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Abbaspur: Health education session for residents of the area.
Pictured by: Dr. Fawad



Highlights

- The number of bloody diarrhoea cases decreased by 7% from week 22 from 590 to 551 cases
- Malaria cases decreased by 20% from week 22, from 660 to 531 cases
- Acute watery diarrhoea cases increased by 2% from week 22 from 9571 to 9785 cases
- One alert for bloody diarrhoea involving five patients was received; samples were positive for shigella.
- One suspected measles case was reported from Muzaffarabad district in week 23, but was most likely a misdiagnosis
- One alert for acute watery diarrhoea was received in week 23; food poisoning is suspected.

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 this week was 306, a 1% decrease as compared to the previous week, but reporting timeliness of the DEWS system has increased compared with last week.

See Table 1 for summary statistics.

Table1. Reported health facilities by district, Earthquake Affected Areas, Pakistan, 12 May – 8 June 2007.

Area	Population	Reporting Health Facilities			
		12-18 May Week-20	19 – 25 May Week-21	26 May-1 June Week-22	2 – 8 June Week-23
Muzaffarabad	894,364	93	85	87	83
Bagh	452,532	38	39	41	41
Poonch	633,712	74	65	77	72
Mansehra / Balakot	1,154,804	70	70	69	72
Battagram / Shangla	592,256	36	36	35	38
Total	3,727,668	311(93%)	295(88%)	309(92%)	306(91%)

Total number of consultations

In week 23, there was 1% decrease in the number of reporting sites, but the number of consultations has increased from 94,152 to 96,904. The highest number of consultations by district was from Muzaffarabad, with 31,106, and the lowest was from Battagram, at 9,137. The weekly trend of reporting units participating in the DEWS and the number of consultations is shown in figure 1.

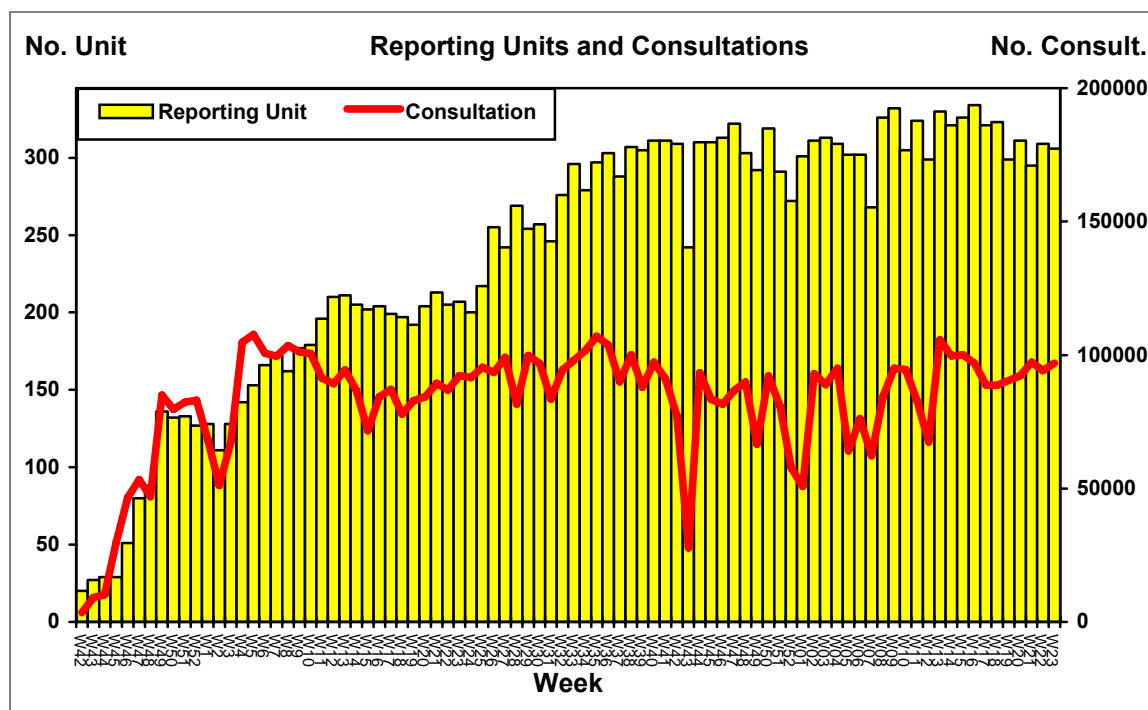


Figure 1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, 15 October 2005 - 8 June 2007.

DEWS Data, Epidemiological Week No. 23, 2007

During the last week (1st to 8th June, 2007), **96,904** consultations were reported through DEWS. Acute Respiratory Infections (**ARI**) accounted for **20%** of consultations (19,018), which was 3% higher compared to the same week last year. Acute Watery Diarrhoea (**AWD**) made up **10%** of consultations (9,785), **7%** (6,819) were due to Fever of Unknown Origin (**FUO**) and **3%** (2,436) due to Injuries (**INJ**). The ARI cases in patient under five years were 3% higher in week 23 of 2007 as compared to the same week last year. In patients' aged five and above, ARI made up 17% of consultations, 2% higher than that reported in the same week last year. All other reportable conditions each represented less than 1% of the total consultations in week 23.

