



Weekly Epidemiological Bulletin

Disease early warning system and response in Pakistan

Volume 5, Issue 12, Wednesday 26 March 2014

Highlights

*Epidemiological week no. 12
(16 to 22 Mar 2014)*

- **Dengue fever:** During this week, 11 Dengue fever lab confirmed cases have been reported, 10 cases were from Sindh province and 1 case was from Punjab province.
- In this week, **81** districts and 2,465 health facilities have reported to Disease Early Warning System (DEWS), compared to 82 districts with 2,577 health facilities shared weekly data in week 11, 2014 to the DEWS.
- Total **1,022,196** patients consultations reported in week 12, 2014 compare to **1,059,885** consultations in week 11, 2014.
- In this week, a total of 66 alerts identified and timely responded. Altogether 23 alerts were for Measles; 16 for Leishmaniasis; 7 for NNT; 5 for H1N1; 4 for Pertussis; 3 for Typhoid fever; 2 each for CCHF and ARI; while 1 each for acute diarrhoea, AJS, Dengue fever and Scabies.

Figure-1: 81 districts reported to DEWS in week 12, 2014



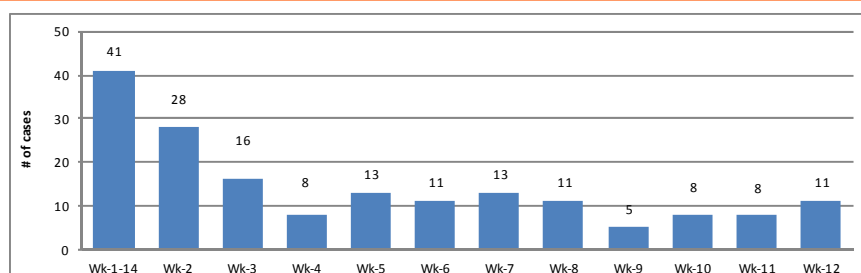
Priority diseases under surveillance in DEWS

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 12, 2014 (29 Dec 2013 to 22 Mar 2014)

| Disease | # of Cases | Percentage |
|----------------------------------|------------|------------|
| ARI | 2,509,084 | 23.35% |
| Bloody diarrhoea | 10,095 | <1.00% |
| Acute diarrhoea | 484,289 | 4.51% |
| S. Malaria | 302,712 | 2.82% |
| Skin Diseases | 319,276 | 2.97% |
| Unexplained fever | 285,224 | 2.65% |
| Total (All consultations) | | |

Figure-2: Number of Dengue fever positive cases in Pakistan, Week 1 to week 12-2014

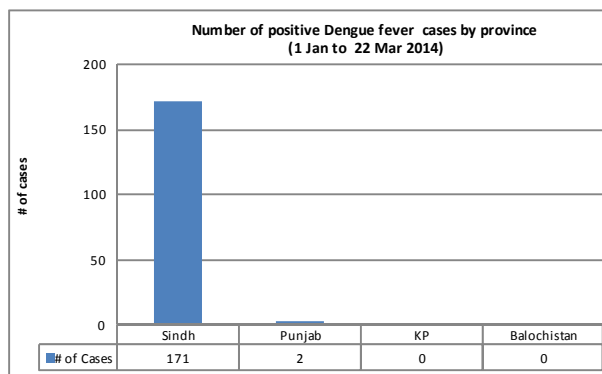


Major health events reported during the Epi-week - 12 (16 to 22 Mar 2014)

| Disease | # of Cases | Percentage |
|----------------------------------|------------------|------------|
| ARI | 225,039 | 22.02% |
| Bloody diarrhoea | 1,096 | <1.00% |
| Acute diarrhoea | 52,783 | 5.16% |
| S. Malaria | 33,394 | 3.27% |
| Skin Diseases | 29,003 | 2.84% |
| Unexplained fever | 23,104 | 2.26% |
| Total (All consultations) | 1,022,196 | |

From 1st January to 15th March 2014, a total of 173 lab confirmed Dengue fever cases were reported, out of them 171 positive cases were from Sindh province; while 2 positive cases were reported from Punjab province.

