



Highlights

Figure-1: 71 districts reported to DEWS in week 41, 2013

Epidemiological week no. 41 (6 to 12 Oct 2013)

- **Dengue fever:** During this week, 717 Dengue fever cases have been reported. The highest number of DF cases 561 reported from district Swat, Khyber Pakhtunkhwa. The outbreak in Swat is being responded jointly.
- **CCHF:** In week 41, 2013, 1 new CCHF case was reported from Islamabad (Page 5).
- In this week, **71** districts and 1961 health facilities have reported to Disease Early Warning system (DEWS), compared to 70 districts with 2059 health facilities shared weekly data in week 40, 2013 to the DEWS.
- Total **791,843** patients consultations reported this week compared to **783,886** consultations in week 40, 2013.
- **91** alerts investigated and **6** outbreaks identified and timely responded. Altogether 17 alerts were for Measles; 16 for Typhoid; 13 each for Leishmaniasis, Dengue fever and NNT; 5 for Scabies; 4 for Acute diarrhoea; 3 each for CCHF and Diphtheria; 2 for AWD; while 1 each for Acute Jaundice Syndrome and Malaria.



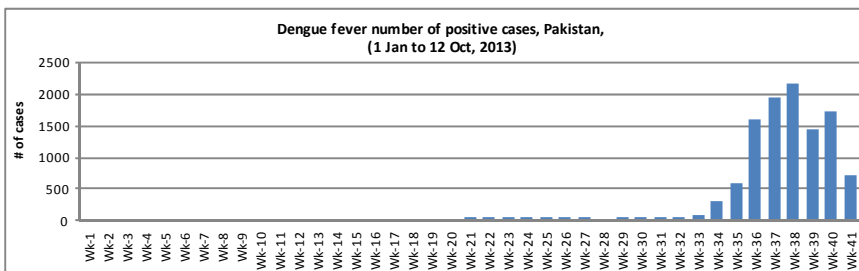
Priority diseases under surveillance in DEWS

- 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 41, 2013 (29 Dec 2012 to 12 October 2013)

| Disease | # of Cases | Percentage |
|----------------------------------|-------------------|------------|
| ARI | 6,575,496 | 20% |
| Bloody diarrhoea | 86,057 | <0.5% |
| Acute diarrhoea | 2,585,855 | 8% |
| S. Malaria | 1,461,023 | 4% |
| Skin Diseases | 1,307,078 | 4% |
| Unexplained fever | 1,031,106 | 3% |
| Total (All consultations) | 33,444,987 | |

Figure-2: Number of Dengue fever positive cases in Pakistan, 1 Jan to 12 Oct 2013



Major health events reported during the Epi-week - 41 (29 Sept - 12 Oct 2013)

| Disease | # of Cases | Percentage |
|----------------------------------|----------------|------------|
| ARI | 152,907 | 19% |
| Bloody diarrhoea | 1,428 | <0.5% |
| Acute diarrhoea | 49,906 | 6% |
| S. Malaria | 37,866 | 5% |
| Skin Diseases | 31,344 | 4% |
| Unexplained fever | 24,096 | 3% |
| Total (All consultations) | 791,843 | |

An ongoing Dengue fever outbreak is being confronted in district Swat of Khyber Pakhtunkhwa province. In district Swat total 8,391 Dengue fever cases and 33 deaths have been reported from 7th August to 12th 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 12th October 2013, Sindh reported 2,467, Punjab 407, and Balochistan 10 Dengue fever cases.