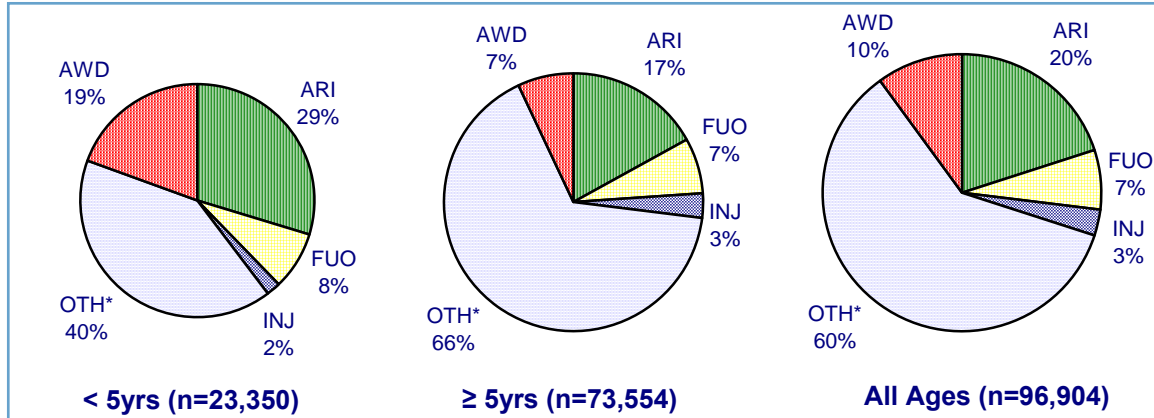


Figure 2. Proportion of primary causes for all reported cases, Earthquake Affected Areas, Pakistan, 1 to 8 June 2007.

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

DEWS Data, Epidemiological Week No. 23, 2007: Consultations by age

Though the trend in AWD in young children has been rising overall, when examined by district, only Muzaffarabad has had a sustained rise in the proportion of consultations in young children that are for AWD. Bagh and Poonch districts have remained steady in their rates, and Battagram and Mansera districts have seen a rise and fall in rate. See figure 3.

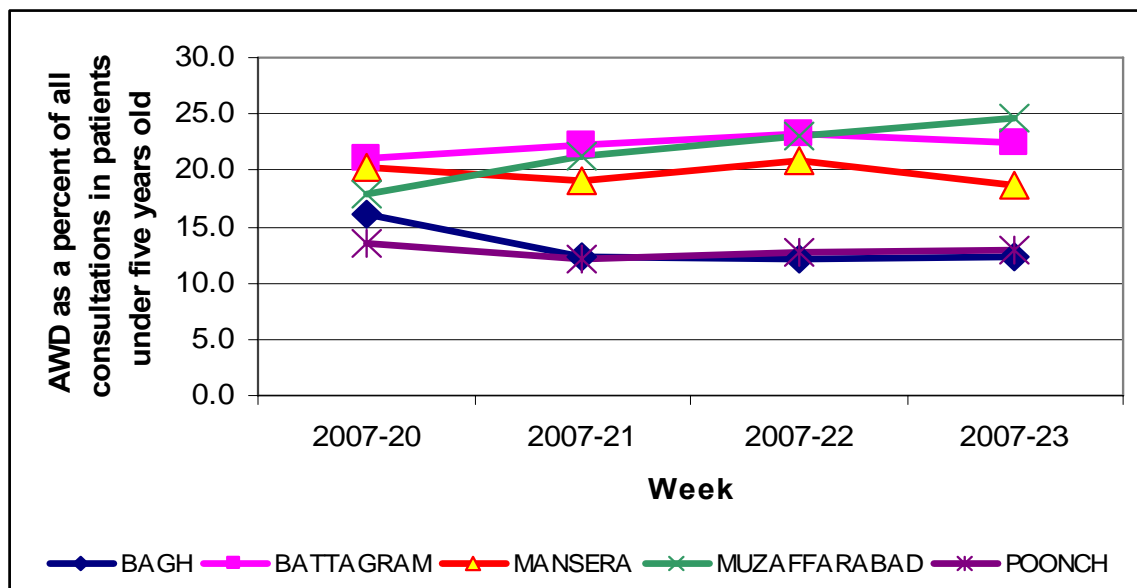


Figure 3: Trend in AWD and bloody diarrhoea as a percent of all consultations in patients under five, Earthquake Affected Areas, Pakistan, 12 May - 8 June 2007

DEWS Data, Monthly Summary (Epidemiological Weeks No. 20-23)

During the period, 12th May to 8th June, 2007 (Epidemiological weeks 20 to 23 inclusive), 150,507 consultations relating to health conditions under surveillance were reported, out of the total of 380,600 consultations. **19%** (73,226) of consultations were due to acute respiratory infection (**ARI**), **10%** (37,008) acute watery diarrhoea (**AWD**), **7%** (25,358) unexplained fever (**FUO**) and **3%** (10,021) Injuries (**INJ**).

