



Highlights

Figure-1: 78 districts reported to DEWS in week 49, 2013

Epidemiological week no. 49 (1 to 7 Dec 2013)

- **Dengue fever:** During this week, 372 Dengue fever cases have been reported, out of them 237 from province Sindh; 135 from province Punjab. The outbreaks are being responded jointly.
- In this week, **78** districts and 2,266 health facilities have reported to Disease Early Warning system (DEWS), compared to 69 districts with 2,019 health facilities shared weekly data in week 48, 2013 to the DEWS.
- Total **795,747** patients consultations reported this week 49, 2013 compared with **759,127** consultations in week 48, 2013.
- **82** alerts investigated and **6** outbreaks identified and timely responded. Altogether 23 alerts were for Measles; 16 for Leishmaniasis; 14 for NNT; 9 for Dengue fever; 7 for ARI; 5 each for Diphtheria and Typhoid; 2 for Bloody diarrhoea; while 1 for CCHF.



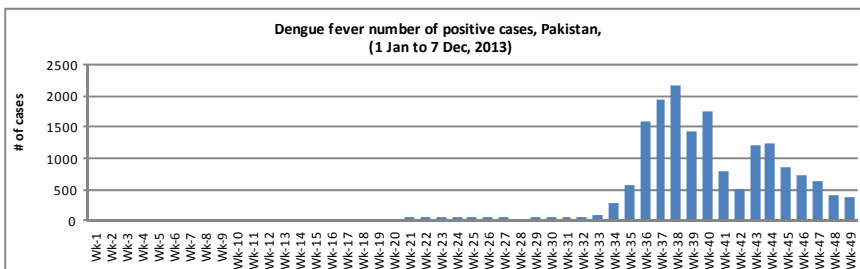
Priority diseases under surveillance in DEWS

- 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 49, 2013 (29 Dec 2012 to 7 December 2013)

Disease	# of Cases	Percentage
ARI	7,801,862	20%
Bloody diarrhoea	95,562	<0.5%
Acute diarrhoea	2,912,320	7%
S. Malaria	1,694,885	4%
Skin Diseases	1,493,263	4%
Unexplained fever	1,203,300	3%
Total (All consultations)	39,191,749	

Figure-2: Number of Dengue fever positive cases in Pakistan, 1 Jan to 30 Nov 2013

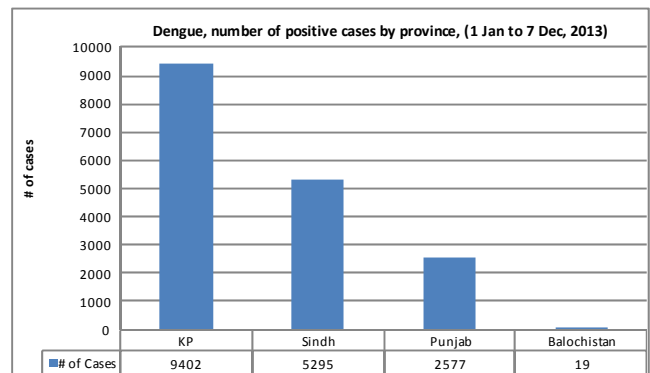


Major health events reported during the Epi-week - 49 (1 - 7 Dec 2013)

Disease	# of Cases	Percentage
ARI	173,713	22%
Bloody diarrhoea	1,064	<0.5%
Acute diarrhoea	44,369	6%
S. Malaria	26,857	3%
Skin Diseases	24,487	3%
Unexplained fever	22,978	3%
Total (All consultations)	795,747	

From 1st January to 7th December 2013, Khyber Pakhtunkhwa reported 9,402; Sindh 5,295, Punjab 2,577, and Balochistan 19 confirmed Dengue fever cases.

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.



