



Highlights

*Epidemiological week no. 15
(7 to 13 Apr, 2013)*

- Measles:** This week a total of 41 alerts investigated, responding and monitoring to 3 outbreaks. 213 measles cases from 22 districts, while 7 deaths reported from 2 districts. Vitamin-A drops provided to all the suspects and district health teams took action to improve vaccination in affected areas.
- 67 districts** and 1933 health facilities have reported to DEWS this week 15, compared with 71 districts with 1952 health facilities shared weekly data in week 14, 2013 to the Disease Early Warning System (DEWS).
- 719,533** patients' consultations were reported in week 15, 2013 compared to **659,437** consultations reported in week 14, 2013.
- Altogether **69** alerts were investigated and response were provided to **3** outbreaks.

Figure-1: 67 districts reported to DEWS in week 15, 2013



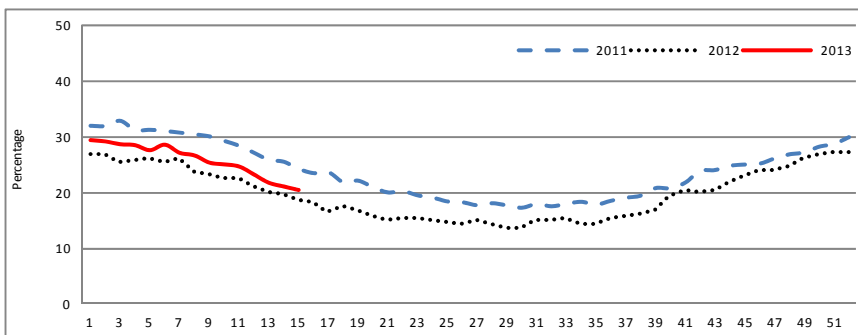
Priority diseases under surveillance in DEWS

- Pneumonia
- Acute Watery Diarrhoea
- Bloody diarrhoea
- Other 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 15, 2013 (29 Dec 2012 to 13 Apr 2013)

| Disease | # of Cases | Percentage |
|----------------------------------|-------------------|------------|
| ARI | 3,249,553 | 26% |
| Bloody diarrhoea | 34,264 | <0.5% |
| Acute diarrhoea | 853,660 | 7% |
| S. Malaria | 587,712 | 5% |
| Skin Diseases | 472,417 | 4% |
| Unexplained fever | 416,188 | 3% |
| Total (All consultations) | 12,630,965 | |

Figure-2: Weekly trend of Acute Respiratory Infection (ARI) in Pakistan; Week-1, 2011 to week-15, 2013.



Major health events reported during the Epi-week - 15 (7 to 13 Apr 2013)

| Disease | # of Cases | Percentage |
|----------------------------------|----------------|------------|
| ARI | 145,879 | 20% |
| Bloody diarrhoea | 1,953 | <0.5% |
| Acute diarrhoea | 62,063 | 9% |
| S. Malaria | 30,555 | 4% |
| Skin Diseases | 25,567 | 4% |
| Unexplained fever | 24,253 | 3% |
| Total (All consultations) | 719,533 | |

- The graph (Figure-2) shows the comparison of weekly trend of Acute respiratory infection (ARI) as proportional morbidity (percentage of cases out of total consultations) reported to DEWS each week in year 2011; 2012 and 2013.

Outbreaks (Wk-15/2013):