Table 2. Comparison of the weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 12 May – 8 June 2007.

Week	WEEK 20		WEEK 21		WEEK 22		WEEK 23		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	8614	2	9038	0	9571	1	9785	1	37008	4	0.011
BD	647	0	560	0	590	0	551	0	2348	0	0.000
AFP	0	0	1	0	1	0	0	0	2	0	0.000
MAL	608	0	521	0	660	0	531	0	2320	0	0.000
ARI	18224	1	17594	7	18390	3	19018	3	73226	14	0.019
MES	4	0	17	0	13	0	1	0	35	0	0.000
MEN	0	1	1	1	3	1	0	0	4	3	75.000
JAU	70	1	36	0	31	0	48	0	185	1	0.541
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	5485	0	6679	1	6375	1	6819	0	25358	2	0.008
INJ	2701	0	2397	0	2487	1	2436	0	10021	1	0.010
OTH	55901	16	60446	11	56031	14	57715	13	230093	54	0.023
TOTAL	92254	21	97290	20	94152	21	96904	17	380600	79	
RU	311		295		309		306				

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, **88,620** consultations were reported in children under **5** years age, (23% of the total consultations), of which **ARI** was **29%** (25,446), **AWD** **18%** (16,308), **FUO** **8%** (7,063) and **INJ** was **2%** (1,858).

Table 3. Total number of reported cases, deaths and monthly Case Fatality Rate (CFR), less than 5 years old, Earthquake Affected Areas, Pakistan 12 May – 8 June 2007.

Week	WEEK 20		WEEK 21		WEEK 22		WEEK 23		TOTAL		CFR%
Event	C	D	C	D	C	D	C	D	C	D	
AWD	3921	2	3840	0	4129	1	4418	1	16308	4	0.025
BD	206	0	161	0	216	0	184	0	767	0	0.000
AFP	0	0	0	0	1	0	0	0	1	0	0.000
MAL	156	0	105	0	164	0	106	0	531	0	0.000
ARI	6636	1	5885	7	6153	3	6772	3	25446	14	0.055
MES	2	0	7	0	7	0	1	0	17	0	0.000
MEN	0	1	0	0	1	1	0	0	1	2	0.000
JAU	9	0	5	0	4	0	13	0	31	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	1470	0	1849	0	1779	0	1965	0	7063	0	0.000
INJ	549	0	380	0	482	0	447	0	1858	0	0.000
OTH	9086	1	9267	4	8800	3	9444	3	36597	11	0.030
TOTAL	22035	5	21499	11	21736	8	23350	7	88620	31	
RU	311		295		309		306				

There was an increase in the number of AWD cases from 9,571 to 9,785 since last week, and ARI also increased from 18,390 to 19,018 in the last week. The weekly proportion of ARI and AWD is shown in figure 4. Rates are showing their expected seasonal patterns, with ARI falling sharply and AWD increasing.