Outbreaks (Wk-49/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
2-Dec	Measles	Balochistan	Kalat	Village Siah Jaw, UC Jeeva, Tehsil Surab	4	1	1	1	Alert for suspected Measles cases. During investigation one death verified along 6 suspected cases. Vit-A was provided to all the suspected Measles cases. EPI team vaccinated 38 unvaccinated children in the area. Information share with DoH.
4-Dec	Measles	Khyber Pakhtunkhwa	Battagram	Takot	0	1	0	1	Alert for 2 suspected Measles cases were reported from DHQ Battagram belonging to Takot, Vitamin-A drops provided to all the suspected Measles cases. In the last four weeks 5 suspected measles cases have been reported from this area constituting an outbreak. DHO Battagram informed about the situation. The EPI team requested to conduct the outreach vaccination in the area.
2-Dec	Dengue Fever	Punjab	Rawalpindi	Rawal Town	1	20	0	6	10 confirmed cases and 17 suspected cases of Dengue fever from Rawal Town notified from hospitals in Rawalpindi. Blood samples were taken and sent to lab for detection of dengue specific antibodies, result for IgM positive for 4 cases, IgG is 6 and NS1 positive for 5. PCR request was sent for 3 cases to NIH for serotyping and genotyping result is awaited. The confirmed case was admitted and kept in isolation ward in hospital. Follow-up planned. Information shared with EDO(H) Rawalpindi.
2-Dec	Dengue Fever	Punjab	Lahore	Aziz Bhatti Town UC 56; Samna Abad Town UC 106, UC 102	0	2	0	2	Four confirmed cases of Dengue fever notified from HDU Services Hospital. The case was investigated and blood sample were taken and found IgM positive for four cases, and IgG is negative. PCR request of patients were sent to PU for serotyping and genotyping result is awaited. The confirmed case was admitted and kept in isolation ward (HDU) of Teaching hospital. There is no travel History of patient. DPC along with, CDCO, DDHO, and entomologist visit the area, vector surveillance was carried out at confirmed case Location. Larva was found inside and outside the houses near the address of confirm case. Followup planned. ADG(VBD) was informed along with EDO Health Lahore. Response snaps are uploaded on Dashboard.
6-Dec	Bloody Diarrhoea	Sindh	Hyderabad	DCD Bakhshu Laghari	2	2	0	2	Alert for Bloody diarrhoea cases. DCD Bakhshu Laghari reported 6 cases of Bloody Diarrhea which is more than alert threshold. All cases were diagnosed clinically and were treated in OPD. Cases were discussed with MO and case definition was refreshed. Advise for referral of serious patient to DHQ hospital for further management was given.

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

Disease	2012		Current week 49, 2013		2013 (Total up till week - 49)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	0	0	141	40
Acute jaundice syndrome	113	22	0	0	48	6
Bloody diarrhoea	146	11	2	1	44	3
CCHF	68	41	1	0	89	47
Dengue fever	175	29	9	3	282	61
Diphtheria	60	16	5	0	77	19
Measles	5922	812	23	2	3293	279
Pertussis	366	147	0	0	45	10
NNT + tetanus	560	0	14	0	333	0
Malaria	136	68	0	0	24	5
Cutaneous Leishmaniasis	900	78	16	0	599	49
Others	1529	58	12	0	487	5
Total	10631	1475	82	6	5462	524

