



Highlights

Figure-1: 73 districts reported to DEWS in week 38, 2013

Epidemiological week no. 39 (22 to 28 Sept 2013)

- **Dengue fever:** During this week, 1,432 Dengue fever cases have been reported. The highest number of DF cases 1,218 reported from district Swat, Khyber Pakhtunkhwa. The outbreak in Swat is being responded jointly.
- **CCHF:** In week 39, 2013, 2 new confirmed CCHF cases were reported, both the cases admitted at hospital in Quetta, both the cases having history of contact with animals (taking care at home). While 1 more suspected CCHF case was reported from district Zhob. Epidemiological investigation conducted and treatment initiated (Page 5).
- In this week, **73** districts and 2071 health facilities have reported to Disease Early Warning system (DEWS), compared to 73 districts with 2192 health facilities shared weekly data in week 38, 2013 to the DEWS.
- Total **834,714** patients consultations reported this week compared to **956,247** consultations in week 38, 2013.
- Altogether **84** alerts were investigated and **12** outbreaks were identified and timely responded.



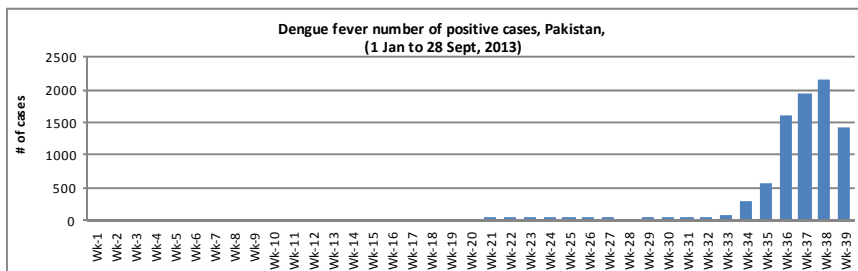
Priority diseases under surveillance in DEWS

- 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 39, 2013 (29 Dec 2012 to 28 September 2013)

Disease	# of Cases	Percentage
ARI	6,268,834	20%
Bloody diarrhoea	83,139	<0.5%
Acute diarrhoea	2,480,319	8%
S. Malaria	1,386,201	4%
Skin Diseases	1,242,604	4%
Unexplained fever	981,546	3%
Total (All consultations)	31,810,147	

Figure-2: Number of Dengue fever positive cases in Pakistan, 1 Jan to 28 Sept 2013



Major health events reported during the Epi-week - 39 (22 - 28 September 2013)

Disease	# of Cases	Percentage
ARI	152,340	18%
Bloody diarrhoea	1,852	<0.5%
Acute diarrhoea	57,446	7%
S. Malaria	39,947	5%
Skin Diseases	34,720	4%
Unexplained fever	28,759	3%
Total (All consultations)	834,714	

An ongoing Dengue fever outbreak is being confronted in district Swat of Khyber Pakhtunkhwa province. In district Swat total 6,932 Dengue fever cases and 23 deaths have been reported from 7th August to 28th September. Three Sero types (DNV-1; DNV-2; DNV-3) of Dengue virus have been found in different patients in district Swat. Samples for Sero typing are tested at National Institute of Health (NIH) Islamabad, and Institute of Public Health (IPH), Lahore. The other districts in Khyber Pakhtunkhwa where Dengue fever cases reported are Mardan, Shangla and Lower Dir.

District administration Swat has notified Dengue Task Force and Dengue Response Cell has been established at the EDO Health Office Swat. Joint outbreak control activities are carried in the district by all partners and the concerned line departments. From 1st January to 28th September 2013, Sindh reported 1,634, Punjab 248, and Balochistan 8 Dengue fever cases.

