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Muzaffarabad: WHO team's follow-up visit for AJS at Village Chandira
Picture by: Kashif Jan



Highlights

- This week 63, 712 consultations were reported from 273 reporting units
- ARI remains the leading cause of consultation this week and the weekly trend is on decline
- Acute Diarrhoea reported in 6% of consultation with a steady weekly trend.
- District Poonch reporting an increasing number of Malaria.
- District Neelum reports higher number of Bloody Diarrhoea and is being investigated
- Two cases of AFP reported from DHQ hospital Mansehra and were investigated

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

During week 14, 2008, total 273 (81%) sites sent a weekly DEWS report on the due time. The DEWS reporting has increased by 4% compare to last week (81% and 77% respectively). The total number of reporting site in the Earthquake affected districts remains 335 as of week 14, 2008. Table 1, summarises reporting by each earthquake affected district for the last 4 weeks.

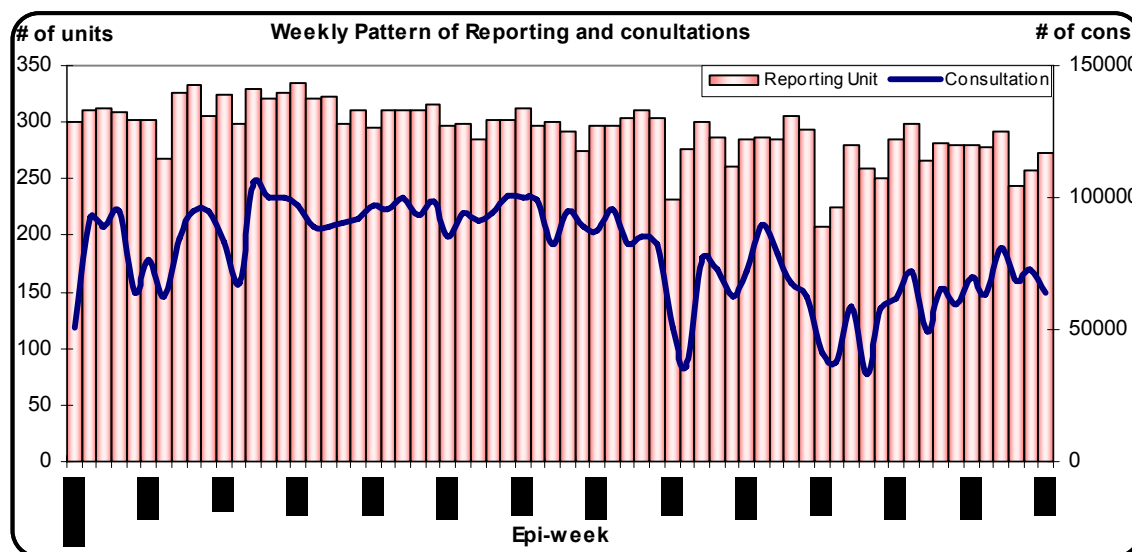
Table1. Heath Facilities by district, reported from Earthquake Affected Areas, Pakistan, 8 March - 4 April 2008.

Area	Population	Reporting Health Facilities			
		8-14 Mar 08	15-21 Mar 08	22-28 Mar 08	29Mar-4Apr 08
		Week-11	Week-12	Week-13	Week-14
Bagh	452,532	37	37	38	38
Battagram	592,256	34	31	32	32
Mansehra	1,154,804	60	59	59	59
Muzaffarabad	770,000	75	67	76	67
Neelum	184,000	17	13	18	16
Poonch	633,712	68	36	34	61
Total	3,727,668	291(87%)	243(73%)	257(77%)	273(81%)

Total number of consultations

During week 14, Total 63,712 patient consultations were reported a decrease by 12% compare to last week. District Muzaffarabad and Mansehra reports the highest proportion (27%) and Neelum reports the lowest proportion (5%) of the total consultation reported from all the Earthquake affected districts. District Neelum is the smallest district with less number of DEWS reporting sites among all the districts in the earthquake area. Figure 1 showing the pattern of weekly reporting units participating in the DEWS and the total number of weekly consultations reported from week 1, 2007 to week 14, 2008.

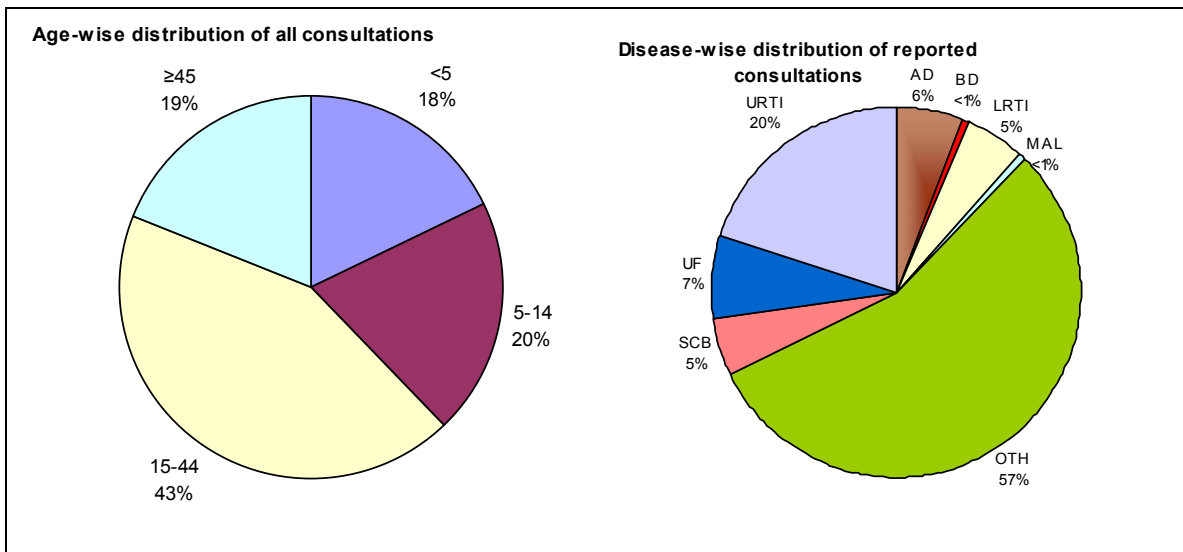
Figure1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, Week 1, 2007 – week 14 2008.



