



Highlights

Figure-1: 72 districts reported to DEWS in week 37, 2013

Epidemiological week no. 37 (8 to 14 Sept 2013)

- Dengue fever:** During this week, 1,952 Dengue fever cases have been reported. The highest number of DF cases 1,808 reported from district Swat, Khyber Pakhtunkhwa. The outbreak in Swat is being responded jointly.
- CCHF:** In week 37, 2013, 4 deaths (2 confirmed for CCHF) reported from district Abbottabad, Khyber Pakhtunkhwa province, all 4 cases belongs to the same family living in a village in Tehsil Havellian, Abbottabad, and butcher by profession; while 4 more CCHF cases, 2 confirmed from district Killa Abdullah; and 2 suspected cases reported from districts Loralai and Musa Khail in Balochistan province. Epidemiological investigation conducted and treatment initiated (Page 5).
- In this week, **72** districts and 2047 health facilities have reported to Disease Early Warning system (DEWS), compared to 73 districts with 1872 health facilities shared weekly data in week 36, 2013 to the DEWS.
- Total **893,698** patients consultations reported this week compared to **840,660** consultations in week 36, 2013.



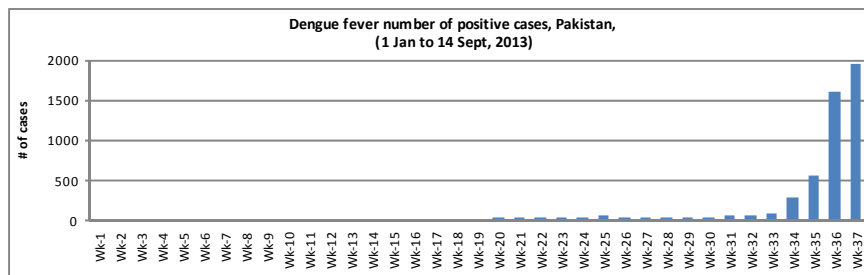
Priority diseases under surveillance in DEWS

- 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 37, 2013 (29 Dec 2012 to 14 September 2013)

Disease	# of Cases	Percentage
ARI	5,930,349	20%
Bloody diarrhoea	78,998	<0.5%
Acute diarrhoea	2,348,962	8%
S. Malaria	1,300,738	4%
Skin Diseases	1,168,453	4%
Unexplained fever	920,447	3%
Total (All consultations)	29,992,617	

Figure-2: Number of Dengue fever positive cases in Pakistan, 1 Jan to 14 Sept 2013



Major health events reported during the Epi-week - 37 (1 - 14 September 2013)

Disease	# of Cases	Percentage
ARI	153,166	17%
Bloody diarrhoea	1,869	<0.5%
Acute diarrhoea	63,322	7%
S. Malaria	47,575	5%
Skin Diseases	37,879	4%
Unexplained fever	27,074	3%
Total (All consultations)	893,698	

In 2013 Dengue fever outbreaks reported from the less endemic areas in Pakistan. A huge Dengue fever outbreak is being confronted in district Swat of Khyber Pakhtunkhwa province. In district Swat from 7th August to 19th September total 5,194 Dengue fever cases and 14 deaths have been reported. Rapid diagnostic Test Kits are used for diagnosis locally, and selected numbers of samples are also sent to NIH Islamabad reference Laboratory for confirmation and Sero typing. 15 samples tested at NIH revealed that three types of virus (DNV-1; DNV-2; DNV-3) were detected in different patients from Swat. This year few cases of Dengue fever have been diagnosed in Gawadar with no travel history out of the district (most probably the infection was acquired locally).

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 14 September 2013, Sindh reported 1,170, Punjab 119, and Balochistan 6 Dengue fever cases.