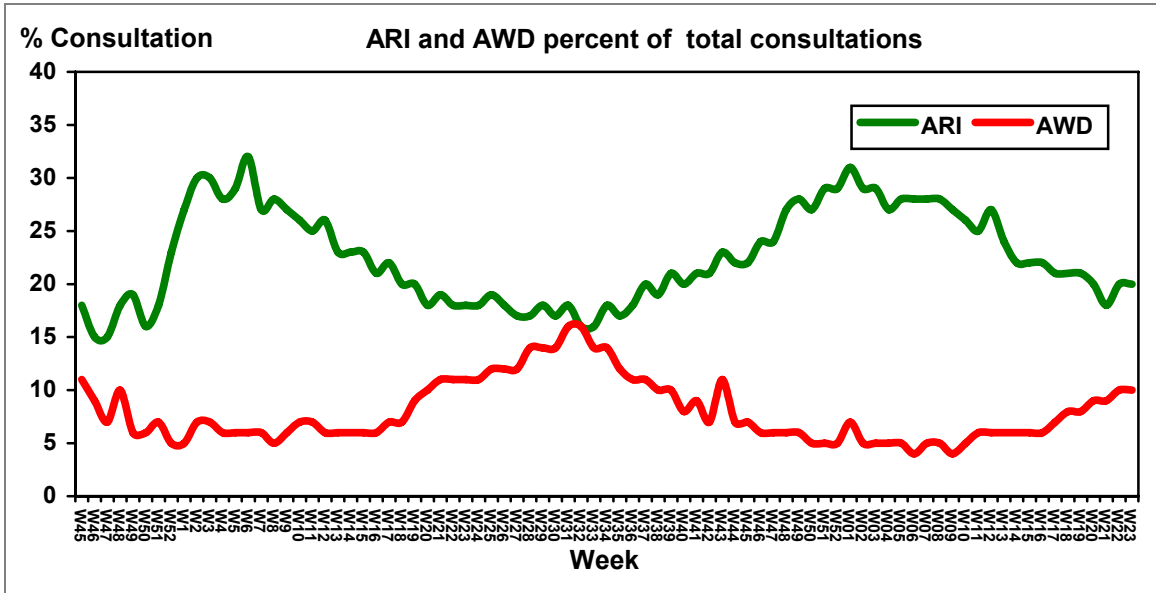


Figure 4. Weekly trend of percent of consultations for ARI and AWD, Earthquake Affected Areas, Pakistan, 15 October 2005 – 8 June 2007.

Acute Watery Diarrhoea

During the week 23, there were 9,785 cases of AWD reported which was 2% higher than week 22. There was one associated death under five years of age reported from Bagh district. The percentage of AWD in 2007 is almost identical to that of 2006. See figure 5

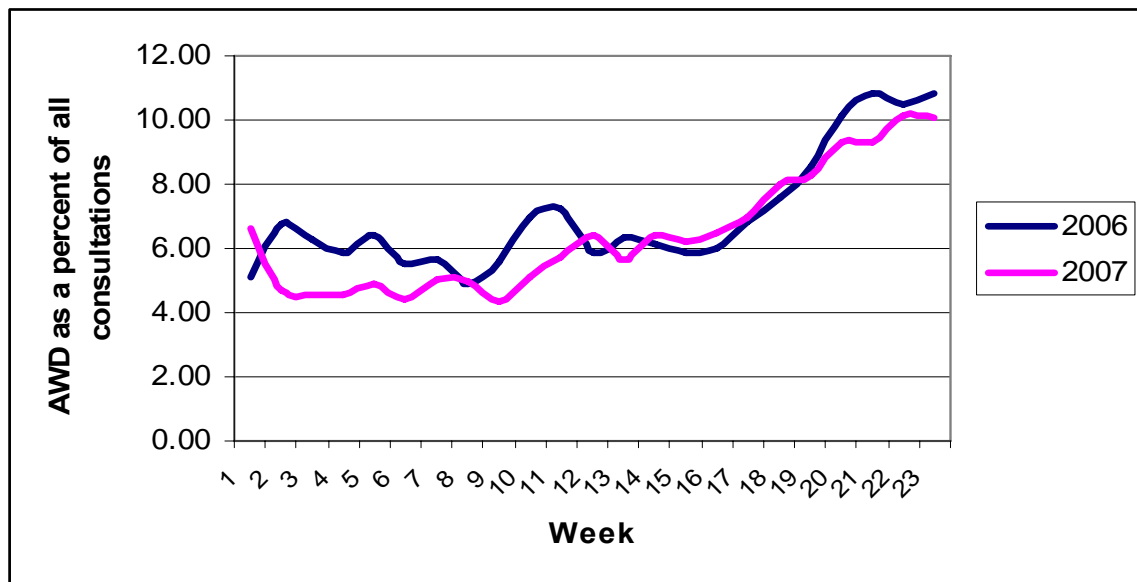


Figure 5: Trend in AWD as a percent of all consultations, 2006 and 2007, Earthquake Affected Areas, Pakistan, 31 Dec 2005 – 9 June 2006 and 30 Dec 2006 – 8 June 2007

Bloody Diarrhoea

During week 23, there were 551 suspected cases of bloody diarrhoea reported, which was 7% lower than week 22. There were no associated deaths reported from any district. The rate of bloody diarrhoea differs considerably by district, with Muzaffarabad and Battagram having a rate that is almost ten times that of the other districts. The rate of bloody diarrhoea has been declining in most districts. See figure 6

