



Weekly Epidemiological Bulletin

Disease early warning system and response in Pakistan

Volume 5, Issue 4, Wednesday 22 January 2014

Highlights

Figure-1: 73 districts reported to DEWS in week 4, 2014

Epidemiological week no. 4 (19 to 25 Jan 2014)

- Dengue fever:** During this week, 8 Dengue fever lab confirmed cases have been reported from province Sindh. The outbreaks are being responded jointly.
- In this week, **73** districts and 2,299 health facilities have reported to Disease Early Warning System (DEWS), compared to 76 districts with 2,340 health facilities shared weekly data in week 2, 2014 to the DEWS.
- Total **812,513** patients consultations reported this week 4, 2014 compared with **767,249** consultations in week 3, 2014.
- In this week, a total of 84 alerts identified and timely responded. Altogether 45 alerts were for Measles; 19 for Leishmaniasis; 7 for Typhoid; 6 for NNT; 2 each for Bloody diarrhoea and Diphtheria; while 1 each for AWD, Pertussis and Scabies.



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

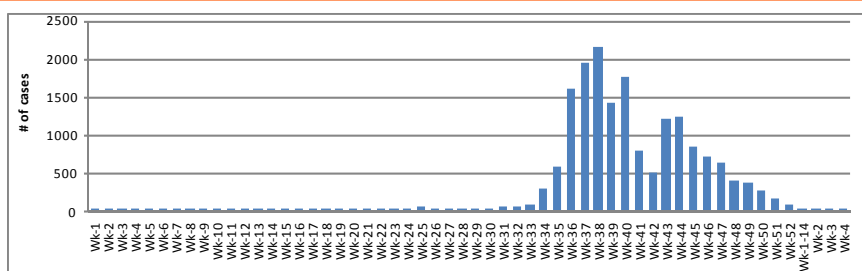
Cumulative number of selected health events reported in Epi-week 1 to 4, 2014 (29 Dec 2013 to 25 Jan 2014)

| Disease | # of Cases | Percentage |
|----------------------------------|------------------|------------|
| ARI | 719,911 | 23.20% |
| Bloody diarrhoea | 3,073 | <0.5% |
| Acute diarrhoea | 138,587 | 4.47% |
| S. Malaria | 78,992 | 2.55% |
| Skin Diseases | 95,595 | 3.08% |
| Unexplained fever | 85,069 | 2.74% |
| Total (All consultations) | 3,102,542 | |

Major health events reported during the Epi-week - 3 (19 to 25 Jan 2014)

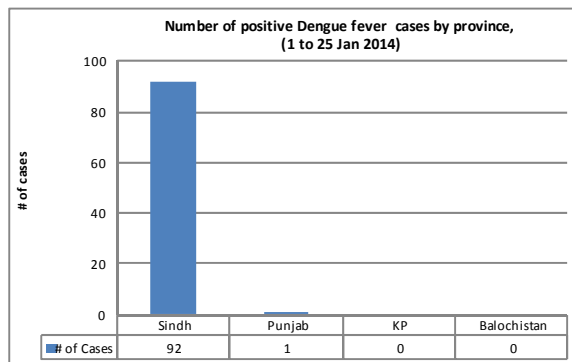
| Disease | # of Cases | Percentage |
|----------------------------------|----------------|------------|
| ARI | 186,200 | 22.92% |
| Bloody diarrhoea | 786 | <0.5% |
| Acute diarrhoea | 34,981 | 4.31% |
| S. Malaria | 20,183 | 2.48% |
| Skin Diseases | 22,793 | 2.81% |
| Unexplained fever | 21,668 | 2.67% |
| Total (All consultations) | 812,513 | |

Figure-2: Number of Dengue fever positive cases in Pakistan, 1 Jan 2013 to 25 Jan 2014



From 1st to 25 January 2014, a total of 93 lab confirmed Dengue fever cases were reported, out of them 92 positive cases from Sindh province; while 1 positive case was reported from province Punjab.

