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Bagh: Unprotected Water sources can be a danger
Pictured by: Dr. Musa Rahim / Engr. Imran



Highlights

- In the past month (Epidemiological weeks 11-14 inclusive), 148,837 health events under surveillance were reported including 64 deaths
- This week, there were 320 (96%) reporting units contributing to the report.
- In week 14, Total 97,985 consultations were reported, with 13 deaths
- This week rate of acute watery diarrhoea has increased 4% compared to the previous week
- In Muzaffarabad, there was one alert for suspected meningitis reported
- Battagram district experienced an outbreak of food poisoning this week with 500 patients and no deaths

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 number of reporting sites able to report decreased by twelve this week. Reporting timeliness of the DEWS systems has also decreased in the current epidemiological week compared with week 13.

See Table 1 for summary statistics.

Table1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 10 Mar – 6 Apr 2007.

Area	Population	Reporting Health Facilities			
		10-16 Mar Week-11	17-23 Mar Week-12	24-30 Mar Week-13	31Mar-6Apr Week-14
Muzaffarabad	894,364	101	83	105	100
Bagh	452,532	42	42	44	40
Poonch	633,712	77	75	77	74
Mansehra / Balakot	1,154,804	70	65	68	69
Battagram / Shangla	592,256	34	33	38	37
Total	3,727,668	324(97%)	298(89%)	332(99%)	320(96%)

Total number of consultations

In week 14 there were decreasing in the number of reporting sites, and the number of consultations also increased to 97,985 from 105,652. The highest number of consultations by district was in Muzaffarabad, with 32,768, and the lowest was in Battagram, at 8,058. The weekly trend of reporting units participating in the DEWS and the number of consultations is shown in figure 1.

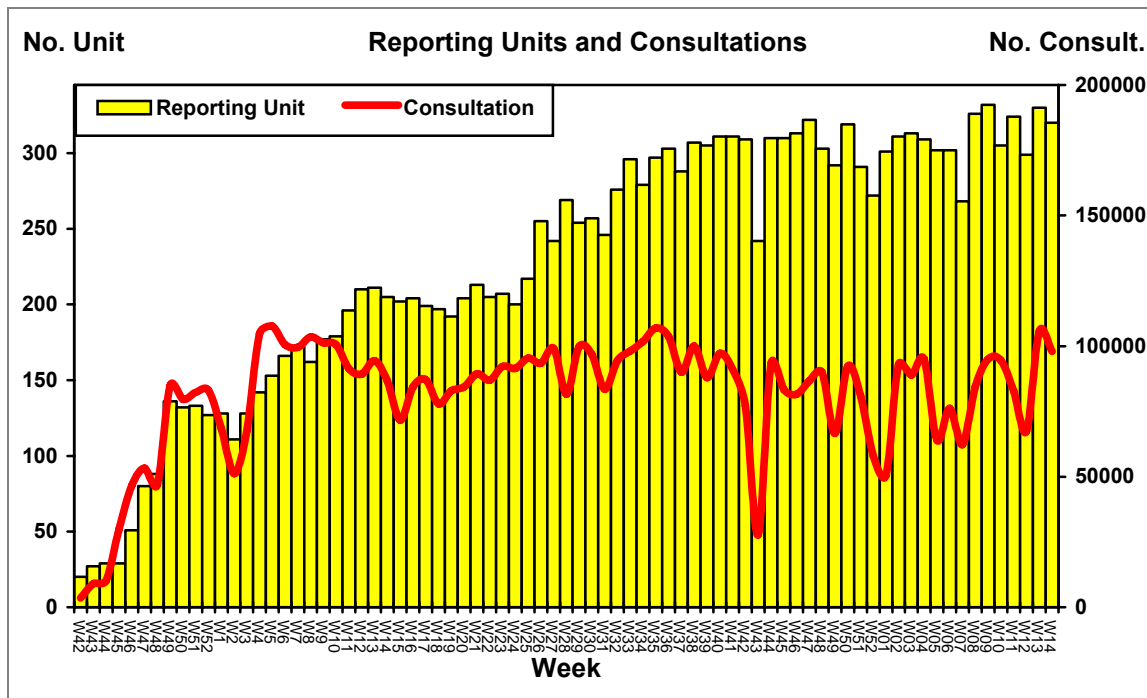


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 - 6 April 2007.

DEWS Data, Epidemiological Week No. 14, 2007

Between 31 Mar - 6 Apr 2007, **97,985** consultations were reported through DEWS. Overall, **22%** (21,782) were due to acute respiratory infections (**ARI**), the same rate seen in week 14 of last year. **7%** (6,916) of consultations were due to fever of unknown origin (**FUO**), **6%** (6,195) of consultations were due to acute watery diarrhoea (**AWD**), and **4%** (3,671) due to injuries (**INJ**). All of these percentages are almost identical to the rate seen in week 14 of 2006. **ARI** in patients under five years is 1% lower in week 14 of 2007 as compared to that same age group last year. **ARI** in patients 5 or more years old constituted **19%** of consultations in week 14 of both 2007 and 2006. All other reportable conditions each represented less than 1% of the total consultations in week 14.

