



Highlights

Figure-1: 69 districts reported to DEWS in week 46, 2013

Epidemiological week no. 46 (10 to 16 Nov 2013)

- **Dengue fever:** During this week, 713 Dengue fever cases have been reported. The highest number of DF cases 402 reported from Punjab. The outbreaks are being responded jointly.
- **CCHF:** No new confirmed CCHF case was reported in week 46, 2013. (Page 5).
- In this week, **69** districts and 2,040 health facilities have reported to Disease Early Warning system (DEWS), compared to 72 districts with 2,020 health facilities shared weekly data in week 45, 2013 to the DEWS.
- Total **604,236** patients consultations reported this week compared to **668,380** consultations in week 45, 2013.
- **67** alerts investigated and **4** outbreaks identified and timely responded. Altogether 28 alerts were for Measles; 13 for Dengue fever; 8 for NNT; 7 for Leishmaniasis; 5 for Typhoid fever; 4 for ARI; while 1 each for Tetanus and Scabies.



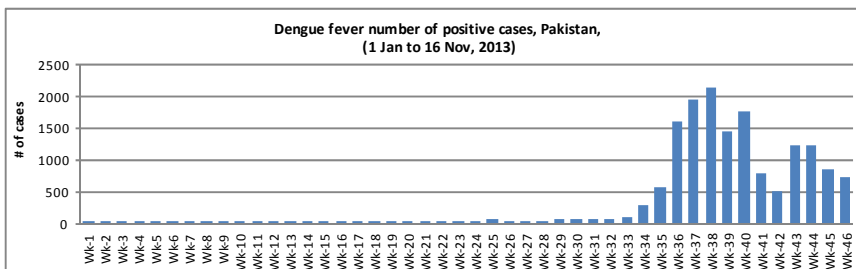
Priority diseases under surveillance in DEWS

- Pneumonia
- Acute Watery Diarrhoea
- Bloody diarrhoea
- Acute Diarrhoea
- Suspected Enteric/Typhoid Fever
- Suspected Malaria
- Suspected Meningitis
- Suspected Dengue fever
- Suspected Viral Hemorrhagic Fever
- Suspected Measles
- Suspected Diphtheria
- Suspected Pertussis
- Suspected Acute Viral Hepatitis
- Neonatal Tetanus
- Acute Flaccid Paralysis
- Scabies
- Cutaneous Leishmaniasis

Cumulative number of selected health events reported in Epi-week 1 to 46, 2013 (29 Dec 2012 to 16 November 2013)

Disease	# of Cases	Percentage
ARI	7,286,426	20%
Bloody diarrhoea	91,961	<0.5%
Acute diarrhoea	2,779,258	8%
S. Malaria	1,609,703	4%
Skin Diseases	1,418,497	4%
Unexplained fever	1,130,192	3%
Total (All consultations)	36,800,661	

Figure-2: Number of Dengue fever positive cases in Pakistan, 1 Jan to 16 Nov 2013

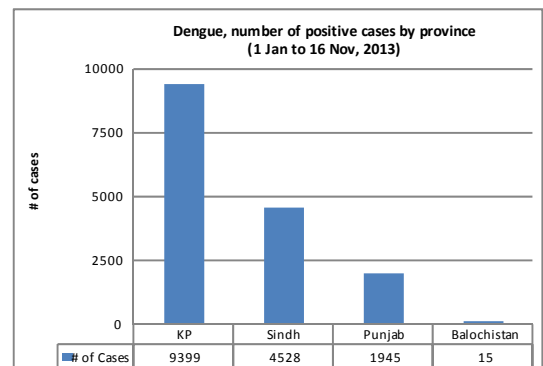


Major health events reported during the Epi-week - 46 (10 - 16 Nov 2013)

Disease	# of Cases	Percentage
ARI	132,363	22%
Bloody diarrhoea	1,057	<0.5%
Acute diarrhoea	33,836	6%
S. Malaria	24,264	4%
Skin Diseases	18,503	3%
Unexplained fever	15,588	3%
Total (All consultations)	604,236	

In 2013 Dengue fever cases are reported from the less endemic areas also. A huge outbreak is confronted in district Swat and increasing number of Dengue fever cases are reported from adjacent districts also. Dengue fever cases are also reported from Gawadar district in Balochistan province, districts Karachi and Hyderabad in Sindh province and districts Lahore and Rawalpindi in Punjab province.

