



Highlights

Epidemiological week no. 44
(27 Oct to 2 Nov 2013)

- **Dengue fever:** During this week, 1237 Dengue fever cases have been reported. The highest number of DF cases 690 reported from Sindh. The outbreaks are being responded jointly.
- **CCHF:** No new confirmed CCHF case was reported in week 44, 2013. (Page 5).
- In this week, **69** districts and 1,961 health facilities have reported to Disease Early Warning system (DEWS), compared to 72 districts with 2,049 health facilities shared weekly data in week 43, 2013 to the DEWS.
- Total **738,465** patients consultations reported this week compared to **896,122** consultations in week 43, 2013.
- **87** alerts investigated and **9** outbreaks identified and timely responded. Altogether 25 alerts were for Dengue fever; 14 for Measles; 11 for Leishmaniasis; 10 each for NNT and Typhoid; 4 each for ARI and CCHF; 3 for Acute diarrhoea; 2 each for AWD and Scabies; while 1 each for Diphtheria and Malaria.

Figure-1: 69 districts reported to DEWS in week 44, 2013



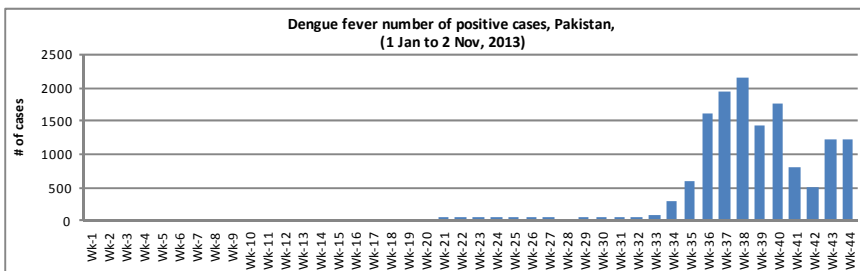
Priority diseases under surveillance in DEWS

- 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 44, 2013 (29 Dec 2012 to 2 November 2013)

Disease	# of Cases	Percentage
ARI	6,993,640	20%
Bloody diarrhoea	89,668	<0.5%
Acute diarrhoea	2,702,796	8%
S. Malaria	1,554,664	4%
Skin Diseases	1,375,814	4%
Unexplained fever	1,092,803	3%
Total (All consultations)	35,466,137	

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



Major health events reported during the Epi-week - 44 (27 Oct - 2 Nov 2013)

Disease	# of Cases	Percentage
ARI	159,315	22%
Bloody diarrhoea	1,243	<0.5%
Acute diarrhoea	40,954	6%
S. Malaria	32,095	4%
Skin Diseases	24,243	3%
Unexplained fever	23,508	3%
Total (All consultations)	738,645	

An ongoing Dengue fever outbreak is being confronted in district Swat of Khyber Pakhtunkhwa province. In district Swat total 8,963 Dengue fever cases and 36 deaths have been reported from 7th August to 2nd November 2013. 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 2nd November 2013, Khyber Pakhtunkhwa reported 9,321; Sindh 3,889, Punjab 1,103, and Balochistan 15 Dengue fever cases.

