



Highlights

Epidemiological week no. 40 (29 Sept to 5 Oct 2013)

- **Dengue fever:** During this week, 1,736 Dengue fever cases have been reported. The highest number of DF cases 898 reported from district Swat, Khyber Pakhtunkhwa. The outbreak in Swat is being responded jointly.
- **MERS-CoV:** An alert for the Middle East Respiratory Syndrome Corona Virus was reported. The laboratory tests for the suspected case reported negative. The tests were repeated and found negative.
- **CCHF:** In week 40, 2013, no new CCHF case was reported from any district (Page 5).
- In this week, **70** districts and 2059 health facilities have reported to Disease Early Warning system (DEWS), compared to 73 districts with 2071 health facilities shared weekly data in week 39, 2013 to the DEWS.
- Total **742,392** patients consultations reported this week compared to **867,073** consultations in week 39, 2013.
- **109** alerts investigated and **10** outbreaks identified and timely responded.

Figure-1: 70 districts reported to DEWS in week 40, 2013



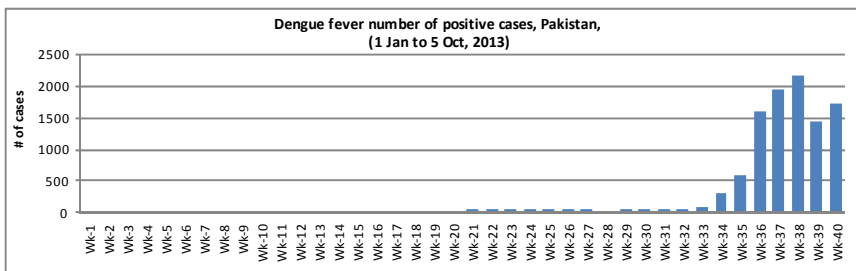
Priority diseases under surveillance in DEWS

- 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 40, 2013 (29 Dec 2012 to 5 October 2013)

Disease	# of Cases	Percentage
ARI	6,415,611	20%
Bloody diarrhoea	84,466	<0.5%
Acute diarrhoea	2,532,327	8%
S. Malaria	1,422,130	4%
Skin Diseases	1,274,443	4%
Unexplained fever	1,005,492	3%
Total (All consultations)	32,585,084	

Figure-2: Number of Dengue fever positive cases in Pakistan, 1 Jan to 5 Oct 2013



Major health events reported during the Epi-week - 40 (29 Sept - 5 Oct 2013)

Disease	# of Cases	Percentage
ARI	140,147	19%
Bloody diarrhoea	1,380	<0.5%
Acute diarrhoea	49,651	7%
S. Malaria	34,624	5%
Skin Diseases	30,315	4%
Unexplained fever	23,029	3%
Total (All consultations)	742,392	

An ongoing Dengue fever outbreak is being confronted in district Swat of Khyber Pakhtunkhwa province. In district Swat total 8,083 Dengue fever cases and 23 deaths have been reported from 7th August to 5th October. 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 5th October 2013, Sindh reported 2,403, Punjab 315, and Balochistan 8 Dengue fever cases.

Outbreaks (Wk-40/2013):