From 1st January to 16th November 2013, Khyber Pakhtunkhwa reported 9,399; Sindh 4,528, Punjab 1,945, and Balochistan 15 confirmed Dengue fever cases.



Outbreaks (Wk-46/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
12-Nov	DF	Punjab	Lahore	Data Ganj Bakhsh Town UC 67, UC 69, UC 71, UC 72, UC 79, UC 82,	0	45	0	28	21 confirmed, 41 suspected and 8 probable cases including 1 death due to Dengue fever notified from Teaching hospitals in Lahore. 29 blood samples were taken and found IgM positive for 21 cases, results for 2 cases awaited. PCR request was sent for 2 cases to IPH for serotyping and genotyping and result awaited. The confirmed cases were admitted and kept in isolation ward (HDU) of Teaching hospital. There is no travel History of patient. During field investigation, Larva was found inside and outside of the houses near the address of confirm cases. Health education session conducted in the community on proper solid waste disposal and improved water storage practices, protective clothing and repellents, Community - based environmental management to remove mosquito breeding sites. Follow up planned. Information shared with ADG(VBD) and EDOH.
13-Nov	DF	Punjab	Lahore	Wahga Town UC 38, UC 39, UC 42, UC 62	0	16	0	10	8 confirmed, 17 suspected and 1 probable cases of Dengue fever notified from different teaching hospitals in Lahore. 8 blood samples were taken and found positive for IgM. PCR request sent for one case to IPH for serotyping and Genotyping result is awaited. The confirmed cases were admitted and kept in isolation ward (HDU) of Teaching hospital. No travel history reported from any patient. Focal Person Dengue along with, CDCO,DDHO, and entomologist visit the area, Vector Surveillance was carried out. Larva was found inside and outside the houses near the address of confirm cases. Health education session conducted in the community on proper solid waste disposal, improved water storage practices, protective clothing and repellents and community-based environmental management to remove mosquito breeding sites, the area would be visited again for follow up. Information shared with ADG (VBD) and EDOH Lahore.
13-Nov	Measles	FATA	Khyber Agency	Village Jawaz killi,UC Pindi Lalma, Tehsil Mulagori	1	2	8	0	11 suspected Measles cases along with 1 death due to Measles were reported from CD Pindi Lalma. Active surveillance was conducted in the affected area and Vitamin-A drops was given to all suspected measles cases. 2 blood samples were taken and sent to NIH for laboratory testing. Health education was imparted in the community. Information shared with Agency surgeon and FSMO.
13-Nov	Measles	Khyber Pakhtunkhwa	Mardan	Village Pir Sufaid Kharkhano, UC Chak Hotti, Tehsil Mardan	2	1	1	1	Alert for suspected Measles cases reported from DHQ Hospital Mardan, the patient found completely unvaccinated for routine immunization. Vitamin-A given to all the suspected cases. During active surveillance in the area and surrounding 3 more recovered cases were from measles were found in the neighbors, most of the children were found unvaccinated for routine immunization. All children of under 5 years of age were sent to nearby health facility for vaccination. Health education session was conducted with the family members and community, LHW's working in the area was involved. EPI team informed and requested for outreach immunization in the area. Information shared with EDOH and EPI Coordinator.