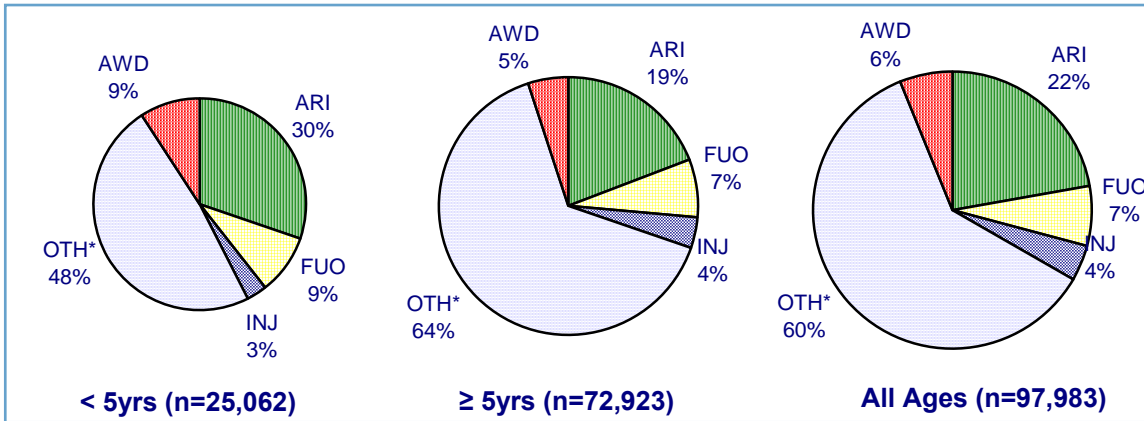


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 31 Mar - 6 April 2007.

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

DEWS Data, Epidemiological Week No. 14, 2007: Consultations by age

In weeks 11 through 13, the rate of **ARI** was very stable, however, in week 14 the rate decreased by 5 percentage points in both the under five and five and over age groups. See figure 3.

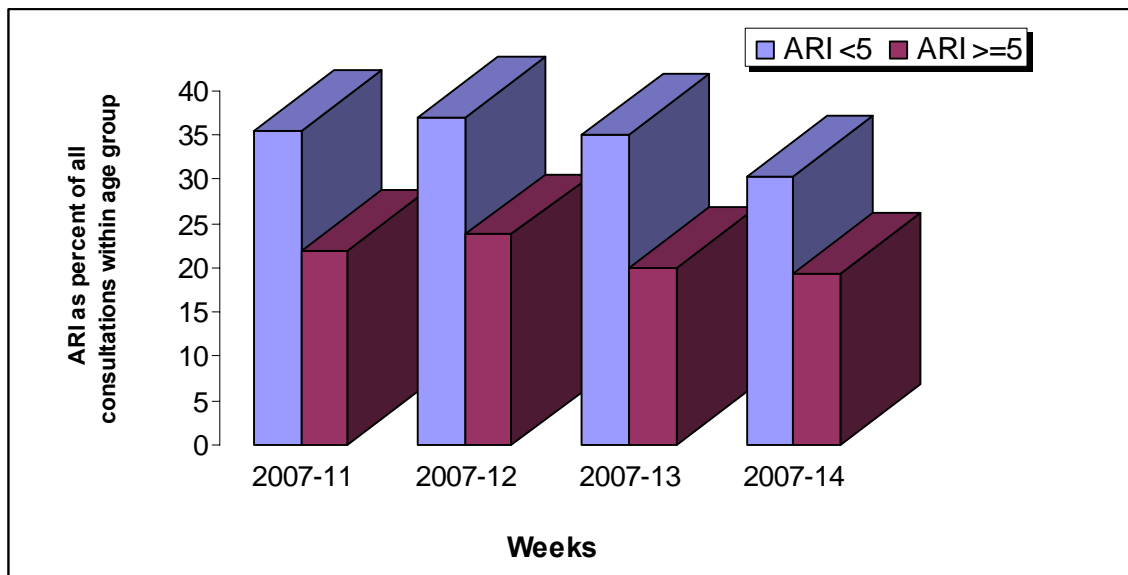


Figure 3: Trend in **ARI** as a percent of all consultations, by age group, Earthquake Affected Areas, Pakistan, 10 March – 6 April 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 11-14)

In the past four weeks from 31 Mar to 6 Apr 2007 (Epidemiological weeks 11-14 inclusive), 148,837 consultations for health conditions under surveillance were reported, out of a total 353,857 consultations. **24%** (86,285) of consultations were due to acute respiratory infection (**ARI**), **6%** (21,203) acute watery diarrhoea (**AWD**), **7%** (25,018) unexplained fever (**FUO**) and **4%** (13,699) injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 31 Mar – 6 Apr 2007.