Outbreaks (Wk-39/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
27-Sep	Measles	Balochistan	Chagai	Killi Malik Naik Mohammad, UC Chagai Village	1	4	1	3	An alert of 9 suspected Measles cases were reported. Vitamin-A dose given to all the suspected cases and were isolated. During field investigation a total of 39 children were checked for EPI vaccination on which 20 were found unvaccinated. Parents were advised to take all unvaccinated children to nearby health facility for vaccination.
26-Sep	AWD	ICT	Islamabad	Hardoghar, Sihala (Health Department, ICT)	3	1	3	5	Alert for AWD reported by Health department ICT in Sihalla, field investigation revealed 12 admitted cases. RRT established field health post, treated 80 cases of diarrhea, Chlorination of 145 wells including community supply well was done in 2 days through area Sanitary inspector, ADC, LHS and LHWS with door to door visit and distributing Chlorine tablets and Health Education leaflets. 2 samples collected and 1 found positive for Cholera. Community session on Health education on safe drinking water was imparted.
26-Sep	Measles	Khyber Pakhtunkhwa	Swabi	Village Kalu Khan Parhra, Tehsil Razar, Swabi	3	1	2	0	An alert of suspected Measles was reported from Children unit of BMC Hospital, Swabi. The patient received one dose of measles vaccination (verbal history). Vitamin-A drops was given and blood sample collected and sent to NIH for Lab confirmation. During field investigation 5 more suspected cases of Measles were identified in same family and neighbors, most of the children were found partially immunized for routine vaccination. All children of less than 5 years were sent to near by HF for vaccination. Health education session was conducted in the community, LHW's working in the area was involved. EDO-H Focal person and EPI Coordinator were informed.
24 to 27-Sep	DF	Punjab	Lahore	Gulberg Town UC 130 Kot Lakhpat; UC 131 Pindi Rajputan; Nishter Town UC 135 Ismail Nager; UC 136 Khana Nau; Ravi Town UC 12 Bengali Bagh; Samanabad Town UC 115 Muslim Town	0	187	0	66	6 new Dengue fever outbreaks were investigated, 253 suspected cases of Dengue fever were reported from 6 UCs in Lahore. 14 blood samples were collected and sent for laboratory testing. The results of 6 cases were found positive for Dengue IgM. All the positive Dengue fever cases were admitted in the isolation ward. DPC along with CDCO, DDHO and entomologist were visit the area. Health education sessions were conducted in the community and follow up planned. Information shared with EDOH, Lahore.
24-Sep	Diphtheria	Punjab	Lahore	Village Chak Mozang G Block Johar Town UC 116 Allama Iqbal Town	0	0	1	0	A Clinical Diphtheria case was reported by Jinnah Hospital Lahore. Patient belongs to UC 116 Lahore district, was admitted in Emergency ward, but expired on the same day. EDOH, DG health, Director CDC and Director EPI were informed. During field investigation, all close contacts at Paternal address were examined and advised Syp. Erythrosine. DSC, DDOH, SO, DSV, IV and LHS perform field investigation. OPV zero to Two Neonates, BCG was given to 32 Children, Penta 1 to 35 children, Penta 2 to Two Children, Penta 3 to Four Children, 16 children under 5 year of age were given additional dose of Penta. Measles 1 to 28, Measles 2 to 2 children and TT to 2 Females. DSC shared the detail Investigation report to EDO(H) Lahore.
28-Sep	DF	Sindh	Hyderabad	Liaquat Colony	0	3	0	3	6 cases of Dengue fever were reported from Liaquat University Hospital. 6 blood samples were collected and sent to Lab testing which came positive for Dengue IgM while IgG found positive in 2 cases. Families were briefed about the homecare of Dengue fever patients. Information shared with DHO Office.

