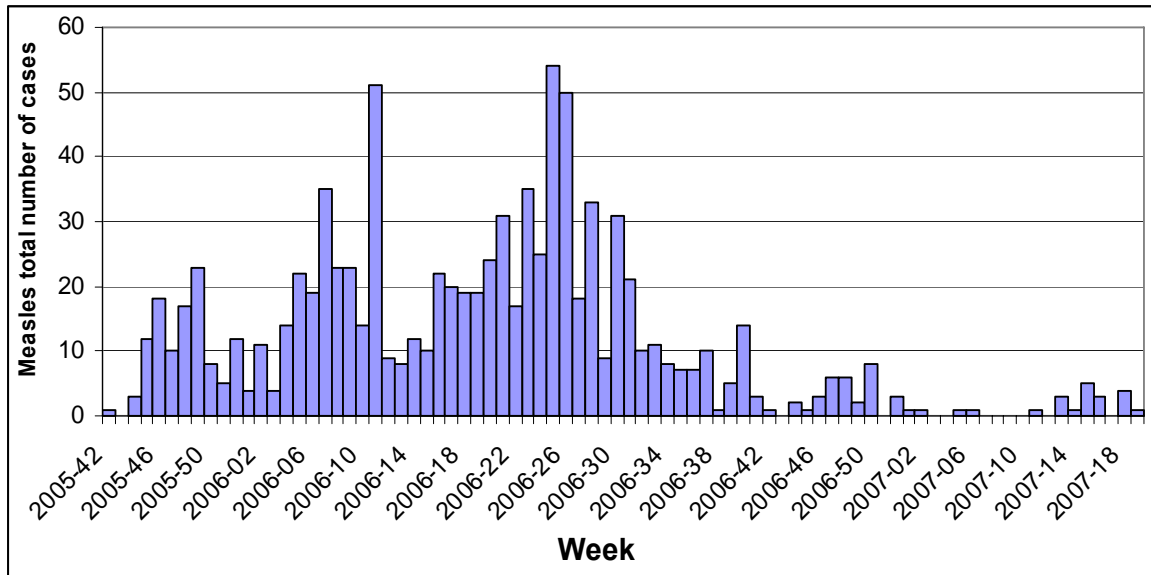


Figure 9: Trend in measles cases, 31 December 2005 – 11 May 2007

Acute Respiratory Infection

In week 19, there were 18,570 consultations for ARI reported through the DEWS system. There were two deaths in patients less than five years of age reported from Mansehra district. Since the beginning of 2007, there has been a gradual overall decline in the rate of ARI in all districts, however, the districts have fluctuations week on week. See Figure 10.

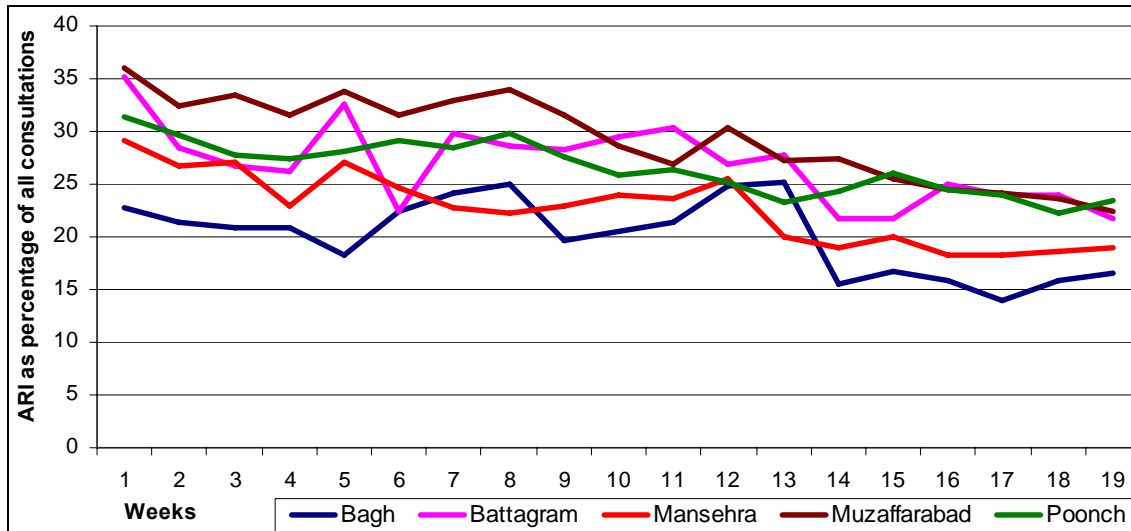


Figure 10: Trend in ARI as a percent of all consultations, Earthquake Affected Areas, Pakistan, 31 December 2006 – 11 May 2007

Other Reportable Diseases and Conditions

There were no cases of suspected meningitis reported from any district in week 18. There were 5,980 cases of fever of unknown origin, and 2,150 cases of injuries. There were no cases of tetanus or acute hemorrhagic fever.

