

Epidemiological Week No. 15 (5 -11 April 08)

April 24/ Vol. 125/ DEWS 2008-15

Contents

Reporting Units	2
Total number of consultations	2
DEWS Data, Epidemiological Week No. 15, 2008	3
DEWS Data, (Epidemiological Weeks No.12 – 15, 2008):	4
Acute Respiratory Tract Infections:	5
Acute Diarrhoea and suspected Cholera:	6
Upper Respiratory Infection and Lower respiratory Infection: ..	8
Other Conditions under Surveillance:	9
Outbreak Alert and Response	9
Number of reported cases and deaths per District, AJK	11
Number of reported cases and deaths per District, NWFP ...	12

Muzaffarabad: WHO team collecting drinking water samples Village Upper Chandira
Picture credit: Dr. Musa Rahim



Highlights

- This week 70,878 consultations were reported from 280 reporting units
- ARI remains the leading cause of consultation this week and the weekly trend is on decline
- Acute Diarrhoea reported in 6% of all consultation with a steady weekly trend.
- District Poonch reports the highest proportion of Malaria.
- Three alerts of AFP reported one each from district Bagh, Mansehra and Muzaffarabad and all were investigated
- One suspected Meningitis reported from Bagh and was 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 15, 2008, weekly DEWS reports received from 280 (84%) sites on the due time. Compare to last week the DEWS reporting has increased by 3% (84% and 81% respectively). The total number of reporting site in the Earthquake affected districts remains 335 as of week 15, 2008. Table 1, summarises reporting by each earthquake affected district for the last 4 weeks.

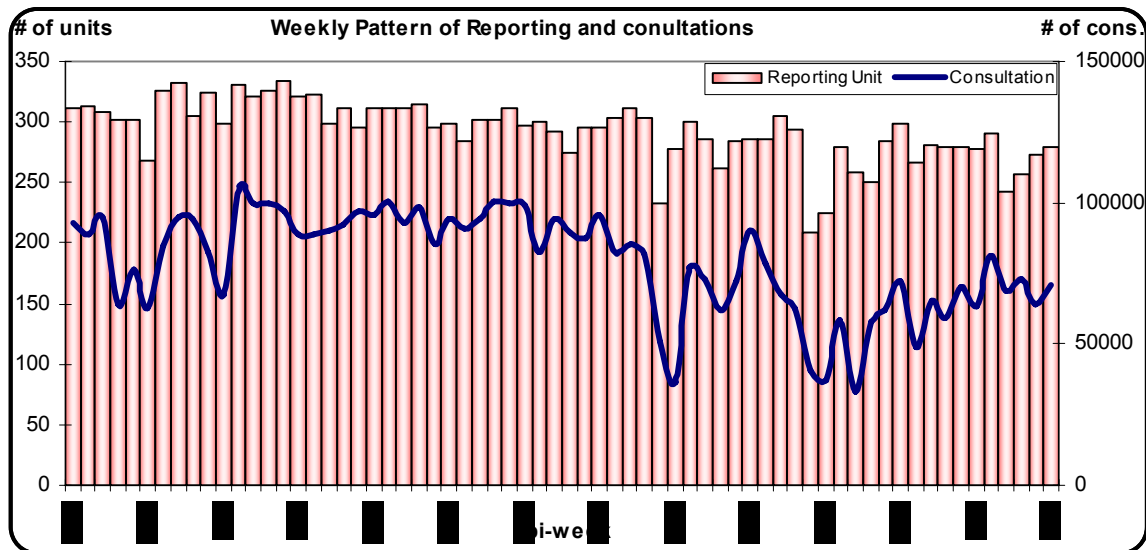
Table1. Health Facilities by district, reported from Earthquake Affected Areas, Pakistan, 15 March - 11 April 2008.

Area	Population	Reporting Health Facilities			
		15-21 Mar 08	22-28 Mar 08	29Mar-4Apr 08	5-11 Apr 08
		Week-12	Week-13	Week-14	Week-15
Bagh	452,532	37	38	38	37
Battagram	592,256	31	32	32	31
Mansehra	1,154,804	59	59	59	61
Muzaffarabad	770,000	67	76	67	76
Neelum	184,000	13	18	16	16
Poonch	633,712	36	34	61	59
Total	3,727,668	243(73%)	257(77%)	273(81%)	280(84%)

Total number of consultations

During week 15, Total 70,878 patient consultations were reported an increase by 11% compared to last week. District Muzaffarabad reports the highest proportion (33%) and Neelum reports the lowest proportion (5%) of the total consultation reported from all the Earthquake affected districts. 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 15, 2008.