Figure-3: Number of alerts received and responded, week 36 - 39, 2013

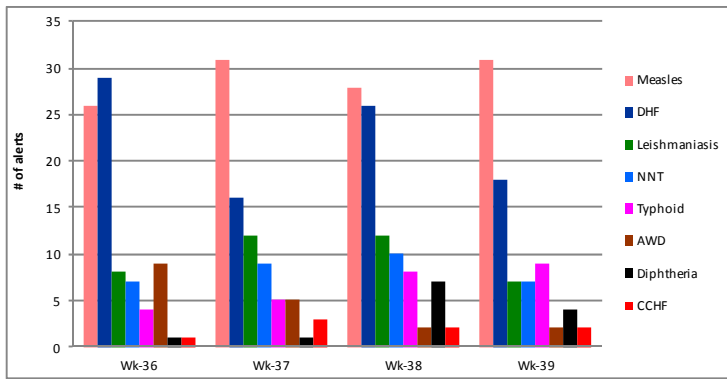
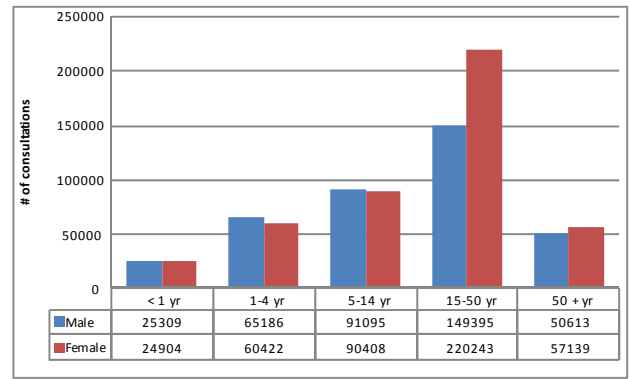
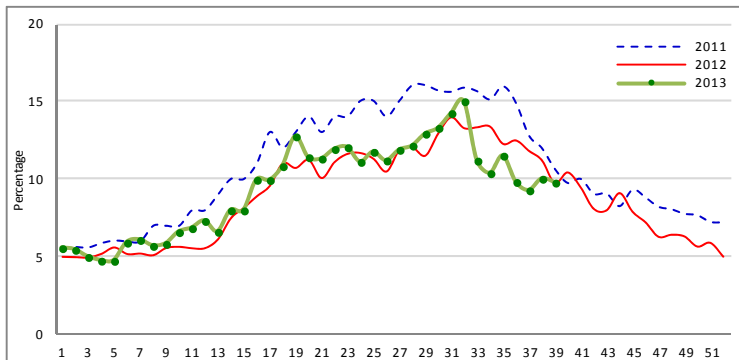


Figure-4: Number of consultations by age and gender, week 39, 2013



Province Khyber Pakhtunkhwa:

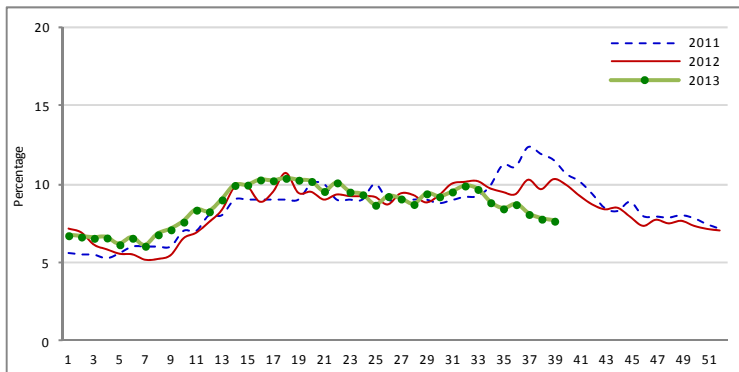
Figure-5: Weekly trend of Acute diarrhoea, province Khyber Pakhtunkhwa



231 health facilities from 10 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 86,257 patients consultations reported in week 39, 2013. A total of 28 alerts, 24 for Measles; while 4 for Dengue hemorrhagic fever were received and appropriate measures were taken. The weekly trend of Acute diarrhoea is showing minor decrease as compared with last week in KP, but 5 Cholera confirmed cases reported from KP in last six weeks, and the situation need continuous attention in the province. Dengue fever outbreak in district Swat and Mardan being responded jointly.