In year 2013 Dengue fever cases are reported from the less endemic areas. 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.



Continuous Outbreaks (Wk-4/2013):

| Date | Disease | Province | District | Area | <5M | >5M | <5F | >5F | Action Taken |
|--------|---------------|--------------------|----------|--|-----|-----|-----|-----|---|
| 20-Jan | Leishmaniasis | Balochistan | Lasbela | (RHC) winder, Tehsil Winder | 0 | 5 | 0 | 2 | Alert for 7 cases of Cutaneous Leishmaniasis were reported from RHC Winder. None of the case had any travelling history. Cases had lesion on feet and hands. All the cases are being provided regular treatment from RHC. Information shared with DoH. |
| 24-Jan | Leishmaniasis | Khyber Pakhtunkhwa | Mardan | Village and UC Kohi Bermol, Tehsil Katlang, Mardan | 0 | 0 | 1 | 1 | An Alert of Cutaneous Leishmaniasis reported from UC Kohi Bermol. During active surveillance 1 more clinical case was identified in the area. Required doses of Inj-Glucantime were placed in nearby health facility for all the registered cases. FPHC Mardan, Relief Intl., and PPHI were requested for vector control interventions in the areas and surrounding. on the job training of health staff was conducted for Intralesional administration of Inj-Glucantime. Information shared with EDO-H and RBM focal person and requested for vector control measures in the areas. |
| 22-Jan | Measles | Khyber Pakhtunkhwa | Swabi | Mohalla Shahidan, Topi West, Swabi | 2 | 2 | 1 | 1 | Alert for suspected Measles was reported from private clinic at Topi, Swabi. The child was found partially vaccinated for routine vaccination. Vitamin-A dose was given. during active surveillance 5 more clinical cases were found in the area. EPI team Swabi conducted outreach vaccination activities and vaccinated 481 children of less than five year of age. Health education session was conducted in the community with the help of LHW's working in the area. Information shared with EDO-H, Focal person and EPI Coordinator. |

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

| Disease | 2013 | | Current week 4, 2014 | | 2014 | |
|-------------------------|-------------|------------|----------------------|----------|------------|----------|
| | A | O | A | O | A | O |
| Acute watery diarrhoea | 142 | 40 | 1 | 0 | 3 | 0 |
| Acute jaundice syndrome | 49 | 6 | 0 | 0 | 1 | 0 |
| Bloody diarrhoea | 45 | 3 | 2 | 0 | 5 | 0 |
| CCHF | 90 | 47 | 0 | 0 | 1 | 0 |
| Dengue fever | 300 | 66 | 0 | 0 | 1 | 0 |
| Diphtheria | 84 | 19 | 2 | 0 | 8 | 0 |
| Measles | 3357 | 281 | 45 | 1 | 123 | 1 |
| Pertussis | 46 | 10 | 1 | 0 | 2 | 0 |
| NNT + tetanus | 349 | 0 | 6 | 0 | 35 | 0 |
| Malaria | 25 | 6 | 0 | 0 | 0 | 0 |
| Cutaneous Leishmaniasis | 621 | 51 | 19 | 0 | 54 | 0 |
| Others | 520 | 5 | 8 | 0 | 29 | 0 |
| Total | 5628 | 534 | 84 | 1 | 262 | 1 |