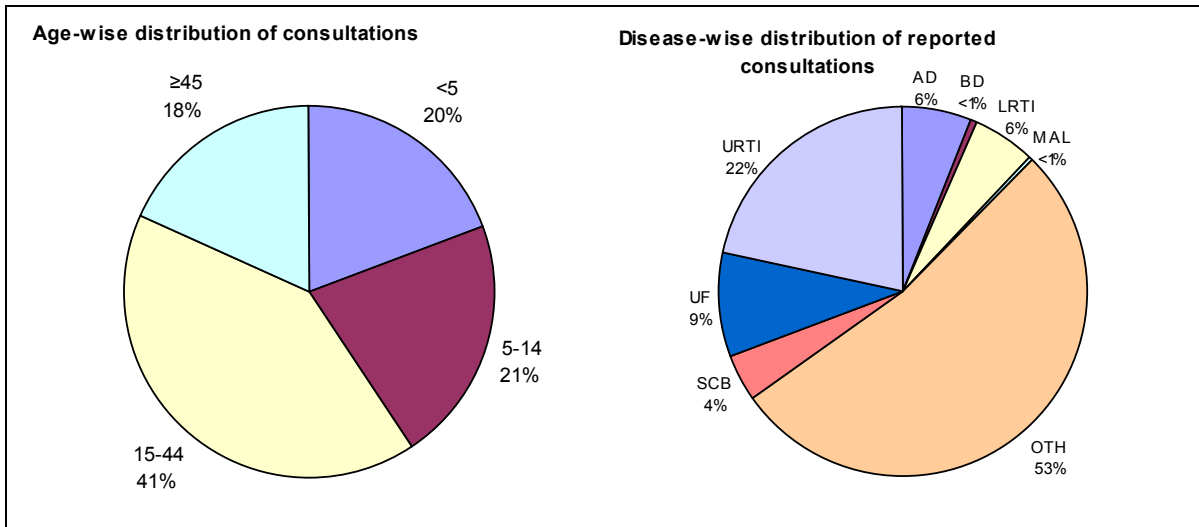
Figure1. Weekly trend of reporting units and total number of consultations, Earthquake Affected Areas, Pakistan, Week 1, 2007 – week 15 2008.



DEWS Data, Epidemiological Week No. 15, 2008

During the Epidemiological week 15 (5 – 11 April, 2008), total 70,878 consultations were reported through DEWS. The proportion for Upper Respiratory Tract Infection was **22%**, Unexplained Fever **9%**, Acute Diarrhoea **6%**, Lower Respiratory Tract Infection **6%** and Scabies **4%** in all age groups and both sexes. Out of the total 70,878 reported consultation, **53%** (37,074) in all ages and both sexes were for health problems other than the diseases reported above. Distribution of the consultations by age groups shows that **20%** are children less than 5 years age, **21%** children 5-14 years, while **41%** adults 15-45 years and **18%** above 45 years age. Female patients were **53%** of the total consultations reported for the week (Figure 2).

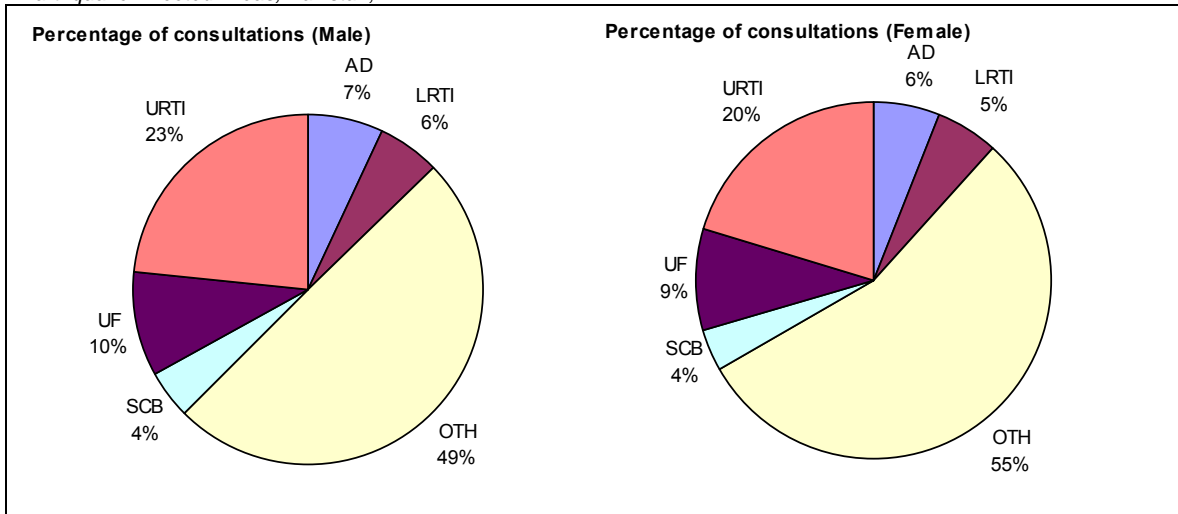
Figure 2. Distribution of reported consultations by disease/health event and age groups, 5 – 11 April 2008, Earthquake Affected Areas, Pakistan



*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 (55% and 49% respectively) (Figure 3). In males the proportion for all common infectious diseases reported is higher than females (51% and 45% respectively).