Province Sindh:

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

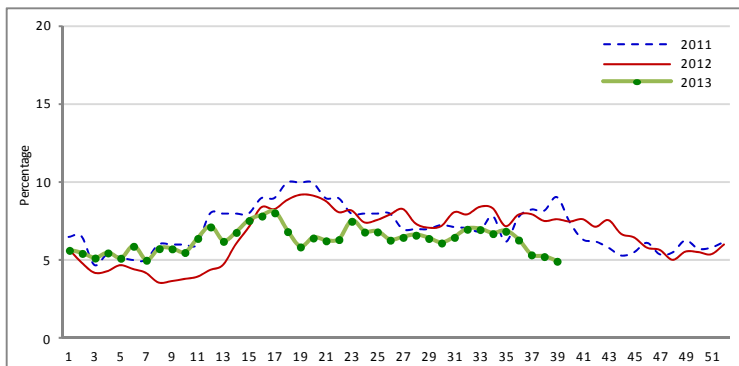


815 health facilities from 23 districts in Sindh province reported to DEWS with a total of 314,920 patient consultations in week 39, 2013. A total of 8 alerts were received and appropriate measures were taken. Altogether 3 alerts were for Dengue fever; 2 each for Leishmaniasis and NNT; while 1 for CCHF.

The overall proportion of AD for the province is showing decrease from last 4 weeks, but during this season 17 AWD outbreaks identified and responded, and the situation need continuous attention in the province.

Province Punjab:

Figure-7: Trend of ARI, province Punjab

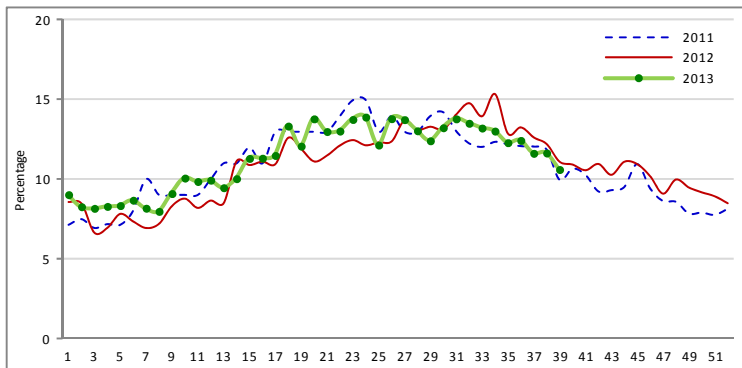


627 health facilities from 13 districts in province Punjab reported to DEWS with a total of 356,260 patients consultations in week 39, 2013.

Total 33 alerts were received and appropriate measures were taken. Altogether 11 alerts were for Dengue fever; 9 for Typhoid; 4 each for Diphtheria and NNT; while 1 each for Acute diarrhoea, Acute Jaundice Syndrome, ARI, AWD and Scabies 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



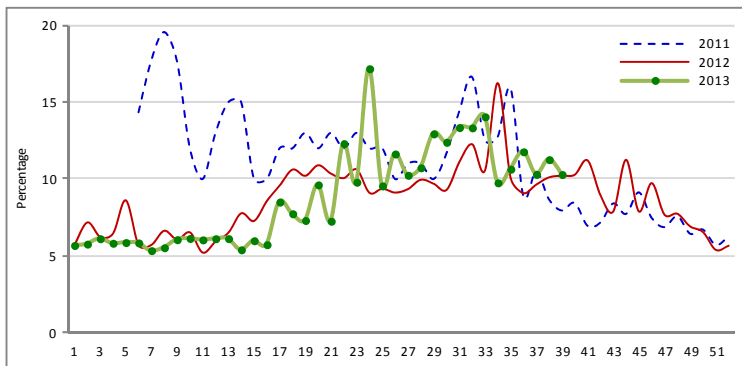
286 health facilities from 14 districts in province Balochistan reported to DEWS with a total of 48,276 patients consultations in week 39, 2013. Total 7 alerts were reported and appropriate measures were taken in week 39, 2013.

Altogether 4 alerts for Measles; 2 for Leishmaniasis; while 1 for CCHF.