| Date | Disease | Province | District | Area | <5M | >5M | <5F | >5F | Action Taken |
|--------|---------------|--------------------|-------------|---|-----|-----|-----|-----|--|
| 9-Apr | Leishmaniasis | Khyber Pakhtunkhwa | Mardan | Village Pirali & alam khan, UC Qasim, Tehsil Takht Bhai | 1 | 1 | 2 | 3 | Alert for Cutaneous Leishmaniasis reported from UC Qasim. During active surveillance 6 more clinical cases were found. Required doses of Inj-Glucantime were placed in nearby health facility for all registered cases. FPHC Mardan, Relief Intl., PPHI and RBM focal person 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. Information shared with EDO Health. |
| 12-Apr | Measles | Khyber Pakhtunkhwa | Mardan | Village Cheena, UC Rustam, Tehsil Mardan | 3 | 0 | 2 | 0 | Alert for suspected Measles reported Children unit of DHQ Hospital Mardan, the suspect found unvaccinated for routine vaccination. Vitamin-A was given. During active surveillance 4 more clinical cases were identified in same family and neighbors. Vitamin-A capsule were given to all the suspects. EPI team was informed and requested for outreach immunization in the area. Health education session was conducted in the community, LHW's working in the area were involved. EDO-H Focal person & EPI Coordinator were informed. |
| 7-Apr | Measles | Punjab | Lahore | Allama Iqbal Town UC 112, UC 114, UC 116, UC 111, UC 118, UC 121, UC 132, | 6 | 2 | 2 | 3 | Alert for 10 Suspected cases of Measles were reported from different Teaching Hospitals in Lahore. The suspected cases have been given 1st dose of vitamin-A. While vaccinator and LHWs were advised to deliver 2nd dose on next day. During active surveillance 3 more suspected cases were found. A total of 100 children were checked for routine EPI coverage where 26 children were found to have missed second dose of Measles. 40 houses on all sides were interviewed. Mass Vaccination campaign arranged in the nearest Health facility and 145 children were vaccinated. 2 blood samples and Throat swabs were taken and sent to NIH. Health education session in community was conducted with the help of LHW, religious and community Leaders. EDO(H) and Director EPI were informed. (ongoing outbreak) |
| 9-Apr | Measles | Punjab | Lahore | Nishtar Town , UC 134, UC 135, UC 136, UC137, UC 139 , UC 143, | 7 | 2 | 2 | 0 | Alert for 8 suspected cases of Measles were reported from different Union council in Nishtar town. The suspected cases were given 1st dose of vitamin-A, while vaccinator and LHWs were requested to deliver 2nd dose on next day. During active surveillance 3 more cases were found. 24 children were found to have missed second doze of Measles. 40 houses on all sides were interviewed. Mass Vaccination campaign arranged in the nearest Health facility and 98 children were vaccinated. 2 blood samples were taken and sent to NIH. Health education session conducted in the community with the help of LHW, religious and community Leaders. EDO(H) and Director EPI were informed. |
| 9-Apr | Measles | Sindh | Thar-parkar | Village Tagusar, UC Tagusar, taluka Nagar-parkar | 2 | 1 | 3 | 2 | 6 deaths due to Measles were reported in a local News paper. during investigation it revealed that deaths were occurred due to rashes in body and Pneumonia. During active search in the area 2 more suspected cases were found out of which 1 suspect was not vaccinated for Measles. 2 blood samples were taken and sent to NIH. Vitamin-A dose given to all the suspects. Health education was imparted. Information shared with EDOH. |

Figure-3: Number of alerts received and responded, week 12 - 15, 2013

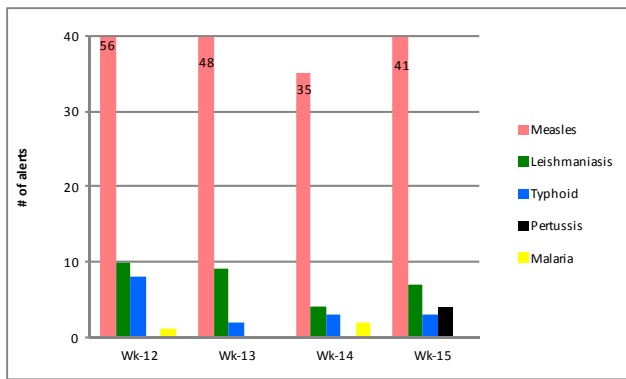
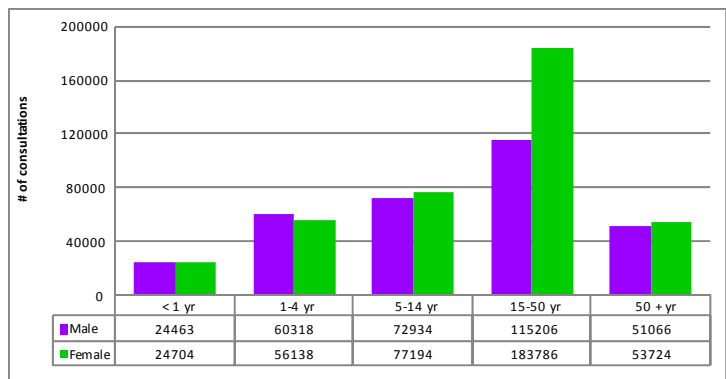


