



# Weekly Epidemiological Bulletin

## Disease early warning system and response in Pakistan

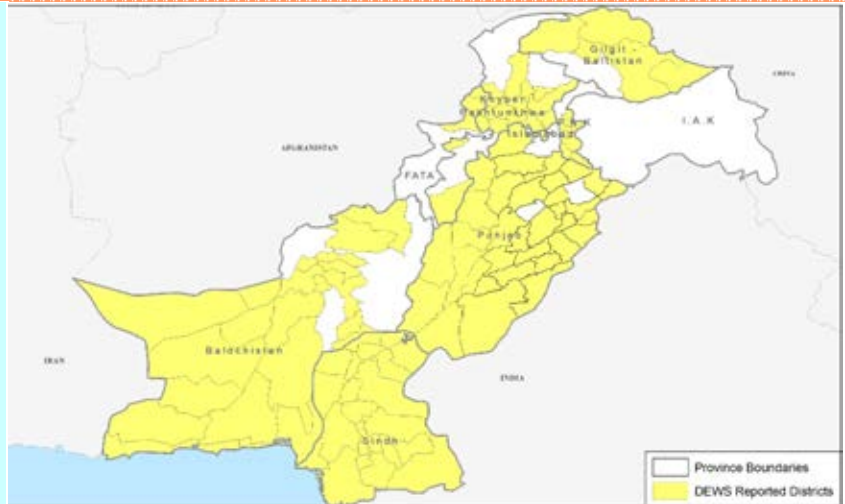
Volume 5, Issue 41, Wednesday 15 October 2014

### Highlights

Epidemiological week no. 41  
(5 - 11 October 2014)

- In this week, **84** out of 87 districts and 2,791 out of 3,590 health facilities have reported to Disease Early Warning System (DEWS), compared to 68 districts with 1,995 health facilities shared weekly data in week 39, 2014.
- A total of **658,642** patients consultations reported in this week 41, 2014; This decrease in number of consultations is due to Eid-ul-Azha holidays.
- In this week, a total of 18 alerts generated and timely responded. Altogether 6 alerts were for Diphtheria; 4 for Dengue fever; 3 for NNT; 2 for Leishmaniasis; while 1 each for Measles, Naegleria Meningitis and Typhoid fever.
- 1 outbreak of Dengue fever was also identified and timely responded.

Figure-1: 84 out of 87 districts reported to DEWS in week 41, 2014



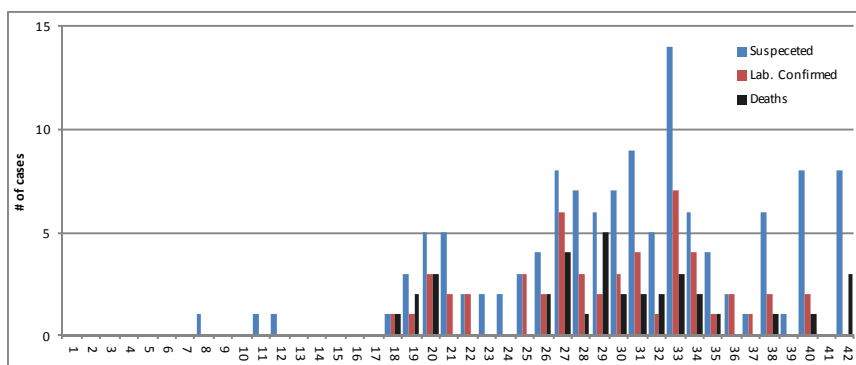
#### Priority diseases under surveillance in DEWS

Acute Respiratory Infection  
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  
Cutaneous Leishmaniasis

#### Cumulative number of selected health events reported in Epi-week 1 to 41, 2014 (29 Dec 2013 to 11 October 2014)

| Disease                          | # of Cases        | Percentage  |
|----------------------------------|-------------------|-------------|
| ARI                              | 7,590,416         | 18.31%      |
| Bloody diarrhoea                 | 41,624            | <1.00%      |
| Acute diarrhoea                  | 2,403,674         | 5.80%       |
| S. Malaria                       | 1,050,321         | 2.53%       |
| Skin Diseases                    | 1,321,118         | 3.19%       |
| Unexplained fever                | 1,059,101         | 2.55%       |
| All other consultations          | 27,994,127        | 67.52%      |
| <b>Total (All consultations)</b> | <b>41,460,381</b> | <b>100%</b> |