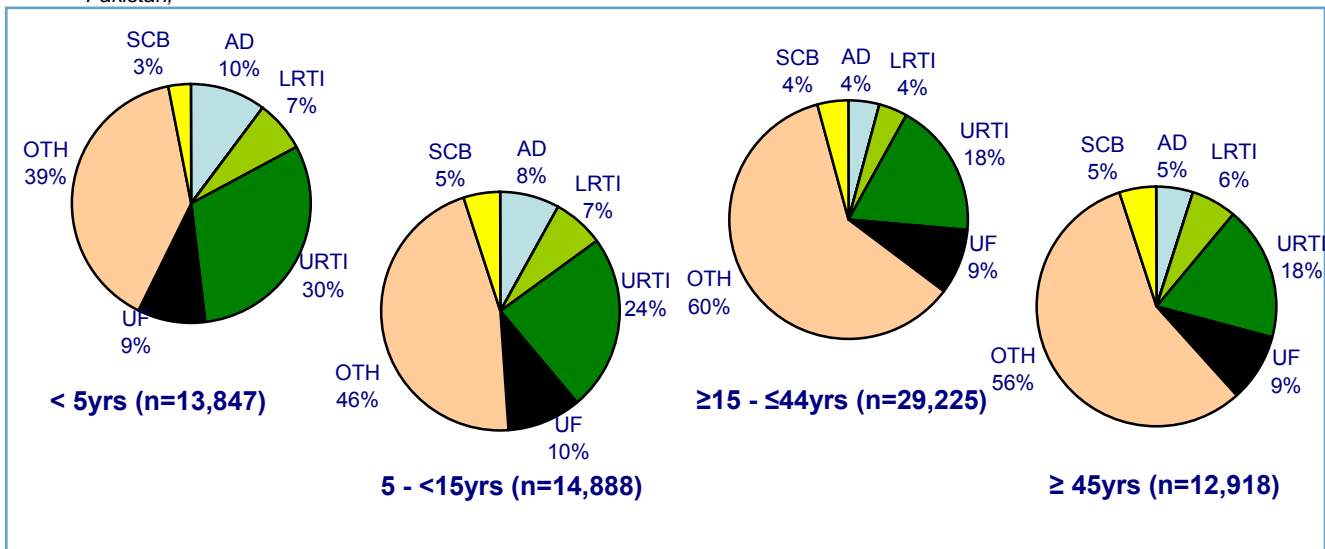
Figure 3. Distribution of reported consultations by disease/health event and age groups, 29March – 4 April 2008, Earthquake Affected Areas, Pakistan,



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 **30%**, followed by Acute Diarrhoea (**AD**), **10%**, Lower Respiratory Tract Infection (**LRTI**) **7%**, Unexplained Fever **9%** Scabies **3%** and **39%** for others problems. In **5 to 15 years age** group Upper Respiratory Tract Infection reported **24%** followed by Unexplained Fever **UF**, **10%**, Acute Diarrhoea **8%**, Lower Respiratory Tract Infection **7%**, and Scabies **5%** and **46%** other health problems. 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 (**60%** and **56%** respectively), followed by URTI **18%** in both age group (15-45 years and 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.

Figure4. Proportion of primary causes for all reported cases by age groups, 5 – 11 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.12 – 15, 2008):

During the period 15th March to 11th Apr, 2008 (Epidemiological weeks 12 to 15, 2008 inclusive), total 275,998 consultations were reported in the Earthquake affected areas. The proportion of the five common diseases under surveillance was, 54% (127,295) of the total consultations reported during this period. This proportion remains almost consistent for the last some weeks. During this period **21%** (57,193) of consultations were due to upper respiratory infection (**URTI**), **9%** (24,436) unexplained fever (**UF**), **6%** (15,351) lower respiratory infection (**LRTI**), **6%** (16,594) acute diarrhoea (**AD**), and **4%** (11,767) due to scabies (**SCB**). Total 59 deaths were reported during this period. Most of the deaths (45 deaths) were due to health events other than the diseases under weekly surveillance. Two deaths were reported due to acute Diarrhoea with a total case fatality **0.012%**. Nine deaths reported due to Lower Respiratory Tract Infection and the total case fatality for LRTI stands at **0.059%**. 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, 15 March – 11 April, 2008.