DEWS Data, Epidemiological Week No. 14, 2008

During the Epidemiological week 14 (29 March – 4 April, 2008), total 63,712 consultations were reported through DEWS. The proportion for Upper Respiratory Tract Infection was **20%**, Unexplained Fever **7%**, Acute Diarrhoea **6%**, Lower Respiratory Tract Infection **5%** and Scabies **5%** in all age groups and both sexes. Out of the total 63,712 reported consultation, 57% (35,533) in all ages and both sexes were for health problems other than the diseases reported above. Distribution of the consultations by age groups show that **18%** are children less than 5 years age, **20%** children 5-14 years, **43%** adults 15-45 years and **19%** above 45 years age. Female patients were **53%** of the total consultations reported for the week (Figure 2).

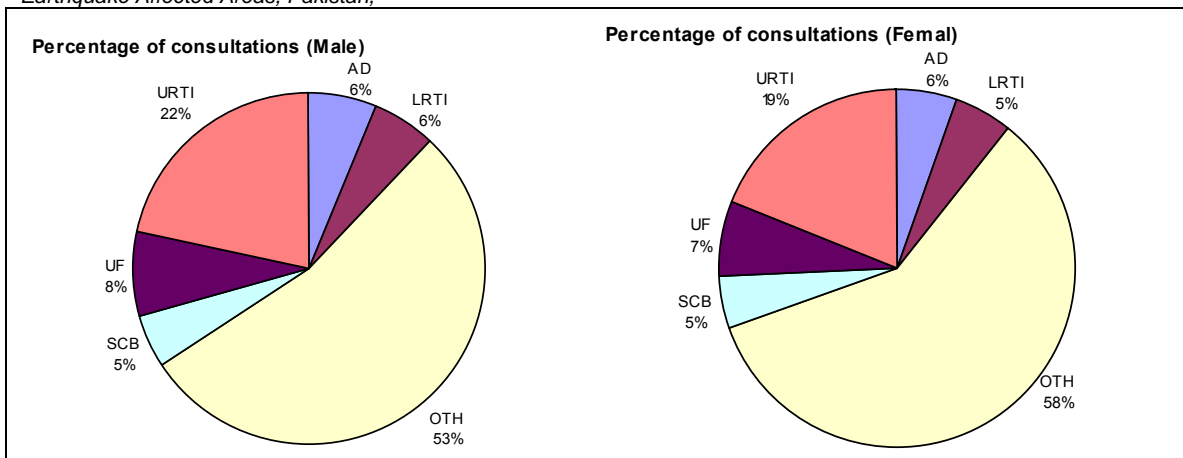
Figure 2. Distribution of reported consultations by disease/health event and age groups, 29March – 4 April 2008, Earthquake Affected Areas, Pakistan



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

Comparison of consultation by gender shows that in female patients, health events other than the five common communicable disease reported are higher than males (58% and 53% respectively) (Figure 3). In males the proportion for all common infectious diseases reported is higher than females (47% and 42% respectively).

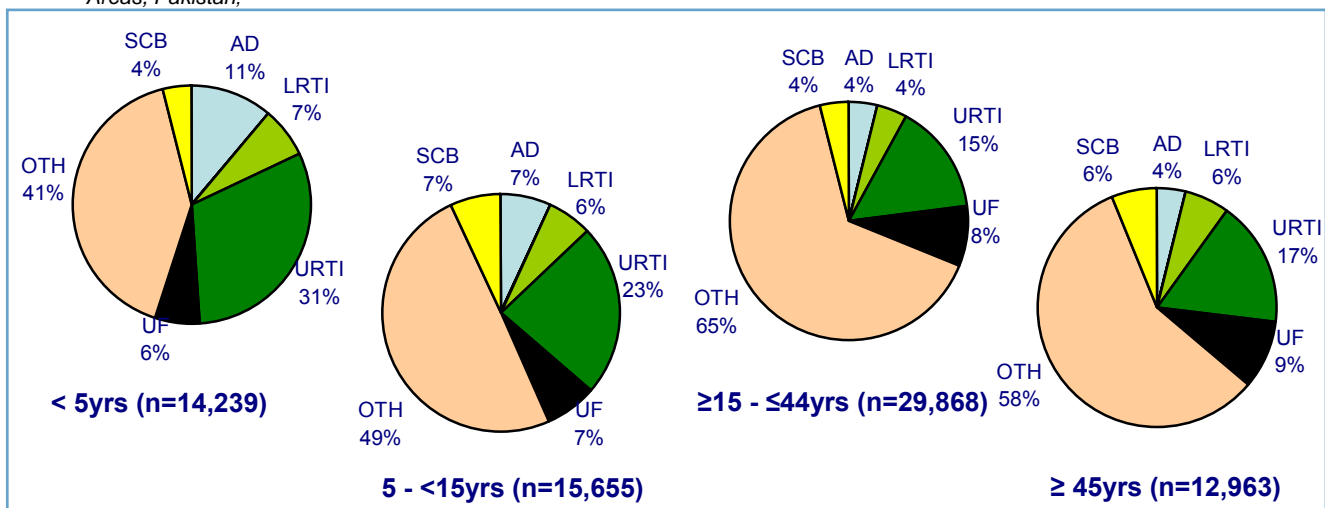
Figure 3. Distribution of reported consultations by disease/health event and age groups, 29March – 4 April 2008, Earthquake Affected Areas, Pakistan,