In year 2013 Dengue fever cases were reported from many less endemic areas. A huge outbreak was confronted in district Swat and increasing number of Dengue fever cases were reported from adjacent district also and cases were also reported from Gawadar and Kech districts in Balochistan province and Karachi in Sindh province.



Number of Outbreaks (Wk-12/2014):

| Date | Disease | Province | District | Area | <5M | >5M | <5F | >5F | Action Taken |
|--------|---------------|--------------------|----------|--|-----|-----|-----|-----|---|
| 18-Mar | Leishmaniasis | Balochistan | Lasbela | (RHC) winder, Tehsil Winder | 2 | 3 | 1 | 2 | 8 cases of CL were reported from HF. So far 25 cases have been reported from this area. Cases were presenting with P1 Lt arm, Pt 2 nose, Pt3 left leg, P4 on Back, P5 left arm, P6 left leg, Pt7 Cheek, Pt 8 Left leg. Injection Glucantime supplied by WHO. All information shared with DHO. |
| 21-Mar | Measles | Balochistan | Lasbela | Jam yousuf colony, UC Pathra, Tehsil HUB | 0 | 0 | 5 | 0 | 5 suspected cases of measles were reported from Jam Yousuf colony, UC Pathra. Symptomatic treatment and Vit-A drops were given to all the suspected cases. All the cases were found unvaccinated. All information shared with DHO and requested for the mop up activity in the area. |
| 21-Mar | Leishmaniasis | Khyber Pakhtunkhwa | Mardan | Village & UC Kohi Bermol, Tehsil Katlang, Mardan | 1 | 0 | 3 | 0 | 4 clinically suspected cases of Cutaneous Leishmaniasis were reported from UC Kohi Bermol. Required doses of Inj-Glucantime were placed in BHU Kohi Bermol for all the registered cases. RBM, PPHI were requested for vector control interventions in the area and surrounding. On the job training of health staff was conducted for Intralesional administration of Inj-Glucantime. Information shared with EDO-Health. |
| 20-Mar | Measles | Khyber Pakhtunkhwa | Swabi | Village Sandoa, UC Ghani Chathra, Gadoon, Swabi | 3 | 0 | 3 | 6 | Alert for suspected measles was received from UC Ghani Chathra of Swabi district. During active surveillance, one death and 12 suspected cases were identified in village Sandoa. Routine EPI vaccination status in the area was observed to low and most of the families were reluctant to administer routine vaccination to their children during outreach activities. Vitamin-A drops were given to all the suspected cases. EPI Swabi team was conducted outreach immunization in the areas and vaccinated more than 200 children for all antigens (BCG-4, Penta/PCV10/OPV-18, and Measles-179). On the job training of health staff conducted. Awareness session on importance of routine vaccination was conducted in the community. EDO-H Focal person and DSM PPHI were informed. |
| 17-Mar | H1N1 | Punjab | Multan | Multan City | 0 | 3 | 0 | 1 | 4 suspected cases of H1N1 Influenza reported from Nishter Hospital Multan. All cases had symptoms of fever, cough, respiratory distress and SOB. All cases were admitted to HDU and nasopharyngeal samples were collected from 3 cases as the fourth case was expired on the date of admission. Lab results are awaited. Cap. Oseltamivir were given to all the suspected the cases. 2 contacts reported mild ILI symptoms which are under surveillance. Health education sessions were conducted with hospital staff, attendants, family and community on hand washing and prevention from airborne infections. WHO has provided PPEs, surface disinfectants and hand sanitizers to Nishter hospital. |
| 20-Mar | Pertussis | Sindh | Matiari | UC Sekhat Village Wasoo Taluka Matiari | 0 | 0 | 5 | 0 | 2 suspected cases of Pertussis were reported from THQ Matiari. On field investigation, 3 more suspected cases were found which are already on antibiotics advised by the pediatrician. Samples were not collected as the cases have already started the antibiotics. Total 10 children were assessed for vaccination status, out of them 2 were found unvaccinated. Erythromycin were given to all the suspected cases. Health education imparted regarding the importance of routine immunization and timely treatment. Information shared with EDOH and DHO Matiari. |