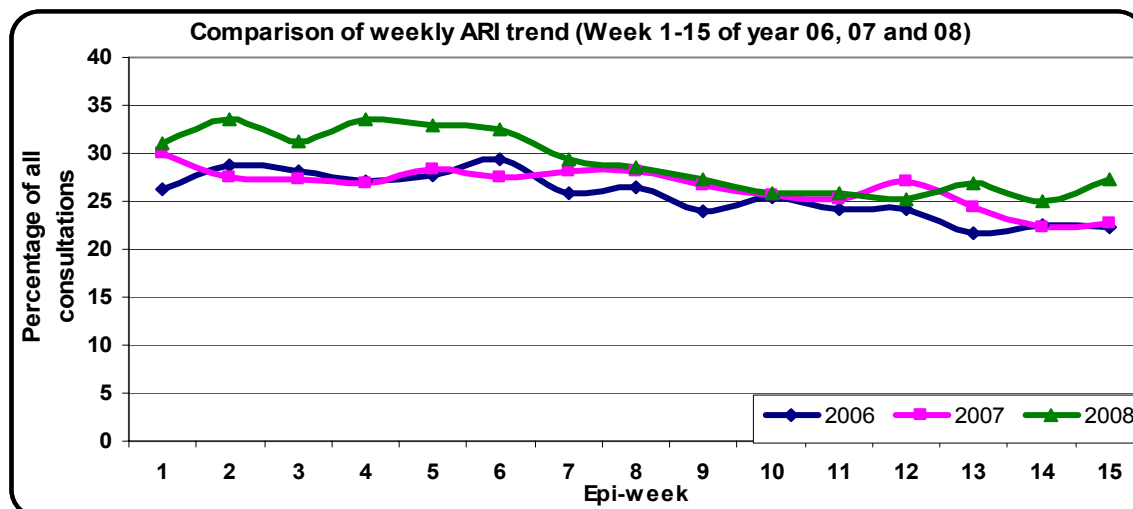
Week Event	WEEK 12		WEEK 13		WEEK 14		WEEK 15		TOTAL		CFR%
	C	D	C	D	C	D	C	D	C	D	
AD	3944	1	4486	0	3787	1	4377	0	16594	2	0.012
AFP	0	0	2	0	2	0	3	0	7	0	0.000
AJS	7	0	13	0	15	0	11	0	46	0	0.000
BD	164	0	245	0	255	0	278	0	942	0	0.000
LRTI	3717	1	4222	1	3405	6	4007	1	15351	9	0.059
MAL	162	0	273	0	269	0	250	0	954	0	0.000
MG	0	0	1	0	0	0	2	1	3	1	33.00
MS	1	0	1	0	0	0	0	0	2	0	0.000
OTH	38140	8	37956	7	35533	13	37074	17	148703	45	0.030
SCB	2559	0	3250	0	3032	0	2926	0	11767	0	0.000
UF	6322	0	6876	0	4633	0	6605	0	24436	0	0.000
URTI	13671	0	15400	0	12781	0	15341	2	57193	2	0.003
Total Cons.	68687	10	72725	8	63712	20	70878	21	275998	59	
RU	243		257		273		280				

Acute Respiratory Tract Infections:

During week 15, 2008 total 19,348 consultations for ARI (both Upper and Lower Respiratory Tract Infection) were reported. ARI accounts for 27% of the total consultations reported for the week (URTI 21% and LRTI 6%) 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 30% of consultations and LRTI in 7% of consultations. In **5 to 14 year age** groups URTI reported in 24% and LRTI in 7%. In **15 to 45 years age** group URTI is reported for 18% and LRTI for 4%. In the age group **above 45 year** URTI reported for 18% and LRTI for 7% 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 15) 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 compare to the same period in year 2006 and 2007. The weekly trend of ARI from week 10 to 15 fluctuates between 25% and 27%. In week 15 proportion of ARI has slightly increased than week 14. 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