Week	WEEK 11		WEEK 12		WEEK 13		WEEK 14		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	4743	0	4307	0	5958	0	6195	0	21203	0	0.000
BD	383	0	254	0	447	0	448	0	1532	0	0.000
AFP	0	0	0	0	2	0	0	0	2	0	0.000
MAL	206	0	170	0	306	0	307	0	989	0	0.000
ARI	20935	1	18308	4	25260	6	21782	4	86285	15	0.017
MES	1	0	0	0	3	0	1	0	5	0	0.000
MEN	7	3	3	1	3	0	3	1	16	5	31.250
JAU	23	0	18	0	19	0	28	0	88	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	6007	0	4531	0	7564	0	6916	0	25018	0	0.000
INJ	3069	0	2987	0	3972	1	3671	1	13699	2	0.015
OTH	47375	8	36893	10	62118	17	58634	7	205020	42	0.020
TOTAL	82749	12	67471	15	105652	24	97985	13	353857	64	
RU	324		299		330		320				

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 **90,350** consultations were reported in the **less than 5 years old** group, (**26%** of the total consultations), of which **34%** (30,928) were due to **ARI**, **10%** (8,788) due to **AWD**, **8%** (7,239) due to **FUO** and **3%** (2,613) 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 31 Mar – 6 Apr 2007.

Week	WEEK 11		WEEK 12		WEEK 13		WEEK 14		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	2110	0	1779	0	2644	0	2255	0	8788	0	0.000
BD	118	0	90	0	155	0	144	0	507	0	0.000
AFP	0	0	0	0	1	0	0	0	1	0	0.000
MAL	19	0	8	0	47	0	58	0	132	0	0.000
ARI	7324	1	6393	3	9598	6	7613	2	30928	12	0.039
MES	0	0	0	0	3	0	1	0	4	0	0.000
MEN	0	1	1	1	1	0	0	0	2	2	100
JAU	5	0	3	0	2	0	5	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	1629	0	1067	0	2379	0	2164	0	7239	0	0.000
INJ	528	0	556	0	805	0	724	0	2613	0	0.000
OTH	8872	2	7420	2	11731	6	12098	0	40121	10	0.025
TOTAL	20605	4	17317	6	27366	12	25062	2	90350	24	
RU	324		299		330		320				

In the current week, there was an increase in the number of cases of **AWD** with **5,958** last week and **6,195** this week. In the current week, **ARI** decreased in the total number of cases as compared with the previous week, (**25,260** last week and **21,782** this week). The weekly proportion of ARI and AWD is shown in figure 4.

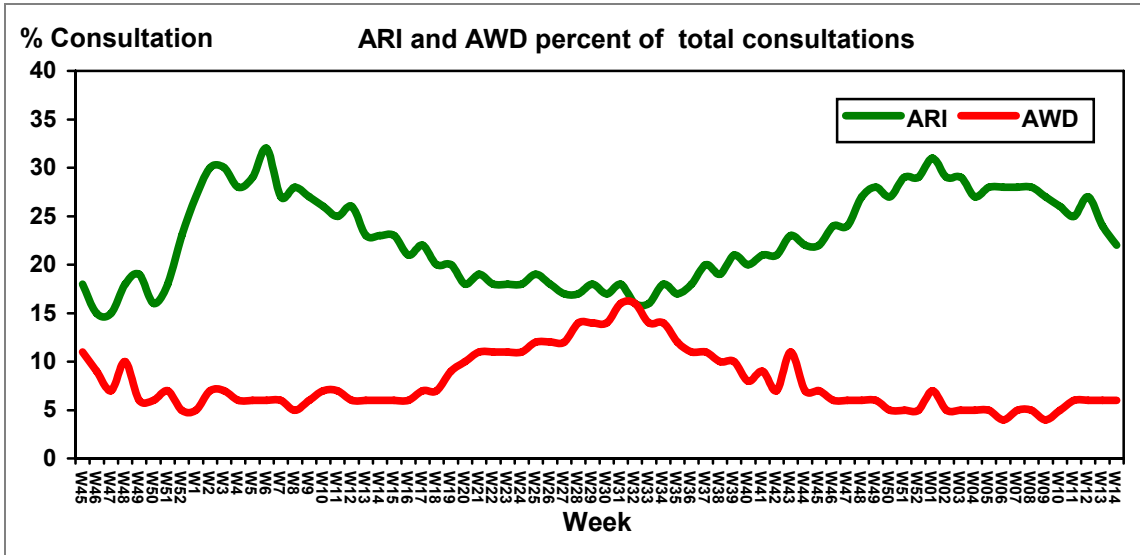


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 5 November 2005 – 6 April 2007.