Outbreaks (Wk-44/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
29-Oct	CCHF	Punjab	Rawalpindi	DHQ Rawalpindi	0	1	0	0	1 confirmed CCHF case was reported from DHQ hospital, Rawalpindi. Sample sent to NIH and found positive for CCHF. Patient had bleeding from gums, fresh blood PR. Patient had a cut on finger while doing qurbani on Eid day by himself. His platelets counts was 5500 at the time of admission in hospital and could not survive. Information was shared with EDO (H) office Rawalpindi.
29-Oct	CCHF	Punjab	Rawalpindi	Holy family Hospital	0	0	0	1	1 confirmed CCHF case was reported from Holy Family Hospital, Rawalpindi. Patient had Fever, myalgia, headache for the last 5 days, and bleeding from mouth, nose and menorrhagia. Sample sent to NIH and found positive for CCHF. Patient is a student nurse. No H/O animal contact found, no family members had any symptom, health education was given to staff and attendants. Patient was given treatment and discharged on 29-10-13. Information shared with EDOH, Rawalpindi.
28-Oct	DF	Punjab	Lahore	Gulberg Town UC 126 Garden town	0	3	0	2	1 confirmed, 4 suspected cases of Dengue fever notified from Teaching Hospitals of Lahore. The cases were investigated and blood sample was taken and sent to lab and the result for IgM found positive for 1 case. The confirmed case was admitted and kept in isolation ward (HDU) of Teaching hospital. DPC along with, CDCO,DDHO, and entomologist visited the area, Vector Surveillance was carried out at confirmed case Location. Health education session conducted in the community for proper solid waste disposal and improved water storage practices use of screening, protective clothing and repellents Community-based environmental management and health education campaign for improved water storage practices to remove mosquito breeding sites. Follow-up planned. ADG(VBD) and EDOH was informed.
28-Oct	DF	Punjab	Lahore	Gulberg Town UC 127 Model Town	0	11	0	11	13 confirmed, 7 suspected and 2 probable cases of Dengue fever notified from Teaching Hospitals of Lahore. Blood samples taken and sent to lab and the result for IgM positive for 13 cases. PCR request was sent for Two cases to IPH for serotyping and genotyping result is awaited. The confirmed cases were admitted and kept in isolation ward (HDU) of Teaching hospital. There is no travel history of patient. DPC along with, CDCO,DDHO, and entomologist visited the area, Vector Surveillance was carried out at confirmed case Location. Health education session conducted in the community. Proper solid waste disposal and improved water storage practices use of screening, protective clothing and repellents, Community-based environmental management and health education campaign for improved water storage practices to remove mosquito breeding sites, the area would be visited again for follow up. ADG(VBD) and EDOH informed.
30-Oct	DF	Punjab	Lahore	Nishter Town UC 136 Sitara Colony	0	10	0	1	1 confirmed, 10 suspected cases of Dengue fever notified from Teaching Hospitals of Lahore. 1 blood sample was taken and sent to lab for detection of dengue specific antibodies, result for IgM found positive. The confirmed case was admitted and kept in isolation ward (HDU) of Teaching hospital. Health Education session was conducted in the community. ADG(VBD) and EDOH informed.
31-Oct	DF	Punjab	Lahore	Nishter Town UC 139 Green Town	0	4	0	2	2 confirmed, 4 suspected cases of Dengue fever notified from Teaching Hospitals of Lahore. 2 blood samples were taken and sent to lab for detection of dengue specific antibodies, results for IgM found positive for 2 cases. The confirmed cases were 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. Health education session was 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 and health education campaign for improved water storage practices to remove mosquito breeding sites. ADG(VBD) and EDOH informed.
31-Oct	DF	Punjab	Lahore	Nishter Town UC 141-Attari Saroba	0	8	0	2	1 confirmed, 7 suspected and 2 probable cases of Dengue fever 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 found positive for one case. The confirmed case was admitted and kept in isolation ward (HDU) of Teaching hospital. Health Education session was 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 and health education campaign for improved water storage practices to remove mosquito breeding sites, the area would be visited again for follow up. ADG(VBD) and EDOH informed.
1-Nov	DF	Punjab	Lahore	Nishter Town UC 146 Khana Nau	0	6	0	5	1 confirmed, 10 suspected cases of Dengue fever 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 found positive for 1 case. 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. Health education session conducted in the community on proper solid waste disposal and improved water storage practices use of screening, protective clothing and repellents Community - based environmental management and health education campaign for improved water storage practices to remove mosquito breeding sites, the area would be visited again for follow up. ADG(VBD) and EDOH informed.
2-Nov	DF	Punjab	Lahore	Samanabad Town UC 115 Muslim Town	0	5	0	3	1 confirmed and 5 suspected cases of Dengue fever notified from Teaching Hospitals of Lahore. 2 blood samples were taken and sent to lab for detection of dengue specific antibodies, result for IgM found positive for one case. PCR request was sent for Two cases to IPH for serotyping and genotyping result is awaited. The confirmed cases were 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. Health Education session was 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 and health education campaign for improved water storage practices to remove mosquito breeding sites, the area would be visited again for follow up. ADG(VBD) and EDOH informed.