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



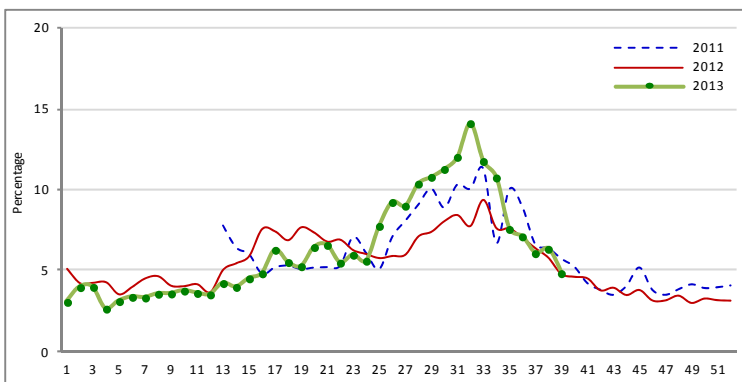
40 health facilities from 3 agencies in FATA reported to DEWS with a total of 12,517 patients consultations in week 39, 2013.

4 alerts, 2 for Leishmaniasis; while 1 each for Measles 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, FATA



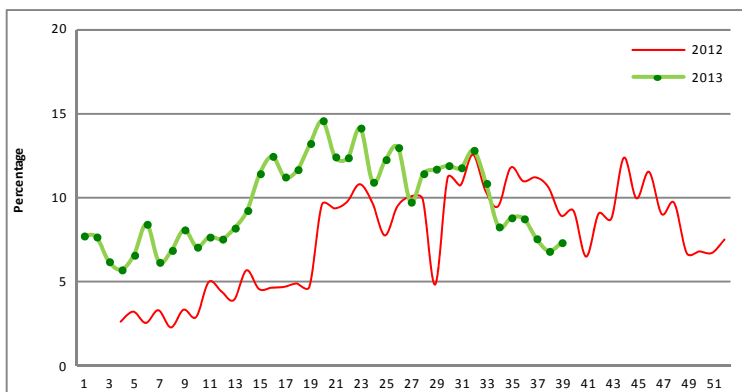
67 health facilities from 8 districts in AJ&K reported to DEWS with a total of 15,571 patients consultations in week 39, 2013.

3 alerts, 2 for Measles; and 1 for Leishmaniasis were reported in week 39, 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



4 health facilities reported to DEWS on time with a total of 685 patients consultations in week 39, 2013.

1 outbreak of AWD was reported in week 39, 2013, and appropriated measures were taken.

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

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

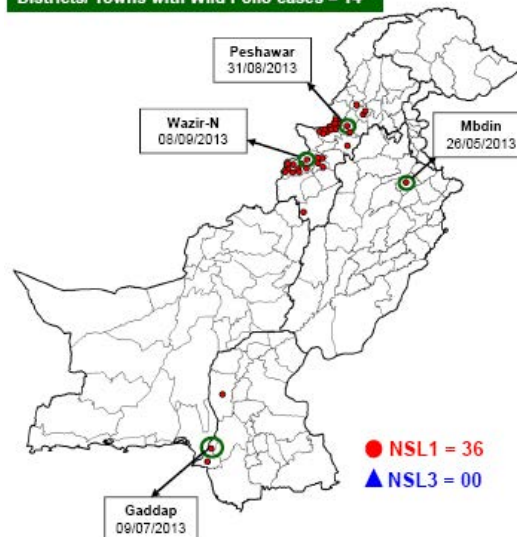
Disease	2012		Current week 39, 2013		2013 (Total up till week - 39)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	2	1	129	39
Acute jaundice syndrome	113	22	1	0	34	6
Bloody diarrhoea	146	11	0	0	38	2
CCHF	68	41	2	0	61	34
Dengue fever	175	29	17	6	124	30
Diphtheria	60	16	4	2	48	13
Measles	5922	812	31	2	3057	270
Pertussis	366	147	0	0	41	10
NNT + tetanus	560	0	7	0	233	0
Malaria	136	68	0	0	20	4
Cutaneous Leishmaniasis	900	78	7	0	502	47
Others	1529	58	12	0	370	3
Total	10631	1475	83	11	4657	458

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

In week 39, 2013, eight new wild polio cases were reported in the country; one from Khyber Pakhtunkhwa (Peshawar district) and seven from Federally Administered Tribal Areas (Five from North Waziristan Agency and one each from Khyber Agency and FR Dera Ismail Khan). This brings the total number of wild polio cases to 36 in 2013 (compared to 46 during the same time period last year) from 14 districts/towns/tribal agencies/areas (compared to 25 during the same time period last year).