Figure-4: Number of consultations by age and gender, week 15, 2013



Province Khyber Pakhtunkhwa:

265 health facilities from 9 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 83,479 patients consultations reported in week 15, 2013. 5 alerts, 4 were for Measles, while 1 for Leishmaniasis were received and appropriate measures were taken. ARI trend showing decrease as compared with last week.

Figure-5: Trend of ARI, province Khyber Pakhtunkhwa

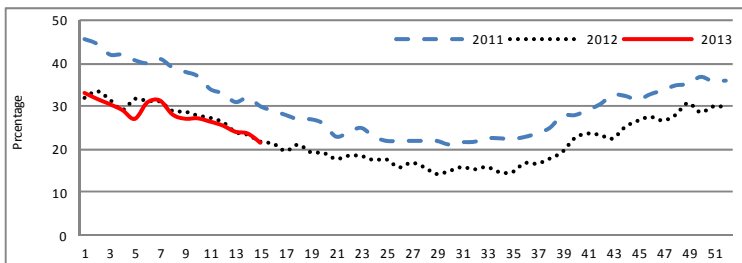
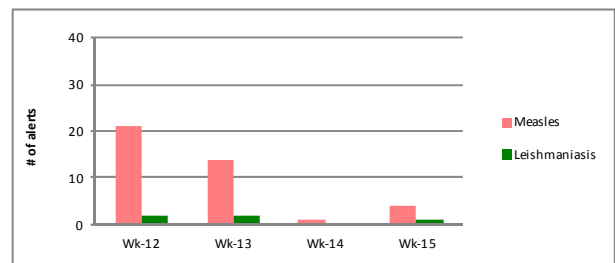


Figure-6: Number of alerts received and responded week 12 to 15, 2013



Province Sindh:

734 health facilities from 21 districts in Sindh province reported to DEWS with a total of 289,605 patient consultations in week 15, 2013. 11 alerts were received and appropriate measures were taken. Altogether 6 alerts were for NNT; 3 for Leishmaniasis; while 1 each for AWD and Pertussis. ARI trend showing decrease as compared with last week.

Figure-7: Trend of ARI, province Sindh

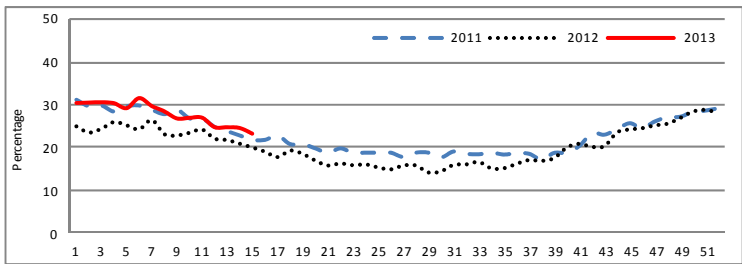
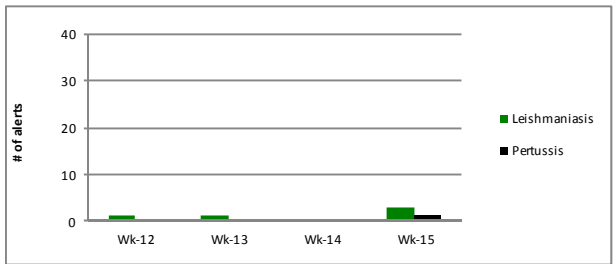


Figure-8: Number of alerts received and responded, week 12 to 15, 2013



Province Punjab:

495 health facilities from 9 districts in province Punjab reported to DEWS with a total of 262,134 patients consultations in week 15, 2013. Total 38 alerts were received and appropriate measures were taken. Altogether 28 alerts were for Measles; 2 each for ARI, Pertussis and Typhoid; while 1 each for CCHF, NNT and Scabies. ARI trend showing a minor increase as compared with last week.