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

| Disease | 2013 | | Current week 12, 2014 | | 2014 | |
|-------------------------|-------------|------------|-----------------------|----------|------------|-----------|
| | A | O | A | O | A | O |
| Acute watery diarrhoea | 142 | 40 | 0 | 0 | 14 | 1 |
| Acute jaundice syndrome | 49 | 6 | 1 | 0 | 3 | 0 |
| Bloody diarrhoea | 45 | 3 | 0 | 0 | 11 | 0 |
| CCHF | 90 | 47 | 2 | 0 | 6 | 0 |
| Dengue fever | 300 | 66 | 1 | 0 | 3 | 1 |
| Diphtheria | 84 | 19 | 0 | 0 | 19 | 3 |
| Measles | 3357 | 281 | 23 | 2 | 392 | 15 |
| Pertussis | 46 | 10 | 3 | 1 | 15 | 2 |
| NNT + tetanus | 349 | 0 | 7 | 0 | 102 | 0 |
| Malaria | 25 | 6 | 0 | 0 | 0 | 0 |
| Cutaneous Leishmaniasis | 621 | 51 | 16 | 0 | 169 | 4 |
| Others | 520 | 5 | 12 | 0 | 146 | 4 |
| Total | 5628 | 534 | 65 | 3 | 880 | 30 |

Figure-3: Number of alerts received and responded, week 9 to 12 2014

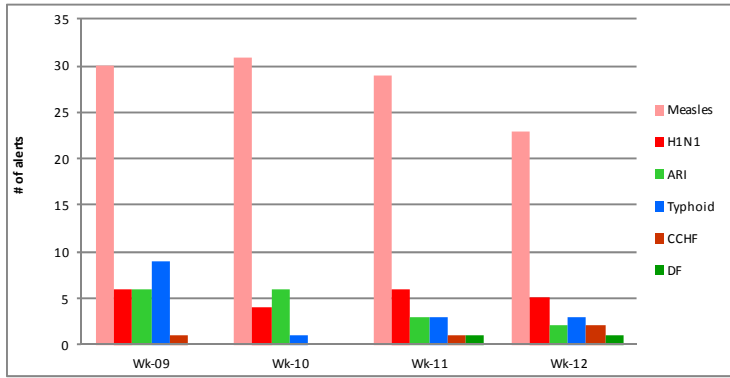
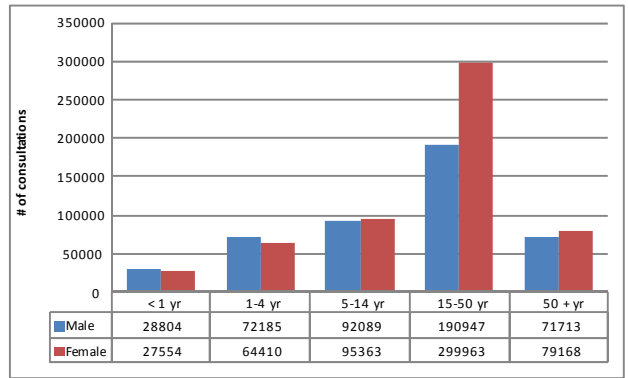
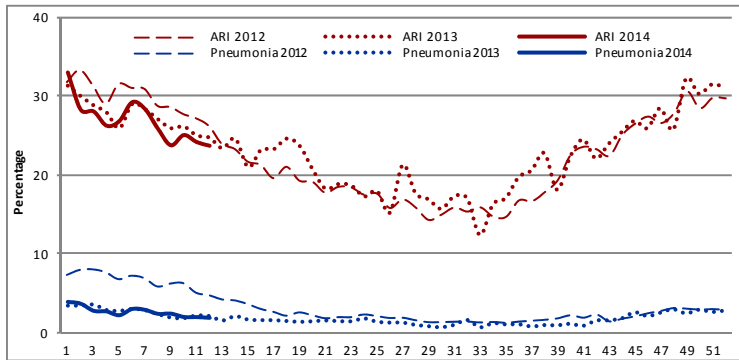


Figure-4: Number of consultations by age and gender, week 12, 2014



Province Khyber Pakhtunkhwa:

Figure-5: Weekly trend of ARI and Pneumonia, province Khyber Pakhtunkhwa



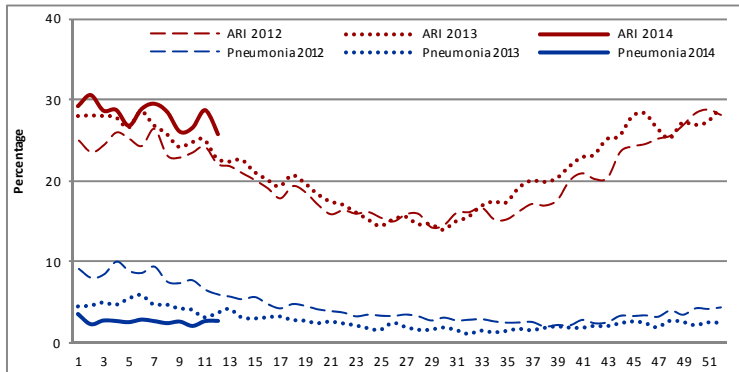
153 health facilities from 8 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 43,480 patients consultations reported in week 12, 2014.

A total of 15 alerts were reported and appropriate measures were taken. Altogether 11 alerts were for Measles; 2 for H1N1; while 1 each for CCHF and Leishmaniasis.

Figure-5 shows the weekly trend of ARI (showing decrease) and Pneumonia (showing stability) as compare with last three weeks.

Province Sindh:

Figure-6: Weekly trend of ARI and Pneumonia, province Sindh



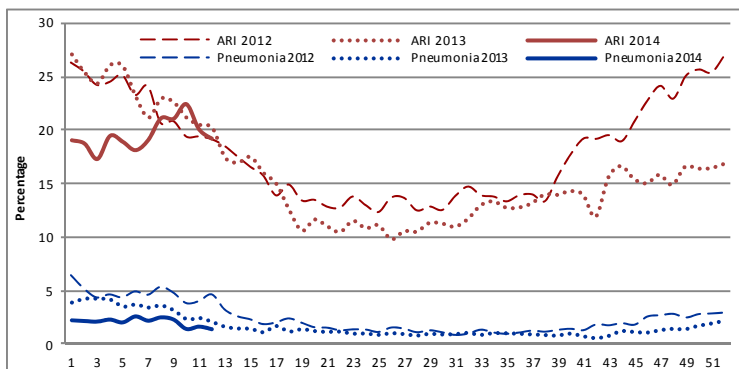
771 health facilities from 23 districts in Sindh province reported to DEWS with a total of 318,623 patient consultations in week 12, 2014.

A total of 18 alerts were received and appropriate measures were taken. Altogether 5 alerts were for Measles; 4 each for Leishmaniasis and NNT; 3 for Typhoid fever; while 2 for Pertussis.

The proportion of ARI for the province is showing decrease as compared with last week, but higher from the same time period last year; while Pneumonia also shows increase as compare with last week but low from the same time period last year.

Province Punjab:

Figure-7: Trend of ARI and Pneumonia, province Punjab



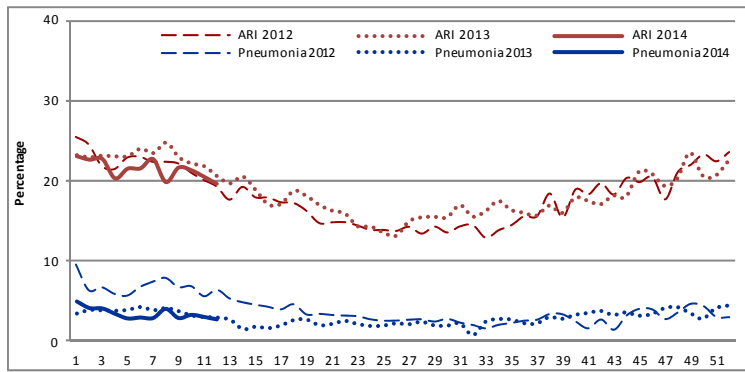
1,184 health facilities from 26 districts in Punjab province reported to DEWS with a total of 592,234 patients consultations in week 12, 2014.