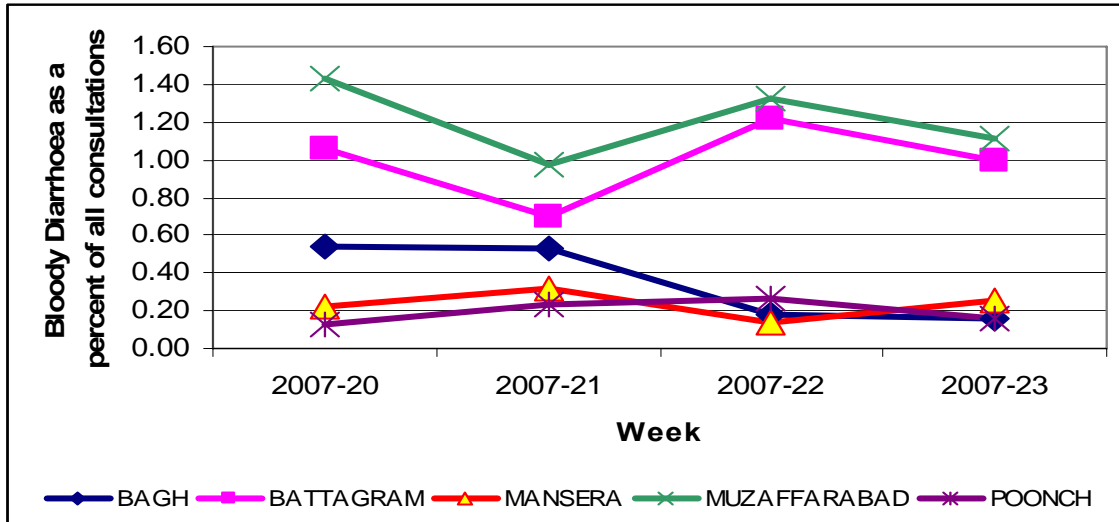


Figure 6: Trend in bloody diarrhoea as a percent of all consultations, by district, Earthquake Affected Areas, Pakistan, 12 May – 8 June 2007

Acute Jaundice Syndrome

In week 23, there were 48 cases of suspected hepatitis reported. There were no associated deaths. During the past two weeks, there had been a gradual decrease in the percentage of suspected hepatitis, but in week 23 the percentage has increased. However the rate is still significantly below that of the same period reported during 2006. See figure 7.

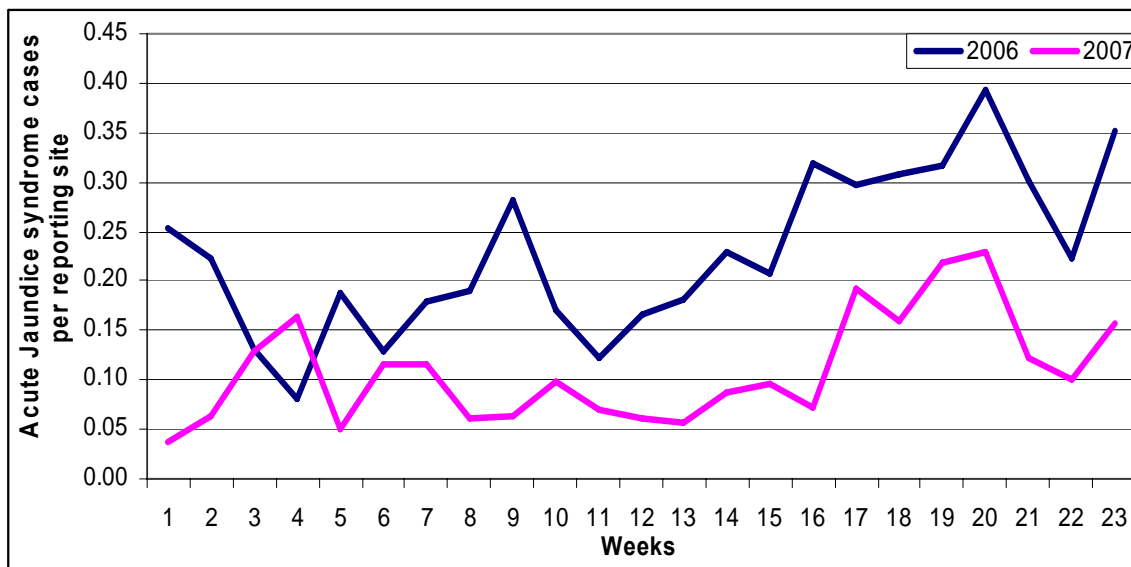


Figure 7: Trend in suspected hepatitis cases per reporting site, Earthquake Affected Areas, Pakistan, 31st Dec, 05 to 9 June 2006 and 30th Dec 06 to 8 June, 2007.

Malaria

In week 23, there were 536 suspected cases of malaria reported, 19% lower than week 22. There were no associated deaths reported. In most districts, malaria is a greater problem for patients over five years of age, with the exception of Muzaffarabad, which has a higher rate in patients under five. The rates of malaria in week 23 range widely by district, with Mansehra showing the lowest rate, and Poonch the highest. See figure 8.