Figure-9: Trend of ARI, province Punjab

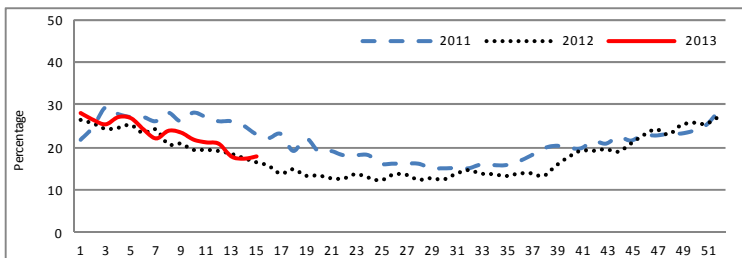
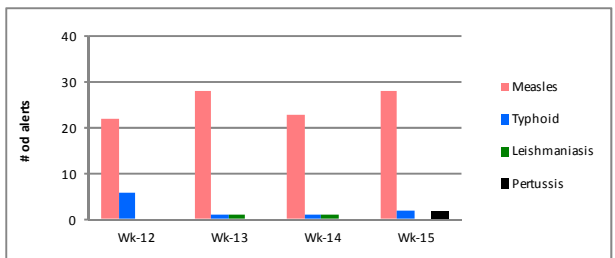


Figure-10: Number of alerts received and responded, week 12 to 15, 2013



Province Balochistan:

275 health facilities from 14 districts in province Balochistan reported to DEWS with a total of 40,929 patients consultations in week 15, 2013. Total 8 alerts reported and appropriate measures were taken in week 15, 2013. Altogether 3 alerts for Leishmaniasis; 2 for Measles; while 1 each for Pertussis, Typhoid and Chickenpox. ARI trend showing decrease as compared with last week.

Figure-11: Trend of ARI, province Balochistan

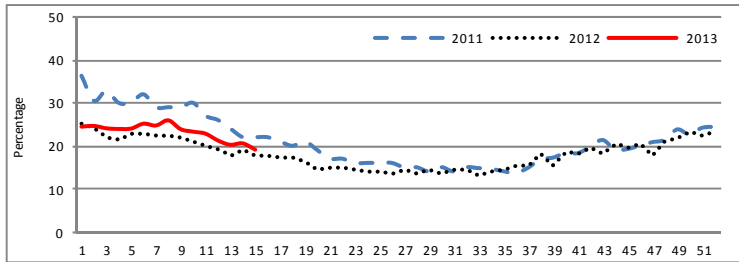
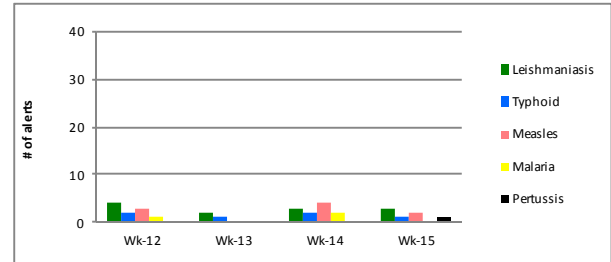


Figure-12: Number of alerts received and responded, week 12 to 15, 2013



Province Gilgit Baltistan:

21 health facilities from 4 districts in Gilgit Baltistan reported to DEWS with a total of 7,907 patients consultations in week 15, 2013. No alerts for any disease was reported in last 6 weeks (Wk 10 to 15), 2012. ARI showing a decrease as compared with last week.

Figure-13: Trend of ARI, province Gilgit Baltistan

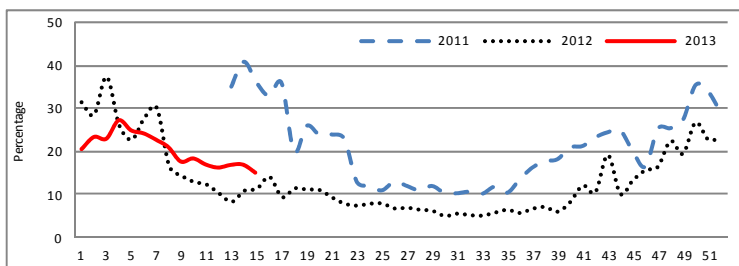
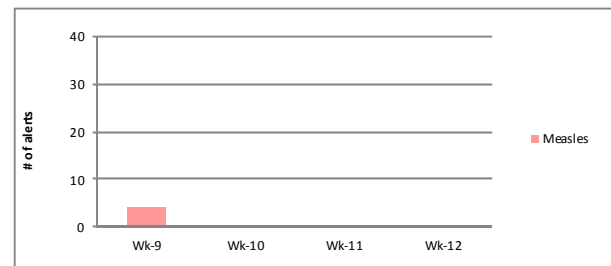