Total 13 alerts were received and appropriate measures were taken. Altogether 3 alerts were for H1N1; 2 each for ARI and Measles; while 1 each for Acute diarrhoea, AJS, CCHF, Dengue fever, Pertussis and Scabies were responded in Punjab province.

The weekly trend of ARI in Punjab showing decrease as compared with last week; while Pneumonia trend also showing decrease as compared with last week.

Province Balochistan:

Figure-8: Weekly trend of ARI and Pneumonia, province Balochistan



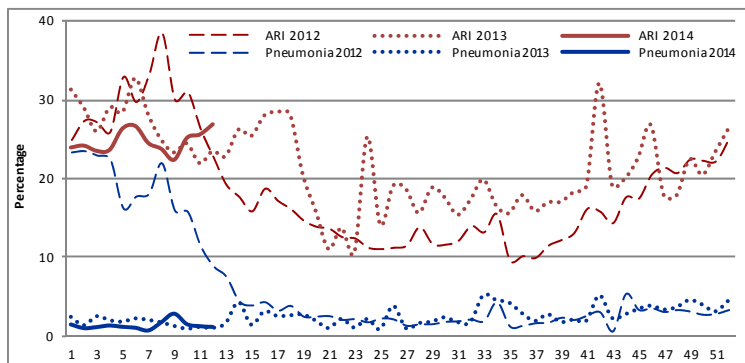
247 health facilities from 12 districts in Balochistan province reported to DEWS with a total of 41,048 patients consultations in week 12, 2014.

7 alerts were reported and appropriate measures were taken. Altogether 5 alerts were for Leishmaniasis; while 2 for Measles.

In this week the weekly proportion of ARI showing decrease as compared with last week; while Pneumonia also showing minor decrease as compared with last week.

FATA:

Figure-9: Weekly trend of ARI and Pneumonia, FATA



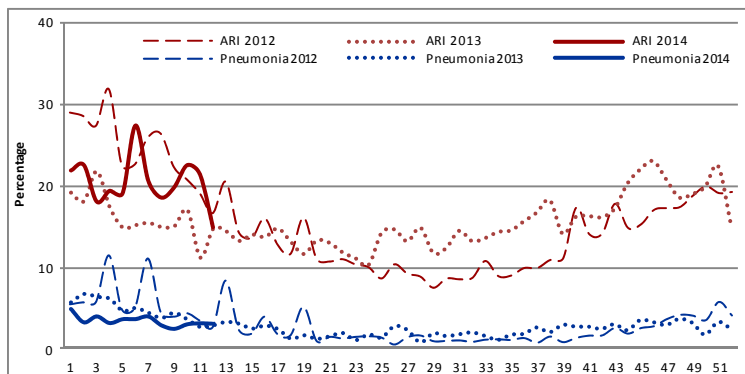
42 health facilities from 3 agencies in FATA reported to DEWS with a total of 11,489 patients consultations in week 12, 2014.

8 alerts were received and responded in FATA in week 12, 2014. Altogether 5 alerts were for Leishmaniasis; while 3 for NNT.

The proportion of ARI showing increase and higher from same time period last year, while Pneumonia shows minor decrease as compared with last week but high from same time period last year in FATA.

State of Azad Jammu and Kashmir:

Figure-10: Weekly trend of ARI and Pneumonia, AJ&K



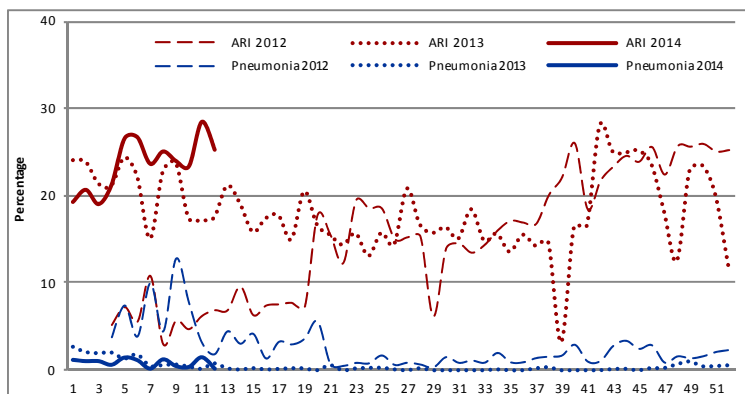
67 health facilities from 8 districts in AJ&K reported to DEWS with a total of 15,063 patients consultations in week 12, 2014.