Figure-3: Number of alerts received and responded, week 43 - 46, 2013

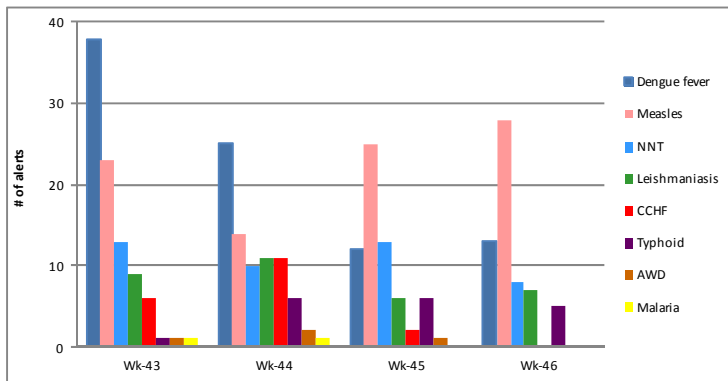
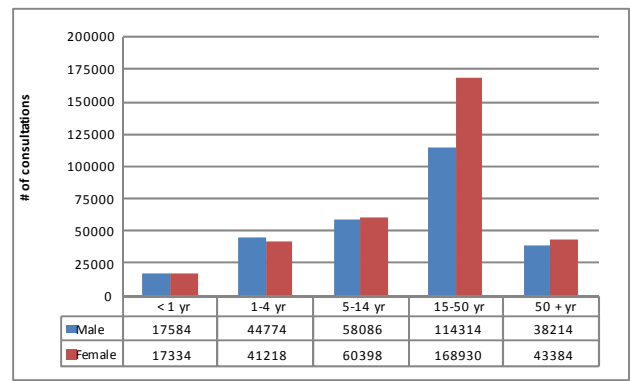
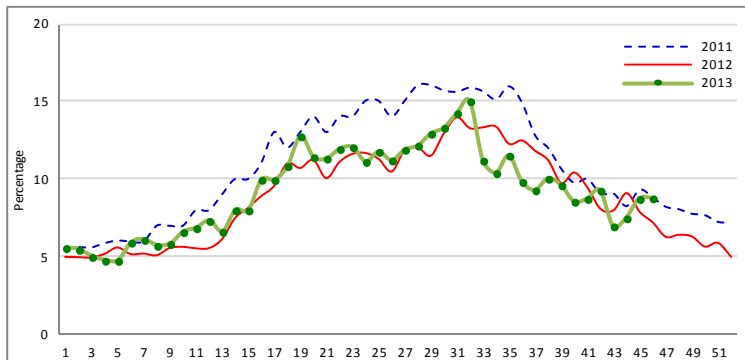


Figure-4: Number of consultations by age and gender, week 46, 2013



Province Khyber Pakhtunkhwa:

Figure-5: Weekly trend of Acute diarrhoea, province Khyber Pakhtunkhwa

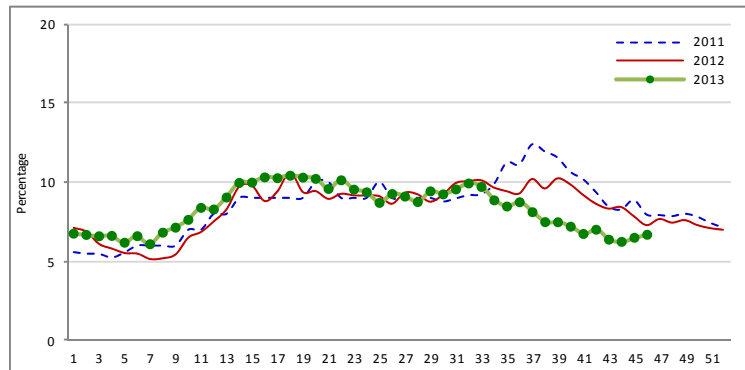


178 health facilities from 9 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 49,098 patients consultations reported in week 46, 2013. A total of 22 alerts for Measles were received and appropriate measures were taken.

The weekly trend of Acute diarrhoea is showing increase as compared with last two weeks in KP, and 5 Cholera confirmed cases reported from KP in last six weeks, and the situation need continuous attention in the province.

Province Sindh:

Figure-6: Weekly trend of Acute diarrhoea, province Sindh

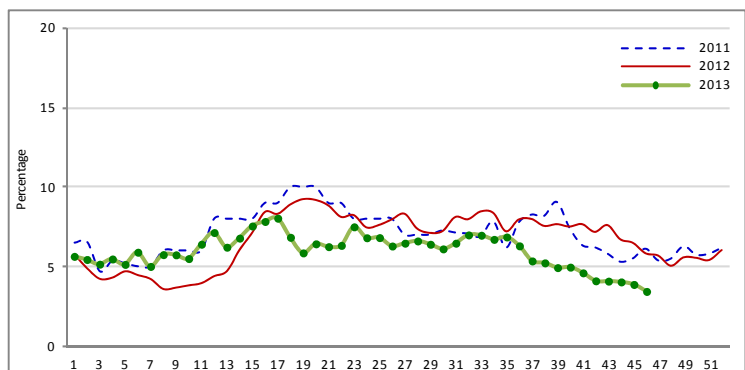


822 health facilities from 23 districts in Sindh province reported to DEWS with a total of 220,045 patient consultations in week 46, 2013. A total of 14 alerts, 7 for Dengue fever; 5 for NNT; while 2 for Leishmaniasis were received and appropriate measures were taken.

