



Highlights

Figure-1: 80 districts reported to DEWS in week 50, 2013

Epidemiological week no. 50 (8 to 14 Dec 2013)

- **Dengue fever:** During this week, 281 Dengue fever cases have been reported, out of them 205 from province Sindh; 68 from province Punjab; and 8 from province Balochistan. The outbreaks are being responded jointly.
- In this week, **80** districts and 2,354 health facilities have reported to Disease Early Warning system (DEWS), compared to 78 districts with 2,266 health facilities shared weekly data in week 49, 2013 to the DEWS.
- Total **869,535** patients consultations reported this week 50, 2013 compared with **820,158** consultations in week 49, 2013.
- **84** alerts investigated and **3** outbreaks identified and timely responded. Altogether 29 alerts were for Measles; 13 for Dengue fever; 12 for Leishmaniasis; 10 for NNT; 8 for Typhoid fever; 3 for Diphtheria; 2 for Acute diarrhoea; while 1 each for AJS, ARI, AWD, CCHF, Pertussis, Scabies and Food poisoning.



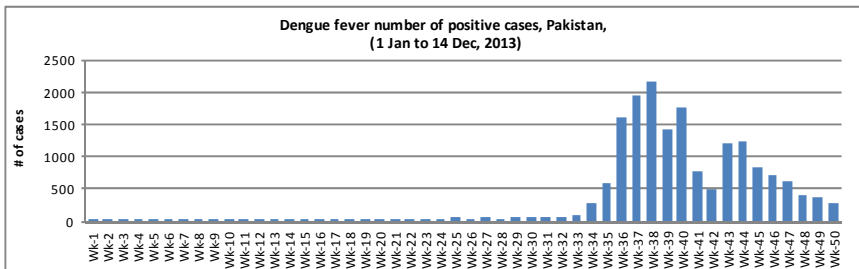
Priority diseases under surveillance in DEWS

- 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 50, 2013 (29 Dec 2012 to 14 December 2013)

Disease	# of Cases	Percentage
ARI	8,001,623	20%
Bloody diarrhoea	96,627	<0.5%
Acute diarrhoea	2,960,466	7%
S. Malaria	1,721,687	4%
Skin Diseases	1,519,547	4%
Unexplained fever	1,227,787	3%
Total (All consultations)	40,094,992	

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

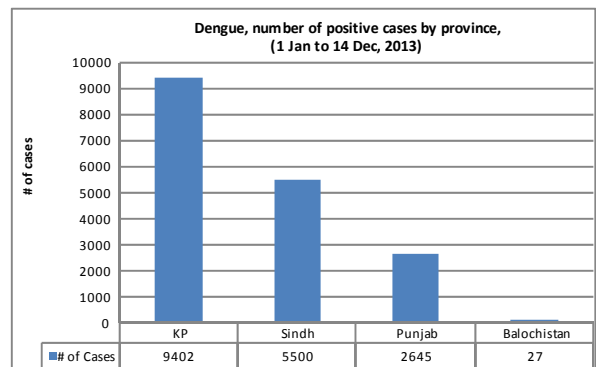


Major health events reported during the Epi-week - 50 (8 - 14 Dec 2013)

Disease	# of Cases	Percentage
ARI	189,599	22%
Bloody diarrhoea	995	<0.5%
Acute diarrhoea	46,270	5%
S. Malaria	26,606	3%
Skin Diseases	25,310	3%
Unexplained fever	23,445	3%
Total (All consultations)	869,535	