Outbreaks (Wk-41/2013):

| Date | Disease | Province | District | Area | <5M | >5M | <5F | >5F | Action Taken |
|-------|---------------|-------------|------------|------------------------------------|-----|-----|-----|-----|---|
| 7-Oct | Leishmaniasis | Balochistan | Lasbela | FC Camp Bela, UC Bela, Tehsil Bela | 0 | 8 | 0 | 0 | 8 suspected cases of Cutaneous Leishmaniasis were reported. Field investigation reveals that all the cases were presenting with typical lesions. Injection Glucantime was prescribed. None of the cases had travel history. All information shared with DHO. |
| 7-Oct | CCHF | ICT | Islamabad | PIMS (Alwar mella Hango) | 0 | 1 | 0 | 0 | An alert of CCHF was reported from PIMS with Fever, haematemesis and Melina for the last five 05 days. Patient is butcher by profession. Blood transfusion, Platelets and anti viral were administered at the hospital. Blood sample sent to NIH was found positive for CCHF. Information was shared with KPK team who contacted health department Hango for active surveillance. No other case found. |
| 9-Oct | DF | Punjab | Lahore | Gulberg Town UC 97 Gulberg | 0 | 3 | 0 | 7 | 3 confirmed case and 7 suspected cases of Dengue fever were notified from Teaching Hospitals of Lahore . The cases were investigated and blood sample was taken and sent to lab for detection of dengue specific antibodies, result for IgM positive for three cases, and IgG is negative, result for one case is awaited. The confirmed case was admitted and kept in isolation ward (HDU) of Teaching hospital. Alert warning was generated by PITB DSS team after analysis of data by Dengue monitoring cell. 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. Health Education sessions conducted in the community on proper solid waste disposal and improved water storage practices, use of screening, protective clothing and repellents. ADG(VBD) was informed along with EDO Health Lahore . |
| 7-Oct | Diphtheria | Punjab | Kasur | Village Hanol Tehsil Kasur | 0 | 0 | 0 | 1 | One Probable case of Diphtheria was reported by Children Hospital Lahore. Patient was admitted in Emergency ward and case management was ensured. The Patient Belongs to Village Hanol, Kasur district. Throat Swab was Sent to NIH for Detection of Corynebacterium Diphtheria. ADS was given to the Patient. No travelling history. DG health, Director CDC and Director EPI were informed . EDO (H) Kasur was also informed. All close contacts at Paternal address and School (Rehman Public School) were advised Syp Erythrosine. DSC shared the detail Investigation report to EDO(H) Lahore. |
| 9-Oct | Malaria | Punjab | D. G. Khan | Sarwar wali | 7 | 18 | 5 | 12 | 42 suspected Malaria cases were reported. 42 slides were tested out of which 17 were found positive for plasmodium vivax (SPR=40%). Active surveillance was carried out in the community. Health education imparted on disease awareness , Signs and symptoms ,mode of spread and preventive measures for use of repellants, wearing full sleeves, Screening of windows, spraying in the houses with insecticides and use of bed nets was recommended. |

Figure-3: Number of alerts received and responded, week 38 - 41, 2013

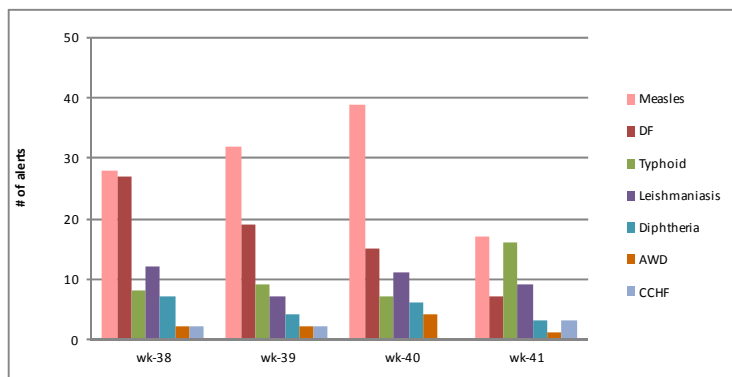
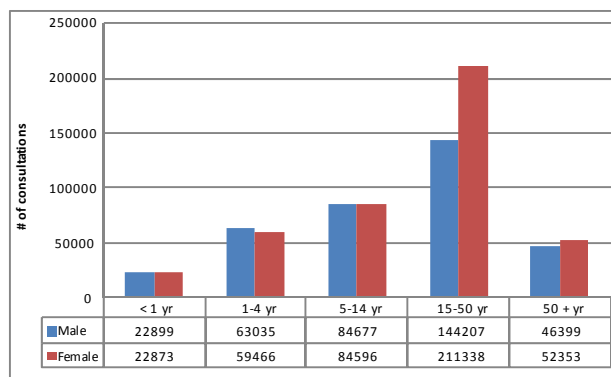
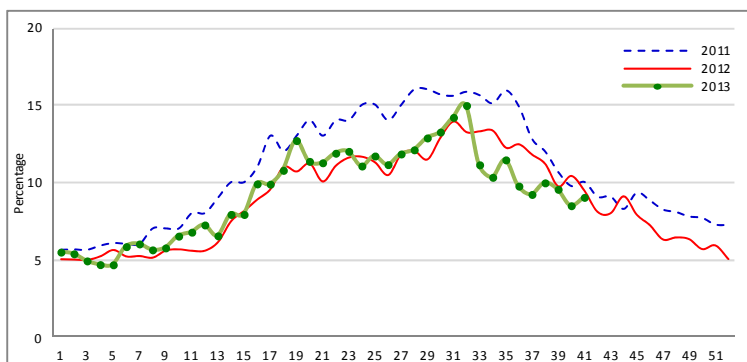