Disease Distribution by Age:

Acute Upper Respiratory Tract Infections (**URTI**) is the highest reported disease in all age groups. In children **less than five years age**, Upper Respiratory Tract Infection is **31%**, followed by Acute Diarrhoea (AD), **11%**, Lower Respiratory Tract Infection (LRTI) **7%**, Unexplained Fever **6%** and Scabies **4%**. In **5 to 15 years age** group Upper Respiratory Tract Infection reported **23%** followed by Unexplained Fever UF, **7%**, Lower Respiratory Tract Infection and Acute Diarrhoea **6%**, and Scabies **7%**. In both the adult age groups (15-45 years and above 45 years) consultation for the other health events is higher than reported for children (65% and 58% respectively), followed by URTI 15% in 15-45 years age group and 17% in above 45 years age. The proportion of rest of the reported communicable diseases in adults is lower than reported in children. Figure 4 present comparison of the reported consultation by age groups.

Figure 4. Proportion of primary causes for all reported cases by age groups, 29 Mar – 4 Apr 2008, Earthquake Affected Areas, Pakistan.



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

DEWS Data, (Epidemiological Weeks No.11 – 14, 2008):

During the period 8 March - 4 Apr, 2008 (Epidemiological weeks 11 to 14, 2008 inclusive), 129,407 (45%) consultations out of the total 286,086 consultations in the Earthquake affected areas were reported for health conditions under weekly surveillance. The proportion (percentage of total consultations) of the five common diseases under surveillance has remained almost consistent since last week. During this period **20%** (58,837) of consultations were due to upper respiratory infection (**URTI**), **9%** (24,690) unexplained fever (**UF**), **5%** (15,500) lower respiratory infection (**LRTI**), **6%** (16,782) acute diarrhoea (**AD**), and **4%** (11,869) due to scabies (**SCB**). Total 42 deaths were reported during this period. Most of the deaths (35 deaths) were due to health events other than the diseases under weekly surveillance. Three deaths were reported due to acute Diarrhoea with a total case fatality **0.018%**. Four deaths reported due to Lower Respiratory Tract Infection and the total case fatality for LRTI stands at **0.026%**. No deaths were reported from any other disease under weekly surveillance during this period.

Table 2. Weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), Earthquake Affected Areas, Pakistan, 8 March – 4 April, 2008.

Week Event	WEEK 10		WEEK 11		WEEK 12		WEEK 13		TOTAL		CFR%
	C	D	C	D	C	D	C	D	C	D	
AD	3225	0	4565	2	3944	1	4486	0	16220	3	0.018
AFP	1	0	3	0	0	0	2	0	6	0	0.000
AJS	31	0	15	0	7	0	13	0	66	0	0.000
BD	206	0	245	0	164	0	245	0	860	0	0.000
LRTI	3426	0	4156	2	3717	1	4222	1	15521	4	0.026
MAL	205	0	268	0	162	0	273	0	908	0	0.000