From 1st January to 14th December 2013, Khyber Pakhtunkhwa reported 9,402; Sindh 5,500, Punjab 2,645, and Balochistan 27 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-50/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
10-Dec	DF	Sindh	Hyderabad	Village Budhani Distt. Hyd	0	0	0	1	A death was reported from Liaquat University Hospital Medical Emergency ward, A Female aged 40 years got admitted on 27th October 2013 in a semi conscious condition and case was diagnosed as Meningitis with septicemia DIC (Disseminated Intravascular Coagulation) Dengue fever with IgG Positive. At the time of admission there was no fever no bleeding with Platelets counts 77000, blood pressure 80/40. Treatment given with I/V fluids, and antibiotics. But patient did not survived and expired on 28th October 2013. Information shared with DHO Office.
11-Dec	Measles	Sindh	Karachi	Railway colony , Saddar Town	3	0	1	0	An alert of suspected Measles was found on active surveillance visit to wards of NICH. Patient was in the usual state of health, around 2 weeks back he developed high grade fever, he developed rash on his forehead which gradually spread to the whole body within a couple of days, he was taken to a local GP for the same complaint and medicine was given, he had an episode of breathlessness and was taken to Civil Hospital, from there he was referred to NICH. On detailed history it came to be known that the twin brother of the child died with the complication of Measles on 7th December 2013, according to the father the patient developed rash on 4th December, he was suffering from high grade fever 4 days prior to the appearance of rash, he died at home due to breathlessness and cough due to Measles complication, on area visit 2 more cases of suspected Measles were found. Vitamin (A) dose was given. Vaccination status of 20 children were assessed. BCG=10(50%), Penta-1=06(30%), Penta-2=06(30%), Penta-3=5(25%), Measles-1=3(18%), Measles-2=0(0%). Information shared with THMT.
13-Dec	DF	Punjab	Rawalpindi	Pothohar Town	0	6	0	1	8 suspected cases of Dengue fever was notified from Teaching Hospital in Rawalpindi, blood samples were taken and sent to lab for detection of dengue specific antibodies, result for IgM positive for 1 case. PCR request was sent for 4 cases to NIH for serotyping and genotyping results is awaited. The confirmed case was admitted and kept in isolation wards of Teaching hospitals. There is no travel History of patient. Health education session given to the community on proper solid waste disposal and improved water storage practices use of screening, protective clothing and repellents community - based environmental management for improved water storage practices to remove mosquito breeding sites. Follow-up planned. Information shared with EDO(H) Rawalpindi.

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

Disease	2012		Current week 50, 2013		2013 (Total up till week - 50)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	1	0	142	40
Acute jaundice syndrome	113	22	1	0	49	6
Bloody diarrhoea	146	11	0	0	44	3
CCHF	68	41	1	0	90	47
Dengue fever	175	29	13	2	295	63
Diphtheria	60	16	3	0	80	19
Measles	5922	812	29	1	3322	280
Pertussis	366	147	1	0	46	10
NNT + tetanus	560	0	10	0	343	0
Malaria	136	68	0	0	25	6
Cutaneous Leishmaniasis	900	78	12	0	611	49
Others	1529	58	13	0	500	5
Total	10631	1475	84	3	5547	528

Figure-3: Number of alerts received and responded, week 47 - 50, 2013

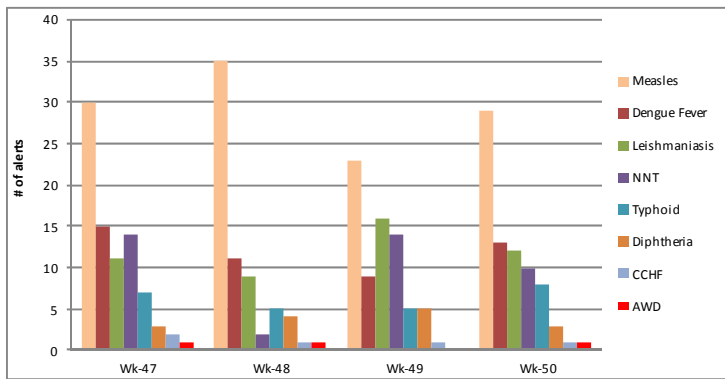
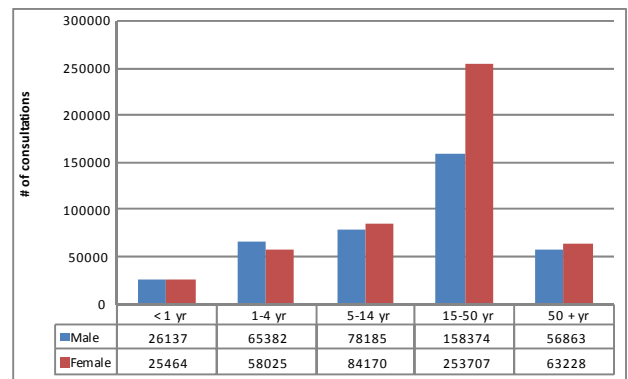
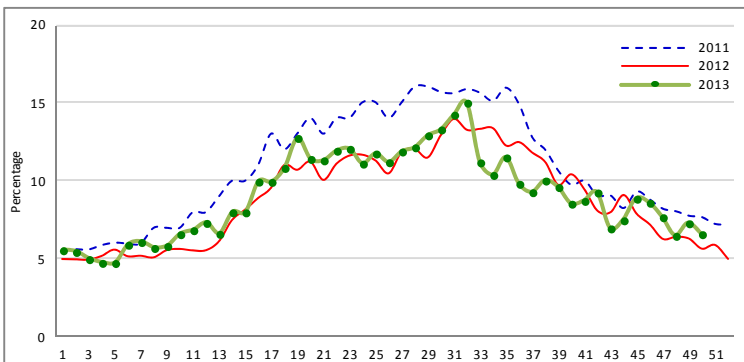