Acute Watery Diarrhoea

In week 14 there were 6,195 cases of AWD reported, a 4% increase over week 13. There were no associated deaths reported from any district. The rate of AWD in 2007 is less than 1% higher than that of 2006 for most weeks. See Figure 5.

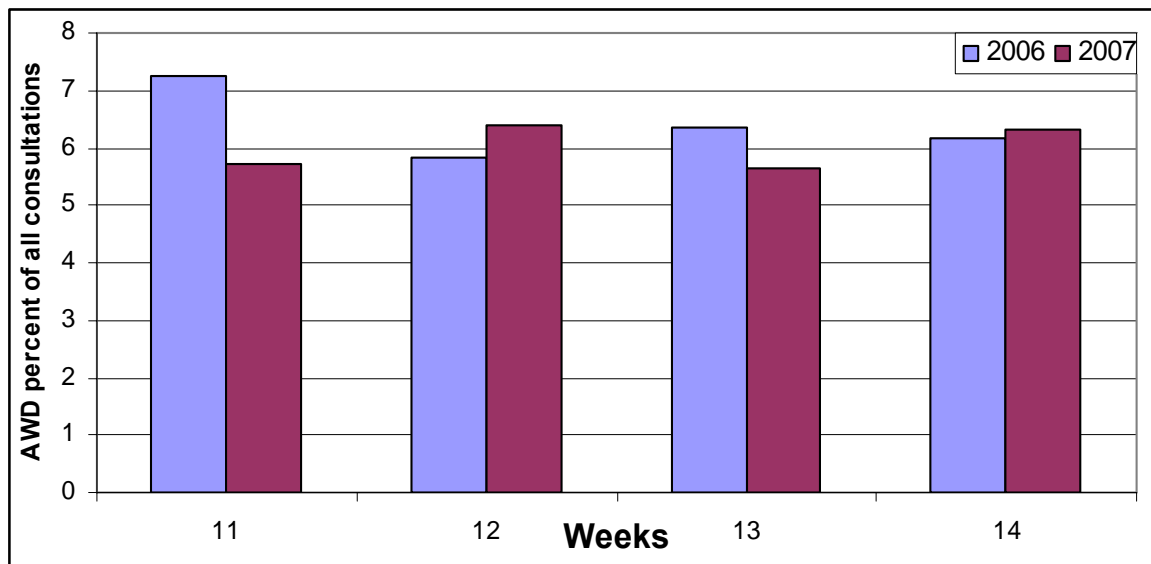


Figure 5: Trend in AWD as a percent of all consultations, 2006 and 2007, Earthquake Affected Areas, Pakistan, 11 March – 7 April 2006 and 10 March – 6 April 2007

Bloody Diarrhoea

In week 14, there were 448 cases of bloody diarrhoea reported, less than 1% point higher when compared to week 13. There were no associated deaths reported. In first 12 weeks of 2007 the rate of bloody diarrhoea was lower and has less fluctuation than in 2006 but in weeks 13 and 14 bloody diarrhoea cases were higher as compare to the last year. See figure 6

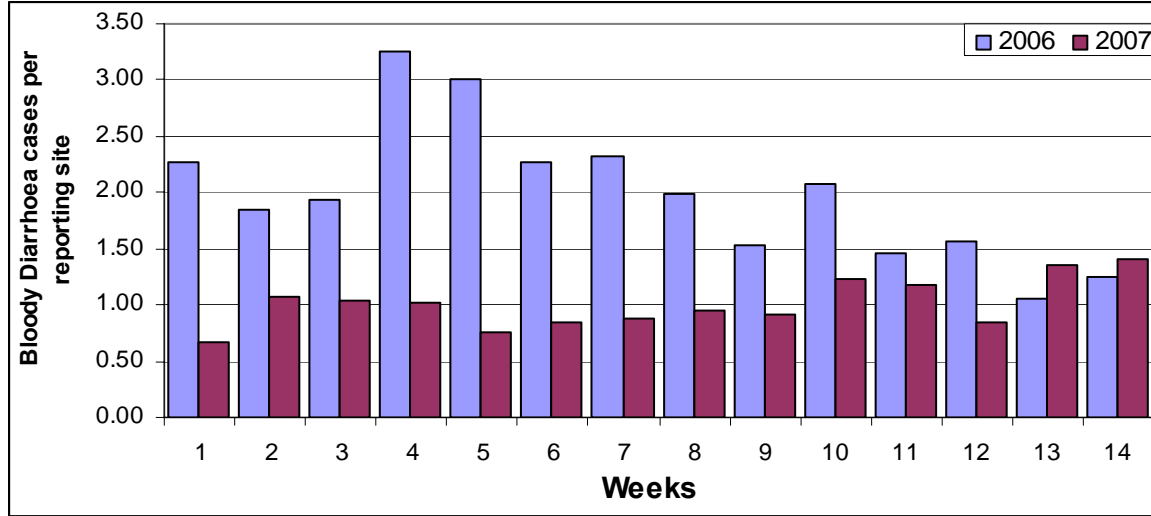


Figure 6: Trend in bloody diarrhea cases per reporting site, 2006 and 2007, Earthquake Affected Areas, Pakistan, 31 December 2005 – 16 March 2006 and 30 December 2006 – 6 April 2007