A total of 24 haemorrhagic fever cases have been reported since the system was instituted. Virtually all of the cases were misdiagnoses or false reports, though one outbreak with four suspected cases was identified. See figure 11.

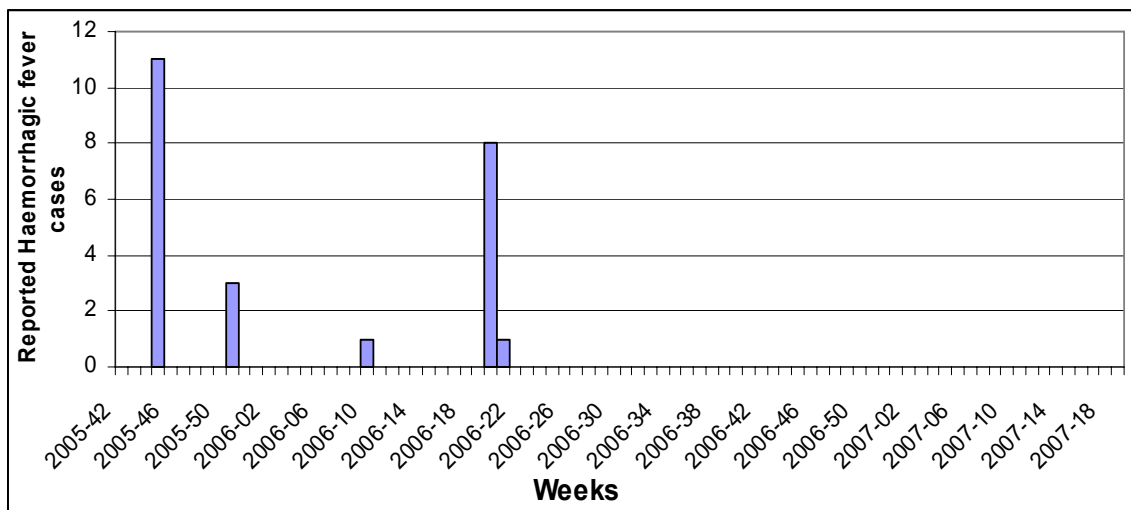


Figure 11: Haemorrhagic fever cases, Earthquake Affected Areas, Pakistan, 15 October 2005 – 11 May 2007

Outbreak Alert and Response¹

Acute Jaundice:

Poonch

Thirty cases of suspected hepatitis were reported; 1 case from RHC Paniola, 3 cases from FAP Troty Abbaspur and 26 cases from RHC Abbaspur mostly from Tangran and vicinity. A follow up visit was carried out to see the trends of outbreak in Abbaspur and found 7 years, 22 years and 25 years old male patients from village Troty, Tehsil Abbaspur. All patients had a history of visiting outbreak affected area of Abbaspur during the past three weeks.

The water sources of Troty village were visited and water samples were collected for further analysis. LHW's started health education on safe drinking water and sanitary practices to the community. MO will provide water purification tablets for distribution.

Mansehra

Six suspected Hepatitis-A cases reported from THQ hospital Balakot. On investigation all cases were found to be sporadic with no clustering.

Muzaffarabad

Four cases of hepatitis were reported from AIMS, Muzaffarabad, while one case was reported from FC Katkair. On investigation all cases were reported from different locations and there is no clustering.

Bagh

Five suspected Hepatitis cases reported from RHC Sessar. The DHO was informed and will undertake the investigation, due to security concerns in the area.

Measles:

Bagh

One case of suspected measles was reported from RHC Sessar. The DHO was informed and will undertake the investigation, due to security concerns in the area.

Muzaffarabad

Four cases of suspected measles were reported from IDP-Thuri camp. On investigation two cases were found positive. The immunization campaign at Thuri camp is completed and 171 individuals between 9 months to 15 years were vaccinated.

Acute Flaccid Paralysis:

Mansehra

One case of acute flaccid paralysis was reported from AIMS hospital, an 18 month old male from Muzaffarabad. The polio team was contacted and sample taken for confirmation, child was further referred to PIMS, Islamabad, where the second sample was collected by WHO polio surveillance team. The child is well and sent back to home.