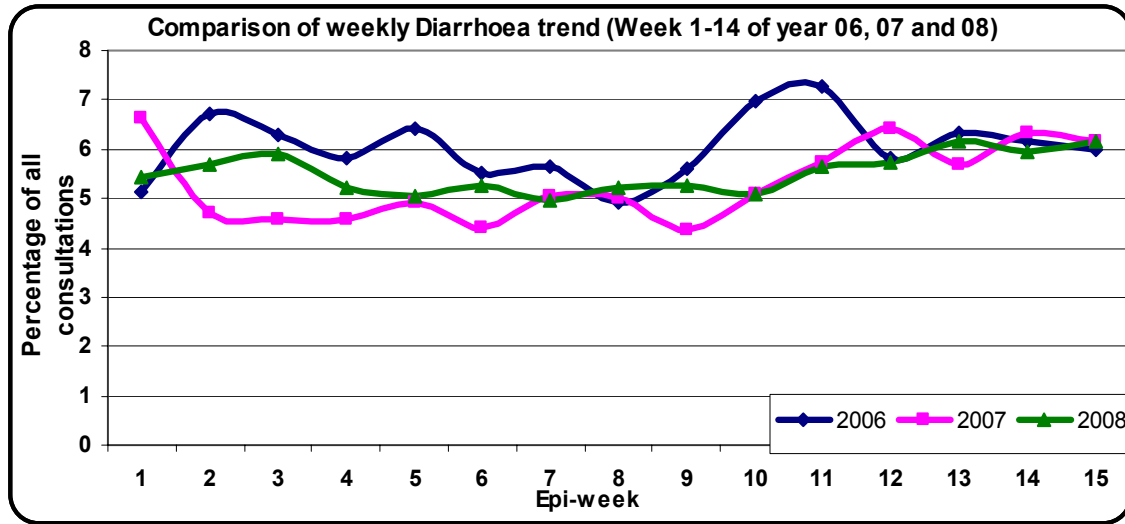
Figure 5: Comparison of ARI weekly trends (week 1 to 15) years 2006, 2007 and 2008, Earthquake districts Pakistan



Acute Diarrhoea and suspected Cholera:

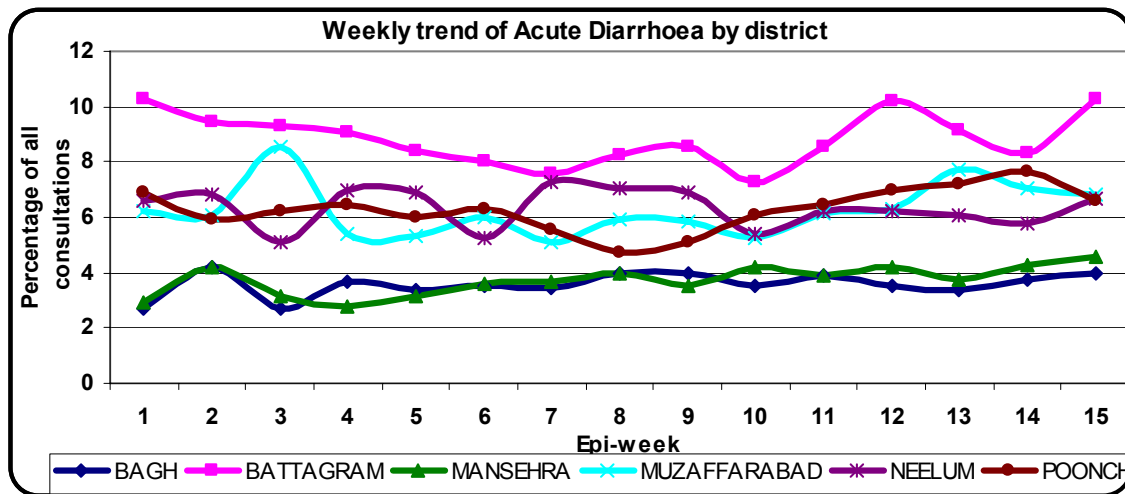
During week 15, 2008, Acute Diarrhoea was reported in 4,377 patients accounting for 6% of the total consultation in all groups. In children less than 5 years age Acute Diarrhoea was reported in 10% of the total consultation in the age group for the week. Similarly in 5 -14 year children 8% of the consultations were for AD. In adults of 15-45 years and above 45 years age groups, AD was reported for 4% of the total consultations in these age groups. The trend of AD remains constant from week 13 onwards after showing an inclining trend from week 10 to 13, 2008. When compared the weekly trend of the AD from week 1 to 15 for the last three years it shows a much steady path in 2008 and reflecting same pattern for all the three years (Figure 6). There were no cases of suspected cholera reported from any district, and there was no death due to acute diarrhoea was reported from any district in week 15.