Date	Disease	Province	District	Area	<SM	>SM	<SF	>SF	Action Taken
30-Sep	Leishmaniasis	FATA	Khyber Agency	Village Godar, UC Jamrud, Tehsil Jamrud	3	4	2	3	An alert of Cutaneous Leishmaniasis was reported. On active surveillance 11 more suspected Cutaneous Leishmaniasis cases were found. Health education session conducted in the community. Injection Glucantime was provided to all the registered cases. Information shared with Agency Surgeon and PPHI.
1-Oct	Diphtheria	Khyber Pakhtunkhwa	D. I. Khan	Band Korai, Pahar Pur	0	1	0	1	2 probable cases of Diphtheria were reported. The patients belongs to DI Khan district. Both the patients developed fever leading to neck swelling and vomiting. Two of their cousins had died a day before, while other children at home were shared to be having similar neck swelling. Cases were treated with Tab Erythromycin/Azithromycin for next ten days. Precautions were discussed with HOD and staff of pediatrics department at Nishter Hospital Multan to prevent disease propagation. Patient's family was given briefing on importance of adoption of personal and general hygiene measures. EDOH, DOH, DSC, DDOH Multan were informed of the situation.
2-Oct	Measles	Khyber Pakhtunkhwa	Battagram	Colony	3	0	1	0	3 suspected cases of measles were reported from DHQ Battagram, WHO team visited the area, and vitamin A drops were given to the cases. The EPI team was requested to conduct intensified outreach vaccination activity in the area. Follow up planned.
30 Sept to 2 Oct	DF	Punjab	Lahore	Gulberg Town, UC 127, Model Town; Allama Iqbal Town, UC 132, Town Ship; Gulberg Town, UC 97, Gulberg; Nishter Town, UC 136, Sitara Colony	0	42	0	5	7 new confirmed cases of Dengue fever were investigated, 40 suspected cases of Dengue fever were reported from 4 UCs in Lahore. 7 blood samples collected and sent for laboratory testing. All the samples 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 visited the area. Health education sessions were conducted in the community and follow up planned. Information shared with EDOH, Lahore.
5-Oct	Diphtheria	Punjab	Lahore	Talat Park Near Babu Sabu UC 90 Saman Abad Town; Fateh Garh UC 44 Aziz Bhatti Town	0	0	0	2	4 probable cases of Diphtheria reported from Children Hospital Lahore. 4 Throat swab samples were taken and sent to NIH for Lab testing. Case management was ensured. ADS was given to all the suspected cases. During field investigation, all the contacts at Paternal address and School were examined and given Syp. Erythrosine. Intensified vaccination activity has been carried out in the locality and BCG was given to 3 children, Penta 1 to 225 children, Penta 2 to 4 children, Penta 3 to 4 children, 25 children under 5 year of age were given additional dose of Penta. Measles 1 to 20, Measles 2 To 4 children and TT to 4 females. EDOH, DG health, Director CDC and Director EPI were informed.
2-Oct	Diphtheria	Punjab	Lahore	Katchi Abadi Badami Bagh UC 12 Ravi Town	0	1	0	0	A probable Diphtheria case reported from Mayo Hospital, Lahore. Throat Swab was collected and sent to NIH for Lab testing. ADS was given to patient. There is no travelling history of Patient. All the close contacts at Paternal address were advised Syp. Erythrosine. DSC, DDOH, SO, DSV, IV and LHS perform field investigation. Intensified vaccination activity has been carried out in the locality and BCG was given to 11 children, Penta 1 to 18 children, Penta 2 to two Children, Penta 3 to two Children, 12 children under 5 year of age were given additional dose of Penta. Measles 1 to 7, Measles 2 To 2 children and TT to 2 females. EDOH, DG health, Director CDC and Director EPI were informed.