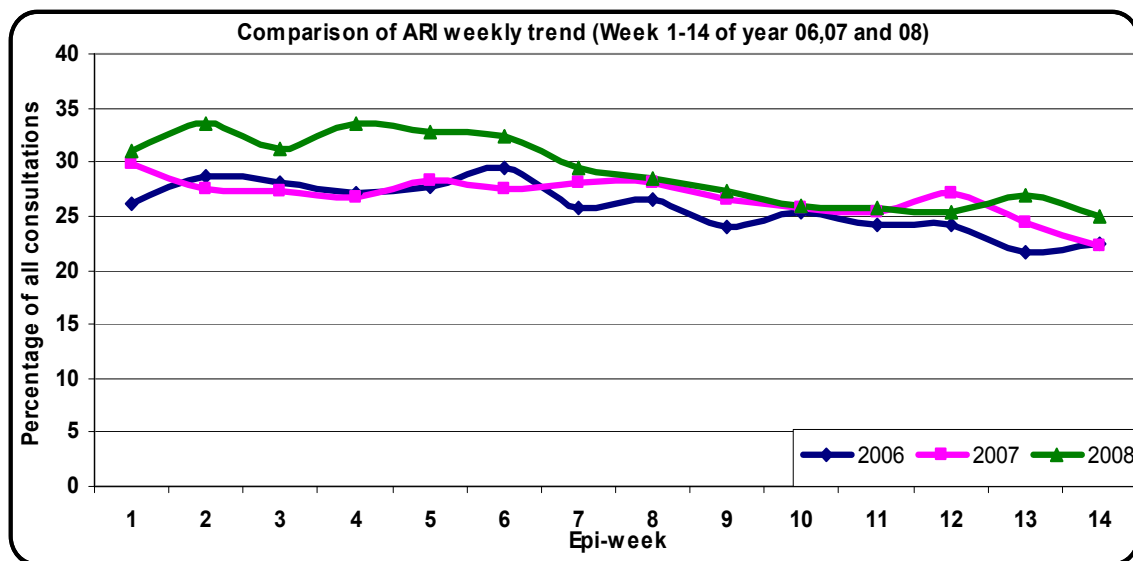
MG	0	0	0	0	0	0	1	0	1	0	0.000
MS	0	0	0	0	1	0	1	0	2	0	0.000
OTH	37080	1	45050	19	38140	8	37956	7	158226	35	0.022
SCB	2945	0	3028	0	2559	0	3250	0	11782	0	0.000
UF	3360	0	6859	0	6322	0	6876	0	23417	0	0.000
URTI	12993	0	16773	0	13671	0	15400	0	58837	0	0.000
Total Cons.	63472	1	80962	23	68687	10	72725	8	285846	42	
RU	278		291		243		257				

Acute Respiratory Tract Infections:

During week 14, 2008 total 16,186 consultations for ARI (both Upper and Lower Respiratory Tract Infection) were reported. ARI accounts for 25% of the total consultations reported for the week (URTI 20% and LRTI 5%) and it is the leading cause of consultation for all age groups, among all the diseases under surveillance. For the current week in children **less than 5 years age** URTI was reported in 31% of consultations and LRTI in 7% of consultations. In **5 to 14 year age** groups URTI reported in 23% and LRTI in 6%. In **15 to 45 years age** group URTI is reported for 15% and LRTI for 6%. In the age group **above 45 year** URTI reported for 17% and LRTI for 4% of consultations. Proportion of ARI in male patients was reported slightly higher than Females.

When compared the weekly trends of ARI for the same periods (from week 1 to 14) of the last three years the general trend is same. The ARI trend, from week 6 & 7 (mid February) onwards in the earthquake affected districts showing a gradual decline in the proportion of consultations for the disease. The proportion of ARI from week 1 to 7 remains slightly high in year 2008 as compared to the same period in year 2006 and 2007. The weekly trend of ARI has dropped in week 14 than week 13. ARI is the leading cause of consultation throughout the year in all age groups and showing a consistent trend for the last three year. Fig 5

Figure 5: Comparison of ARI weekly trends (week 1 to 14) years 2006, 2007 and 2008, Earthquake districts Pakistan



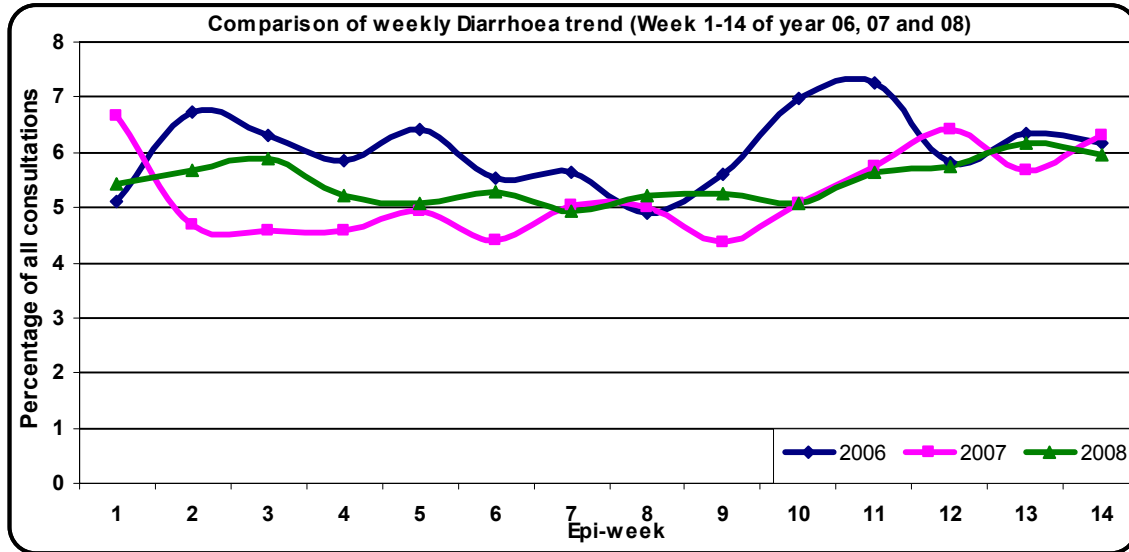
Acute Diarrhoea and suspected Cholera:

During week 14, 2008, Acute Diarrhoea was reported in 3,787 patients accounting for 6% of the total consultation in all groups. In children less than 5 years age Acute Diarrhoea was reported in **11%** of the total consultation in the age group for the week. Similarly in 5 -14 year children 7% of the consultations were for AD. In adult age groups 15-45 years and 45 years, 4% of the consultation were reported for **AD** out of the total consultation in the respective age groups. AD

consultations for week 14 showing a slight decline compared to week 13 after a consistent weekly increase from week 10 to 13. When compared with the weekly trend of the AD from week 1 to 14 for the last two years it shows a much steady path in 2008 and reflecting same pattern for all the three years. See Figure 6.