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 15, 2008, Battagram had been reporting highest proportion of AD throughout the period. District Battagram is presenting a fluctuating pattern for Acute Diarrhoea. In week 15 the proportion of AD increased to 10% compared to week 14. Although proportion of AD is high in Battagram compare to other districts but there is neither clustering of the cases nor the situation is like that of an epidemic. Health cluster partners in the district had already started diarrhoea privation activities in the district and vigilantly monitoring the AD situation. Rest of the districts presenting a much stable trend for AD (Figure 7)

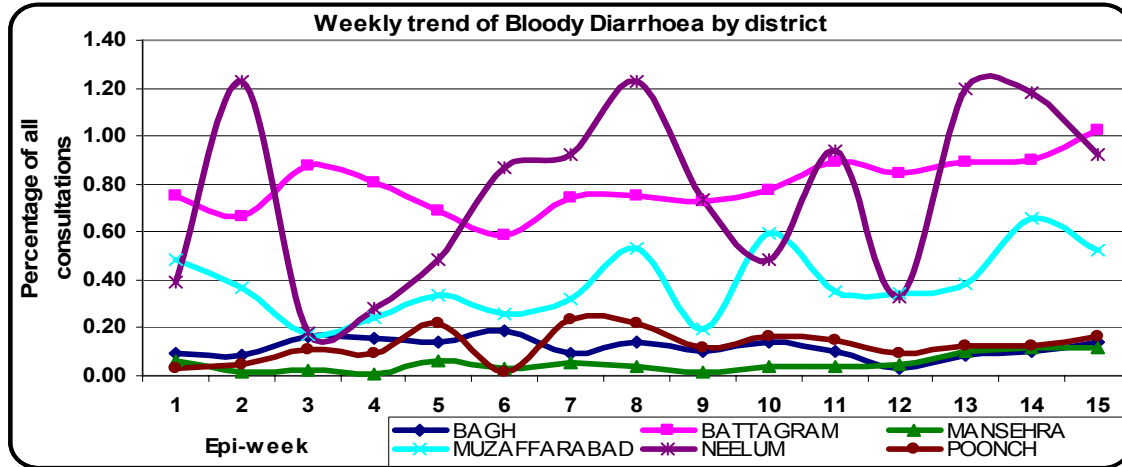
Figure 7: Trend in Acute diarrhoea as a percent of all consultations, comparison by districts weeks 1-15, 2008, Earthquake Affected Areas, Pakistan



Bloody Diarrhoea:

During week 15 of 2008, total 278 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 reported a slight drop in the proportion of BD compared to last two weeks. The WHO team along with DoH and Health Partners had started assessing the BD situation and preventive measures had been initiated. District Battagram, presenting a consistent gradual increase in the proportion of BD. Muzaffarabad, reporting a fluctuating trend while Bagh, Mansehra and Poonch presenting a stable picture for BD over the last few weeks (Figure 8).

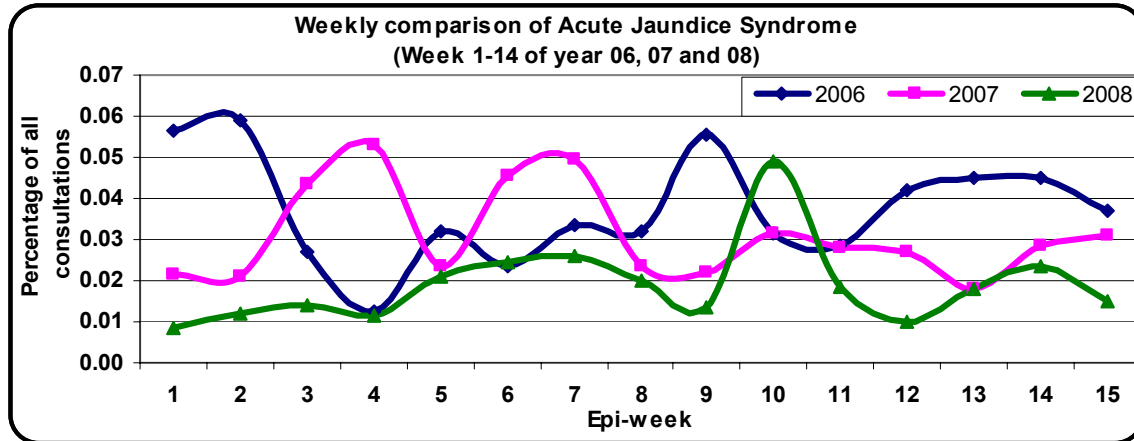
Figure 8: Trend in weekly Bloody diarrhoea as a percent of all consultations, comparison by district, Earthquake Affected Areas, Pakistan,



Acute Jaundice Syndrome:

In week 15 of 2008, 11 cases of Acute Jaundice Syndrome were reported. From week 1 to 15, 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. The proportion of AJS has dropped in week 15 compare to last week (Figure 9).