Figure-3: Number of alerts received and responded, week 37 - 40, 2013

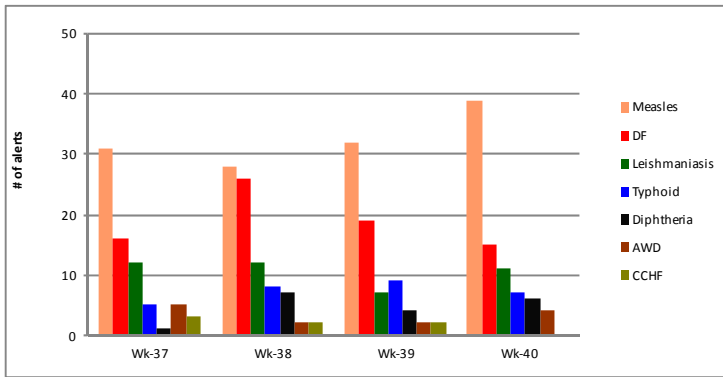
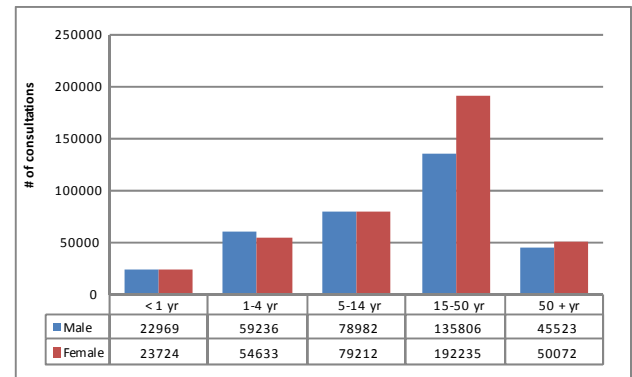
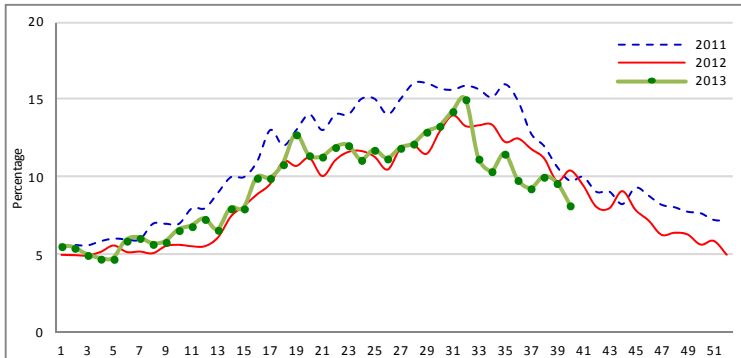


Figure-4: Number of consultations by age and gender, week 40, 2013



Province Khyber Pakhtunkhwa:

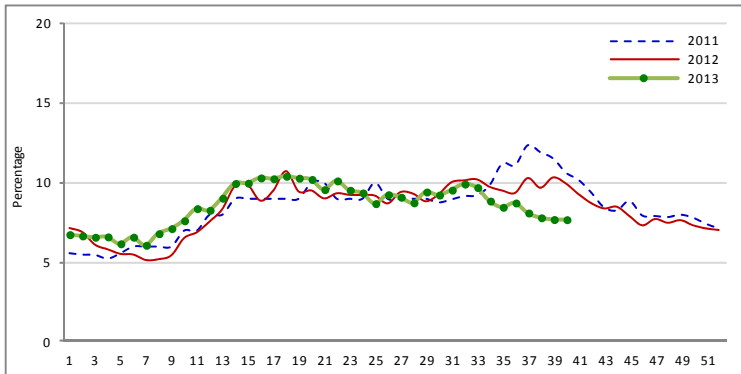
Figure-5: Weekly trend of Acute diarrhoea, province Khyber Pakhtunkhwa



257 health facilities from 11 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 79,894 patients consultations reported in week 40, 2013. A total of 32 alerts, 26 for Measles; 3 for AWD; 2 for Diphtheria; while 1 for AJS were received and appropriate measures were taken. 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 six weeks, and the situation need continuous attention in the province. Dengue fever outbreak in district Swat and Mardan being responded jointly.

Province Sindh:

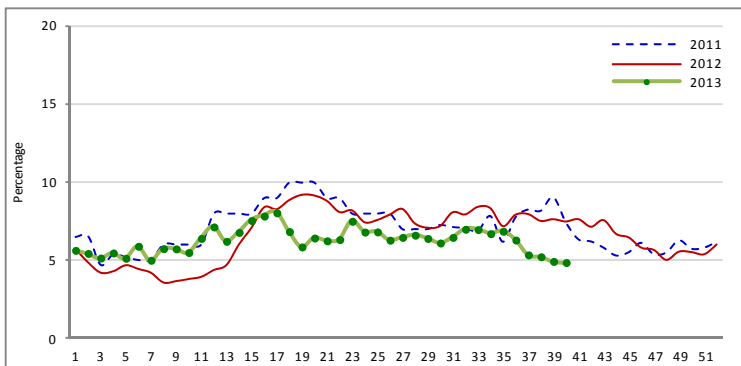
Figure-6: Weekly trend of Acute diarrhoea, province Sindh