There were no cases of suspected cholera reported from any district, and there was one death due to acute diarrhoea was reported from Muzaffarabad district in week 14.

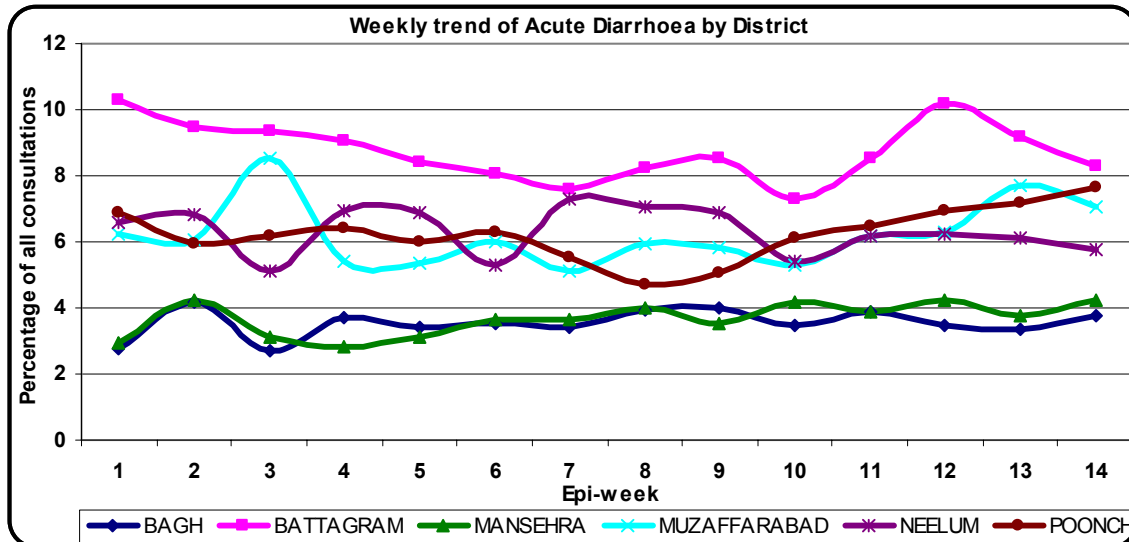
Figure 6: Trend in Acute diarrhoea as a percent of all consultations, comparison by years, Earthquake Affected Areas, Pakistan,



When compared the trends of Acute Diarrhoea by district from Week 1 to 14, 2008, Battagram had been reporting highest proportion of AD throughout the period. However proportion of AD has dropped from 10% in week 12 to 8% in week 14, 2008.

Districts Bagh and Mansehra have been reporting low proportions of AD and presenting a steady pattern over the weeks. District Poonch show an increasing trend for AD for the last four weeks consistently. District Neelum is showing a weekly fluctuating pattern of AD. Figure 8

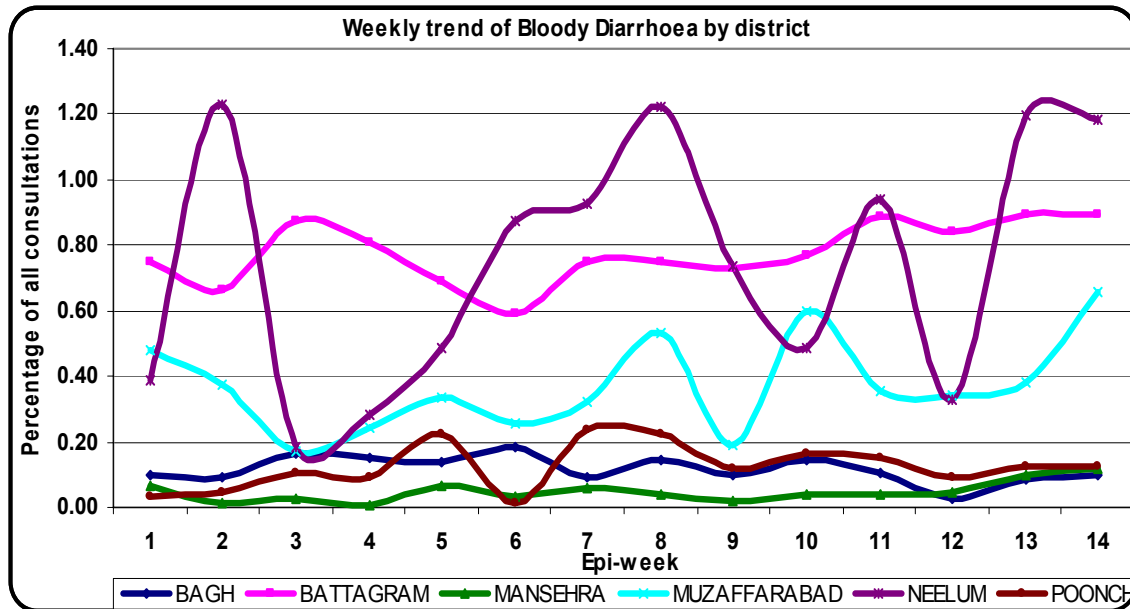
Figure 7: Trend in Acute diarrhoea as a percent of all consultations, comparison by districts weeks 1-14, 2008, Earthquake Affected Areas, Pakistan