Figure-4: Number of consultations by age and gender, week 41, 2013



Province Khyber Pakhtunkhwa:

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

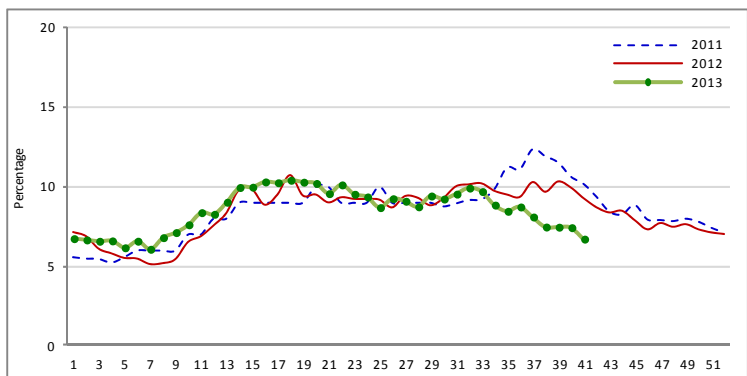


197 health facilities from 10 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 66,094 patients consultations reported in week 41, 2013. A total of 13 alerts, 8 for Measles; 3 for Dengue fever; while 2 for CCHF were received and appropriate measures were taken.

The weekly trend of Acute diarrhoea is showing an 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. Dengue fever outbreak in district Swat and Mardan being responded jointly.

Province Sindh:

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

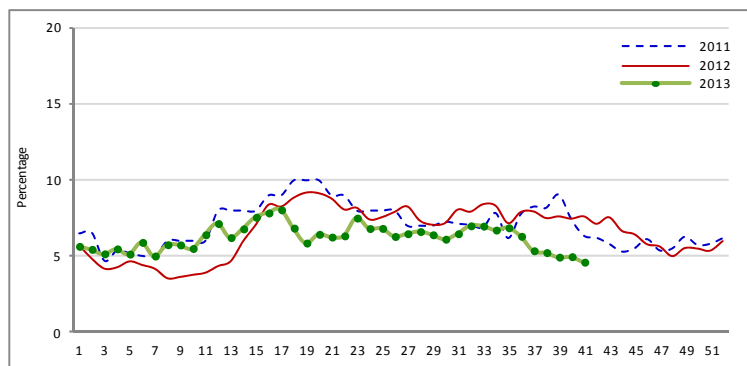


770 health facilities from 23 districts in Sindh province reported to DEWS with a total of 327,561 patient consultations in week 41, 2013. A total of 19 alerts, 8 for NNT; 6 for Dengue fever; 4 for Leishmaniasis; while 1 for AWD were received and appropriate measures were taken.