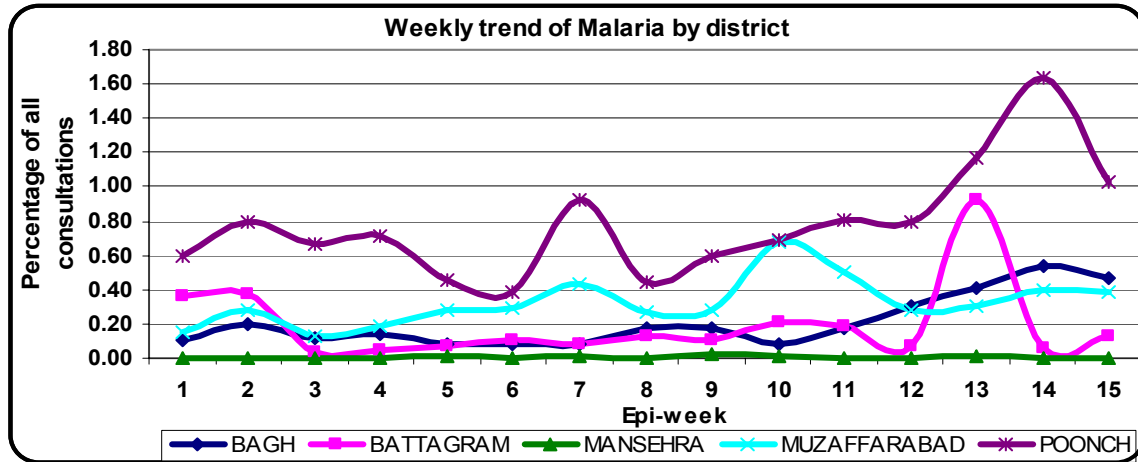
Figure 9: Trends in weekly AJS as a percent of all consultations, comparison by year, Earthquake Affected Areas, Pakistan,



Malaria:

In week 15, 2008, there were 250 suspected cases of malaria reported. Districts Poonch reporting highest number of Suspected Malaria case compared to the other districts. Compare to last week the proportion of Malaria has dropped in district Poonch. 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. See figure 10.

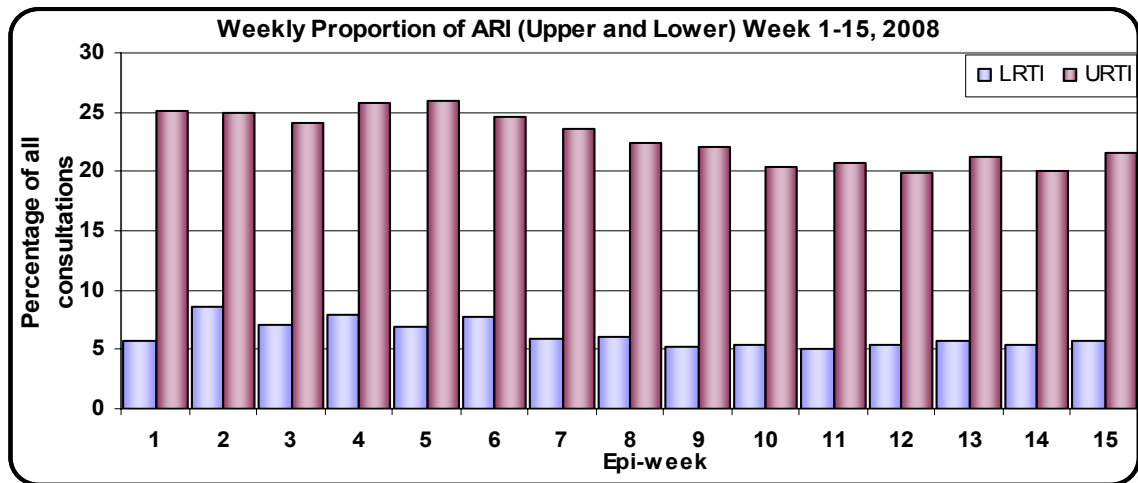
Figure 10: Weekly trends in Suspected Malaria as percentage of all consultations, comparison by district, Earthquake Affected Areas, Pakistan, weeks 1-15, 2008



Upper and Lower Respiratory Tract Infection:

During week 15, 2008, there were 6% (4,007) consultations for Acute Lower Respiratory tract Infections and 22% (15,341) cases of Upper Respiratory tract Infections reported through the DEWS system. There is an overall declining trend in Upper and Lower Respiratory Tract Infection from week 6, 2008 onwards and the proportion is almost stable from week 10 onwards (Figure 11). One death due to Lower Respiratory Tract Infection was reported from district Mansehra in a under five year male child.