The overall proportion of AD for the province is showing increase as compared with last week, and during this season, 18 AWD outbreaks identified and responded, and the situation need continuous attention in the province.

Province Punjab:

Figure-7: Trend of Acute diarrhoea, province Punjab



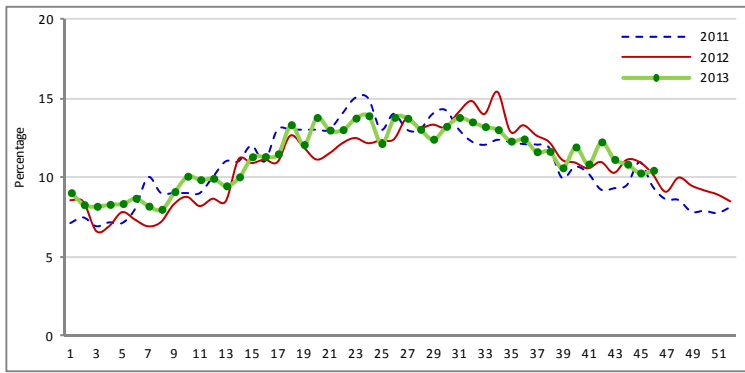
643 health facilities from 13 districts in province Punjab reported to DEWS with a total of 279,803 patients consultations in week 46, 2013.

Total 19 alerts were received and appropriate measures were taken. Altogether 6 were for Dengue fever; 5 for Typhoid fever; 4 for ARI; 2 for NNT; while 1 each for Leishmaniasis and Scabies were responded in Punjab.

The weekly trend of AD in Punjab showing decrease as compared with last week, but required vigilant monitoring of the situation.

Province Balochistan:

Figure-8: Weekly trend of Acute diarrhoea, province Balochistan



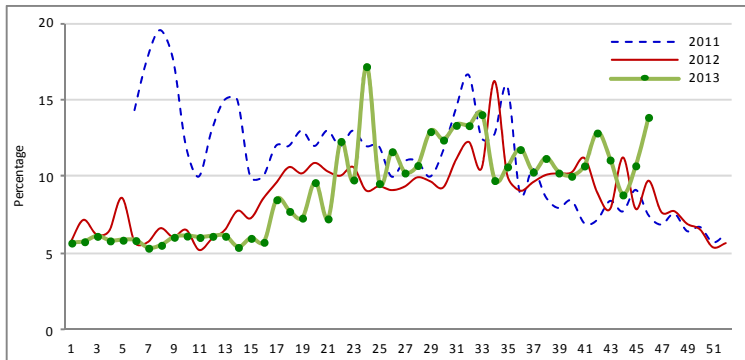
293 health facilities from 13 districts in province Balochistan reported to DEWS with a total of 38,288 patients consultations in week 46, 2013.

7 alerts were reported and appropriated measures were taken. Altogether 3 each alerts were for Leishmaniasis and NNT; while 2 for Measles.

In this week the weekly proportion of AD showing increase as compared with last week, and vigilant monitoring of the situation is required.

FATA:

Figure-9: Weekly trend of Acute diarrhoea, FATA



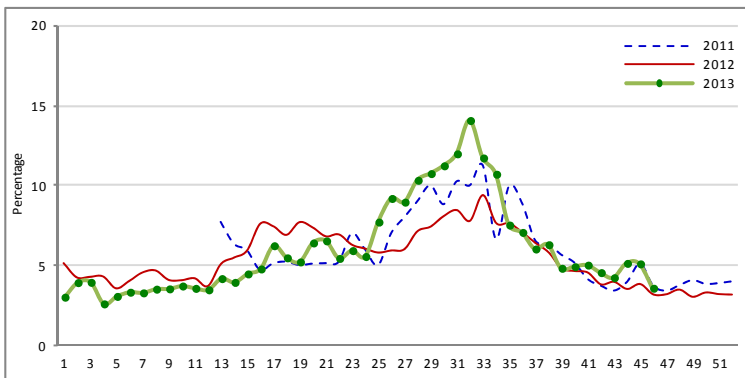
27 health facilities from 2 agencies in FATA reported to DEWS with a total of 9,939 patients consultations in week 46, 2013.

3 alerts, 2 for Measles; while 1 for Leishmaniasis were reported in week 46, 2013 and appropriate measures were taken.

Fluctuating and high weekly trend of Acute diarrhoea is noted in FATA and required vigilant monitoring.