The overall proportion of AD for the province is showing decrease from last 4 weeks, but during this season 18 AWD outbreaks identified and responded, and the situation need continuous attention in the province.

Province Punjab:

Figure-7: Trend of ARI, province Punjab

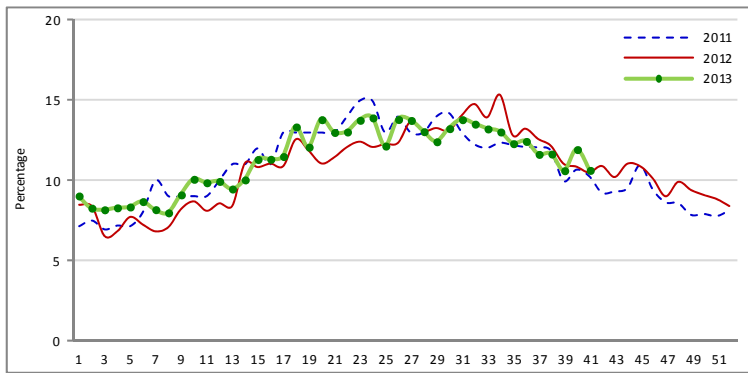


596 health facilities from 13 districts in province Punjab reported to DEWS with a total of 324,271 patients consultations in week 41, 2013.

Total 38 alerts were received and appropriate measures were taken. Altogether 15 alerts were for Typhoid; 5 for Scabies; 4 each for Acute diarrhoea and NNT; 3 each for Dengue fever and Diphtheria; while 1 each for Malaria, AJS, AWD and Measles 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



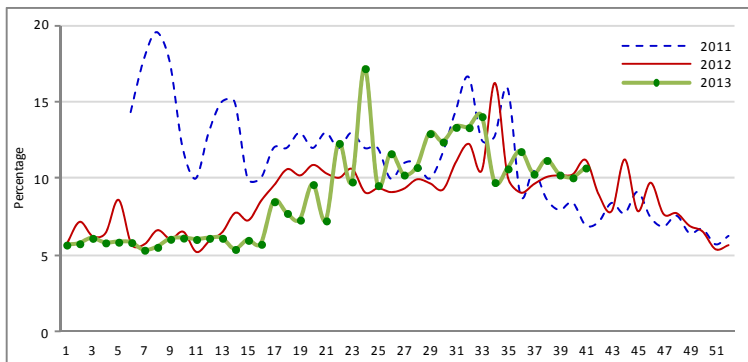
264 health facilities from 12 districts in province Balochistan reported to DEWS with a total of 44,130 patients consultations in week 41, 2013. Total 10 alerts were reported and appropriate measures were taken in week 41, 2013.

Altogether 7 alerts for Leishmaniasis; while 1 each for Dengue fever, Measles and Typhoid.

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

FATA:

Figure-9: Weekly trend of Acute diarrhoea, FATA



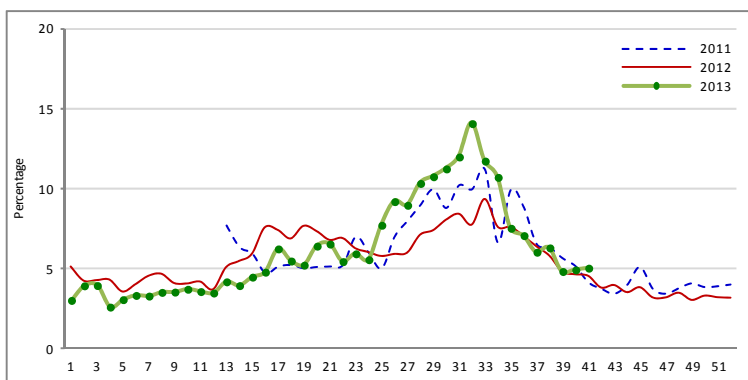
43 health facilities from 3 agencies in FATA reported to DEWS with a total of 12,895 patients consultations in week 41, 2013.