Figure-4: Number of consultations by age and gender, week 50, 2013



Province Khyber Pakhtunkhwa:

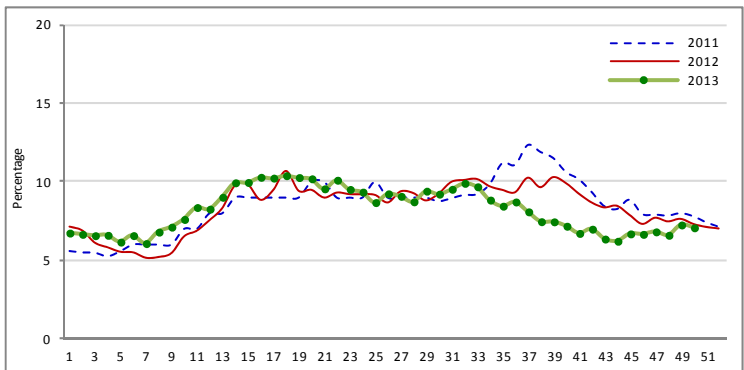
Figure-5: Weekly trend of Acute diarrhoea, province Khyber Pakhtunkhwa



209 health facilities from 12 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 70,342 patients consultations reported in week 50, 2013. A total of 23 alerts were received and appropriate measures were taken. Altogether 21 alerts were for Measles; while 1 each for CCHF and Food poisoning. The weekly trend of Acute diarrhoea is showing decrease as compared with last week in KP, but 5 Cholera confirmed cases reported from KP in last seven weeks, and the situation need continuous attention in the province.

Province Sindh:

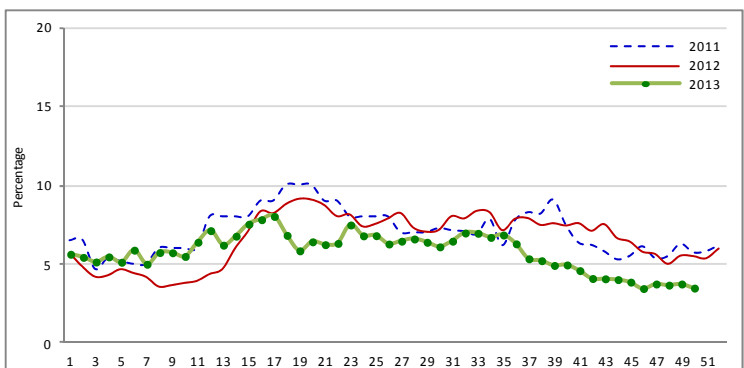
Figure-6: Weekly trend of Acute diarrhoea, province Sindh