Figure-14: Number of alerts received and responded, week 12 to 15, 2013



FATA:

22 health facilities from 1 agency in FATA reported to DEWS with a total of 5,950 patients consultations in week 15, 2013. No alerts for any disease were reported in week 15, 2013. ARI showing decrease as compared with last week.

Figure-15: Trend of ARI, FATA

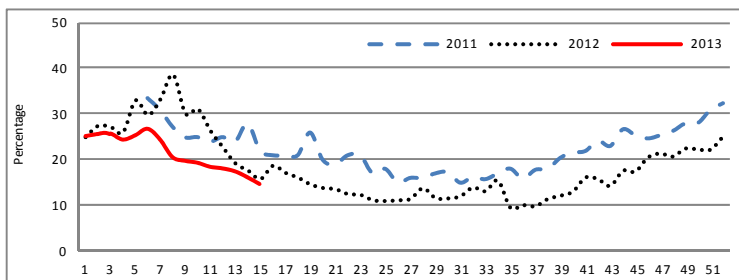
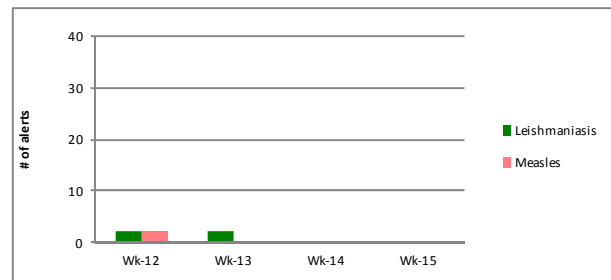


Figure-16: Number of alerts received and responded, week 12 to 15, 2013



State of Azad Jammu and Kashmir:

113 health facilities from 8 districts in AJ&K reported to DEWS with a total of 28,198 patients consultations in week 15, 2013. 4 alerts for Measles were reported in week 15, 2013. ARI trend showing a minor increase as compared with last week.

Figure-17: Trend of ARI, AJ&K

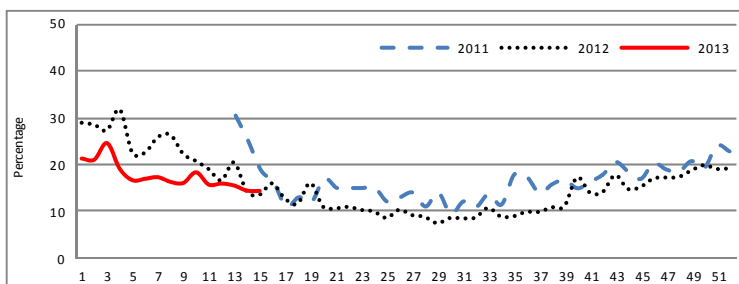


Figure-18: Number of alerts received and responded, week 12 to 15, 2013

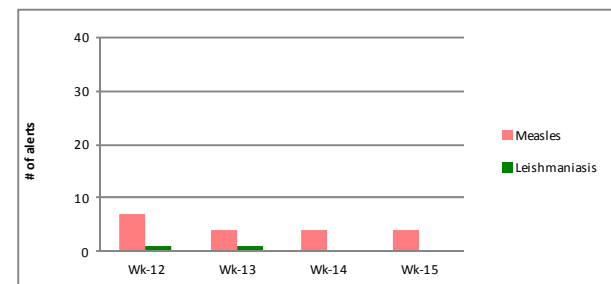
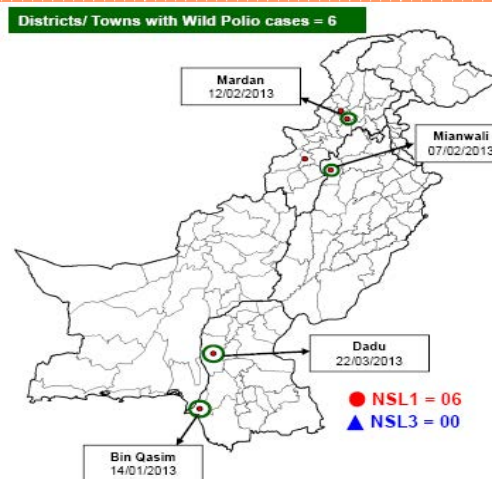


Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

| Disease | 2012 | | Current week 15, 2013 | | 2013 (Total up till week - 15) | |
|-------------------------|--------------|-------------|-----------------------|----------|--------------------------------|------------|
| | A | O | A | O | A | O |
| Acute watery diarrhoea | 635 | 171 | 1 | 0 | 10 | 1 |
| Acute jaundice syndrome | 113 | 22 | 0 | 0 | 9 | 3 |
| Bloody diarrhoea | 146 | 11 | 0 | 0 | 6 | 1 |
| CCHF | 68 | 41 | 1 | 0 | 6 | 1 |
| Dengue fever | 175 | 29 | 0 | 0 | 1 | 0 |
| Diphtheria | 60 | 16 | 1 | 0 | 14 | 1 |
| Measles | 5922 | 812 | 41 | 3 | 1609 | 206 |
| Pertussis | 366 | 147 | 4 | 0 | 22 | 4 |
| NNT + tetanus | 560 | 0 | 7 | 0 | 101 | 0 |
| Malaria | 136 | 68 | 0 | 0 | 6 | 2 |
| Leishmaniasis | 900 | 78 | 7 | 1 | 276 | 37 |
| Others | 1529 | 58 | 6 | 0 | 141 | 3 |
| Total | 10610 | 1453 | 68 | 4 | 2201 | 259 |

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

- In week 15, 2013, no new polio case reported from any district. The total number of polio cases as well as the infected districts/towns in the country for the year 2013 remain 6 (compared to 16 cases from the 10 districts/towns/agencies during the same time period last year).

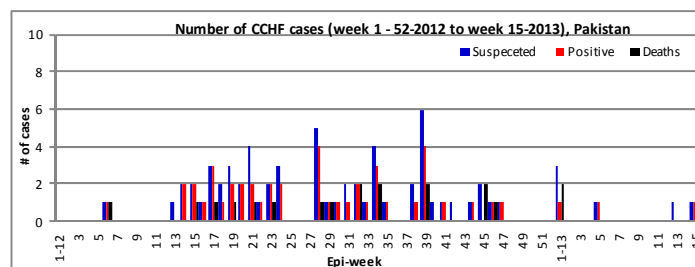


| Province | 2012 | | | 2013 | | |
|--------------------|-----------|----------|----------|----------|----------|----------|
| | P1 | P3 | P1+P3 | P1 | P3 | P1+P3 |
| Punjab | 2 | - | - | 1 | - | - |
| Sindh | 4 | - | - | 2 | - | - |
| Khyber Pakhtunkhwa | 27 | - | - | 3 | - | - |
| FATA | 17 | 2 | 1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

Follow up of 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.

In week 15, 2013, 1 CCHF case reported from district DG Khan, Punjab. The suspected case was 48 years old male working at a dairy farm died in Nishter hospital with history of fever for the last one week which did not respond to Antimalarial treatment. Bleeding from gums which did not stop with any treatment. Platelet counts were 20000 only. Five close contacts of the deceased were kept under observation in isolation ward and started prophylactic treatment with ribavirin. 5 blood samples were taken and sent to NIH, all found negative. Health session in the community conducted. Follow-up going on. The total number of CCHF cases were 5 for the year 2013.



In 2012, a total of 61 suspected cases have been reported throughout the country with 41 cases confirmed to date and in total 17 deaths; of which 13 deaths (CFR is 31.7%) are reported of the lab confirmed cases and 4 deaths are reported as suspected CCHF cases. 23 confirmed cases have been reported from Balochistan; 7 from Sindh; 6 from Khyber Pakhtunkhwa and 5 from Punjab. Chart at 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, a traditional practice of wearing fresh animal skin (posti) to treatment ailment. There is ongoing trade of animals and animal skins with movement Intra Pakistan and between neighboring countries (Afghanistan and Iran).