Outbreaks (Wk-37/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
9-Sep	Malaria	Balochistan	Lasbela	JGQ Hospital, HUB	15	45	21	29	110 suspected Malaria cases were reported from Lasbela. 10 slides tested, of which 5 found positive PF= 2(20%), PV=3(30%). Slide positivity rate was 50%. Anti malarial drugs were provided. DHO was informed and requested for fog spray and to take necessary measures.
10-Sep	Leishmaniasis	FATA	Khyber Agency	Village Ghariza, UC Ghariza 1, Tehsil Jamrud	4	3	2	7	Alert for suspected Cutaneous Leishmaniasis cases were reported from CH Jamrud. On active surveillance a total of 16 suspected CL cases were found. LD tests were performed in CH Jamrud lab and were found positive. Health education session conducted in the community. Injection Glucantime placed in the health facility to treat patients and to prevent other cases through preventive measures. Report was shared with Agency Surgeon.
11-Sep	AWD	Khyber Pakhtunkhwa	Swabi	Village Aratai, UC Manki, Swabi	2	1	1	4	Alert for AWD reported from UC Manki. Epidemiological and Environmental assessment was carried out in the area and surroundings, total of 8 cases with mild to severe dehydration were identified in the area and surroundings, most of the cases are still under treatment and some recovered cases suffered from mild to severe dehydration during last weeks were also found. Field investigation revealed possible source is contaminated water supply. Stool Sample was taken and sent to NIH for laboratory testing. Water samples were collected from various points for any faecal contamination. Health and hygiene sessions were conducted in the community. LHW's were requested for door to door awareness sessions in their catchment on hygienic practices. Aqua tabs, Antiseptic soaps, hygiene kits, Jerry cane, Aqua Sachet and ORS distributed in the community. EDO health and DSM PPHI Swabi informed about the situation.
12-Sep	CCHF	Khyber Pakhtunkhwa	Abbottabad	PIMS (Muhalla Usman Ghani, Tehsil Havelian)	0	4	0	0	4 CCHF cases were reported from PIMS Islamabad, all cases belongs to same family and butchers by profession, resident of Havelian, district Abbottabad. Investigation was done by WHO DEWS team along with EDO Health at Abbottabad and Islamabad and visited the area. A detailed session was done with the community. Anti viral were also given to them; all three had melina, one had gum bleeding. All four cases expired, whereas samples sent to NIH and 2 were found positive for CCHF. Insecticide residual spraying was done in the households, the butcher shops and in the area. Fogging was done in the area and tick dusting of the animals was done.
10-Sep	CCHF	Khyber Pakhtunkhwa	Peshawar	Khyber Teaching Hospital	0	2	0	1	Suspected CCHF cases were reported at Khyber Teaching Hospital. Upon investigation three cases were found and belongs to Swat, Zhob and Lower Dir. Investigations was done and samples sent to NIH. 1/3 Sample collected were found positive for CCHF. DHO Zhob has planned response in the respected area.
13-Sep	Leishmaniasis	Khyber Pakhtunkhwa	Mardan	Village Kandao, Kharki, UC Baizo Kharki, Tehsil Takht Bhai	3	2	4	5	Alert of Cutaneous Leishmaniasis reported from UC Kharki, Tehsil Takht Bhai. During active surveillance 13 more clinical cases were identified in the area and surrounding. Required doses of Inj Glucantime were placed in nearby health facility for all registered cases. PPHI were requested for vector control interventions in the areas and surrounding. On job training of health staff was conducted for Intralesional administration of Inj Glucantime. RBM focal person was informed and requested for vector control measures in the areas. EDO Health and focal person was informed.
9-Sep	DF	Punjab	Lahore	Data Ganj Baksh Town UC 71 Kasur Pura; Data Ganj Baksh Town UC 69, 70, 78, 79, 86; Ravi Town UC 10,12,14,28	0	16	0	12	14 confirmed, 11 Suspected cases and 3 probable cases of Dengue fever notified from Teaching Hospital, Lahore. The cases were investigated and blood samples were taken and sent to lab for detection of Dengue specific antibodies, result for IgM positive for 14 cases, while result for 8 cases is awaited. PCR request was sent for 6 cases to IPH for serotyping and genotyping result is awaited. The confirmed cases were admitted and kept in isolation ward (HDU) of Teaching hospital. DPC along with, CDCO, DDHO, and entomologist visit the area. 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. Follow up planned. ADG(VBD) was informed along with EDO Health Lahore.
13-Sep	DHF	Punjab	Sheikhupura	F-27-Urban Ferozwala	0	3	0	5	3 confirmed, 5 suspected cases of Dengue fever notified. The cases were investigated and blood sample were taken and sent to lab for detection of dengue specific antibodies, result for IgM positive for 3 cases, while result for one case is awaited. PCR request was sent for 1 case to IPH for serotyping and Genotyping result is awaited. The confirmed cases were admitted and kept in isolation ward (HDU) of Teaching hospital. Focal Person Dengue along with, CDCO, DDHO, and entomologist visit the area, Vector Surveillance was carried out at confirmed cases locality. Larva was found inside and outside the houses near the address of confirm cases. 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. ADG(VBD) was informed along with EDO Health Sheikhupura.
9-Sep	Diphtheria	Punjab	Okara	CH Lahore (Bahadur abad Chak no 36/37)	0	0	0	1	Probable Diphtheria case reported from Children hospital, Lahore. The patient belongs to Okara district. SO DEWS at Okara along with DSC, ASV, LHWs also carried out field investigation at Bhadar Nagar Farm, Okara. ADS was supplied to patient on the same day of admission at Lahore. DG health, Director CDC and Director EPI were informed. Throat Swab was collected and sent to NIH for Lab testing. EDO(H) Kasur and Focal person EPI was informed.