841 health facilities from 23 districts in Sindh province reported to DEWS with a total of 284,585 patient consultations in week 50, 2013. A total of 19 alerts were received and appropriate measures were taken. All together 6 alerts each were for NNT and Dengue fever; 5 for Leishmaniasis; while 1 each for Measles and Typhoid fever. The proportion of AD for the province is showing minor decrease 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



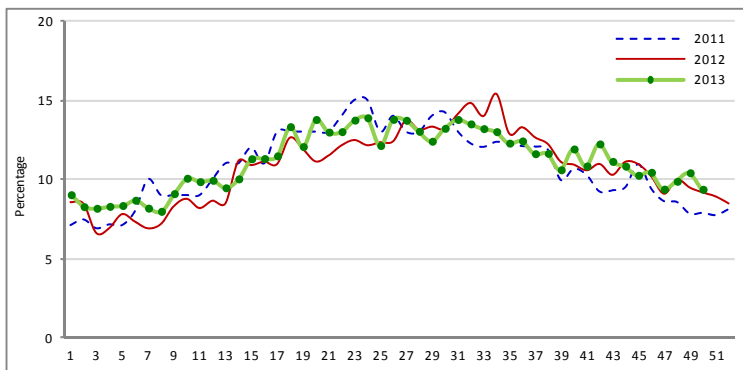
930 health facilities from 18 districts in province Punjab reported to DEWS with a total of 443,958 patients consultations in week 50, 2013.

Total 22 alerts were received and appropriate measures were taken. Altogether 6 alerts were for Typhoid fever; 4 for Dengue fever; 3 for Diphtheria; 2 for Acute diarrhoea; while 1 each for AJS, ARI, AWD, Leishmaniasis, Measles, NNT and Scabies were responded in Punjab.

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

Province Balochistan:

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



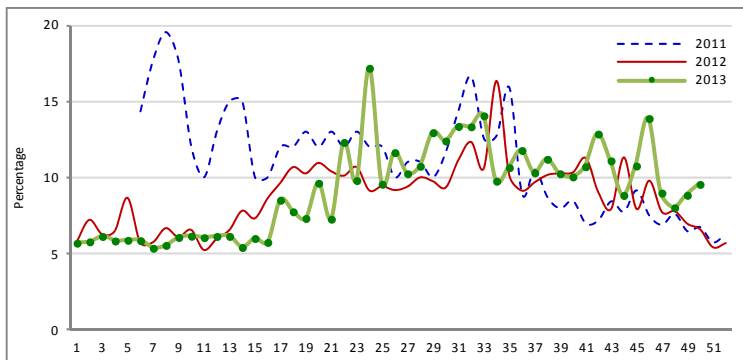
266 health facilities from 14 districts in province Balochistan reported to DEWS with a total of 43,146 patients consultations in week 50, 2013.

13 alerts were reported and appropriated measures were taken. Altogether 4 for alerts were for Leishmaniasis; 3 each for Dengue fever and Measles; while 1 each for NNT, Pertussis and Typhoid.

In this week the weekly proportion of AD showing decrease as compared with last week. But vigilant monitoring of the situation is required.

FATA:

Figure-9: Weekly trend of Acute diarrhoea, FATA



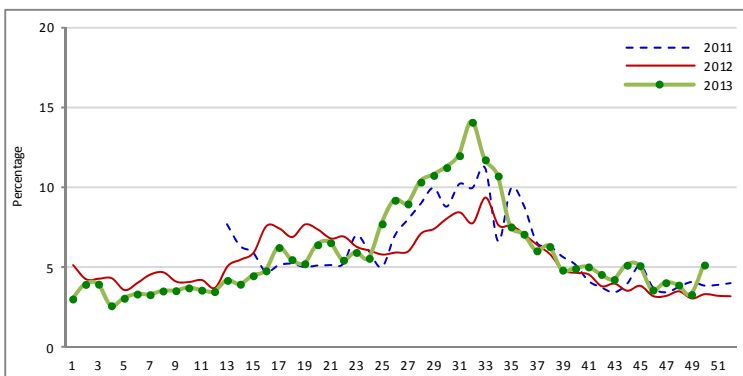
23 health facilities from 3 agencies in FATA reported to DEWS with a total of 12,138 patients consultations in week 50, 2013.