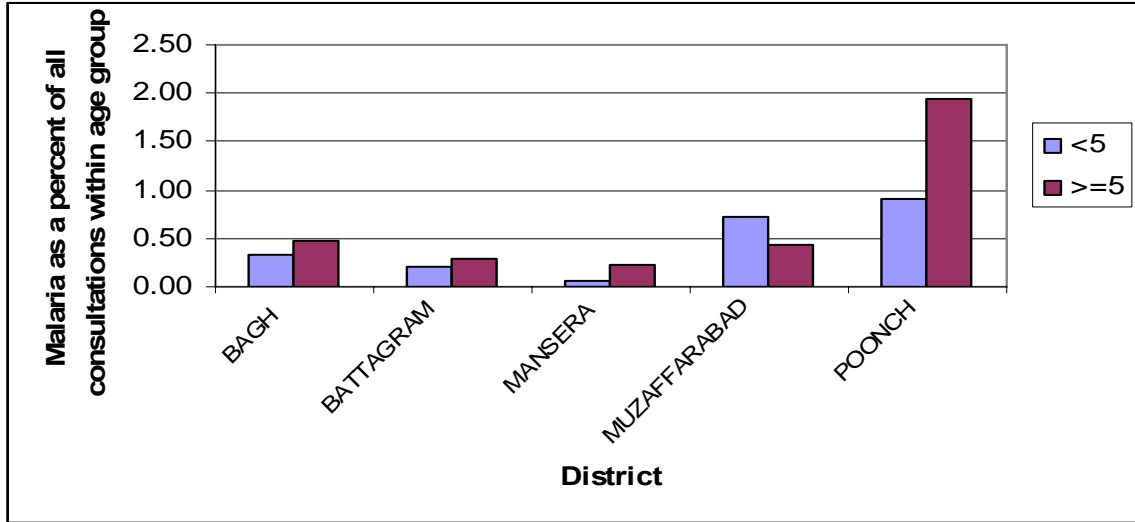


Figure 8: Malaria as a percent of all consultations within age group, by district, Earthquake Affected Areas, Pakistan, 2 - 8 June 2007

Measles

There was 1 case of suspected measles reported in week 23 from Muzaffarabad district. Despite a promising beginning to 2007, with 6 of the first ten weeks having no measles cases, the rate has increased suddenly. Since week 13, there have been 52 cases of measles reported, with over half of these (28) from Muzaffarabad. See Figure 9.

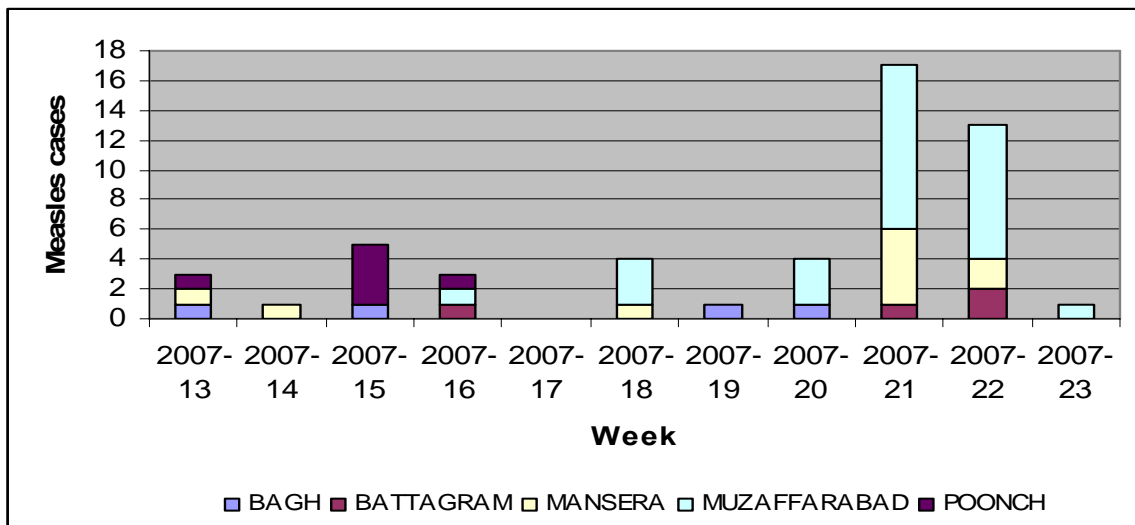


Figure 9: Measles cases, by district, Earthquake Affected Areas, Pakistan, 24 March - 8 June, 2007

Acute Respiratory Infection

In week 23, there were 19,018 consultations for ARI reported through the DEWS system. There were three deaths in patients under five years of age; one from Muzaffarabad, one from Poonch and one from Mansehra district. In the past four weeks, the trend in the percentage of ARI has been relatively steady in most districts, having small fluctuations. See Figure 10.