Figure-3: Number of alerts received and responded, week 41 - 44, 2013

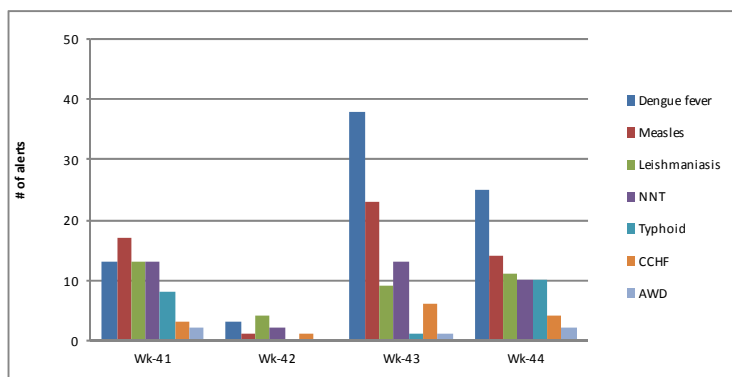
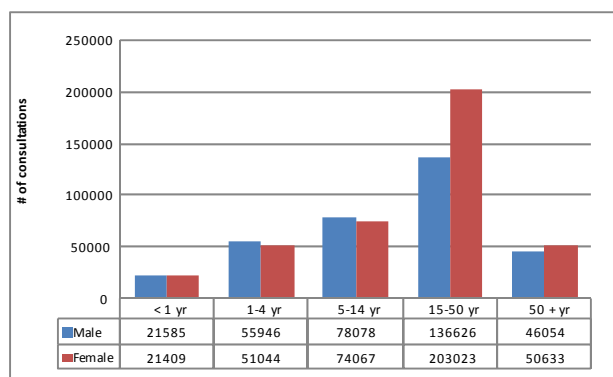
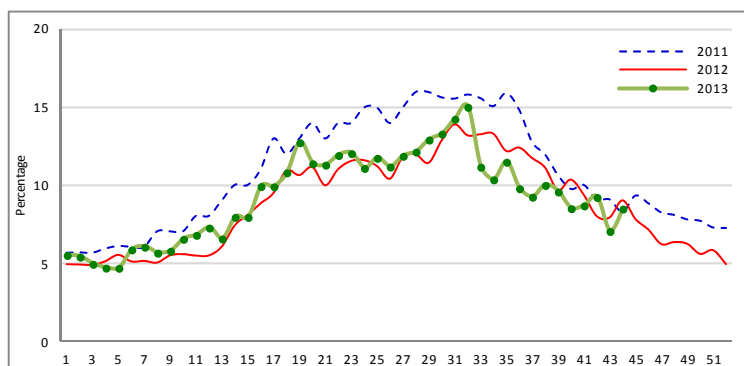


Figure-4: Number of consultations by age and gender, week 44, 2013



Province Khyber Pakhtunkhwa:

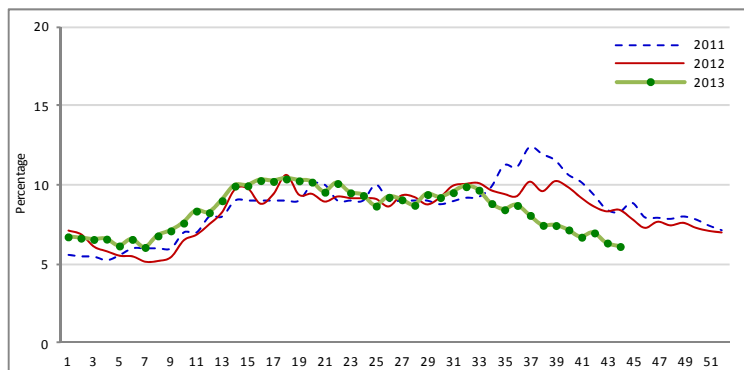
Figure-5: Weekly trend of Acute diarrhoea, province Khyber Pakhtunkhwa



198 health facilities from 9 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 60,223 patients consultations reported in week 44, 2013. A total of 9 alerts, 5 for Measles; while 1 each for CCHF, Diphtheria, Leishmaniasis and NNT were received and appropriate measures were taken. 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. Dengue fever outbreak in district Swat and Mardan being responded jointly.

Province Sindh:

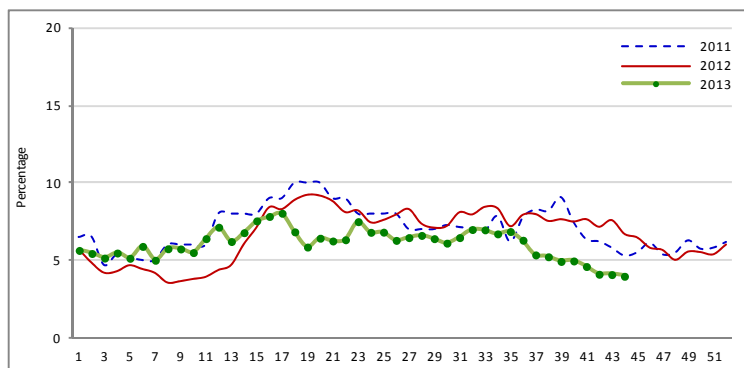
Figure-6: Weekly trend of Acute diarrhoea, province Sindh