Figure-3: Number of alerts received and responded, week 1 to 4 2014

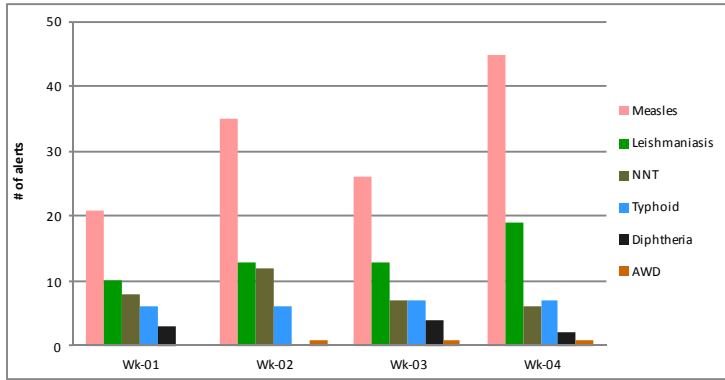
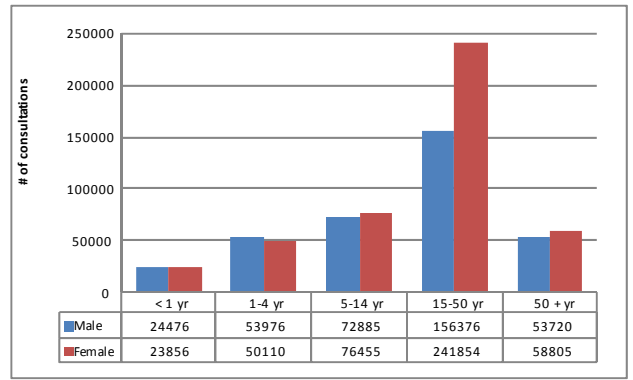
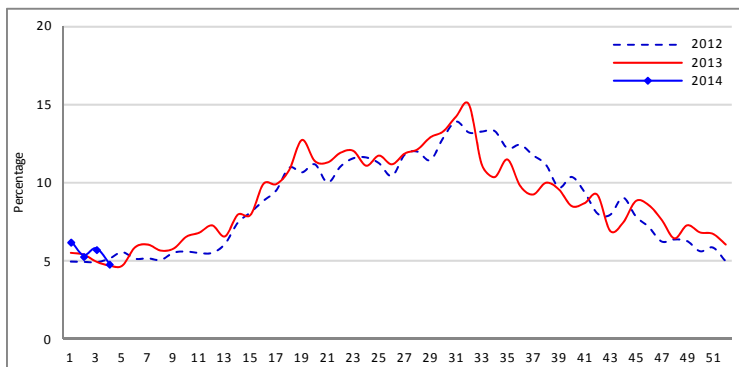


Figure-4: Number of consultations by age and gender, week 4, 2014



Province Khyber Pakhtunkhwa:

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



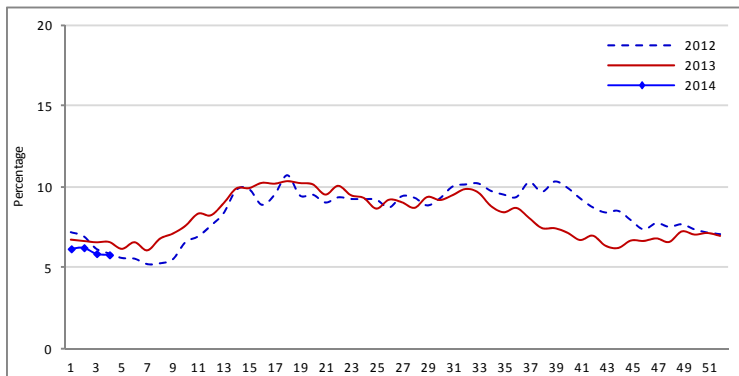
172 health facilities from 9 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 54,167 patients consultations reported in week 4, 2014.

A total of 46 alerts were reported and appropriate measures were taken. Altogether 39 alerts were for Measles; 4 for Leishmaniasis; while 1 for Bloody diarrhoea.

The weekly trend of Acute diarrhoea is showing decrease as compared with last week in KP, but the situation needs continuous attention in the province.