Acute Jaundice Syndrome

In week 14 there were 28 cases of suspected hepatitis, 32% higher than the number of cases in the previous week. There were no associated deaths. In the first 9 weeks of 2007 and week 11, Battagram district has had a much higher rate of suspected hepatitis than any other districts, but in week 13 and 14 Mansehra district had higher rate than any other districts. However, it should be noted that the rate in all the districts is still less than one case per reporting site on average. See figure 7.

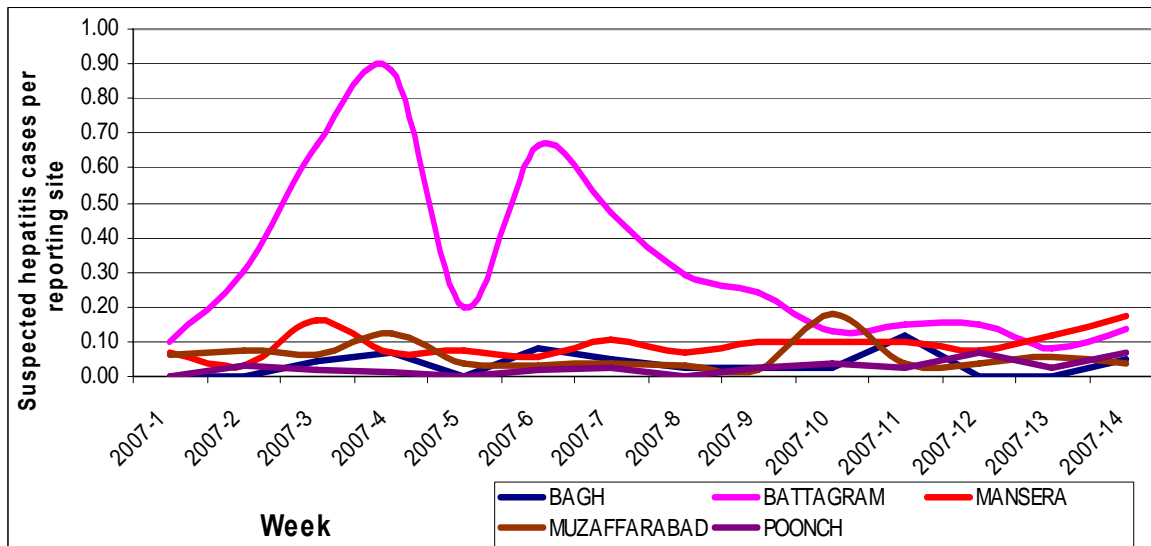


Figure 7: Trend in suspected hepatitis cases per reporting site, by district, Earthquake Affected Areas, Pakistan , 30 December 2006 – 6 April 2007

Malaria

In week 14, there were 307 suspected malaria cases reported, an increase of less than 1% higher from week 13. There were no associated deaths reported. The rate of malaria differs by district, and Poonch district has a rate 3 to 4 times higher than the other districts for last four weeks. See figure 8.