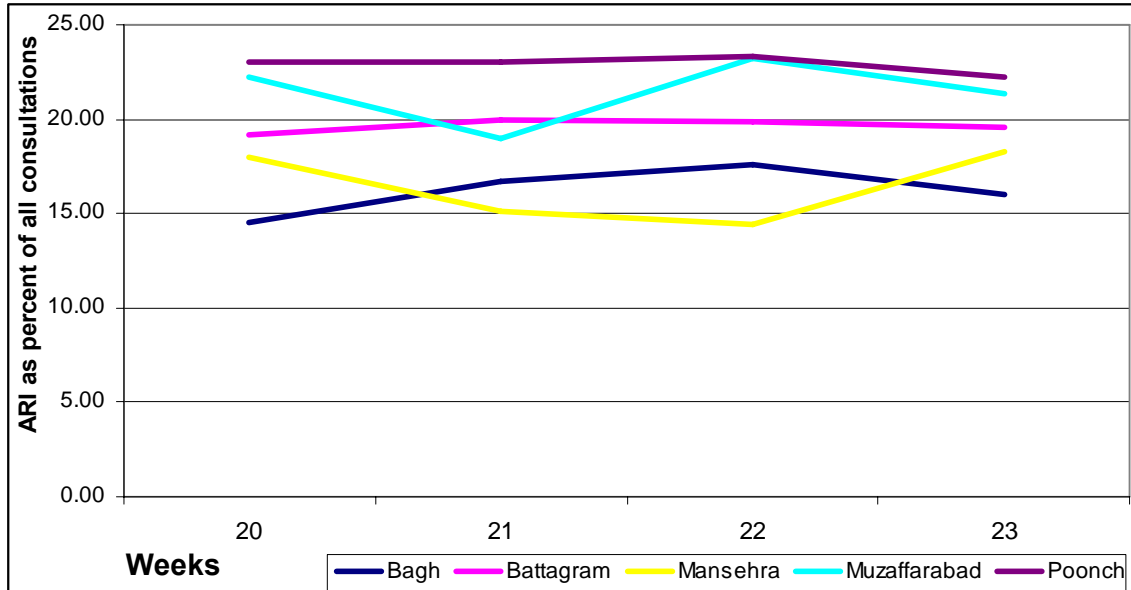


Figure 10: Trend in ARI as a percent of all consultations, Earthquake Affected Areas, Pakistan, 12 May – 8 June 2007

Other Reportable Diseases and Conditions

There were no cases of suspected meningitis reported from any of the districts in week 23. There were 6,819 cases of Fever of Unknown Origin (FUO) and 2,436 cases of injuries. There were no cases of tetanus or acute hemorrhagic fever.

Since the beginning of 2007, there have been 99 cases of meningitis reported. Cases have been gradually declining with warmer weather. See figure 11.

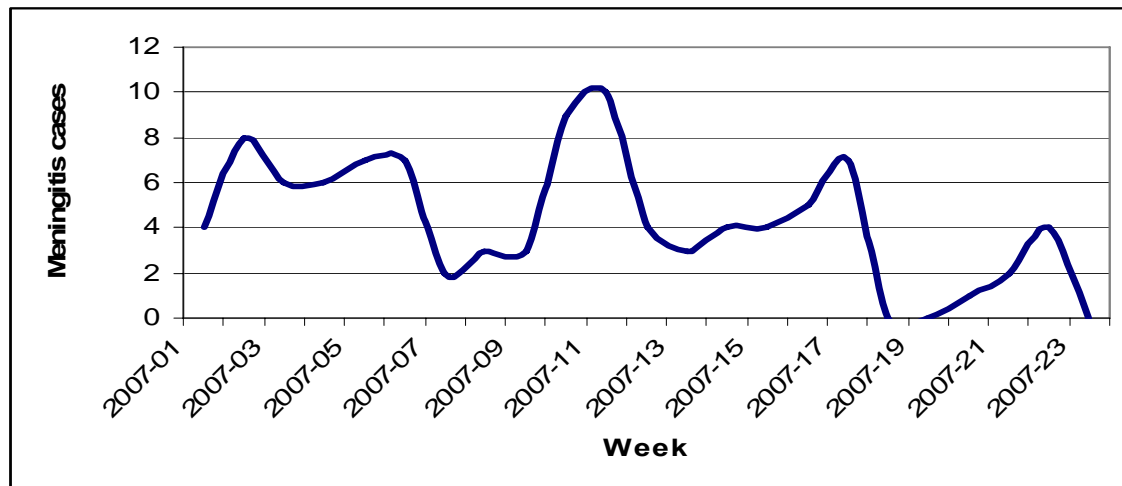


Figure 11: Meningitis cases, Earthquake Affected Areas, Pakistan, 30 December 2006 – 8 June 2007

Outbreak Alert and Response¹

Battagram Measles

One alert of suspected Measles was received on June 4th, 2007 from village Donga, Shamlai, and investigated on June 6th. A 20 day old male child resident of village Donga, Shamlai, developed rashes on his body, followed by fever the next day. The fever resolved after three days. The mother of the child was comprehensively vaccinated against measles before. No other case having similar symptoms or measles was identified in the locality. The team considered the case to be a misdiagnosis, but informed the EDO health in case a vaccination campaign was desired.

Battagram Bloody Diarrhoea

An alert for bloody diarrhoea was reported from BHU Phagora on June 8th, 2007. There were five cases, four in one household and one from a nearby house. The first case was an adult woman, treated on June 7th. Her four year old son was treated the following day, at which point the alert was reported. Two further members of the family and a female child of a nearby house were treated in the following two days.

WHO surveillance team investigated the situation on the day the alert was reported. A sample was taken and sent to NIH, Islamabad for laboratory confirmation. The sample was positive for Shigella. All of the patients have recovered and no other cases were found in the locality. Health education was given to the community.