Figure-2: Weekly number of CCHF cases and deaths in Pakistan, week 1 to 42 2014



#### Major health events reported during the Epi-week - 41 (5 - 11 October 2014)

| Disease                          | # of Cases     | Percentage  |
|----------------------------------|----------------|-------------|
| ARI                              | 121,301        | 18.42%      |
| Bloody diarrhoea                 | 970            | <1.00%      |
| Acute diarrhoea                  | 35,892         | 5.45%       |
| S. Malaria                       | 17,381         | 2.64%       |
| Skin Diseases                    | 20,270         | 3.08%       |
| Unexplained fever                | 16,800         | 2.55%       |
| All other consultations          | 446,028        | 67.72%      |
| <b>Total (All consultations)</b> | <b>658,642</b> | <b>100%</b> |

Crimean Congo Haemorrhagic Fever (CCHF) cases are reported continuously from epidemiological week 8, 2014. So far total 122 suspected cases, 52 laboratory confirmed, and 35 deaths (of these 16 laboratory confirmed) have been reported. Most of the cases are from Balochistan province 63 suspected (14 cases belongs to Afghanistan), 20 Laboratory confirmed and 15 deaths. 35 suspected, 19 Laboratory confirmed (12 from Afghanistan) and 12 deaths (7 Lab confirmed) were reported from Khyber Pakhtunkhwa province. 4 suspected cases (2 from Afghanistan), 3 Laboratory confirmed and 2 deaths were reported from Islamabad. 17 suspected CCHF cases (8 Laboratory confirmed), 6 deaths were reported from Punjab province. 2 laboratory confirmed cases (1 death) were reported from Sindh province; While 1 suspected case was from district Sudhnuti (AJK) and found negative for CCHF.

The CCHF cases from Afghanistan are detected and reported from Quetta and Peshawar. The patients are referred for treatment (mostly self referrals) to the Tertiary Care hospitals in both these cities. The list of CCHF cases with addresses shared with concerned person at the Ministry of Public Health Afghanistan for preventive measures at community level.

## Number of Outbreaks (Wk-41/2014):

| Date   | Disease      | Province | District   | Area                       | <5M | >5M | <5F | >5F | Action Taken   |
|--------|--------------|----------|------------|----------------------------|-----|-----|-----|-----|--|
| 9-Oct  | Dengue Fever | Punjab   | Rawalpindi | Rawal Town Rawalpindi      | 1   | 88  | 0   | 44  | 51 suspected, 35 probable and 47 confirmed Dengue fever cases were notified from Holy Family Hospital and BB Hospital, Rawalpindi during the week. A total of 97 blood samples were taken and sent to lab for confirmation of dengue specific antibodies. 47 patients were found positive for Dengue fever. Health education sessions were conducted in the community for proper solid waste disposal and improved water storage practices. The area would be visited again for follow up. EDO(H) Rawalpindi was informed.         |
| 10-Oct | Dengue Fever | Punjab   | Rawalpindi | Cantonment Area Rawalpindi | 0   | 13  | 0   | 8   | 14 confirmed and 7 suspected cases of dengue fever reported from DHQ Hospital Rawalpindi, Holy Family Hospital and Benazir Bhutto Hospital. All the patient belong to Rawalpindi cantonment area. 19 blood samples were taken and sent to lab for detection of dengue specific antibodies. 14 patients were found positive for Dengue fever. Health education session was given in the community on proper solid waste disposal and improved water storage practices use of repellents. Information shared with EDO(H) Rawalpindi. |
| 10-Oct | Dengue Fever | Punjab   | Rawalpindi | Chaklala Cantonment        | 0   | 6   | 0   | 3   | 3 suspected and 6 confirmed Dengue Fever cases were notified from Holy Family Hospital and BB Hospital Rawalpindi. 9 blood samples were taken and sent to lab for detection of dengue specific antibodies. 6 patients were found positive for Dengue fever. The cases were admitted and kept in isolation wards in the hospital. Health education sessions were given in the community on proper solid waste disposal and improved water storage practices, use of repellents. Information shared with EDO(H) Rawalpindi.          |