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

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



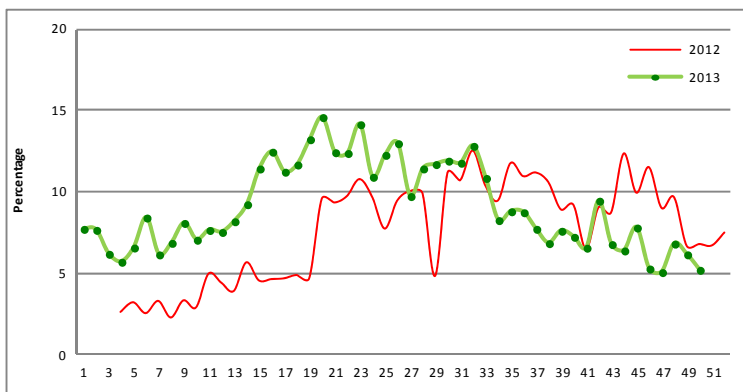
81 health facilities from 8 districts in AJ&K reported to DEWS with a total of 14,739 patients consultations in week 50, 2013.

No alerts for any disease were reported from any area in AJ&K in week 50, 2013.

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

Islamabad:

Figure-11: Weekly trend of Acute diarrhoea, Islamabad



3 health facilities reported to DEWS on time with a total of 425 patients consultations in week 50, 2013.

No alert for any disease was reported in week 50, 2013.

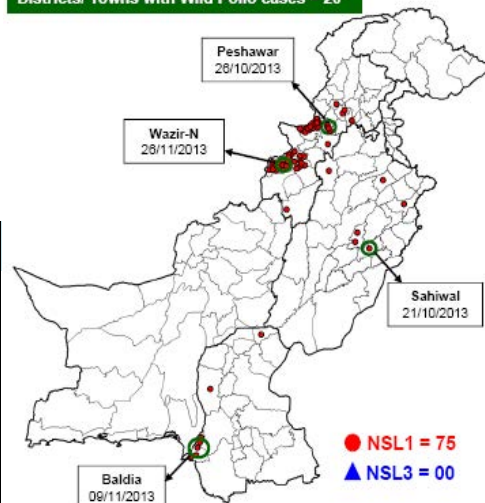
Weekly trend of Acute diarrhoea showing decrease as compared with last week, but vigilant monitoring of the situation is required.

Distribution of Wild Polio Virus cases in Pakistan 2012 and 2013

In this week 50, 2013, one new type-1 wild polio case was reported from Federally Administered Tribal Areas (North Waziristan Agency). This brings the total number of polio cases this year to 75 as compared to 58 last year, the number of infected districts/towns/tribal agencies/ FR areas in the country is 20 as compared to 28 last year.

It is important to mention that 83% of total polio cases (62 cases) are from Khyber Pakhtunkhwa (10 cases) and FATA. North Waziristan Agency in FATA, alone has reported 25 Wild Polio cases indicating very intense viral circulation in the tribal agency (52 cases).

Districts/ Towns with Wild Polio cases = 20



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	52	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	75	-	-

Follow up of CCHF

In week 50, 2013, no new CCHF cases reported in week 50, 2013. So for total of 93 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	93	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°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 50, 2013. Total number of Malaria cases tested in this week is 8,422 out of which 1,031 were found positive; 592 for P. Vivax; 296 for P. Falciparum; while 143 for Mixed (SPR = 12.24%; F.R = 42.58%).

Malaria tests \ Province	Sindh	Punjab	Balochistan	KPK	FATA	AJK	GB	ICT
P. Vivax	165	33	147	114	133	0	0	0
P. Falciparum	42	0	83	8	163	0	0	0
Mixed	121	0	12	6	4	0	0	0
# tested	2614	2331	1707	1000	770	0	0	0
SPR	12.55	1.42	14.18	12.8	38.96	0	0	0
FR	49.7	0	39.26	10.94	55.67	0	0	0