5 alerts, 3 alerts each for Measles; while 1 each for Leishmaniasis and NNT 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



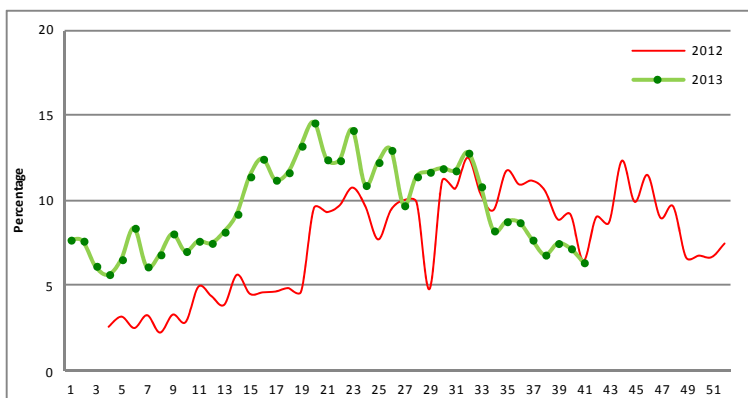
80 health facilities from 8 districts in AJ&K reported to DEWS with a total of 14,601 patients consultations in week 41, 2013.

5 alerts, 4 for Measles; and 1 for Leishmaniasis were reported in week 41, 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



10 health facilities reported to DEWS on time with a total of 2,103 patients consultations in week 41, 2013.

1 CCHF alert was received and appropriate measures were taken in week 41, 2013.

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

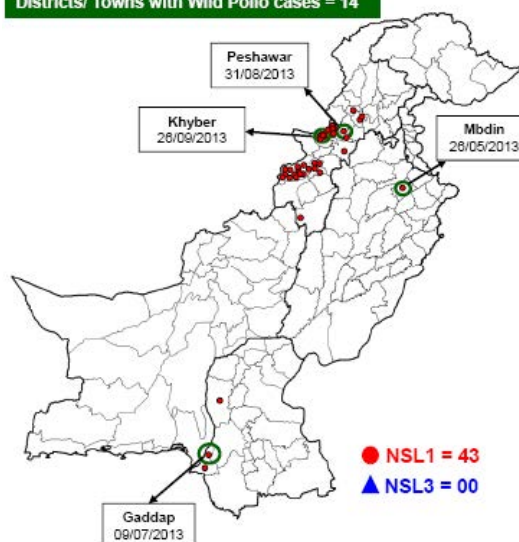
| Disease | 2012 | | Current week 41, 2013 | | 2013 (Total up till week - 41) | |
|-------------------------|--------------|-------------|-----------------------|----------|--------------------------------|------------|
| | A | O | A | O | A | O |
| Acute watery diarrhoea | 656 | 193 | 1 | 0 | 135 | 40 |
| Acute jaundice syndrome | 113 | 22 | 1 | 0 | 40 | 6 |
| Bloody diarrhoea | 146 | 11 | 0 | 0 | 39 | 2 |
| CCHF | 68 | 41 | 3 | 1 | 65 | 36 |
| Dengue fever | 175 | 29 | 7 | 1 | 154 | 35 |
| Diphtheria | 60 | 16 | 3 | 1 | 58 | 18 |
| Measles | 5922 | 812 | 17 | 0 | 3114 | 271 |
| Pertussis | 366 | 147 | 0 | 0 | 44 | 10 |
| NNT + tetanus | 560 | 0 | 5 | 0 | 256 | 0 |
| Malaria | 136 | 68 | 1 | 1 | 21 | 5 |
| Cutaneous Leishmaniasis | 900 | 78 | 9 | 1 | 526 | 49 |
| Others | 1529 | 58 | 25 | 0 | 411 | 3 |
| Total | 10631 | 1475 | 72 | 5 | 4863 | 475 |

Distribution of Wild Polio Virus cases in Pakistan 2012 and 2013

In week 41, 2013, four new wild polio cases were reported in the country from the Federally Administered Tribal Areas (two each from Khyber and North Waziristan Agencies). This brings the total number of wild polio cases to 43 in 2013 (compared to 48 during the same time period last year) from 14 districts/ towns / tribal agencies / areas (compared to 26 during the same time period last year).