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

| Disease                 | 2013        |            | Current week 41, 2014 |          | 2014        |            |
|-------------------------|-------------|------------|-----------------------|----------|-------------|------------|
|                         | A           | O          | A                     | O        | A           | O          |
| Acute watery diarrhoea  | 142         | 40         | 0                     | 0        | 61          | 15         |
| Acute jaundice syndrome | 49          | 6          | 0                     | 0        | 15          | 3          |
| Bloody diarrhoea        | 45          | 3          | 0                     | 0        | 27          | 0          |
| CCHF                    | 90          | 47         | 0                     | 0        | 100         | 50         |
| Dengue fever            | 300         | 66         | 4                     | 1        | 45          | 11         |
| Diphtheria              | 84          | 19         | 6                     | 0        | 52          | 4          |
| Measles                 | 3357        | 281        | 1                     | 0        | 1032        | 32         |
| Pertussis               | 46          | 10         | 0                     | 0        | 27          | 2          |
| NNT + tetanus           | 349         | 0          | 2                     | 0        | 225         | 0          |
| Malaria                 | 25          | 6          | 0                     | 0        | 0           | 0          |
| Cutaneous Leishmaniasis | 621         | 51         | 2                     | 0        | 347         | 19         |
| Others                  | 520         | 5          | 0                     | 0        | 273         | 7          |
| <b>Total</b>            | <b>5628</b> | <b>534</b> | <b>15</b>             | <b>1</b> | <b>2204</b> | <b>143</b> |

Figure-3: Number of alerts received and responded, week 38 to 41 2014

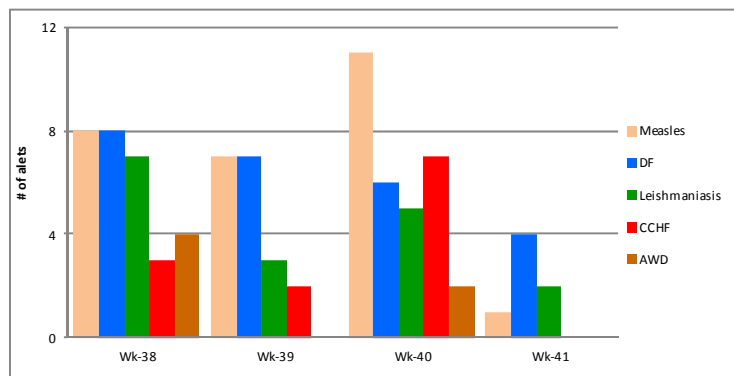
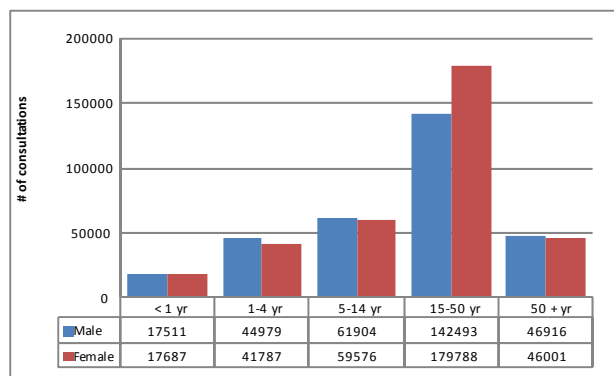
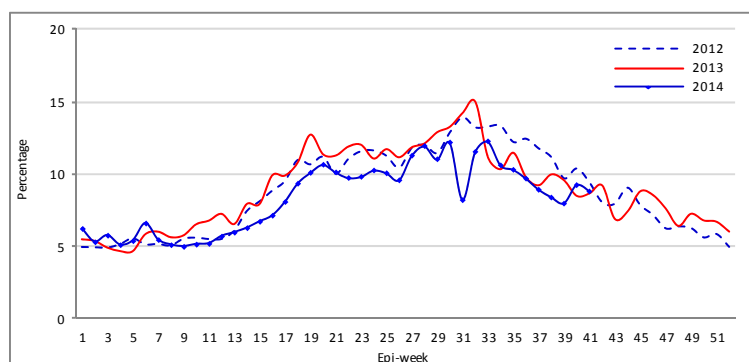


Figure-4: Number of consultations by age and gender, week 41, 2014



**Province Khyber Pakhtunkhwa:**

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



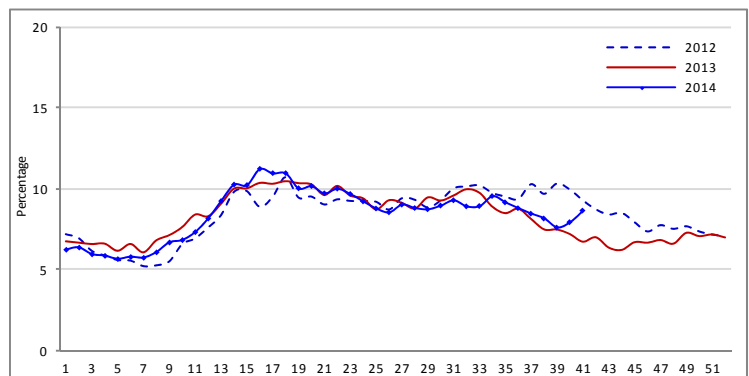
134 health facilities from 11 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 20,072 patients consultations reported in week 41, 2014.