Bloody Diarrhoea:

During week 14 of 2008, total 255 cases of bloody diarrhoea reported from all the districts higher than the total BD consultation reported previous week. When compared with the weekly trend of the disease for the same periods in the last three years the overall yearly trend of BD showing a similar pattern however the proportion of the consultations of the disease remains low for 2008 as compared to 2007 and 2006. There were no associated deaths reported from any district. The percentage of bloody diarrhoea differs by age group, with the highest percentage rate seen in patients 5-14 years of age group, while adult (15-44 years age group) having lowest rate. The overall proportion of reported Bloody Diarrhoea is very small for all the weekly consultations and there is a little weekly fluctuation. When compared the weekly trend of the BD by district Neelum is reporting a fluctuating pattern for the disease and reporting the highest number of cases of BD for last two weeks. District Battagram reporting relatively higher number of BD consistently compare to other districts. District Muzaffarabad, reporting an increasing number of Bloody Diarrhoea over the last few weeks. Districts Bagh, Mansehra and Poonch presenting a stable picture for BD and reporting less case. See Figure 8.

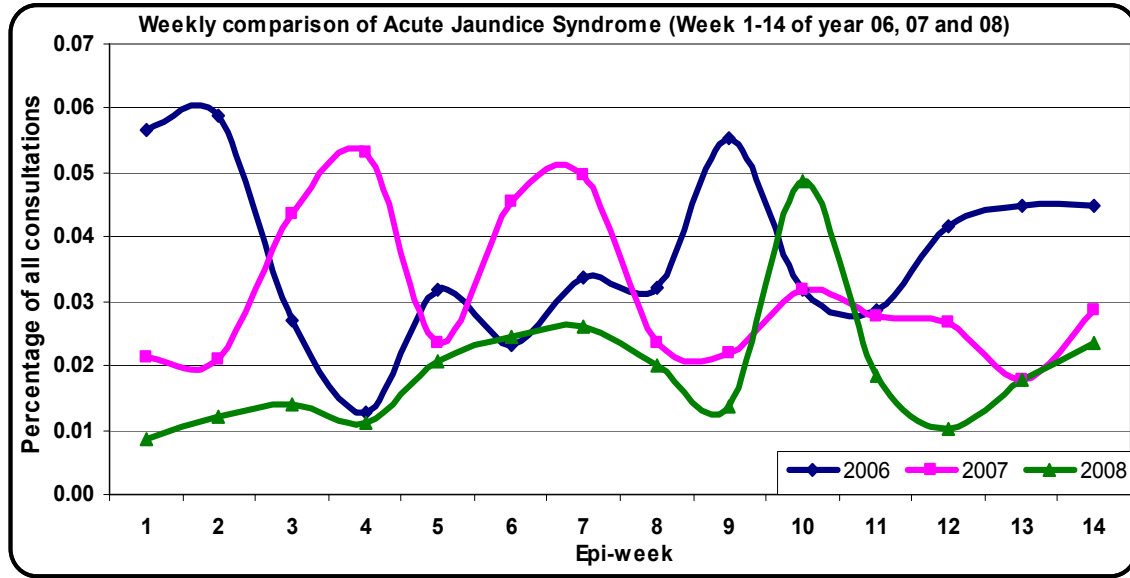
Figure 8: Trend in weekly Bloody diarrhoea as a percent of all consultations, comparison by district, Earthquake Affected Areas, Pakistan,



Acute Jaundice Syndrome:

In week 14 of 2008, 15 cases of Acute Jaundice Syndrome were reported. From week 1 to 13, 2008, the overall trend of the disease is showing a gradual decrease with a slight weekly fluctuation. In week 10, 2008 there was spike in the weekly disease trend as a result of an outbreak in district Muzaffarabad. Comparison of the weekly trends of AJS for the last three years shows that the overall pattern remains the same however the overall proportion of AJS in 2008 remains lower than 2007 and 2006 for the same period. During the last three weeks there is a slight increase in the AJS trend in the earthquake affected districts. (Figure 9).

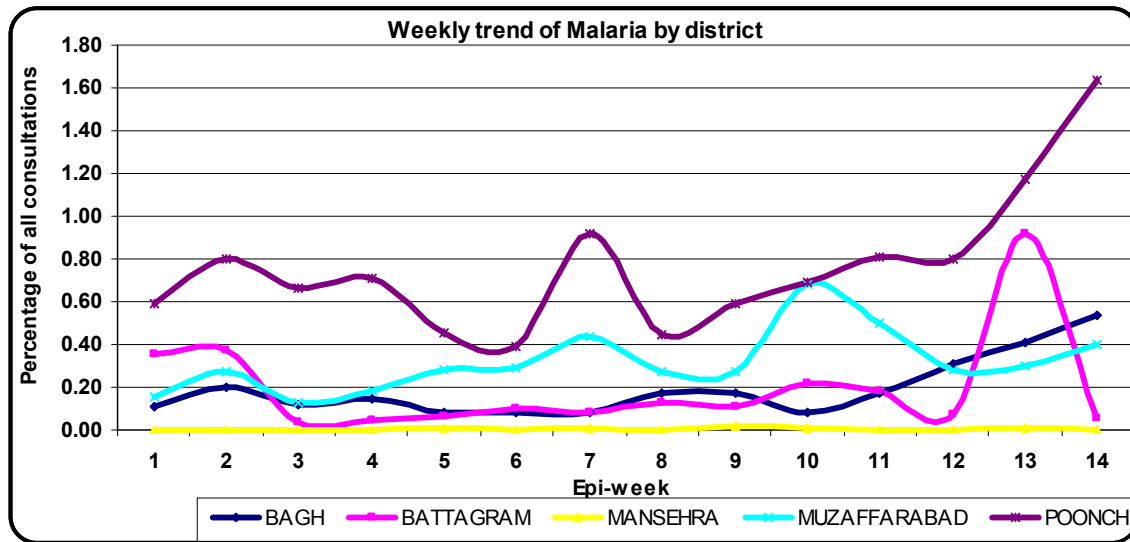
Figure 9: Trends in weekly AJS as a percent of all consultations, comparison by year, Earthquake Affected Areas, Pakistan,