Figure-3: Number of alerts received and responded, week 34 - 37, 2013

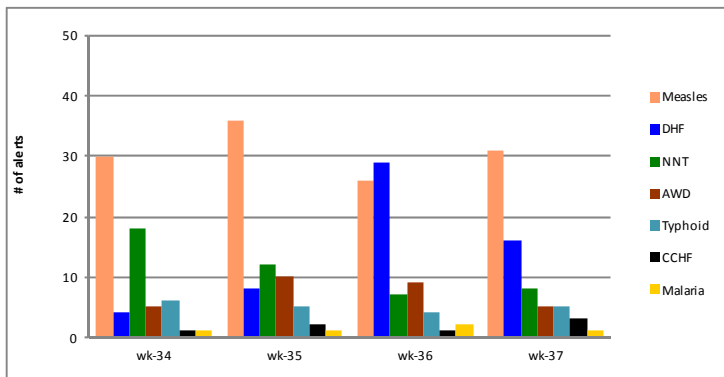
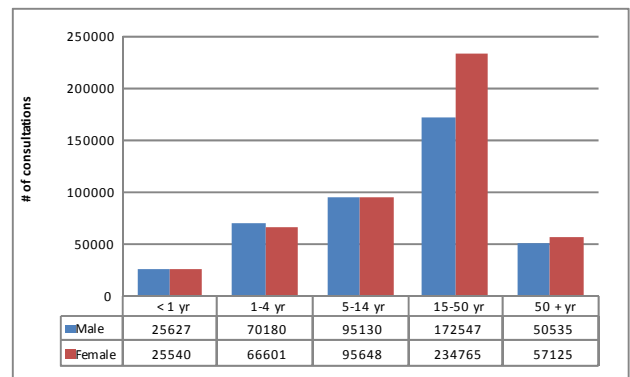
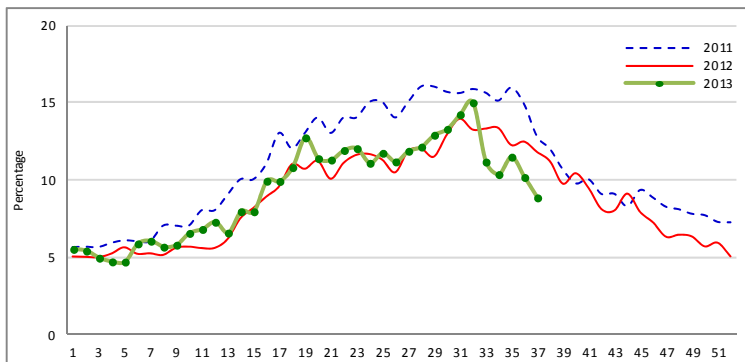


Figure-4: Number of consultations by age and gender, week 37, 2013



Province Khyber Pakhtunkhwa:

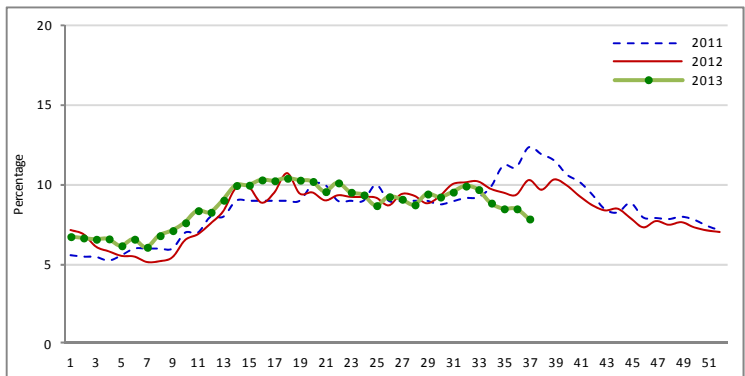
Figure-5: Weekly trend of Acute diarrhoea, province Khyber Pakhtunkhwa