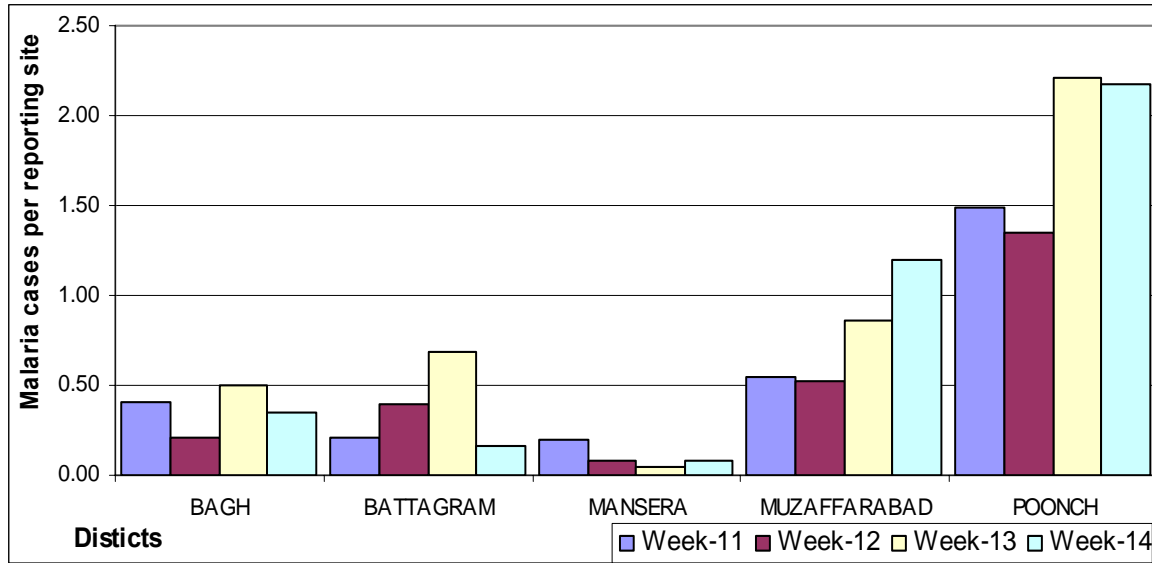


Figure 8: Trend in malaria cases per reporting site, by district, Earthquake Affected Areas, Pakistan, 10 March – 6 April 2007

Measles

There was one case of suspected measles reported in week 14, less than 5 years of age reported from Mansehra district. The number of measles cases has declined considerably over time. It reached a peak in mid 2006, but since beginning of 2007, there have been only 9 cases in total. See figure 9.

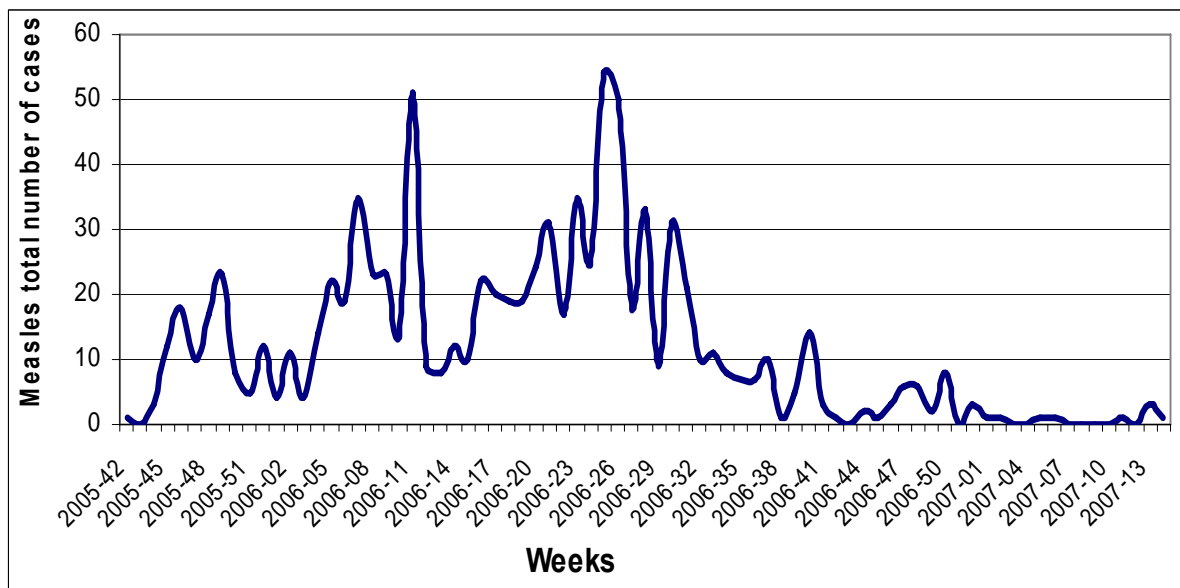


Figure 9: Measles total number of cases, 30 December 2006 – 6 April 2007

Acute Respiratory Infection

In week 14, there were 21,782 consultations for ARI reported through the DEWS. There were four associated deaths 2 under five from Mansehra, and 1 over five from Muzaffarabad and 1 over five from Rawalakot district. In the first 3 weeks of the year, the case fatality rate for ARI was higher for 2006 than for 2007. Beginning in week four however, the rate in 2006 declined steadily until week 10, while in 2007 it fluctuated considerably, and was consistently higher than that of 2006. As of week 10, the two rates nearly converged, and have remained similar since then. See Figure 10.