4 alerts, 2 were for Measles; while 1 each for Leishmaniasis and Pertussis were reported from AJ&K in week 12, 2014 and appropriate measures were taken.

Weekly trend of ARI showing decrease as compared with last week; while Pneumonia showing increase as compare with last week; and vigilant monitoring of the situation is required.

Islamabad:

Figure-11: Weekly trend of ARI and Pneumonia, Islamabad



1 health facilities reported to DEWS on time with a total of 259 patients consultations in week 12, 2014.

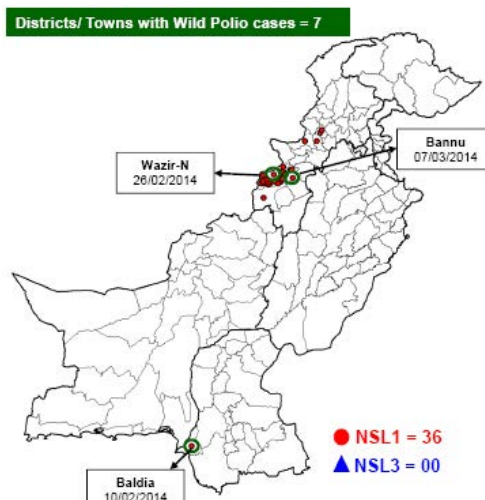
1 alert for Measles reported from Islamabad in week 12, 2014 and appropriate measures were taken.

Weekly trend of ARI and Pneumonia showing decrease as compared with last week; but vigilant monitoring of the situation is required.

Distribution of Wild Polio Virus cases in Pakistan 2013 and 2014

In this week 12 (16 to 22 Mar 2014), seven new wild type-1 polio cases were reported, two from Khyber Pakhtunkhwa (one each from Peshawar and Bannu districts) and five from Federally Administered Tribal Areas (North Waziristan Agency). This brings the total number of polio cases in 2014 to 36 (compared to 6 in 2013 till this time) from 7 districts/tribal agencies (compared to 6 in 2013 till this time).

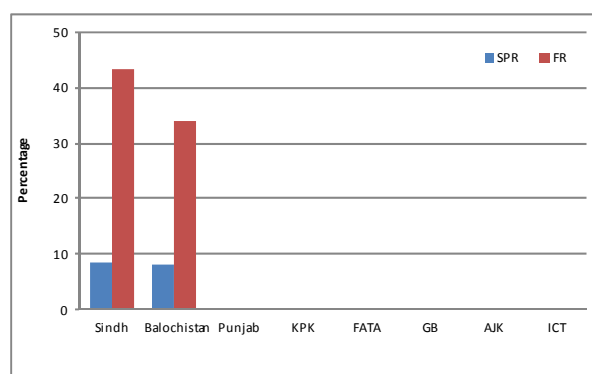
| Province | 2013 | | | 2014 | | |
|--------------------|-----------|----------|----------|-----------|----------|----------|
| | P1 | P3 | P1+P3 | P1 | P3 | P1+P3 |
| Punjab | 7 | - | - | - | - | - |
| Sindh | 10 | - | - | 1 | - | - |
| Khyber Pakhtunkhwa | 11 | - | - | 5 | - | - |
| FATA | 65 | - | - | 30 | - | - |
| Balochistan | - | - | - | - | - | - |
| AJ&K | - | - | - | - | - | - |
| Gilgit-Baltistan | - | - | - | - | - | - |
| Islamabad | - | - | - | - | - | - |
| Total | 93 | - | - | 36 | - | - |



Malaria:

The Table and chart at below shows the Malaria slide positivity and Falciparum ratio in week 12, 2014. Total number of Malaria cases tested in this week is 6,421 out of which 526 were found positive; 310 for P. Vivax; 61 for P. Falciparum; while 155 for Mixed (SPR = 8.19%; F.R = 41.06%).