Federally Administered Tribal Areas (FATA) and Khyber Pakhtunkhwa have reported 88% (38/43) 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 | 31 | - | - |
| Balochistan | 4 | - | - | - | - | - |
| AJ&K | - | - | - | - | - | - |
| Gilgit-Baltistan | 1 | - | - | - | - | - |
| Islamabad | - | - | - | - | - | - |
| Total | 55 | 2 | 1 | 43 | - | - |

Follow up of CCHF

In week 41, 2013, 1 new CCHF case was reported from Islamabad. So for total of 78 suspected, 49 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 12 October.

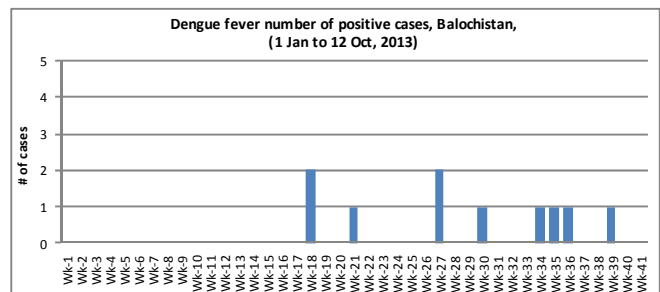
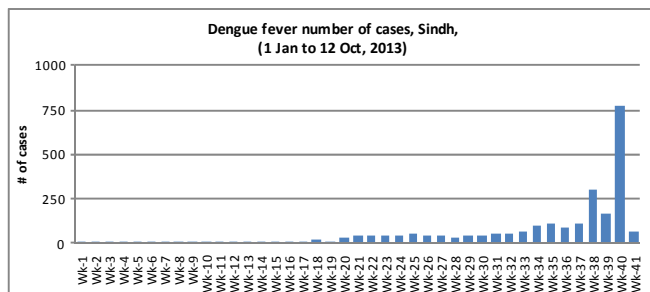
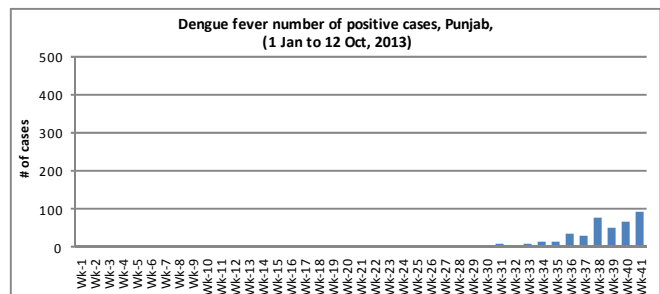
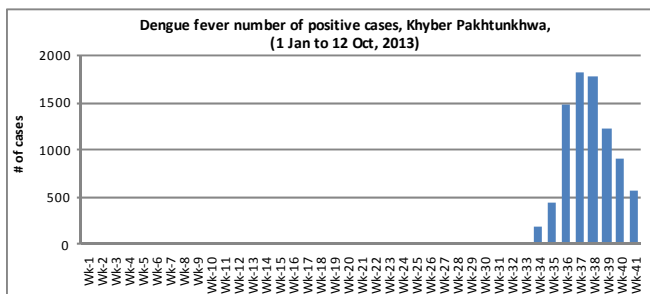
| Province | 2012 | | | 2013 | | |
|--------------|--------------|---------------|-----------|-----------|---------------|-----------|
| | Suspected | Lab confirmed | Deaths | Suspected | Lab confirmed | Deaths |
| AJ&K | 0 | 0 | 0 | 1 | 1 | 0 |
| Balochistan | Afghanistan* | 5 | 5 | 3 | 11 | 3 |
| | Balochistan | 33 | 18 | 4 | 49 | 34 |
| ICT | - | - | - | 3 | 3 | 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 | 78 | 49 | 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°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 41, 2013