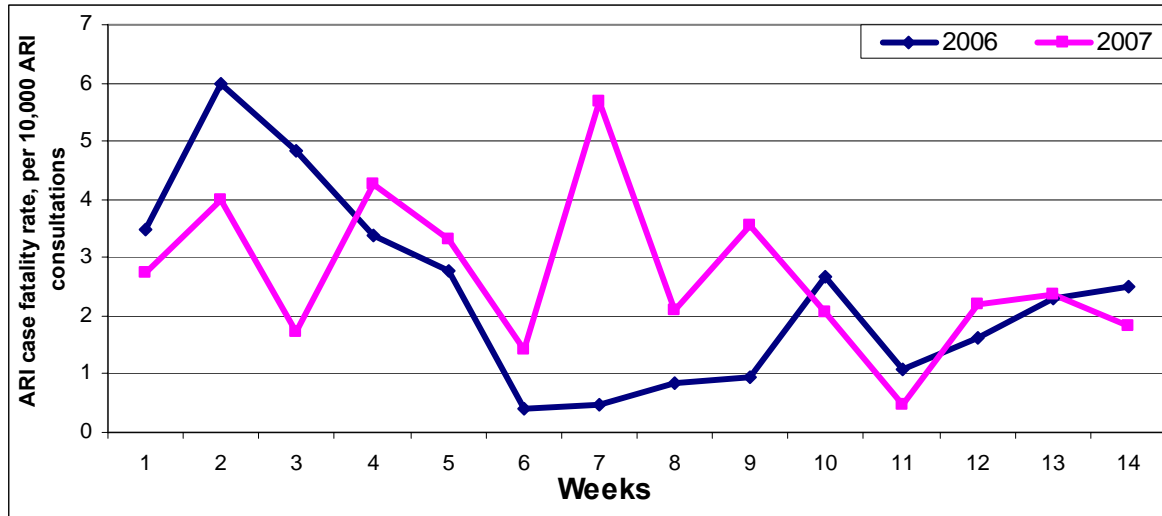


Figure 10: ARI case fatality rate per 10,000 ARI consultations, 2006 and 2007, Earthquake Affected Areas, Pakistan, 31 December 2005 – 7 April 2006 and 30 December 2006 – 6 April 2007.

Other Reportable Diseases and Conditions

There were 3 cases of suspected meningitis reported in week 14: 2 cases over five years of age reported from Muzaffarabad, and 1 case over five years of age reported from Mansehra district. There were 6,916 cases of fever of unknown origin, and 3,671 cases of injuries. There were no cases of tetanus or haemorrhagic fever reported in week 14. Though meningitis is generally considered to have distinct seasonal pattern, this is not seen in the DEWS reported cases. There may be some difficulty in diagnoses of meningitis ; a majority of the suspected cases are negative when tested. See figure 11.

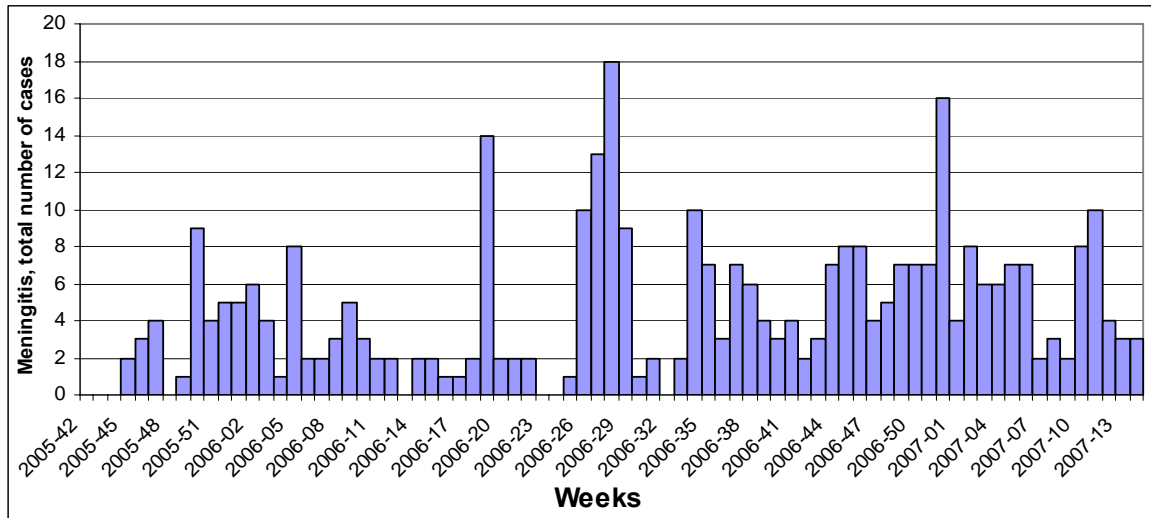


Figure 11: Trend in meningitis cases, Earthquake Affected Areas, Pakistan, 15 October 2005 – 6 April 2007

Outbreak Alert and Response¹

Suspected meningitis alert

Muzaffarabad

One case of suspected meningitis including one death were reported in AIMS. The patient who did not survive was diagnosed with pyogenic meningitis but a CSF examination was not carried out. The patient was an 18 year old woman from Dasu Kohistan who was admitted on 30th March with fever, vomiting and altered consciousness; on examination neck stiffness and kerning's sign were positive. CSF was not carried out due to the worsening condition of the patient. The patient died on 2nd April, 2007.

The case of meningitis reported in week 13 has improved and is expected to recover.

Acute Jaundice Syndrome (AJS):

Four cases of suspected AJS were reported in different health facilities in Muzaffarabad (AIMS: 1, RHC Dhanni: 1, RHC Chikar: 2 all these cases are from different places, therefore there is no clustering.