Malaria:

In week 14, 2008, there were 269 suspected cases of malaria reported. Districts Poonch reporting highest number of Suspected Malaria case compared to the other districts. In district Poonch most of the Malaria cases are reported from Tehsil Hajira. There were no associated deaths reported from any district. When compared with the same week of last year, the percentage of malaria in 2008 has been lower. District Poonch, Bagh and Muzaffarabad are showing an increase in **suspected** malaria in the last few weeks. Battagramm reports less Malaria cases as compared to last week which was due to problem with following the case definition for suspected Malaria. See figure 10.

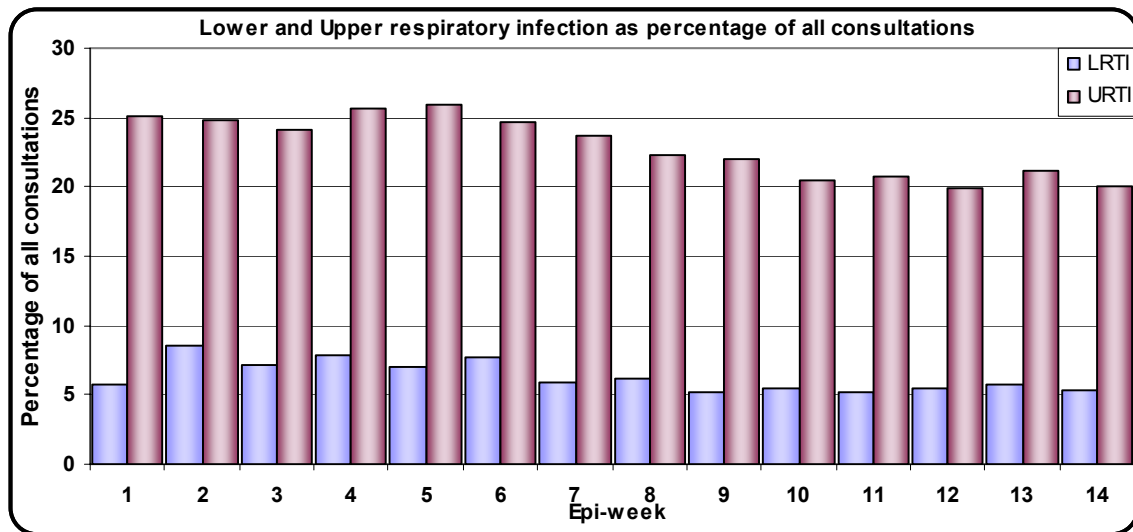
Figure 10: Weekly trends in Suspected Malaria as percentage of all consultations, comparison by district, Earthquake Affected Areas, Pakistan, weeks 1-14, 2008



Upper Respiratory Infection and Lower respiratory Infection:

During week 14, 2008, there were 5% (3,405) consultations for Acute Lower Respiratory tract Infections and 20% (12,781) cases of Upper Respiratory tract Infections reported through the DEWS system. There is an overall declining trend in URTI from week 6, 2008 onwards with a slight weekly fluctuation (Figure 11)

Figure 11: Weekly Proportion of URTI and LRTI as percentage of all consultations, (week 1 – 14, 2008) Earthquake Affected Areas, Pakistan



Other Conditions under Surveillance:

During this week, 35,533 (57%) consultations out of the total 63,712 reported consultation, in all ages and both sexes were for health problems other than reportable disease under weekly surveillance. Two cases of suspected AFP reported. No cases of suspected Hemorrhagic Fever, suspected Measles, Meningitis, suspected or Neonatal Tetanus reported from any district for week 13, 2008.

Outbreak Alert and Response¹

During week 13, 2008, three alerts were reported and were responded accordingly from Earthquake districts.

Mansehra

- Two cases of **AFP** reported from DHQ hospital Mansehra.
 - A twelve years old male child from Dab # 2 Mansehra presented at DHQ hospital with fever and weakness in both legs on April 1, 2008. Stool samples were taken and sent for investigation from NIH.
 - Another female child of 16 months from village Gandian, Mansehra admitted at the DHQ hospital on March 31 with fever and weakness in both legs. Stool samples collected and sent to NIH for investigation
 - Laboratory results for both the samples are awaited
- RHC Shinkiari reported 18 cases of Bloody diarrhoea for the week. Initial investigation showing that the cases are scattered (no clustering)

Battagram:

An alert of **Malaria** from the DHQ hospital was received last week were responded this week. From the investigation it was confirmed that the cases were scattered and there was no clustering of case from any one area.