Province Sindh:

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



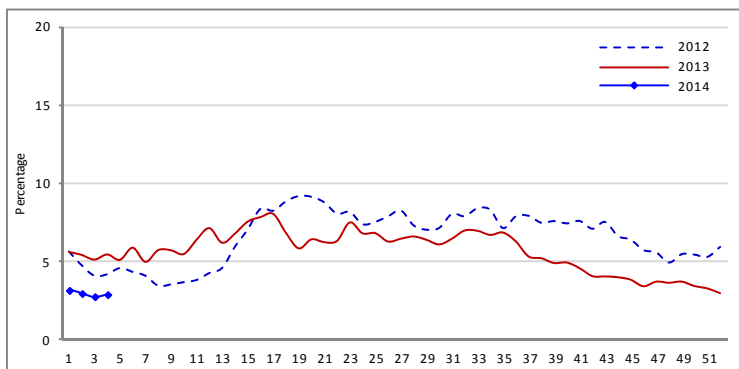
822 health facilities from 23 districts in Sindh province reported to DEWS with a total of 248,843 patient consultations in week 4, 2014.

A total of 13 alerts were received and appropriate measures were taken. Altogether 5 alerts were for NNT; 4 for Leishmaniasis; 3 for Measles; while 1 for AWD.

The proportion of AD for the province is showing minor decrease as compared with last week, Although it is low from the same time period last year but still the situation needs continuous attention in the province.

Province Punjab:

Figure-7: Trend of Acute diarrhoea, province Punjab



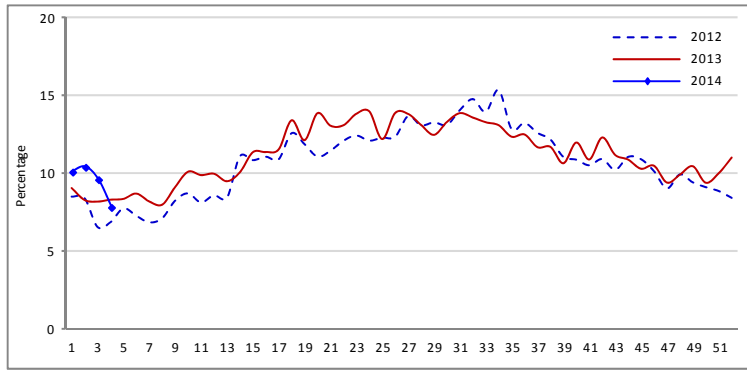
915 health facilities from 16 districts in province Punjab reported to DEWS with a total of 436,196 patients consultations in week 4, 2014.

Total 12 alerts were received and appropriate measures were taken. Altogether 4 alerts were for Typhoid; 3 for Leishmaniasis; 2 for Diphtheria; while 1 each for Bloody diarrhoea, Measles and NNT were responded in province Punjab.

The weekly trend of AD in Punjab showing minor increase as compared with last week.

Province Balochistan:

Figure-8: Weekly trend of Acute diarrhoea, province Balochistan



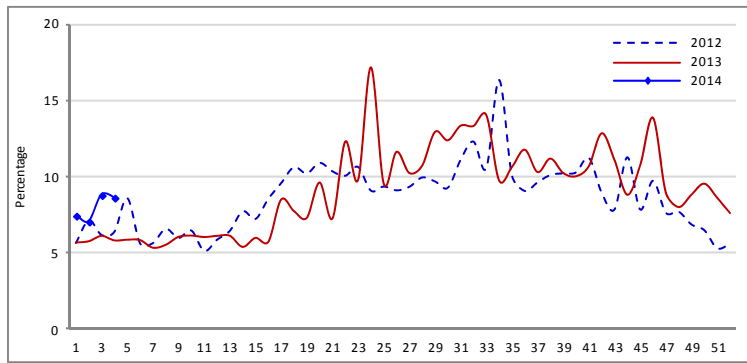
268 health facilities from 13 districts in province Balochistan reported to DEWS with a total of 44,829 patients consultations in week 4, 2014.

9 alerts were reported and appropriate measures were taken. Altogether 5 alerts were for Leishmaniasis; while 1 for Measles, Pertussis, Typhoid and Scabies.