| Malaria tests \ Province | Sindh | Balochistan | Punjab | KPK | FATA | AJK | GB | ICT |
|--------------------------|-------|-------------|--------|-----|------|-----|----|-----|
| P. Vivax | 229 | 81 | 0 | 0 | 0 | 0 | 0 | 0 |
| P. Falciparum | 22 | 39 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mixed | 152 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| # tested | 4876 | 1545 | 0 | 0 | 0 | 0 | 0 | 0 |
| SPR | 8.26 | 7.96 | 0 | 0 | 0 | 0 | 0 | 0 |
| FR | 43.18 | 34.15 | 0 | 0 | 0 | 0 | 0 | 0 |



Focus on: Influenza A (H1N1)

H1N1 influenza virus is the subtype of influenza A virus that was the most common cause of human influenza in 2009. When the unexpected number of cases with the Novel Influenza virus (H1N1) reported from many countries simultaneously, WHO declared the H1N1 Influenza A Pandemic 2009. Since the virus was detected in swine therefore the name swine flu was given initially however later on it was named to Influenza Pandemic H1N1 (2009). In August 2010 WHO declared the end of Pandemic (H1N1) 2009. The pandemic A(H1N1)2009 virus is now considered as a seasonal virus and endemic, continuing to circulate with other seasonal viruses with new nomenclature A(H1N1)pdm09 is currently used now.

H1N1 is contagious virus, and it spreads in the same way as the seasonal Influenza. Typical influenza symptoms include fever with abrupt onset, chills, sore throat, non-productive cough and, often accompanied by headache, coryza, myalgia and prostration. H1N1 influenza virus can lead to more serious complications, including pneumonia and respiratory failure.

H1N1 may also lead to fatal consequences during 3rd trimester in pregnant women, adults and children who have chronic lung, liver, blood, nervous system, neuromuscular, or metabolic problems, diabetes or asthma, or people who have suppressed immune systems (including those who take medications to suppress their immune systems or who have HIV). Throat or nasal swab would be required for the lab confirmation of the H1N1.

Current situation of H1N1 in Pakistan:

A comparative analysis of H1N1 cases reported through DEWS have been done for the years 2013 and 2014. In 2013 total 9 cases of H1N1 have been reported, (3 cases from Punjab and 6 cases from Khyber Pakhtunkhwa). However, in 2014 an increase in the number of Influenza cases have been noted in some parts of Punjab province in Pakistan in a month period.

Contd. : Influenza A (H1N1):

There are reports of critical illness and deaths in young and middle aged adults. So far, 37 suspected cases have been reported from Punjab where majority (15) of the cases reported from Multan whereas 6 cases from Khanewal and 3 each from DG Khan and Lahore, and 8 cases were reported from rest of Punjab province. One case from district Loralai (Balochistan province) was also reported from Nishter hospital. Multan, which was not survived and died o the date of admission. Out of these 37 cases, 21 cases were laboratory positive for H1N1, 9 cases reported as SARI, 2 for Hemophilus influenza and 2 for HIB. Results of one case with ILI are still awaited. 9 out of all the cases were died due to the severity of the disease CFR= 25%.

From Khyber Pakhtunkhwa province this year 14 suspected cases have been reported and 3 of these are found positive for H1N1 and 1 each positive for HIA and HIB respectively. Despite challenges, there is much that the public, patients, clinicians, and public health community can do now to reduce the influenza impact.

Precautionary measures:

Some general measures that would be prudent and helpful to prevent the acquisition of any respiratory illness are:

- Persons are more contagious during the first 3 to 4 days of illness, and infectiousness declines with fever resolution. Avoid close contact, when possible, with anyone who shows symptoms of illness (coughing and sneezing)
- Cover mouth and nose while coughs and sneezes; do not spit)
- Maintain good hand hygiene (Wash your hands with soap and water thoroughly and often).
- Practice good health habits including adequate sleep, eating nutritious food, and keeping physically active
- Keep windows and doors open and allow ventilation of the room as much as possible
- Hospitalized patients with influenza should be isolated or, if necessary, grouped together in the same room (cohorted) and standard & droplet precautions should be implemented.