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 3. Number of reported cases and deaths, **Bagh District***, Earthquake Affected Areas, Pakistan, 8 March -4 April 2008.

Week	AD		SC		BD		AFP		LRTI		URTI		MAL		MS		MG		AHF		SCB		UF		AJS		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	C	D
11	454	1	0	0	12	0	0	0	166	0	2005	0	20	0	0	0	0	0	0	0	290	0	310	0	0	0	8362	1
12	367	0	0	0	3	0	0	0	157	0	1842	0	32	0	0	0	0	0	0	0	223	0	269	0	0	0	7594	4
13	387	0	0	0	10	0	0	0	219	1	2245	0	47	0	0	0	0	0	0	0	374	0	396	0	4	0	7768	1
14	380	0	0	0	10	0	0	0	161	0	1980	0	54	0	0	0	0	0	0	0	238	0	235	0	3	0	6993	0
Total	1588	1	0	0	35	0	0	0	703	1	8072	0	153	0	0	0	0	0	0	0	1125	0	1210	0	7	0	30717	6

Table 4. Number of reported cases and deaths, **Poonch District***, Earthquake Affected Areas, Pakistan, 8 March -4 April 2008.

Week	AD		SC		BD		AFP		LRTI		URTI		MAL		MS		MG		AHF		SCB		UF		AJS		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	C	D
11	687	0	0	0	16	0	0	0	812	0	2373	0	86	0	0	0	0	0	0	0	564	0	1083	0	2	0	5001	2
12	446	0	0	0	6	0	0	0	596	0	1403	0	51	0	0	0	0	0	0	0	314	0	650	0	0	0	2941	0
13	465	0	0	0	8	0	0	0	681	0	1277	0	76	0	0	0	0	0	0	0	291	0	596	0	2	0	3087	5
14	670	0	0	0	11	0	0	0	765	0	1846	0	143	0	0	0	0	0	0	0	508	0	1066	0	2	0	3746	0
Total	2268	0	0	0	41	0	0	0	2854	0	6899	0	356	0	0	0	0	0	0	0	1677	0	3395	0	6	0	14775	7

Table 5. Number of reported cases and deaths, **Muzaffarabad District***, Earthquake Affected Areas, Pakistan, 8 March -4 April 2008.

Week	AD		SC		BD		AFP		LRTI		URTI		MAL		MS		MG		AHF		SCB		UF		AJS		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	C	D
11	1990	0	0	0	133	0	0	0	2660	0	7310	0	146	0	0	0	0	0	0	0	1013	0	3627	0	6	0	15301	9
12	1834	1	0	0	99	0	0	0	2626	1	6528	0	75	0	0	0	0	0	0	0	888	0	3708	0	1	0	13383	4
13	2366	0	0	0	148	0	0	0	2927	0	7415	0	85	0	0	0	1	1	0	0	1286	0	3997	0	3	0	13024	13
14	1209	1	0	0	112	0	0	0	1416	3	3820	0	68	0	0	0	0	0	0	0	783	0	1320	0	7	0	8370	8
Total	7399	2	0	0	492	0	0	0	9629	4	25073	0	374	0	0	0	1	1	0	0	3970	0	12652	0	17	0	50078	34

Number of reported cases and deaths per District, NWFPTable 6. Number of reported cases and deaths, **Battagram District***, Earthquake Affected Areas, Pakistan, 8 March -4 April 2008.

Week	AD		SC		BD		AFP		LRTI		URTI		MAL		MS		MG		AHF		SCB		UF		AJS		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	C	D
11	740	0	0	0	77	0	2	0	160	0	2124	0	16	0	0	0	0	0	0	0	413	0	521	0	5	0	4605	0
12	579	0	0	0	48	0	0	0	125	0	1231	0	4	0	0	0	0	0	0	0	257	0	578	0	5	0	2870	0
13	636	0	0	0	62	0	0	0	113	0	1432	0	64	0	0	0	0	0	0	0	337	0	753	0	2	0	3550	0
14	620	0	0	0	67	0	0	0	196	0	1561	0	4	0	0	0	0	0	0	0	337	0	733	0	3	0	3955	0
Total	2575	0	0	0	254	0	2	0	594	0	6348	0	88	0	0	0	0	0	0	0	1344	0	2585	0	15	0	14980	0

Table 7. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 8 March -4 April 2008.

Week	AD		SC		BD		AFP		LRTI		URTI		MAL		MS		MG		AHF		SCB		UF		AJS		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	C	D
11	698	1	0	0	7	0	1	0	358	2	2973	0	0	0	0	0	0	0	0	0	748	0	1320	0	2	0	11840	4
12	718	0	0	0	8	0	0	0	213	0	2667	0	0	0	1	0	0	0	0	0	877	0	1117	0	1	0	11352	2
13	609	0	0	0	16	0	2	0	278	0	2933	0	1	0	1	0	0	0	0	0	947	0	1134	0	2	0	10225	1
14	737	0	0	0	20	0	2	0	512	3	2821	0	0	0	0	0	0	0	0	0	1019	0	1248	0	0	0	10998	5
Total	2762	1	0	0	51	0	5	0	1361	5	11394	0	1	0	2	0	0	0	0	0	3591	0	4819	0	5	0	44415	12