168 health facilities from 11 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 51,414 patients consultations reported in week 37, 2013. A total of 35 alerts, 22 for Measles; 8 for Dengue fever; 2 each for CCHF and Leishmaniasis; while 1 for AWD were received and appropriate measures were taken. The weekly trend of Acute diarrhoea is showing decrease from last couple of weeks in KP, but 5 Cholera confirmed cases reported from KP in last four weeks, and the situation need continuous attention in the province. Dengue fever outbreak in district Swat and Mardan being responded.

Province Sindh:

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

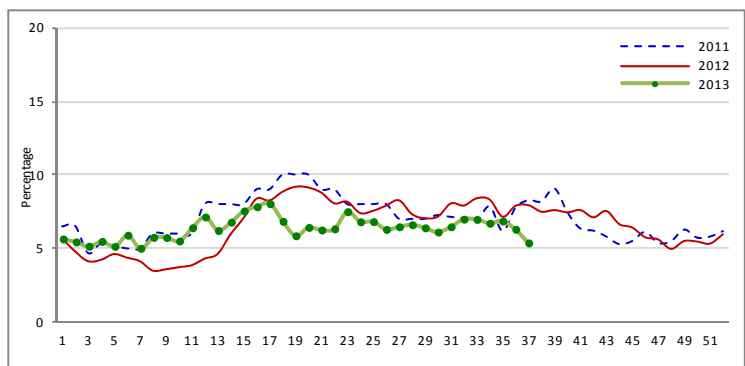


855 health facilities from 23 districts in Sindh province reported to DEWS with a total of 396,437 patient consultations in week 37, 2013. A total of 15 alerts were received and appropriate measures were taken. Altogether 6 alerts were for NNT; 3 each for AWD and Leishmaniasis; 2 for Dengue fever; while 1 for 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

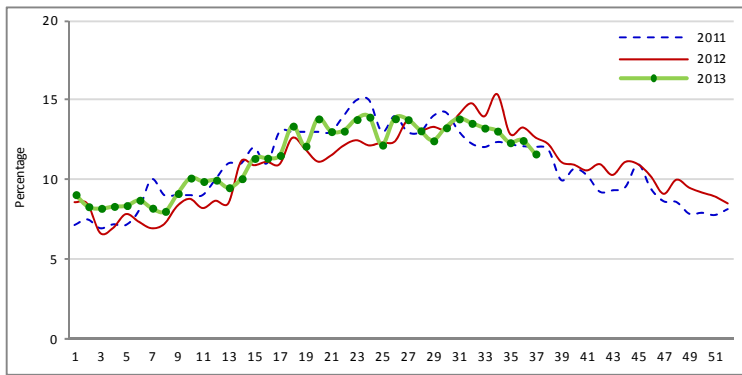


616 health facilities from 13 districts in province Punjab reported to DEWS with a total of 368,540 patients consultations in week 37, 2013. Total 19 alerts were received and appropriate measures were taken.

Altogether 6 alerts were for Dengue fever; 4 for Typhoid fever; 3 for Scabies; 2 for Acute diarrhoea; while 1 each for Bloody diarrhoea, Diphtheria; Leishmaniasis and NNT. 5 outbreaks 4 for Dengue fever and 1 for Diphtheria 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

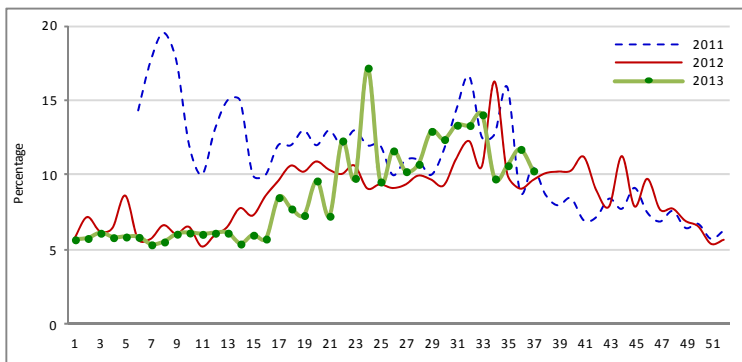


279 health facilities from 12 districts in province Balochistan reported to DEWS with a total of 46,548 patients consultations in week 37, 2013. Total 9 alerts were reported and appropriate measures were taken in week 37, 2013.