Muzaffarabad Acute watery diarrhoea

On Friday 8th June an alert of watery diarrhoea received from PIMA hospital, which was investigated on June 9th. A 29 years old male resident of Bella Noor Shah admitted with watery diarrhoea, vomiting and severe dehydration.

One day before the patient developed abdominal pain and nausea which gradually increased to rice watery stools and vomiting next day. The patient had travelled from Rawalpindi to Muzaffarabad on the 7th of June. A total of 12 people were living in the same house, no others had signs or symptoms. No other case in the area has so far reported. Rectal swab sample was taken and sent to NIH, Islamabad for laboratory confirmation. The preliminary result from NIH was negative for Vibrio Cholera, and at this time food poisoning is suspected. Health education on hand washing and safe drinking water was given to the attendants of patient.

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, 12 May – 8 June 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
20	981	1	80	0	0	0	95	0	2135	0	1	0	0	0	24	0	0	0	0	0	312	0	85	0	10959	3
21	800	0	75	0	0	0	32	0	2371	1	0	0	0	0	2	0	0	0	0	0	414	0	2	0	10519	4
22	843	0	25	0	0	0	86	0	2508	0	0	0	0	0	5	0	0	0	0	0	315	0	18	0	10465	2
23	804	1	24	0	0	0	67	0	2431	0	0	0	0	0	5	0	0	0	0	0	394	0	2	0	11436	0
Total	3428	2	204	0	0	0	280	0	9445	1	1	0	0	0	36	0	0	0	0	0	1435	0	107	0	43379	9

Table 7. Number of reported cases and deaths, **Poonch District***, Earthquake Affected Areas, Pakistan, 12 May – 8 June 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
20	1465	0	20	0	0	0	273	0	3677	0	0	0	0	0	25	0	0	0	0	0	1795	0	652	0	8041	3
21	1268	0	32	0	0	0	288	0	3188	1	0	0	0	0	6	0	0	0	0	0	1828	0	552	0	6702	2
22	1441	0	40	0	0	0	266	0	3526	0	0	0	0	0	7	0	0	0	0	0	1855	0	628	0	7346	4
23	1328	0	22	0	0	0	234	0	3149	1	0	0	0	0	5	0	0	0	0	0	1779	0	513	0	7152	1
Total	5502	0	114	0	0	0	1061	0	13540	2	0	0	0	0	43	0	0	0	0	0	7257	0	2345	0	29241	10

Table 8. Number of reported cases and deaths, **Muzaffarabad District***, Earthquake Affected Areas, Pakistan, 12 May – 8 June 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
20	2818	1	412	0	0	0	182	0	6435	0	3	0	0	0	3	1	0	0	0	0	1357	0	1250	0	16442	7
21	3734	0	306	0	0	0	165	0	6025	3	11	0	1	1	6	0	0	0	0	0	1961	1	1102	0	18470	3
22	4189	1	393	0	0	0	279	0	6858	1	9	0	3	1	5	0	0	0	0	0	1862	1	1131	1	14830	5
23	4269	0	345	0	0	0	154	0	6653	1	1	0	0	0	3	0	0	0	0	0	2091	0	1133	0	16457	4
Total	15010	2	1456	0	0	0	780	0	25971	5	24	0	4	2	17	1	0	0	0	0	7271	2	4616	1	66199	19

Number of reported cases and deaths per District, NWFPTable 9. Number of reported cases and deaths, **Battagram District***, Earthquake Affected Areas, Pakistan, 12 May – 8 June 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
20	654	0	79	0	0	0	37	0	1432	0	0	0	0	0	11	0	0	0	0	0	473	0	220	0	4546	1
21	763	0	51	0	0	0	17	0	1444	0	1	0	0	0	14	0	0	0	0	0	462	0	220	0	4280	0
22	714	0	89	0	0	0	17	0	1384	0	2	0	0	0	9	0	0	0	0	0	375	0	184	0	4501	0
23	929	0	91	0	0	0	25	0	1785	0	0	0	0	0	20	0	0	0	0	0	467	0	203	0	5617	0
Total	3060	0	310	0	0	0	96	0	6045	0	3	0	0	0	54	0	0	0	0	0	1777	0	827	0	18944	1

Table 10. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 12 May – 8 June 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
20	2696	0	56	0	0	0	21	0	4545	1	0	0	0	1	7	0	0	0	0	0	1548	0	494	0	15913	2
21	2473	0	96	0	1	0	19	0	4566	1	5	0	0	0	8	0	0	0	0	0	2014	0	521	0	20475	1
22	2306	0	39	0	1	0	10	0	3983	2	2	0	0	0	5	0	0	0	0	0	1959	0	526	0	18771	3
23	2455	0	69	0	0	0	51	0	5000	1	0	0	0	0	15	0	0	0	0	0	2088	0	585	0	17053	4
Total	9930	0	260	0	2	0	101	0	18094	5	7	0	0	1	35	0	0	0	0	0	7609	0	2126	0	72212	10