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

FATA:

Figure-9: Weekly trend of Acute diarrhoea, FATA



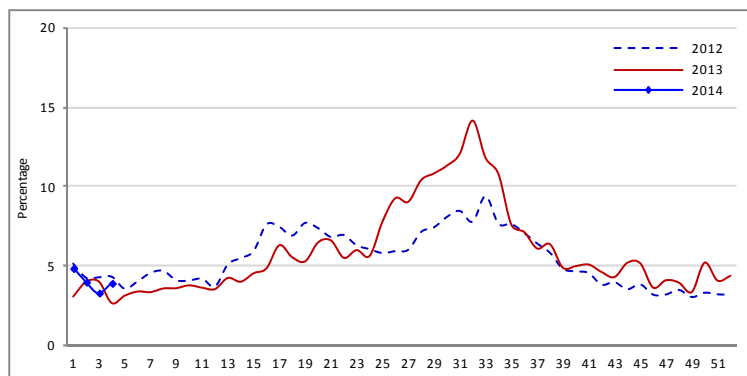
38 health facilities from 3 agencies in FATA reported to DEWS with a total of 11,844 patients consultations in week 4, 2014.

No alerts for any disease from any area in FATA were reported in week 4, 2014.

The proportion of Acute diarrhoea showing minor decrease as compared with last week and high from the same time period last year in FATA and required vigilant monitoring of the situation.

State of Azad Jammu and Kashmir:

Figure-10: Weekly trend of Acute diarrhoea, AJ&K



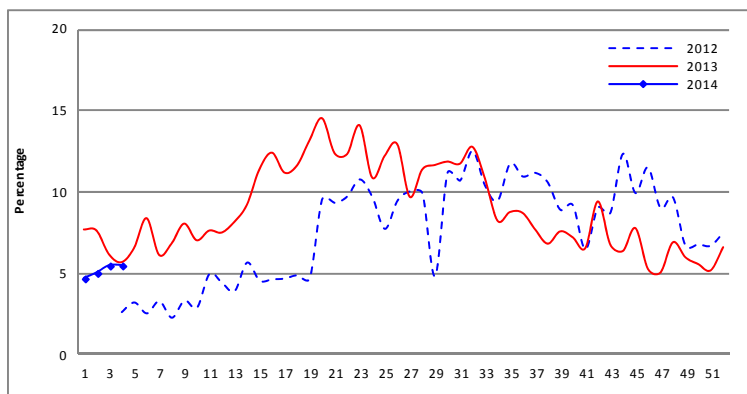
80 health facilities from 8 districts in AJ&K reported to DEWS with a total of 16,268 patients consultations in week 4, 2013.

3 alerts for Cutaneous Leishmaniasis were reported from AJ&K in week 4, 2014 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



4 health facilities reported to DEWS on time with a total of 366 patients consultations in week 4, 2014.

1 alert for Measles was reported in week 4, 2014 and appropriate measures were taken.

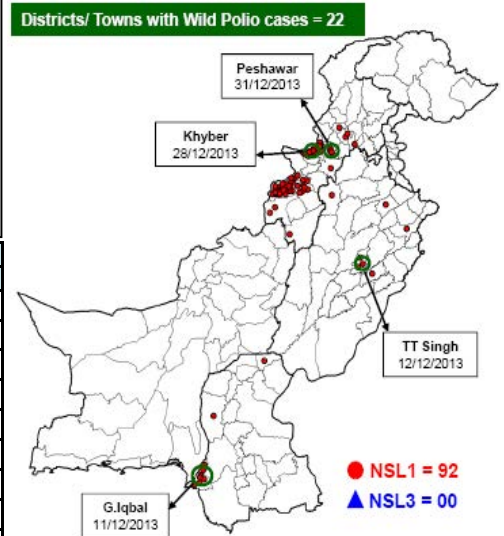
Weekly trend of Acute diarrhoea showing minor decrease as compared with last week, but vigilant monitoring of the situation is required.