Focus on: Measles

Measles is a highly contagious viral disease, which affects mostly children. It is transmitted via droplets from the nose, mouth or throat of infected persons. Initial symptoms, which usually appear 10–12 days after infection, include high fever, runny nose, bloodshot eyes, and tiny white spots on the inside of the mouth. Several days later, a rash develops, starting on the face and upper neck and gradually spreading downwards. There is no specific treatment for measles and most people recover within 2–3 weeks. However, particularly in mal-nourished children and people with reduced immunity, measles can cause serious complications, including blindness, encephalitis, severe diarrhoea, ear infection and pneumonia.

Measles is a killer childhood disease but preventable through immunization. One in 15 people have complications with measles, and one in 1,000 will die of it, but two doses of measles vaccine will protect people against the disease. WHO has set the target for measles elimination for 2015 which would require that more than 95% of the world children are covered by two doses of measles vaccine.

Proper case management during outbreaks:

It is imperative that during outbreak situations proper case management is ensured in order to minimize measles related deaths and measles related complications. The treatment of measles patients with Vitamin A will dramatically reduce their risk of deaths. Two doses of Vitamin A will be given to all identified cases (active and old) during house-to-house investigation, unless it was already received as part of the treatment in the health facility. One dose to be given by the health worker on the day of investigation and the 2nd dose provide to the parents advising to give on next day. The therapy will be given regardless of previous vitamin A prophylaxis. If the investigation team observes complications, the patient should be referred to the nearest health facility for specific treatment of these complications.

Measles Prevention:

Routine measles vaccination for children; combined with mass immunization campaigns in countries with high case and death rates, is key public health strategy to reduce global measles mortality rates. The measles vaccine has been in use for over 40 years. It is safe, effective and inexpensive. It costs less than one US dollar to immunize a child against measles. Measles vaccine is provided by the Pakistan EPI programme to children at 9 months and 15 months. Children who are vaccinated against measles before 9 months of age must receive a 2nd measles vaccination at 9 months age ensuring a gap of one month between both vaccinations. Moreover, any child who received measles vaccine should also receive OPV.

Priority should be placed to immunize children 6 months to 5 years old during outbreaks, regardless of vaccination status or history of disease. Auto destructible syringes and safety boxes are recommended and safe disposal of used sharps and safety of injection during immunization should be ensured. Let's remind all our neighbors, friends and colleagues to be sure that their children are immunized against measles.

Table at the bottom summarizes the situation of measles in year 2012; and illustrates the alerts and outbreaks in 2013 up till week 15 (13 April 2013).

| Province | 2012 (Week 1 - 52) | | | | 2013 (Up till week 15) | | | |
|--------------------|--------------------|----------------|------------|-------------|------------------------|----------------|------------|-------------|
| | # of Alerts | # of Outbreaks | # of Cases | # of Deaths | # of Alerts | # of Outbreaks | # of Cases | # of Deaths |
| AJ&K | 165 | 6 | 268 | 0 | 117 | 6 | 242 | 1 |
| Balochistan | 447 | 119 | 1816 | 31 | 267 | 45 | 1101 | 45 |
| FATA | 211 | 31 | 559 | 13 | 54 | 12 | 173 | 3 |
| Gilgit Baltistan | 40 | 1 | 54 | 0 | 11 | 0 | 22 | 0 |
| ICT | 27 | 2 | 63 | 0 | 24 | 2 | 87 | 1 |
| Khyber Pakhtunkhwa | 1989 | 108 | 3542 | 38 | 462 | 66 | 1152 | 19 |
| Punjab | 809 | 40 | 1329 | 16 | 563 | 51 | 3525 | 31 |
| Sindh | 2234 | 505 | 7353 | 212 | 111 | 24 | 3018 | 140 |
| Total | 5922 | 812 | 14984 | 310 | 1609 | 206 | 9320 | 240 |

Alerts and outbreaks, week 15, 2013