4 alerts for diphtheria were received and appropriate measures were taken during week 41 2014.

Figure-5 shows the weekly trend of Acute diarrhoea showing decrease as compared with last weeks and vigilant monitoring of the situation is required.

**Province Sindh:**

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



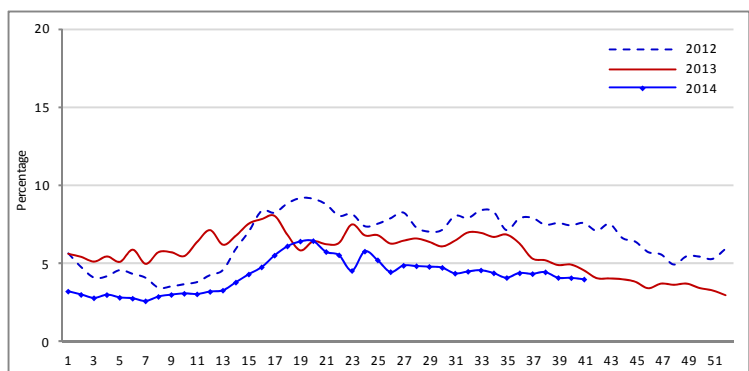
753 health facilities from 23 districts in Sindh province reported to DEWS with a total of 155,085 patient consultations in week 41, 2014.

A total of 5 alerts were received and appropriate measures were taken. Altogether 3 alerts were for NNT; while 1 each for Naegleria Meningitis and Typhoid fever.

The proportion of AD for the province is showing increase as compared with last weeks and vigilant monitoring of the situation is required as proportion of AD is high in the province as compared with same time period last year.

**Province Punjab:**

Figure-7: Trend of Acute diarrhoea, province Punjab



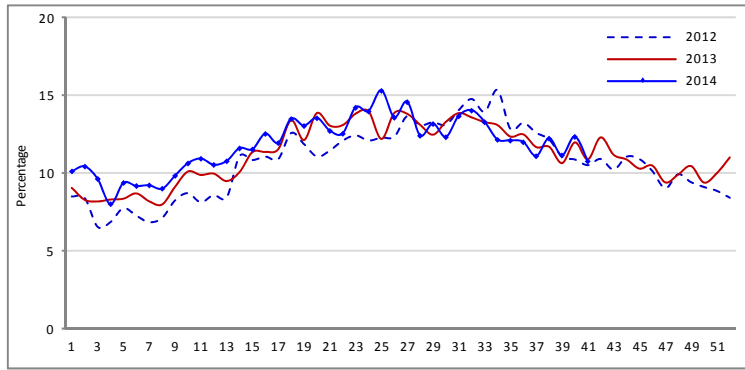
1,663 health facilities from 36 districts in Punjab province reported to DEWS with a total of 458,554 patients consultations in week 41, 2014.

Total 6 alerts were received and appropriate measures were taken. Altogether 4 alerts were for Dengue fever; while 2 for Diphtheria were responded in province Punjab.

The weekly trend of Acute diarrhoea in Punjab showing minor decrease as compared with last week and low as compared with same time period last year.

**Province Balochistan:**

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



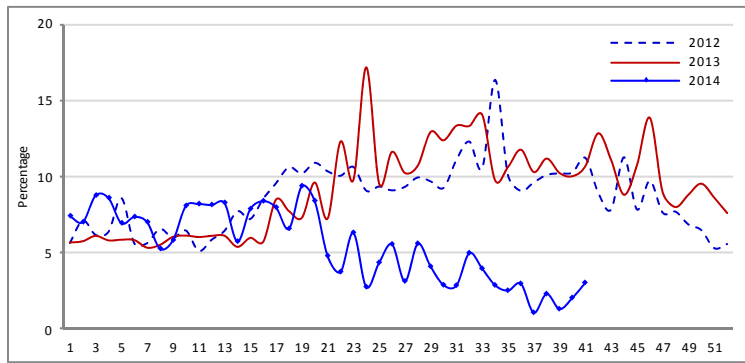
184 health facilities from 8 districts in Balochistan province reported to DEWS with a total of 19,569 patients consultations in week 41, 2014.