Altogether 2 alerts each for Leishmaniasis, and Measles; while 1 each for AWD, CCHF, Malaria 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

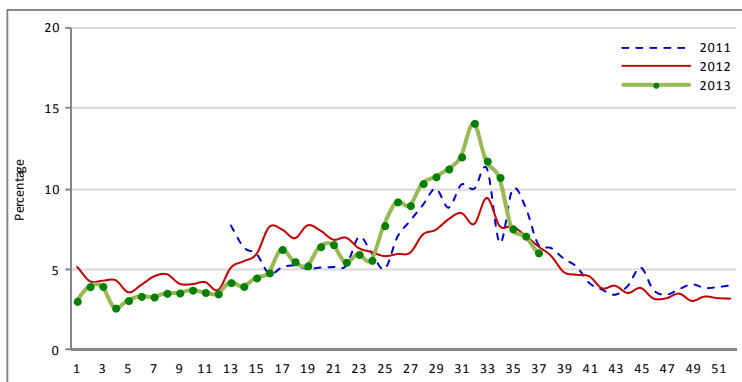


42 health facilities from 3 agencies in FATA reported to DEWS with a total of 12,685 patients consultations in week 37, 2013.

6 alerts, 3 for Leishmaniasis; 2 for Measles; while 1 for NNT were reported and appropriated measures were taken in week 37. AWD outbreak being responded in Khyber Agency last week. Fluctuating and high weekly trend of Acute diarrhoea is noted in FATA and require vigilant monitoring.

State of Azad Jammu and Kashmir:

Figure-10: Weekly trend of Acute diarrhoea, FATA



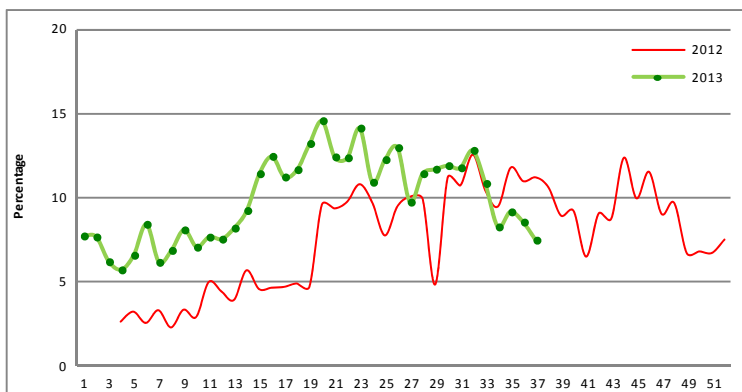
80 health facilities from 8 districts in AJ&K reported to DEWS with a total of 16,624 patients consultations in week 37, 2013.

5 alerts, 4 for Measles and 1 for Leishmaniasis were reported in week 37, 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



7 health facilities reported to DEWS with a total of 1,450 patients consultations in week 37, 2013.

No alerts for any disease was reported in week 37, 2013 from any area in Islamabad.

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

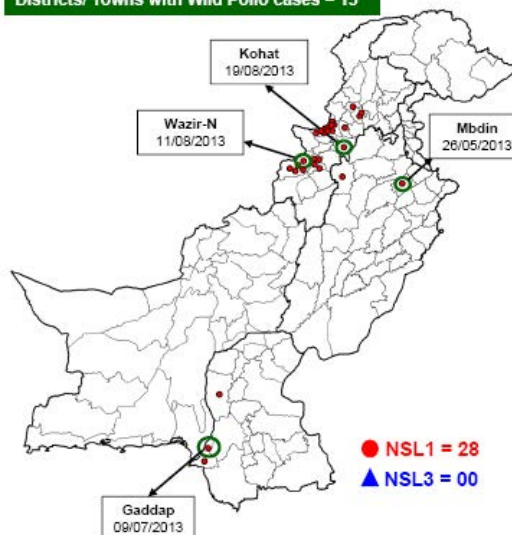
Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 37, 2013		2013 (Total up till week - 37)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	5	1	125	38
Acute jaundice syndrome	113	22	0	0	33	6
Bloody diarrhoea	146	11	2	0	36	2
CCHF	68	41	3	2	56	33
Dengue fever	175	29	16	4	81	17
Diphtheria	60	16	1	1	37	6
Measles	5922	812	30	0	2997	268
Pertussis	366	147	0	0	40	10
NNT + tetanus	560	0	8	0	215	0
Malaria	136	68	1	1	19	4
Cutaneous Leishmaniasis	900	78	12	2	483	47
Others	1529	58	10	0	347	3
Total	10631	1475	88	11	4469	434