State of Azad Jammu and Kashmir:

Figure-10: Weekly trend of Acute diarrhoea, AJ&K



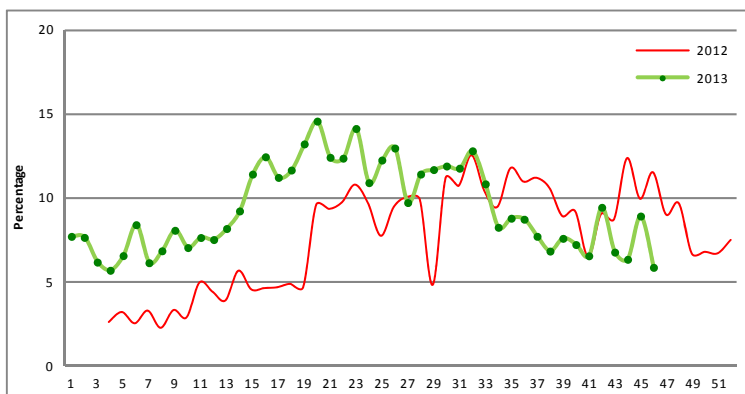
77 health facilities from 8 districts in AJ&K reported to DEWS with a total of 9,747 patients consultations in week 46, 2013.

2 alerts for Measles were reported in week 45, 2013 and appropriate measures were taken.

Weekly trend of Acute diarrhoea showing decrease as compared with last week, but vigilant monitoring of the situation is required.

Islamabad:

Figure-11: Weekly trend of Acute diarrhoea, Islamabad



9 health facilities reported to DEWS on time with a total of 1,316 patients consultations in week 46, 2013.

No alert for any disease was received in week 45, 2013 from any area in ICT.

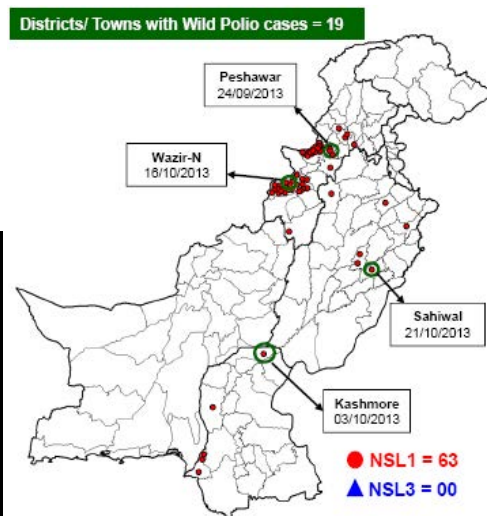
Weekly trend of Acute diarrhoea showing decrease as compared with last week, but vigilant monitoring of the situation is required.

Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 46, 2013		2013 (Total up till week - 46)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	0	0	139	40
Acute jaundice syndrome	113	22	0	0	46	6
Bloody diarrhoea	146	11	0	0	42	2
CCHF	68	41	0	0	85	46
Dengue fever	175	29	13	2	247	53
Diphtheria	60	16	0	0	65	19
Measles	5922	812	28	2	3205	275
Pertussis	366	147	0	0	45	10
NNT + tetanus	560	0	9	0	303	0
Malaria	136	68	0	0	24	5
Cutaneous Leishmaniasis	900	78	7	0	563	49
Others	1529	58	10	0	448	5
Total	10631	1475	67	4	5212	510

Distribution of Wild Polio Virus cases in Pakistan 2012 and 2013

In this week 46 2013, four new wild polio cases (type-1) have been reported; two from Federally Administered Tribal Areas (North Waziristan and Khyber agencies); and one each from Punjab (Sahiwal district) and Sindh (Kashmore district). This brings the total number of wild polio cases to 63 in 2013 as compared to 56 in 2012 (point in time) from 19 districts/ towns / tribal agencies / areas compared to 28 (point in time) last year.



Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	6	-	-
Sindh	4	-	-	5	-	-
Khyber Pakhtunkhwa	27	-	-	9	-	-
FATA	17	2	1	43	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	63	-	-

Follow up of CCHF

In week 46, 2013, no new CCHF case was reported from any area. So for total of 87 suspected, 58 confirmed CCHF cases and 18 deaths have been reported country wide in year 2013.