838 health facilities from 23 districts in Sindh province reported to DEWS with a total of 289,486 patient consultations in week 40, 2013. A total of 23 alerts were received and appropriate measures were taken. Altogether 8 alerts for Dengue fever; 7 alerts for Leishmaniasis; 6 each for NNT; while 1 each for AWD and Measles. 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:

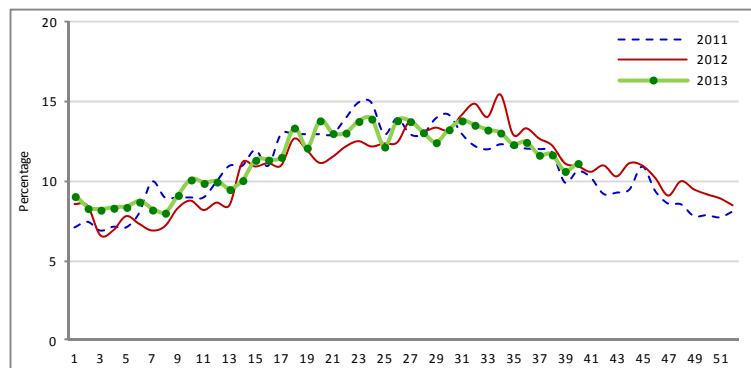
Figure-7: Trend of ARI, province Punjab



628 health facilities from 13 districts in province Punjab reported to DEWS with a total of 313,064 patients consultations in week 40, 2013. Total 30 alerts were received and appropriate measures were taken. Altogether 6 alerts each were for Dengue fever and Typhoid; 4 each for AJS, ARI and Diphtheria; 2 each for Measles and Scabies; while 1 each for Acute diarrhoea and MERS-CoV 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



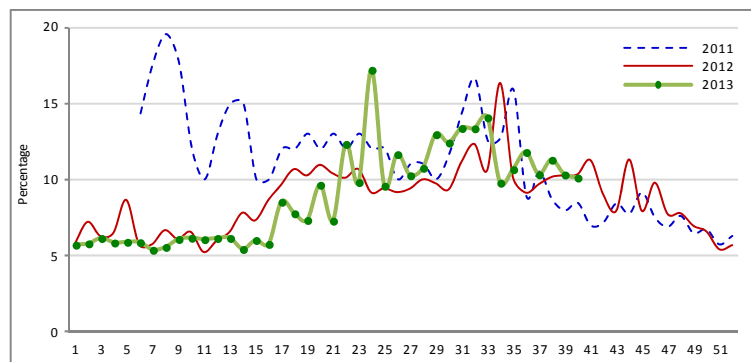
221 health facilities from 10 districts in province Balochistan reported to DEWS with a total of 33,329 patients consultations in week 40, 2013. Total 11 alerts were reported and appropriate measures were taken in week 40, 2013.

Altogether 3 alerts for Measles; 2 each for Leishmaniasis and Pertussis; while 1 for Bloody diarrhoea, NNT, Scabies and Typhoid.