Figure-3: Number of alerts received and responded, week 46 - 49, 2013

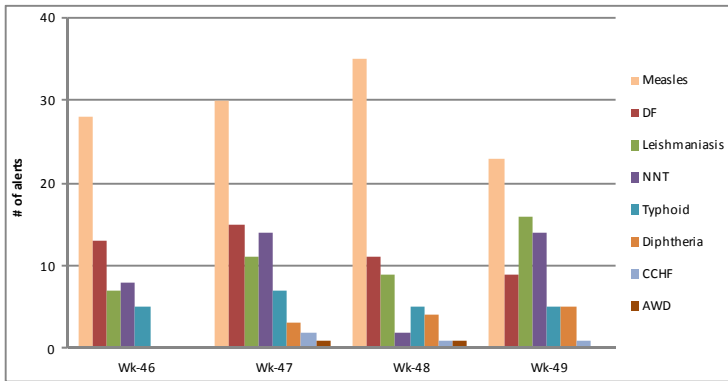
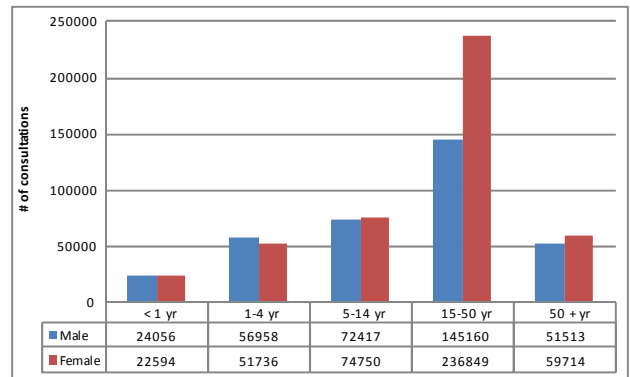
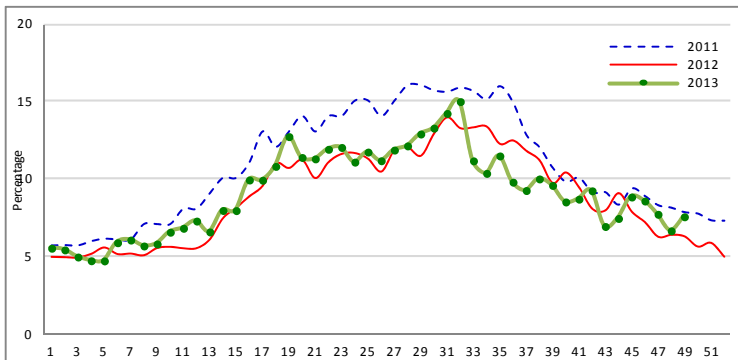


Figure-4: Number of consultations by age and gender, week 49, 2013



Province Khyber Pakhtunkhwa:

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

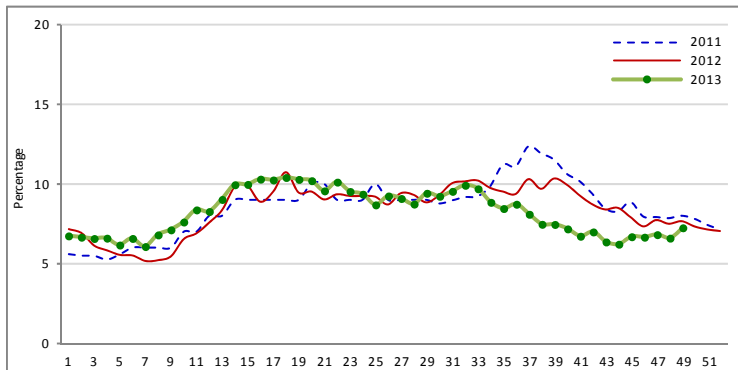


161 health facilities from 12 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 54,128 patients consultations reported in week 49, 2013. A total of 19 alerts were received and appropriate measures were taken. Altogether 17 alerts were for Measles; while 2 for Diphtheria.

The weekly trend of Acute diarrhoea is showing increase as compared with last week 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

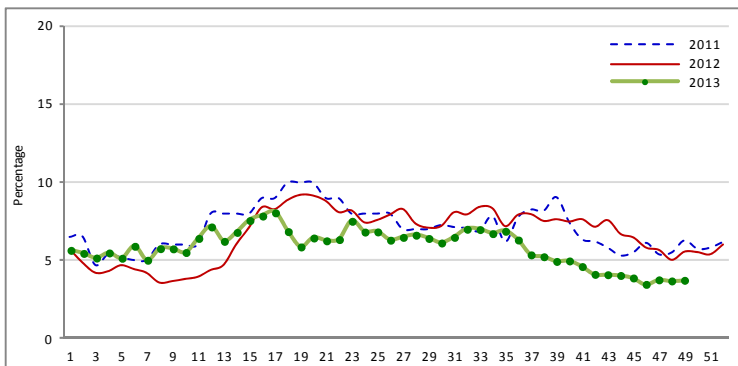


834 health facilities from 23 districts in Sindh province reported to DEWS with a total of 262,049 patient consultations in week 49, 2013. A total of 21 alerts were received and appropriate measures were taken. All together 10 alerts were for NNT; 7 for Leishmaniasis; 2 for Bloody diarrhoea; while 1 each for Dengue fever and Diphtheria.