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

- In this week 37, 2013, no new wild polio case was reported from any part of the country. The total number of wild polio cases is 28 in 2013 (compared to 39 during the same time period last year) from 13 districts/towns/tribal agencies/areas (compared to 22 during the same time period last year).

Districts/ Towns with Wild Polio cases = 13



Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	2	-	-
Sindh	4	-	-	3	-	-
Khyber Pakhtunkhwa	27	-	-	6	-	-
FATA	17	2	1	17	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	28	-	-

Follow up of CCHF

In week 37, 2013, 4 deaths (2 confirmed for CCHF) reported from district Abbottabad, Khyber Pakhtunkhwa province, all 4 cases belongs to the same family living in Abbottabad, Khyber Pakhtunkhwa, and Butcher by profession; while 4 more CCHF cases, 2 confirmed from district Killa Abdullah; and 2 suspected cases reported from districts Loralai and Musa Khail in Balochistan province were reported in this week 37, 2013. So for total of 72 suspected, 48 confirmed CCHF cases and 16 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).

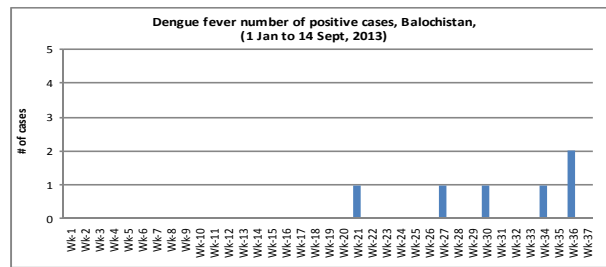
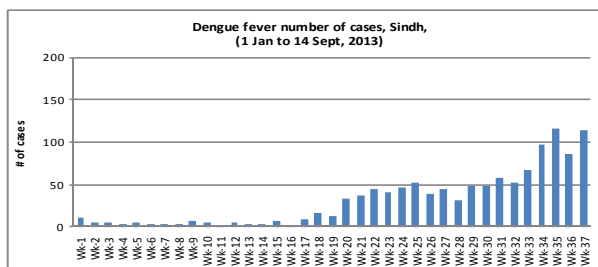
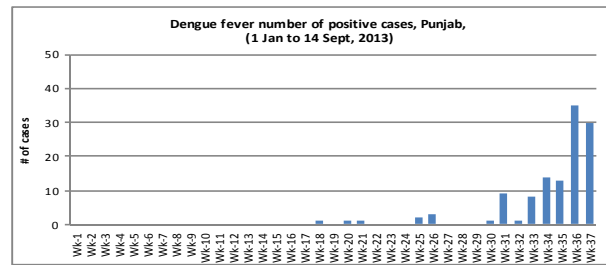
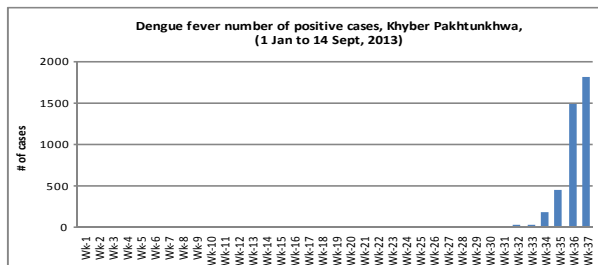
Province	2012			2013		
	Suspected	Lab confirmed	Deaths	Suspected	Lab confirmed	Deaths
AJ&K	0	0	0	1	1	0
Balochistan	Afghanistan*	5	5	3	9	2
	Balochistan	33	18	4	46	7
ICT	-	-	-	2	2	0
KPK	9	6	5	6	4	4
Punjab	8	5	3	6	2	2
Sindh	7	7	3	2	2	1
Total	62	41	18	72	48	16