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



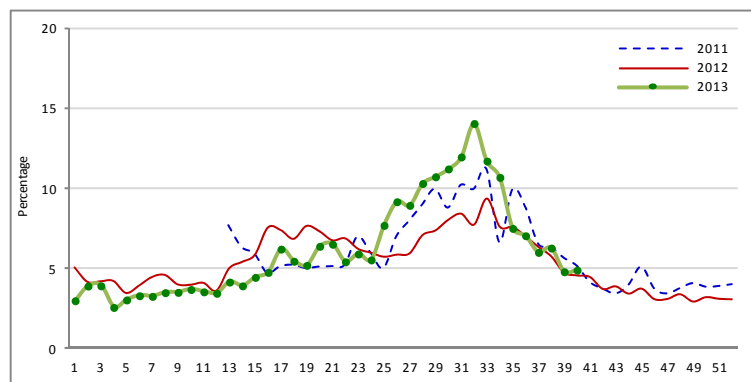
38 health facilities from 3 agencies in FATA reported to DEWS with a total of 11,171 patients consultations in week 40, 2013.

8 alerts, 3 alerts each for Measles and NNT; while 2 for Leishmaniasis were reported 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, FATA



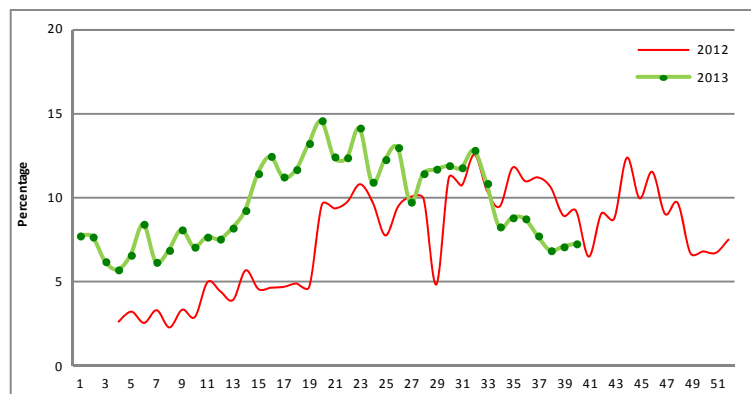
68 health facilities from 8 districts in AJ&K reported to DEWS with a total of 13,189 patients consultations in week 40, 2013.

5 alerts, 4 for Measles; and 1 for Dengue fever were reported in week 40, 2013 and appropriate measures were taken.

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



8 health facilities reported to DEWS on time with a total of 2,117 patients consultations in week 40, 2013.

No alert received for any disease in week 40, 2013.

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

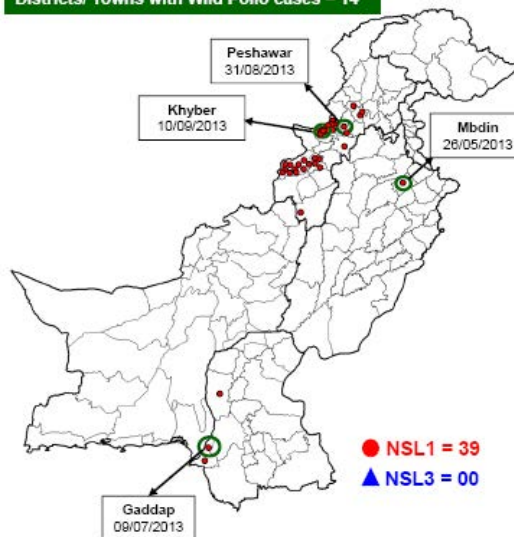
Disease	2012		Current week 40, 2013		2013 (Total up till week - 40)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	4	0	133	39
Acute jaundice syndrome	113	22	5	0	39	6
Bloody diarrhoea	146	11	1	0	39	2
CCHF	68	41	0	0	61	34
Dengue fever	175	29	15	4	141	35
Diphtheria	60	16	6	4	54	17
Measles	5922	812	39	1	3097	271
Pertussis	366	147	2	0	44	10
NNT + tetanus	560	0	10	0	243	0
Malaria	136	68	0	0	20	4
Cutaneous Leishmaniasis	900	78	11	1	513	48
Others	1529	58	16	0	386	3
Total	10631	1475	109	10	4770	469

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

In week 40, 2013, seven new wild polio cases were reported in the country, six from Federally Administered Tribal Areas (three each from North Waziristan and Khyber Agencies) and one from Khyber Pakhtunkhwa (Peshawar). This brings the total number of wild polio cases to 39 all type1 in 2013 (compared to 47 during the same time period last year) from 14 districts/towns/tribal agencies/areas (compared to 25 during the same time period last year).