Distribution of Wild Polio Virus cases in Pakistan 2012 and 2013

In this week 4 (19 to 25 Jan 2014), one new wild type-1 polio case was reported from Federally Administered tribal areas (North Waziristan) with date of onset of paralysis in 2014. This brings the total number of polio cases in 2014 to five, all from North Waziristan Agency in FATA.

The tribal Agency did not conduct any polio supplementary immunization activities (SIAs) since June 2012 leading to an ongoing explosive polio outbreak with 35 type-1 wild polio cases in 2013 and five so far in 2014.

| Province | 2012 | | | 2013 | | |
|--------------------|-----------|----------|----------|-----------|----------|----------|
| | P1 | P3 | P1+P3 | P1 | P3 | P1+P3 |
| Punjab | 2 | - | - | 7 | - | - |
| Sindh | 4 | - | - | 9 | - | - |
| Khyber Pakhtunkhwa | 27 | - | - | 11 | - | - |
| FATA | 17 | 2 | 1 | 65 | - | - |
| Balochistan | 4 | - | - | - | - | - |
| AJ&K | - | - | - | - | - | - |
| Gilgit-Baltistan | 1 | - | - | - | - | - |
| Islamabad | - | - | - | - | - | - |
| Total | 55 | 2 | 1 | 92 | - | - |



Follow up of CCHF

In week 4, 2014, no new CCHF cases reported from any district. A total of 100 suspected, 64 confirmed CCHF cases and 20 deaths have been reported country wide in year 2013.

In year 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 | 12 | 6 | 2 |
| | Balochistan | 33 | 18 | 4 | 54 | 33 | 7 |
| ICT | | - | - | - | 4 | 4 | 1 |
| KPK | | 9 | 6 | 5 | 9 | 9 | 4 |
| Punjab | | 8 | 5 | 3 | 18 | 9 | 5 |
| Sindh | | 7 | 7 | 3 | 2 | 2 | 1 |
| Total | | 62 | 41 | 18 | 100 | 64 | 20 |

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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

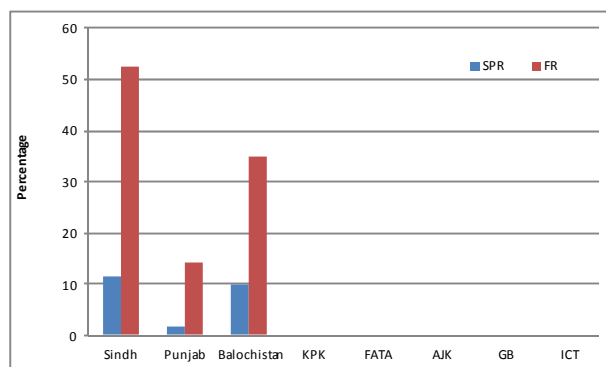
Prevention:

- 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.

Malaria:

The chart at below shows the Malaria slide positivity and Falciparum ratio in week 4, 2014. Total number of Malaria cases tested in this week is 5,653 out of which 423 were found positive; 238 for P. Vivax; 73 for P. Falciparum; while 112 for Mixed (SPR = 7.48%; F.R = 43.74%).

| Malaria tests \ Province | Sindh | Punjab | Balochistan | KPK | FATA | AJK | GB | ICT |
|--------------------------|-------|--------|-------------|-----|------|-----|----|-----|
| P. Vivax | 119 | 30 | 89 | 0 | 0 | 0 | 0 | 0 |
| P. Falciparum | 23 | 2 | 48 | 0 | 0 | 0 | 0 | 0 |
| Mixed | 109 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| # tested | 2182 | 2068 | 1403 | 0 | 0 | 0 | 0 | 0 |
| SPR | 11.5 | 1.69 | 9.76 | 0 | 0 | 0 | 0 | 0 |
| FR | 52.59 | 14.29 | 35.04 | 0 | 0 | 0 | 0 | 0 |



Alerts and outbreaks, week 4, 2014