A total of 3 alerts were reported and appropriate measures were taken. Altogether 2 alerts were for Leishmaniasis; while 1 for Measles.

In this week the weekly proportion of AD showing decrease as compared with last week and vigilant monitoring of the situation is required as the proportion of AD is higher as compared with same time period last year.

**FATA:**

Figure-9: Weekly trend of Acute diarrhoea, FATA



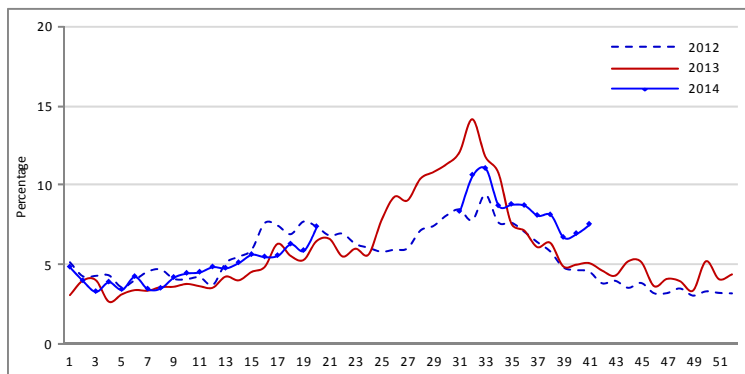
1 health facilities from 1 agency in FATA reported to DEWS with a total of 327 patients consultations in week 41, 2014.

No alert for any disease was received from any area in FATA in week 41 2014.

The proportion of AD showing some spikes as the number of consultations is low, but vigilant monitoring of the situation is required.

**State of Azad Jammu and Kashmir:**

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



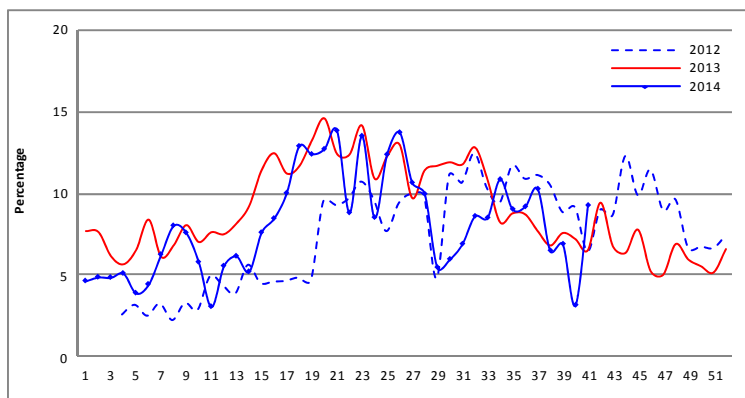
54 health facilities from 4 districts in AJK reported to DEWS with a total of 4,938 patients consultations in week 41, 2013.

No alert for any disease was received from any area in AJ&K in week 41 2014.

Weekly trend of AD showing increase this week as compared with last week and vigilant monitoring of the situation is required as the proportion of AD is higher as compared with the same time period last year.

**Islamabad:**

Figure-11: Weekly trend of Acute diarrhoea, Islamabad



1 health facility reported to DEWS on time with a total of 97 patients consultations in week 41, 2014.

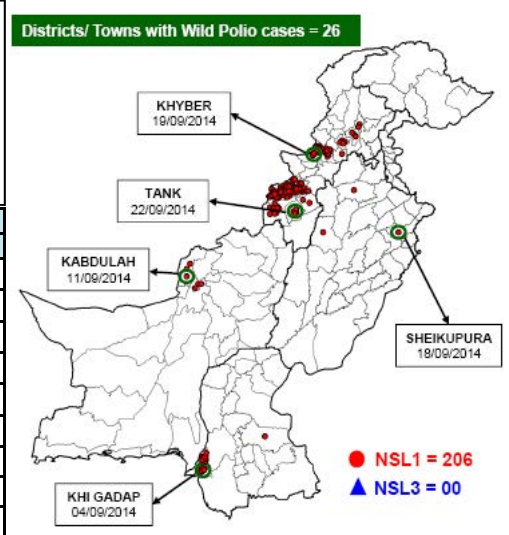
No alert for any disease was reported in week 39 from Islamabad in this week.

Weekly trend of AD showing spikes as the number of reporting health facilities is low from last couple of weeks, but vigilant monitoring of the situation is required.