Food poisoning alert:

Battagram

ACTION AID reported on 3rd of April an outbreak of food poisoning in Shamlai UC. The condition developed after a funeral ceremony on 1st of April, when guests took a meal at around 13:30-14:00 hours. Most of them complained of headache, diarrhoea and vomiting with some moderate dehydration. On investigation it revealed that, the meal comprised of beef and rice; those who ate beef developed the symptoms. All patients recovered without any complications. Stool and vomit samples were taken in addition to raw food stuff and sent for laboratory confirmation. The total number of affected individuals was 500 persons, of both sexes and all ages. All patients came from villages of Bach No1, Bach No 2 and Khari.

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, 31 Mar – 6 Apr 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
11	582	0	29	0	0	0	17	0	2769	0	0	0	0	0	5	0	0	0	0	0	246	0	591	0	8730	2
12	578	0	21	0	0	0	9	0	2815	0	0	0	0	0	0	0	0	0	0	0	187	0	626	0	7007	2
13	937	0	68	0	2	0	21	0	3324	1	1	0	0	0	0	0	0	0	0	0	299	0	657	0	9686	1
14	499	0	38	0	0	0	14	0	2237	0	0	0	0	0	2	0	0	0	0	0	254	0	593	0	11344	1
Total	2596	0	156	0	2	0	61	0	11145	1	1	0	0	0	7	0	0	0	0	0	986	0	2467	0	36767	6

Table 7. Number of reported cases and deaths, **Poonch District**, Earthquake Affected Areas, Pakistan, 31 Mar – 6 Apr 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
11	1244	0	34	0	0	0	113	0	3856	0	0	0	0	0	2	0	0	0	0	0	2030	0	638	0	6694	2
12	1283	0	42	0	0	0	100	0	3229	0	0	0	1	1	5	0	0	0	0	0	1498	0	526	0	6136	0
13	1210	0	46	0	0	0	166	0	3861	0	1	0	0	0	2	0	0	0	0	0	1881	0	735	0	8728	5
14	1531	0	38	0	0	0	161	0	3870	1	0	0	0	0	5	0	0	0	0	0	1970	0	701	0	7599	3
Total	5268	0	160	0	0	0	540	0	14816	1	1	0	1	1	14	0	0	0	0	0	7379	0	2600	0	29157	10

Table 8. Number of reported cases and deaths, **Muzaffarabad District**, Earthquake Affected Areas, Pakistan, 31 Mar – 6 Apr 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
11	1580	0	250	0	0	0	55	0	7744	1	0	0	7	2	4	0	0	0	0	0	1852	0	1315	0	15932	2
12	1327	0	148	0	0	0	43	0	6924	2	0	0	2	0	3	0	0	0	0	0	1191	0	1415	0	11707	5
13	1936	0	237	0	0	0	90	0	9809	4	0	0	3	0	6	0	0	0	0	0	2694	0	1803	1	19350	7
14	1905	0	286	0	0	0	0	0	9010	1	0	0	2	1	4	0	0	0	0	0	2683	0	1667	1	17091	1
Total	6748	0	921	0	0	0	188	0	33487	8	0	0	14	3	17	0	0	0	0	0	8420	0	6200	2	64080	15

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District**, Earthquake Affected Areas, Pakistan, 31 Mar – 6 Apr 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
11	261	0	33	0	0	0	7	0	1421	0	1	0	0	0	5	0	0	0	0	0	248	0	167	0	2530	1
12	306	0	23	0	0	0	13	0	1092	0	0	0	0	0	5	0	0	0	0	0	326	0	114	0	2169	0
13	528	0	58	0	0	0	26	0	2401	0	0	0	0	0	3	0	0	0	0	0	501	0	236	0	4893	1
14	955	0	42	0	0	0	6	0	1747	0	0	0	0	0	5	0	0	0	0	0	357	0	211	0	4735	1
Total	2050	0	156	0	0	0	52	0	6661	0	1	0	0	0	18	0	0	0	0	0	1432	0	728	0	14327	3

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 31 Mar – 6 Apr 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
11	1076	0	37	0	0	0	14	0	5145	0	0	0	0	1	7	0	0	0	0	0	1631	0	358	0	13489	0
12	813	0	20	0	0	0	5	0	4248	2	0	0	0	0	5	0	0	0	0	0	1329	0	306	0	9874	3
13	1347	0	38	0	0	0	3	0	5865	1	1	0	0	0	8	0	0	0	0	0	2189	0	541	0	19464	3
14	1305	0	44	0	0	0	6	0	4918	2	1	0	1	0	12	0	0	0	0	0	1652	0	499	0	17865	1
Total	4541	0	139	0	0	0	28	0	20176	5	2	0	1	1	32	0	0	0	0	0	6801	0	1704	0	60692	7