Acute watery diarrhoea

Bagh

One case of suspected acute watery diarrhoea was reported from DHQ Bagh. A 52 year old male resident of village Kathi Kella was admitted to DHQ hospital, Bagh with sudden onset of AWD, severe dehydration and shock, which was investigated by WHO Surveillance team and stool sample was taken and sent to NIH, Islamabad for laboratory confirmation. During active surveillance of the population of the village and patient's family no further cases were identified. Water sources for the community were investigated, and found to be inadequately protected. The water tank used by the patient was also found to be dirty. Both tanks were tested and the water

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)

found to be unfit for drinking. Hygiene education was provided both to the patient's family and to other members of the community. Water filters were distributed and the Lady Health Workers informed of the situation, and requested to provide further hygiene promotion door-to-door. Nearby BHUs were requested to monitor the situation and report any further cases if they appeared. The water sources will be cleaned and chlorinated with the help of the community.

Number of reported cases and deaths per District, PAKTable 6. Number of reported cases and deaths, **Bagh District**, Earthquake Affected Areas, Pakistan, 14 Apr - 11 May 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
16	693	0	61	0	0	0	38	0	2552	1	0	0	1	1	6	0	0	0	0	0	254	0	725	0	11790	3
17	551	0	36	0	0	0	30	0	1806	1	0	0	0	0	5	0	0	0	0	0	283	0	669	0	9534	2
18	474	0	24	0	0	0	29	0	1700	0	0	0	0	0	4	0	0	0	0	0	194	0	121	0	8120	5
19	1162	0	31	0	0	0	53	0	2444	0	1	0	0	0	12	0	0	0	0	0	226	0	59	0	10710	4
Total	2880	0	152	0	0	0	150	0	8502	2	1	0	1	1	27	0	0	0	0	0	957	0	1574	0	40154	14

Table 7. Number of reported cases and deaths, **Poonch District**, Earthquake Affected Areas, Pakistan, 14 Apr - 11 May 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
16	1181	0	30	0	0	0	329	0	3929	0	1	0	0	0	3	0	0	0	0	0	2011	0	711	0	7878	2
17	1220	0	31	0	0	0	257	0	3046	1	0	0	0	0	32	0	0	0	0	0	1474	0	505	0	6186	4
18	1325	0	87	0	0	0	281	0	3348	0	0	0	0	0	27	0	0	0	0	0	2085	0	598	0	7287	1
19	1213	0	36	0	0	0	220	0	3113	0	0	0	0	0	30	0	0	0	0	0	1536	0	593	0	6525	4
Total	4939	0	184	0	0	0	1087	0	13436	1	1	0	0	0	92	0	0	0	0	0	7106	0	2407	0	27876	11

Table 8. Number of reported cases and deaths, **Muzaffarabad District**, Earthquake Affected Areas, Pakistan, 14 Apr - 11 May 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
16	2537	0	244	0	0	0	99	0	8373	2	1	0	3	0	6	0	0	0	0	0	2680	0	1801	1	18392	7
17	2266	0	209	0	0	0	137	0	6345	1	0	0	6	1	5	0	0	0	0	0	1367	0	1568	2	14808	3
18	2936	0	310	0	0	0	136	0	7300	2	3	0	0	0	5	0	0	0	0	0	2803	0	1467	0	16011	4
19	2599	0	248	0	1	0	82	0	6829	0	0	0	0	0	4	1	0	0	0	0	2495	0	874	0	17277	1
Total	10338	0	1011	0	1	0	454	0	28847	5	4	0	9	1	20	1	0	0	0	0	9345	0	5710	3	66488	15

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District**, Earthquake Affected Areas, Pakistan, 14 Apr - 11 May 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
16	470	0	54	0	0	0	16	0	1778	0	1	0	0	0	3	0	0	0	0	0	347	0	229	0	4199	2
17	527	0	71	0	0	0	33	0	1988	0	2	0	0	0	10	0	0	0	0	0	513	0	208	0	4971	0
18	617	0	76	0	0	0	29	0	1701	0	0	0	0	0	4	0	0	0	0	0	375	0	209	0	4112	0
19	616	0	64	0	0	0	9	0	1565	0	0	0	0	0	4	0	0	0	0	0	379	0	242	0	4314	0
Total	2230	0	265	0	0	0	87	0	7032	0	3	0	0	0	21	0	0	0	0	0	1614	0	888	0	17596	2

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 14 Apr - 11 May 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
16	1414	0	27	0	0	0	23	0	4266	0	0	0	0	0	6	0	0	0	0	0	1646	0	481	0	15583	3
17	1659	0	34	0	0	0	24	0	5158	1	0	0	0	0	10	0	0	0	0	0	1967	0	607	0	18672	6
18	1720	1	23	0	1	0	16	0	4604	0	1	0	0	0	12	0	0	0	0	0	1766	0	473	0	16223	6
19	1857	1	27	0	0	0	13	0	4619	2	0	0	0	0	14	0	0	0	0	0	1344	0	382	0	16139	0
Total	6650	2	111	0	1	0	76	0	18647	3	1	0	0	0	42	0	0	0	0	0	6723	0	1943	0	66617	15