Distribution of Wild Polio Virus cases in Pakistan 2013 and 2014

In week 41 (5 - 11 Oct 2014) four new wild polio virus (WPV) cases were reported, two from Khyber Pakhtunkhwa (Peshawar district) and one each from FATA (Khyber agency) and Punjab (Sheikhupura district). This brings the total number of polio cases in 2014 to 206 (compared to 58 in 2013 till this time) from 26 districts/towns/tribal agencies/FR areas (compared to 18 in 2013 till this time).

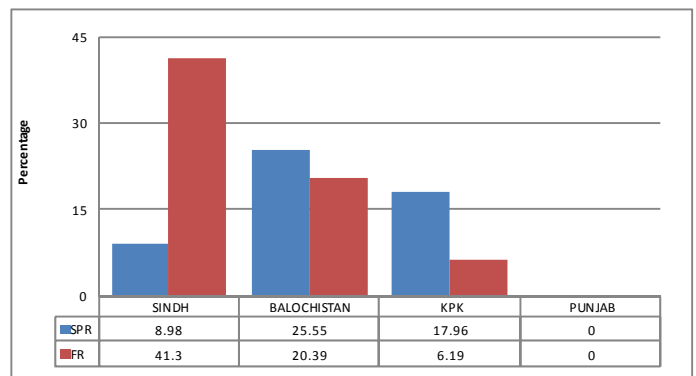
| Province           | 2013      |          |          | 2014       |          |          |
|--------------------|-----------|----------|----------|------------|----------|----------|
|                    | P1        | P3       | P1+P3    | P1         | P3       | P1+P3    |
| FATA               | 65        | -        | -        | 136        | -        | -        |
| Khyber Pakhtunkhwa | 11        | -        | -        | 42         | -        | -        |
| Sindh              | 10        | -        | -        | 19         | -        | -        |
| Balochistan        | -         | -        | -        | 6          | -        | -        |
| Punjab             | 7         | -        | -        | 3          | -        | -        |
| Gilgit-Baltistan   | -         | -        | -        | -          | -        | -        |
| AJ&K               | -         | -        | -        | -          | -        | -        |
| Islamabad          | -         | -        | -        | -          | -        | -        |
| <b>Total</b>       | <b>93</b> | <b>-</b> | <b>-</b> | <b>206</b> | <b>-</b> | <b>-</b> |



Malaria:

The Table and chart given below shows the Malaria Slide Positivity and Falciparum Ratio in week 41, 2014. Total number of Malaria cases tested in this week is 2,671 out of which 387 were found positive; 293 for P. Vivax; 52 for P. Falciparum; while 42 for Mixed (SPR = 14.49%; F.R = 24.29%).

| Malaria tests \ Province | Sindh | Balochistan | Khyber Pakhtunkhwa | Punjab |
|--------------------------|-------|-------------|--------------------|--------|
| P. Vivax                 | 81    | 121         | 91                 | 0      |
| P. Falciparum            | 29    | 21          | 2                  | 0      |
| Mixed                    | 28    | 10          | 4                  | 0      |
| # tested                 | 1536  | 595         | 540                | 0      |
| SPR                      | 8.98  | 25.55       | 17.96              | 0      |
| FR                       | 41.3  | 20.39       | 6.19               | 0      |



Follow up on: CCHF

CCHF is a serious viral hemorrhagic fever with up to 50% case fatality rate, caused by an RNA virus of family Bunyaviridae, genus Nairovirus, carried by Hyalomma species of ticks. Human beings become infected by tick bites or crushing the ticks, which are usually found on sheep, cattle, goats or camels, and their slaughtered skins. They may also be exposed to the virus in blood or tissues of a viremic animal during its slaughter and butchering; or by contact with infected blood or secretions of acute human cases in home or hospital setting. Any contact of a CCHF patient should monitor his/her temperature for 14 days and see a doctor if fever develops. The anti viral medicine Ribavirin has been effective in saving lives of patients who report early to the health facility.

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WHO team is supporting the provincial health departments in handling the situation. The WHO-DEWS team conducts epidemiological investigation and contacts tracing (active surveillance in the community and hospitals), sharing information with the stake holders (DoH, Livestock Dept., hospitals and other partners), give health education to family members and close contacts of the cases on preventive measures and seeking immediate health care in case of fever/symptoms, collect and transport blood samples to NIH for laboratory testing and confirmation. Although joint efforts are being taken, however, more vigorous actions are required on the eradication of infected ticks in the high risks areas and awareness raising in the population.

Alerts and outbreaks week 41 2014