The polio outbreak in FATA continues, bringing the total number of wild polio cases from the region to 24 (67% of the total wild polio cases in the country during 2013 so far).

Districts/ Towns with Wild Polio cases = 14



Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	2	-	-
Sindh	4	-	-	3	-	-
Khyber Pakhtunkhwa	27	-	-	7	-	-
FATA	17	2	1	24	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	36	-	-

Follow up of CCHF

In week 39, 2013, 2 new confirmed CCHF cases were reported 1 each from districts Quetta and Killa Abdullah, both the cases admitted at hospital in Quetta, and having history of contact with animals (taking care at home). While on 1 more suspected CCHF case was reported from Zhob (Died on same day, lab result awaited). So for total of 77 suspected, 48 confirmed CCHF cases and 15 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).

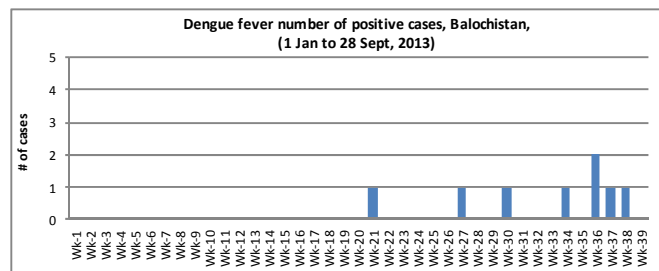
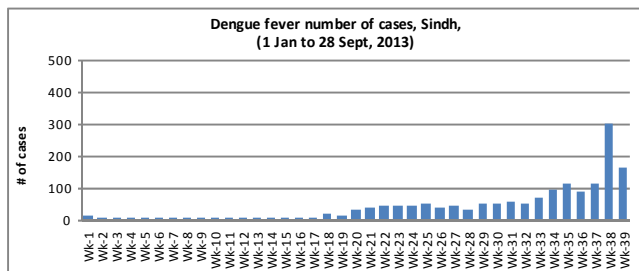
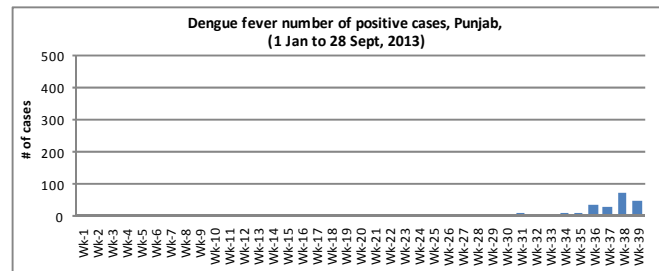
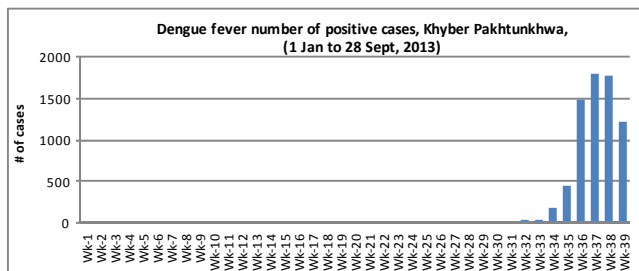
Province	2012			2013		
	Suspected	Lab confirmed	Deaths	Suspected	Lab confirmed	Deaths
AJ&K	0	0	0	1	1	0
Balochistan	Afghanistan*	5	5	3	11	3
	Balochistan	33	18	4	49	34
ICT	-	-	-	2	2	0
KPK	9	6	5	6	4	4
Punjab	8	5	3	6	2	2
Sindh	7	7	3	2	2	1
Total	62	41	18	77	48	15

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. 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.