Federally Administered Tribal Areas (FATA) and Khyber Pakhtunkhwa have reported 87% (33/39) of the total wild polio cases this year 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	27	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	39	-	-

Follow up of CCHF

In week 40, 2013, no new CCHF case was reported from any district. 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).

Number of CCHF cases and deaths reported in year 2012 and 2013 up till 5 October.

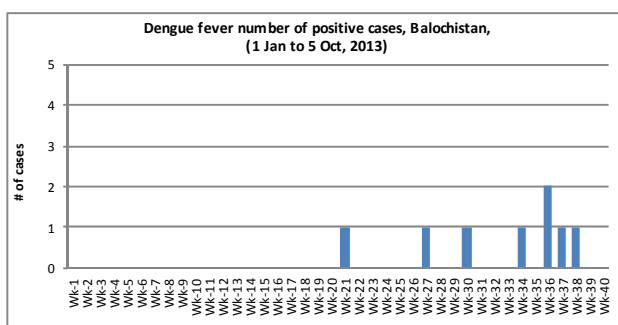
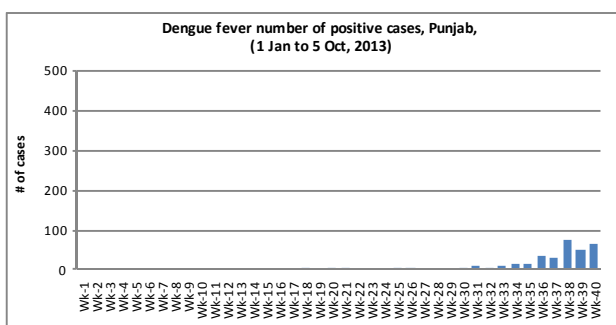
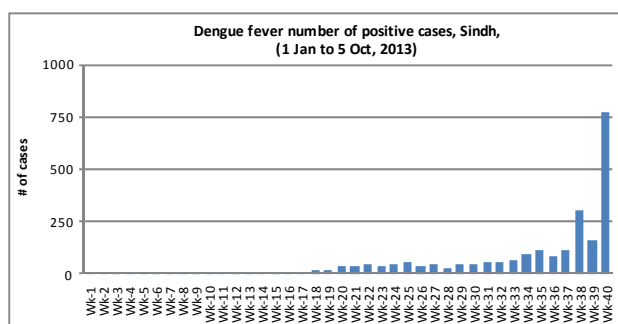
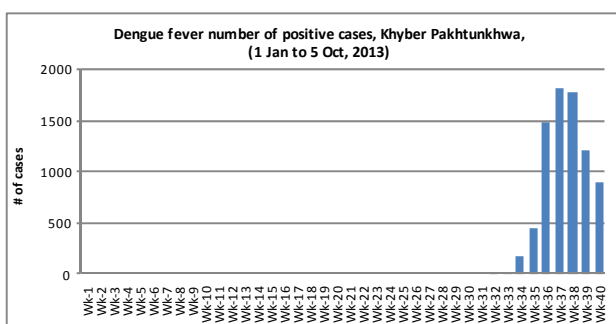
Province	2012			2013		
	Suspected	Lab confirmed	Deaths	Suspected	Lab confirmed	Deaths
AJ&K	0	0	0	1	1	0
Balochistan	Afghanistan*	5	5	3	11	3
	Balochistan	33	18	4	49	34
ICT	-	-	-	2	2	0
KPK	9	6	5	6	4	4
Punjab	8	5	3	6	2	2
Sindh	7	7	3	2	2	1
Total	62	41	18	77	48	15

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 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 40, 2013