Dengue fever:**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 confront in district Swat, and case are also reported from Gawadar district Balochistan. 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):

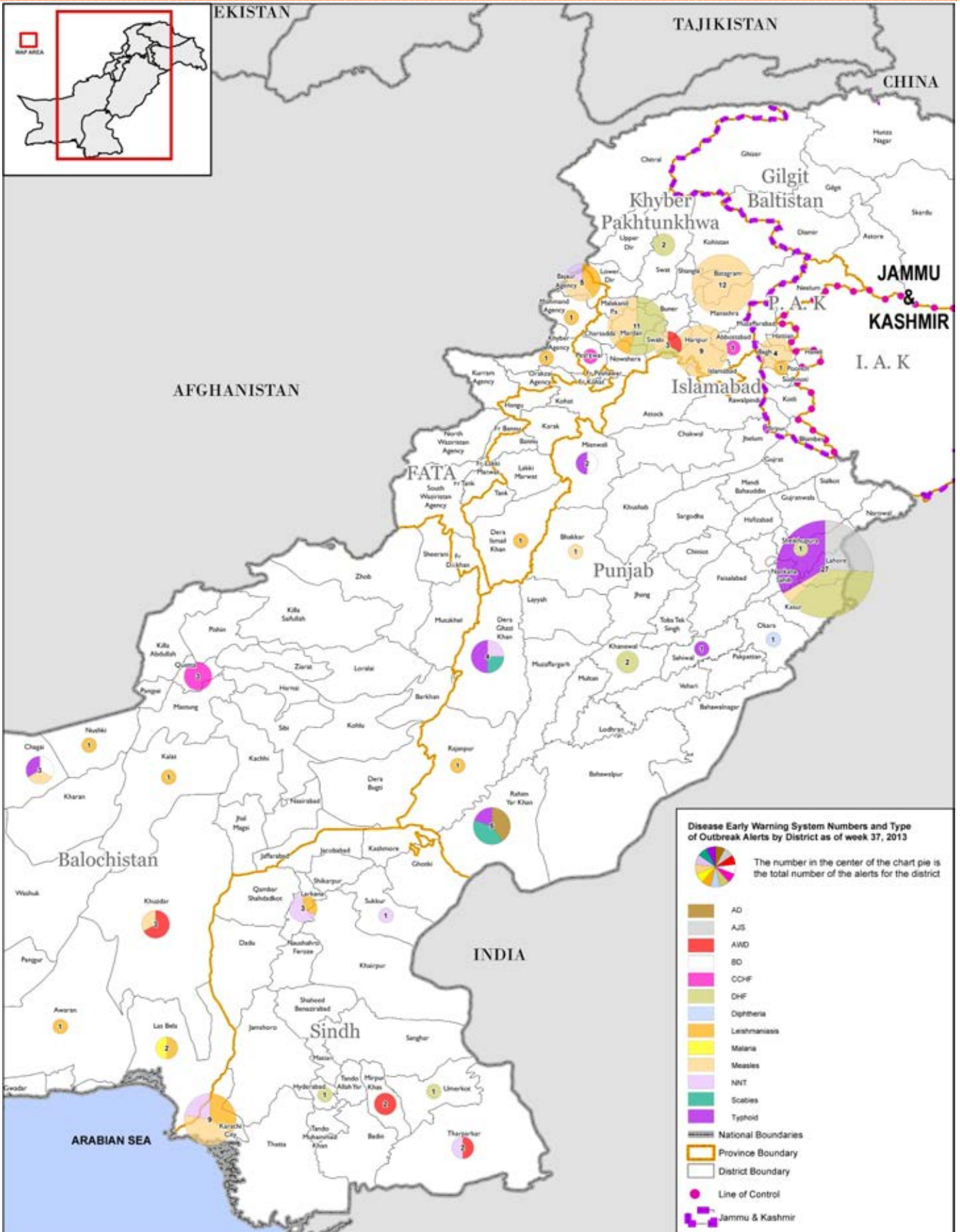
Following are the warning signs of the Dengue Hemorrhagic fever and require immediate referral to the hospital.

- 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 37, 2013



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