Figure 11: Weekly Proportion of URTI and LRTI as percentage of all consultations, (week 1 – 15, 2008) Earthquake Affected Areas, Pakistan



Other Conditions under Surveillance:

During this week, 37,074 (52%) consultations out of the total 70,878 reported consultation, in all ages and both sexes were for health problems other than reportable disease under weekly surveillance. Three cases of suspected AFP reported and two cases of meningitis reported this week. One death due to Meningitis was reported from Meningitis from district Poonch. No cases of suspected Hemorrhagic Fever, suspected Measles, and Neonatal Tetanus reported from any district for week 15, 2008.

Outbreak Alert and Response¹

During week 15, 2008, six alerts were reported and were responded accordingly from Earthquake districts.

Mansehra

- One case of **AFP** reported from DHQ hospital Mansehra.
 - A four years old male child from Mansehra presented at DHQ hospital with fever and weakness in both legs for one day of history. Stool samples were collected and sent for NIH for laboratory testing.
- One suspected case of **Meningitis** reported as an alert from DHQ hospital Mansehra. The patient is a 10 years old female resident of Battal admitted in DHQ hospital with state on unconsciousness and fever, headache and vomiting with the history of last one week. Upon investigation the neck stiffness was present and was unable to speak. CT scan shows meningitis. Now condition of the patient is improving. No other child of the family had same signs and symptoms.

Muzaffarabad

- One suspected case of **AFP** was reported by AIMS hospital. The patient is a 9 years old male child. The information was shared with Polio programme, further information are awaited.

Bagh

- One suspected case of **AFP** was reported by RHC Arja, Dhirkot. The patient is a 3 years old female child, admitted with low grade fever and sudden onset of weakness in both legs with difficulty to walk. No history of trauma and the patient was vaccinated against all EPI diseases. The information was shared with EPI coordinator and DHO, Bagh. The samples were collected and sent to NIH for further laboratory testing.

Battagram

- Two alert of Lower respiratory tract infection were received this week. One alert came reported from BHU Argashori and second was from RHC Thakot. Line listing of the cases were done and followed. Majority of the cases have recovered. The medical doctors were explained the proper management including use of antibiotics. A session

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)

with the community at the respective places were also arranged to sensitize them with protective measures.

Poonch

- One case of suspected meningitis was reported this week. The patient died before doctor starts investigation.

Number of reported cases and deaths per District, AJKTable 3. Number of reported cases and deaths, **Bagh District***, Earthquake Affected Areas, Pakistan, 15 March -11 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
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
15	423	0	0	0	15	0	1	0	230	0	2156	0	49	0	0	0	0	0	0	0	248	0	160	0	2	0	7287	3
Total	1557	0	0	0	38	0	1	0	767	1	8223	0	182	0	0	0	0	0	0	0	1083	0	1060	0	9	0	29642	8

Table 4. Number of reported cases and deaths, **Poonch District***, Earthquake Affected Areas, Pakistan, 15 March -11 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
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
15	652	0	0	0	16	0	0	0	734	0	2074	0	102	0	0	0	1	1	0	0	383	0	1101	0	2	0	4851	2
Total	2233	0	0	0	41	0	0	0	2776	0	6600	0	372	0	0	0	1	1	0	0	1496	0	3413	0	6	0	14625	7

Table 5. Number of reported cases and deaths, **Muzaffarabad District***, Earthquake Affected Areas, Pakistan, 15 March -11 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
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
15	1585	0	0	0	123	0	1	0	1883	0	5692	2	90	0	0	0	0	0	0	0	874	0	3370	0	1	0	9688	8
Total	6994	2	0	0	482	0	1	0	8852	4	23455	2	318	0	0	0	1	1	0	0	3831	0	12395	0	12	0	44465	33

Number of reported cases and deaths per District, NWFP

Table 6. Number of reported cases and deaths, **Battagram District***, Earthquake Affected Areas, Pakistan, 15 March -11 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
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
15	720	0	0	0	72	0	0	0	210	0	1406	0	9	0	0	0	0	0	0	0	302	0	736	0	2	0	3573	0
Total	2555	0	0	0	249	0	0	0	644	0	5630	0	81	0	0	0	0	0	0	0	1233	0	2800	0	12	0	13948	0

Table 7. Number of reported cases and deaths, **Mansehra District***, Earthquake Affected Areas, Pakistan, 15 March -11 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
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
15	759	0	0	0	19	0	1	0	500	1	2993	0	0	0	0	0	1	0	0	0	876	0	1195	0	2	0	10122	4
Total	2823	0	0	0	63	0	5	0	1503	4	11414	0	1	0	2	0	1	0	0	0	3719	0	4694	0	5	0	42697	12