835 health facilities from 23 districts in Sindh province reported to DEWS with a total of 279,301 patient consultations in week 44, 2013. A total of 28 alerts, 15 for Dengue fever; 8 for NNT; 3 for Leishmaniasis; while 2 for AWD were received and appropriate measures were taken. The overall proportion of AD for the province is showing decrease as compared with last week, but during this season, 18 AWD outbreaks identified and responded, and the situation need continuous attention in the province.

Province Punjab:

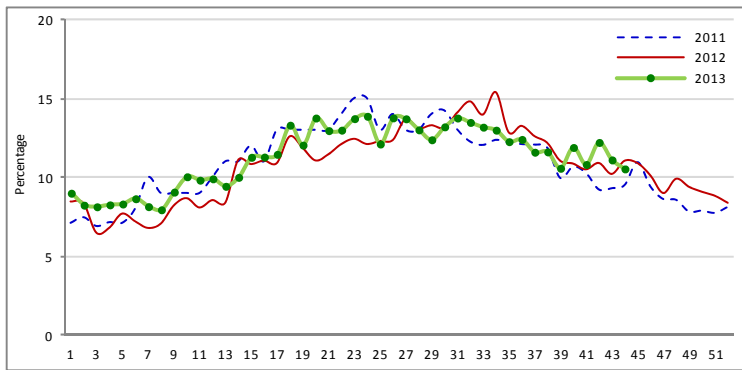
Figure-7: Trend of Acute diarrhoea, province Punjab



592 health facilities from 12 districts in province Punjab reported to DEWS with a total of 339,304 patients consultations in week 44, 2013. Total 31 alerts were received and appropriate measures were taken. Altogether 10 alerts were for Typhoid fever; 9 for Dengue fever; 4 for ARI; 3 for CCHF; 2 each for AD and Scabies; while 1 for Malaria 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

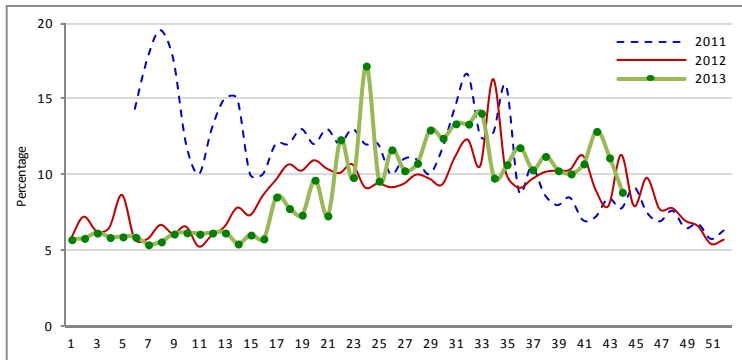


203 health facilities from 12 districts in province Balochistan reported to DEWS with a total of 29,324 patients consultations in week 44, 2013. 7 alerts were reported and appropriated measures were taken. Altogether 4 alerts were for Leishmaniasis; while 1 each for Acute diarrhoea, Dengue fever and NNT.

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



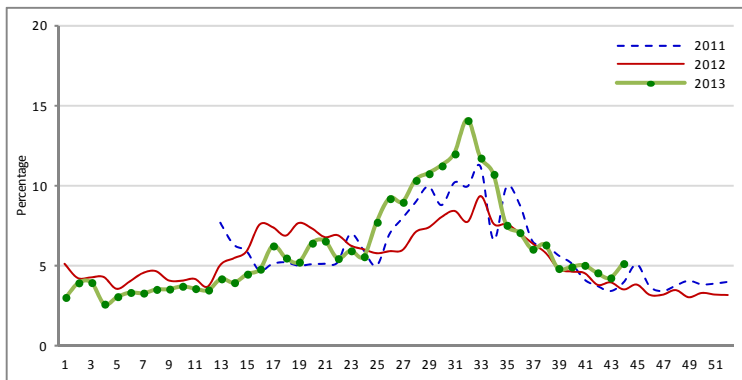
43 health facilities from 3 agencies in FATA reported to DEWS with a total of 14,359 patients consultations in week 44, 2013.