In 2012, a total of 62 suspected cases were reported throughout the country with 41 cases confirmed and in total 18 deaths; of which 13 deaths (CFR is 31.7%) are reported of the lab confirmed cases and 5 deaths are reported as suspected CCHF cases. 23 confirmed cases were reported from Balochistan; 7 from Sindh; 6 from Khyber Pakhtunkhwa and 5 from Punjab. Table on right illustrates situation of CCHF cases in 2012-13.

Approximately all the cases had contact history with animal trading/handling, tick bite, contact with patient, tannery worker, butcher/animals slaughtering, and fresh animal skin. There is ongoing trade of animals and animal skins with movement intra Pakistan and between neighboring countries (Afghanistan and Iran).

Province	2012			2013		
	Suspected	Lab confirmed	Deaths	Suspected	Lab confirmed	Deaths
AJ&K	0	0	0	1	1	0
Balochistan	Afghanistan*	5	5	3	12	6
	Balochistan	33	18	4	53	33
ICT	-	-	-	4	4	1
KPK	9	6	5	8	8	4
Punjab	8	5	3	10	4	3
Sindh	7	7	3	2	2	1
Total	62	41	18	87	58	18

Focus on Dengue fever:

Dengue fever represents one of the most recent and emerging public health challenges with an ever-increasing incidence across the globe, way beyond its original impact area in the tropics. As estimated 2.5 billion people, are said to be at risk from this viral infection across the world. Dengue has emerged as a global problem after 1950's. Incidence of disease can be ascribed to a number of diverse factors related to hygiene, urban decay, environmental problems, changed living styles and physical factors. With a rapidly evolving epidemiology, the disease appears to have become more common in recent years and disturbing numbers of human mortalities have been reported.

The first confirmed outbreak of DF in Pakistan was in 1994 but the sudden rise in cases and annual epidemic trend occurred first in Karachi in November 2005. To assist with vector control, WHO entomologists studied the Aedes mosquito in Karachi during the 2005 outbreak and used the information to design Pakistan-specific control interventions. The worst ever epidemic of Dengue fever reported in Pakistan was in 2011, and reporting of cases started in August in Lahore – Punjab, with over 16,580 confirmed cases and 257 deaths reported from Lahore district and an additional 5000 cases and 60 deaths reported from the rest of the province.

In 2013 Dengue fever cases are reported from the less endemic areas also. A huge outbreak is confronted in district Swat and increasing number of Dengue fever cases are reported from adjacent district also and cases are also reported from Gawadar district in Balochistan province and Karachi in Sindh province. There is no vaccine available against dengue, and there are no specific medications to treat a dengue infection. This makes prevention the most important step, and prevention means avoiding mosquito bites if you live in or travel to an endemic area.

Patient management at home:

- If a person is having fever for more than 2 days with headache, retro-orbital pain, myalgia and arthralgia, it can be taken as a suspected dengue fever case and basic care should be started at home as follow
- Let the patient rest and reduce fever by sponging patient with tepid water. If the patient is shivering, stop sponging, and cover the patient with blanket. Give paracetamol every 4 hours only if the patient still has high fever $>39^{\circ}\text{C}$. **Do not give the patient Aspirin or Brufen or similar medicine.**
- If patient has any of the warning signs he/she should go to the hospital as soon as possible.

Warning signs (WS):

Following are the warning signs of the Dengue Hemorrhagic fever and require immediate referral to the hospital.

- Persistent vomiting, not drinking
- Severe abdominal pain, lethargy and restlessness
- Hematemesis, bleeding from gums and nose, excessive menstrual bleeding
- Hemoglobinuria, giddiness, pale, cold clammy hands and feet
- No/less urine for 4-6 hours

Prevention:

- The best way to reduce mosquitoes is to eliminate the places where the mosquito lays eggs, like water storage containers in and around the home, animal watering containers, flower planter dishes. Keep these containers empty or cover water storage barrels properly. Look for standing water indoors such as in vases with fresh flowers and clean at least once a week.
- The adult mosquitoes like to bite inside as well as around homes, during the day and at night when the lights are on. To protect yourself, wear long sleeves and pants, and use repellent on your skin while indoors or out.
- Use Mosquito coils, electric vapor mats during the day time. Curtains can also be treated with insecticides.
- Also, make sure window and door screens are secure and without holes. If available, use air-conditioning.
- If someone in your house is ill with dengue, take extra precautions to prevent mosquitoes from biting the patient and going on to bite others household members. Keep the dengue patient under the bed net.

Alerts and outbreaks, week 46, 2013