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



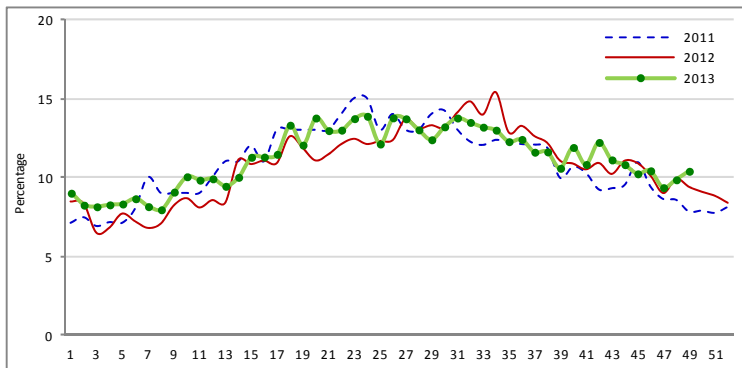
849 health facilities from 16 districts in province Punjab reported to DEWS with a total of 409,847 patients consultations in week 49, 2013.

Total 27 alerts were received and appropriate measures were taken. Altogether 7 alerts were for ARI; 5 for Typhoid; 4 each for Dengue fever and NNT; 2 each for Diphtheria, Leishmaniasis and Measles; while 1 for CCHF were responded in Punjab.

The weekly trend of AD in Punjab showing stability compared with last three weeks, but required vigilant monitoring of the situation.

Province Balochistan:

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



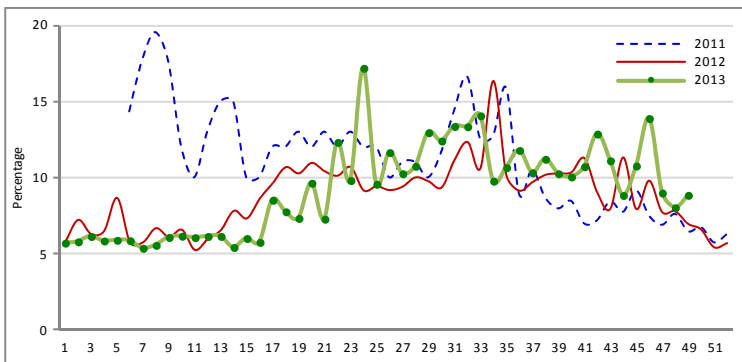
245 health facilities from 11 districts in province Balochistan reported to DEWS with a total of 38,167 patients consultations in week 48, 2013.

15 alerts were reported and appropriated measures were taken. Altogether 8 for alerts were for Measles; 3 for Dengue fever; 2 for Leishmaniasis; while 1 each for NNT and Rabies.

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



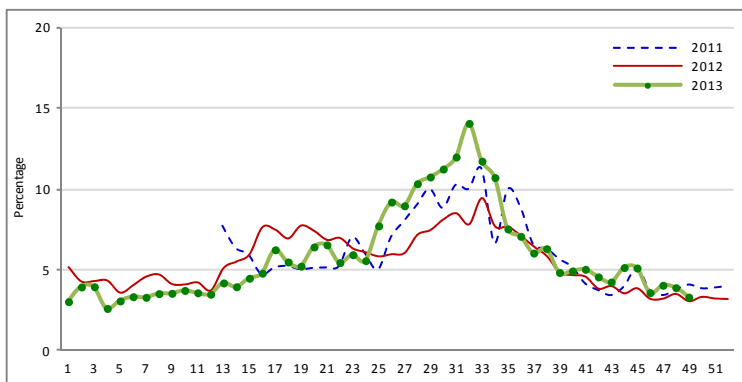
41 health facilities from 3 agencies in FATA reported to DEWS with a total of 12,728 patients consultations in week 48, 2013.