6 alerts, 3 each for Leishmaniasis and Measles were reported in week 44, 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



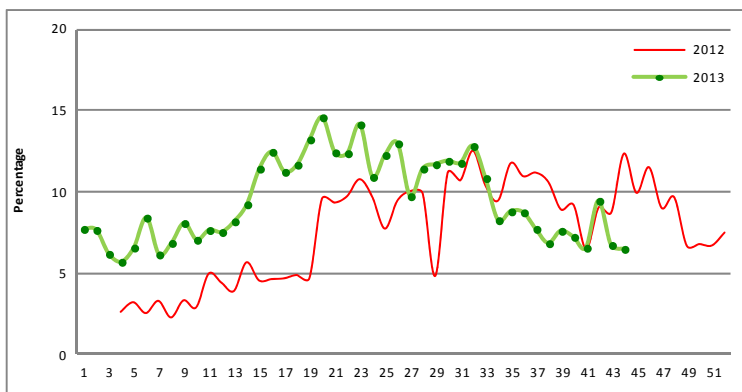
80 health facilities from 8 districts in AJ&K reported to DEWS with a total of 13,757 patients consultations in week 44, 2013.

5 alerts for Measles were reported week 44, 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



9 health facilities reported to DEWS on time with a total of 2,039 patients consultations in week 44, 2013.

1 alert for Measles was received and appropriate measures were taken in week 44, 2013.

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

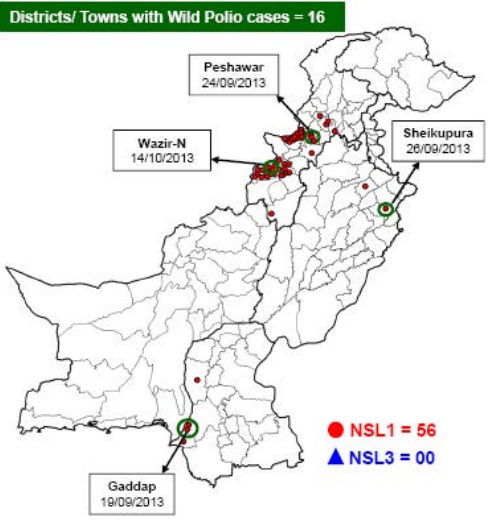
Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 44, 2013		2013 (Total up till week - 44)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	2	0	138	40
Acute jaundice syndrome	113	22	0	0	44	6
Bloody diarrhoea	146	11	0	0	40	2
CCHF	68	41	4	2	76	41
Dengue fever	175	29	25	7	222	46
Diphtheria	60	16	1	0	63	18
Measles	5922	812	14	0	3152	273
Pertussis	366	147	0	0	44	10
NNT + tetanus	560	0	10	0	281	0
Malaria	136	68	1	0	24	5
Cutaneous Leishmaniasis	900	78	11	0	550	49
Others	1529	58	19	0	428	3
Total	10631	1475	87	9	5062	493

Distribution of Wild Polio Virus cases in Pakistan 2012 and 2013

In week 44 2013, 3 new wild polio cases (type-1) have been reported; 2 from Federally Administered Tribal Areas (North Waziristan Agency) and 1 from Khyber Pakhtunkhwa (Peshawar). This brings the total number of wild polio cases to 56 in 2013 as compared to 54 in 2012 (point in time) from 16 districts/ towns / tribal agencies / areas compared to 27 (point in time) last year.

It is important to mention that 87% (49/56) of the total wild polio cases this year have been reported from Federally Administered Tribal Areas (40) and Khyber Pakhtunkhwa (09).



Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	3	-	-
Sindh	4	-	-	4	-	-
Khyber Pakhtunkhwa	27	-	-	9	-	-
FATA	17	2	1	40	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	56	-	-

Follow up of CCHF

In week 44, 2013, no new CCHF case was reported from any area, but the result of 1 case reported previously from district Rawalpindi found positive for CCHF. The patient is a staff nurse. So for total of 86 suspected, 58 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 41 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	6	2
	Balochistan	33	18	4	53	33	7
ICT	-	-	-	4	4	1	
KPK	9	6	5	8	8	4	
Punjab	8	5	3	10	4	3	
Sindh	7	7	3	2	2	1	
Total	62	41	18	86	58	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.

Alerts and outbreaks, week 44, 2013