8 alerts, 4 for Leishmaniasis; 3 for Measles; while 1 for NNT were reported in week 48, 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



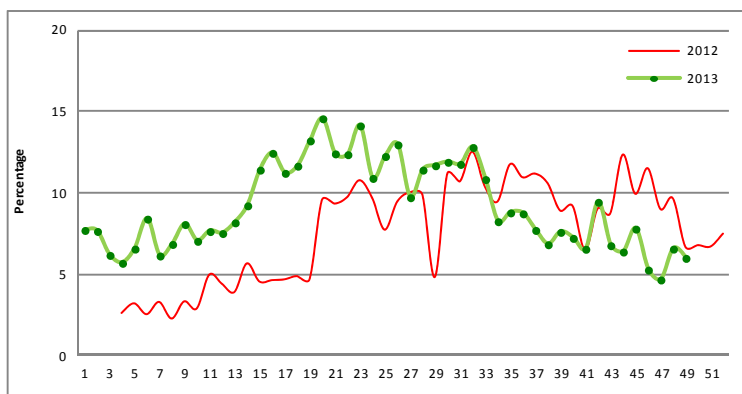
75 health facilities from 8 districts in AJ&K reported to DEWS with a total of 14,655 patients consultations in week 48, 2013.

4 alerts, 2 for AJS; while 1 each for Measles and Leishmaniasis were reported in week 48, 2013 and appropriate measures were taken.

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

Islamabad:

Figure-11: Weekly trend of Acute diarrhoea, Islamabad



4 health facilities reported to DEWS on time with a total of 377 patients consultations in week 48, 2013.

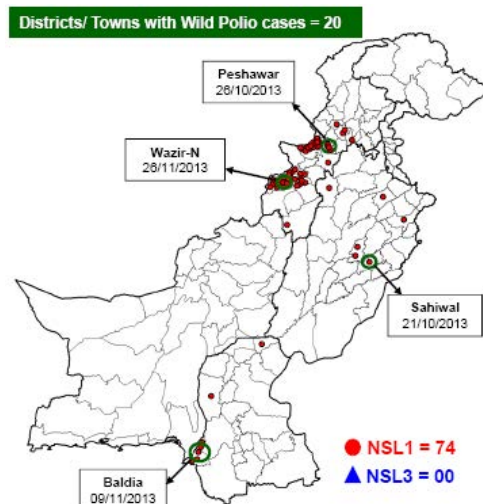
No alert for any disease was received in week 48, 2013 from any area in ICT.

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

Distribution of Wild Polio Virus cases in Pakistan 2012 and 2013

In this week 49, 2013, four new wild polio cases (type-1) were reported; two from Federally Administered Tribal Areas (Khyber agency & North Waziristan Agency) and two from Sindh (one each from Baldia and Bin-Qasim towns Karachi). This brings the total number of polio cases this year to 74 as compared to 58 last year; the number of infected districts/towns/tribal agencies/ areas in the country is 20 as compared to 28 last year.

It is important to mention that 83% of the total polio cases (61/74 cases) are from Khyber Pakhtunkhwa (10 cases) and FATA (51 cases).



Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	6	-	-
Sindh	4	-	-	7	-	-
Khyber Pakhtunkhwa	27	-	-	10	-	-
FATA	17	2	1	51	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	74	-	-

Follow up of CCHF

In week 49, 2013, one suspected CCHF case is reported from Lahore, Punjab province. So for total of 90 suspected, 59 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	2
	Balochistan	33	18	4	54	33	7
ICT		-	-	-	4	4	1
KPK		9	6	5	9	9	4
Punjab		8	5	3	11	4	3
Sindh		7	7	3	2	2	1
Total		62	41	18	90	59	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.

Malaria:

The chart at below shows the Malaria slide positivity and Falciparum ratio in week 49 2013. Total number of Malaria cases tested in this week is 8,417 out of which 1201 were found positive; 638 for P. Vivax; 336 for P. Falciparum; while 227 for Mixed (SPR = 14.27%; F.R = 46.88%).

Malaria tests \ Province	Sindh	Punjab	Balochistan	KPK	FATA	AJK	GB	ICT
P. Vivax	185	33	101	132	187	0	0	0
P. Falciparum	47	1	57	16	215	0	0	0
Mixed	115	0	11	21	80	0	0	0
# tested	3045	1949	1277	988	1158	0	0	0
SPR	11.4	1.74	13.23	17.11	41.62	0	0	0
FR	46.69	2.94	40.24	21.89	61.2	0	0	0