Treatment:

Home Care:

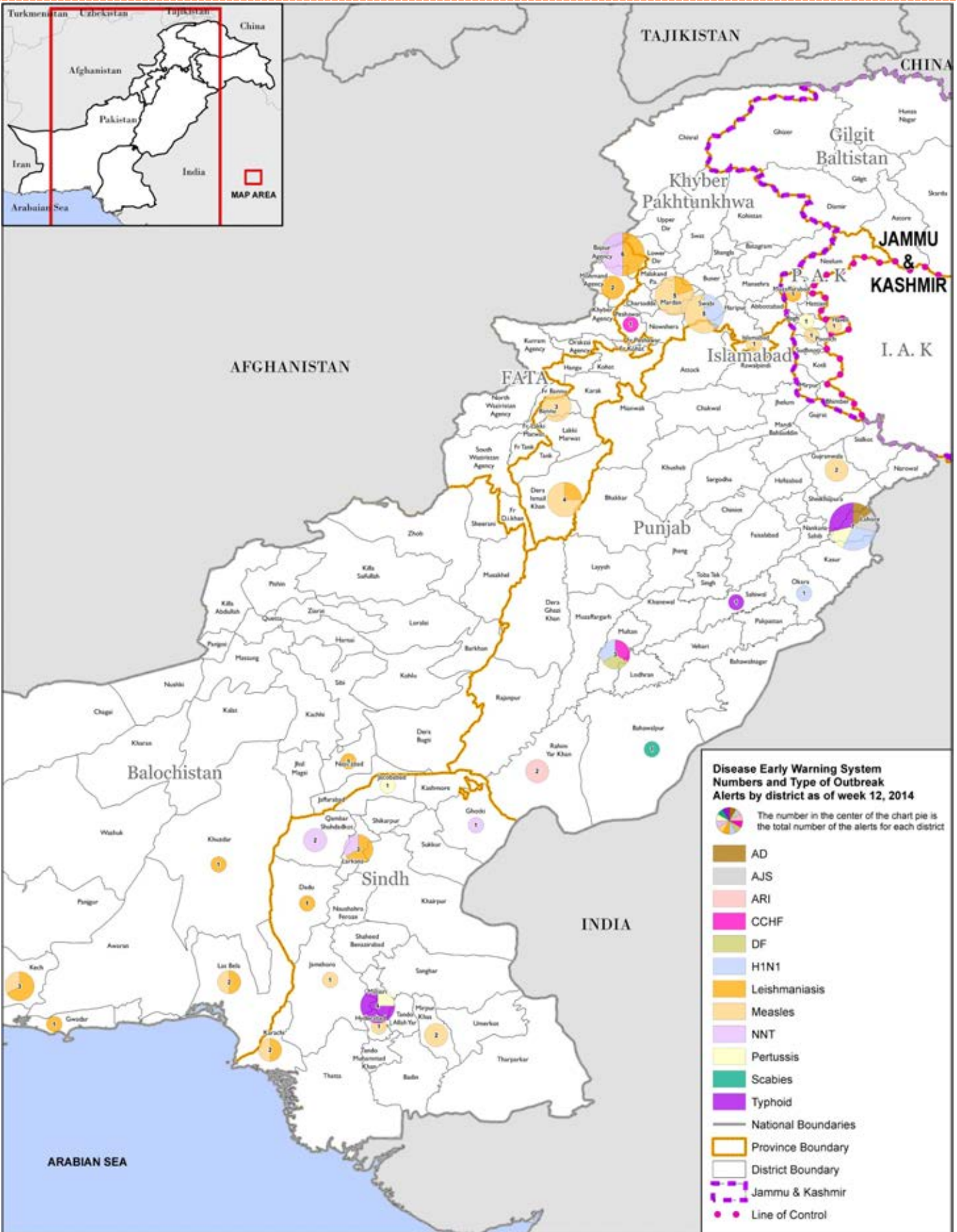
- Influenza patients staying at home away from contacts; take plenty of fluids, covering coughs and sneezes (do not spit) and washing hands frequently may help to reduce the spread. If soap and water are not available, use an alcohol-based hand sensitizer.
- Inform family and friends about your illness and try to avoid contact with people.
- Contact your doctor or healthcare provider and report your symptoms.
- Cover your nose and mouth during travel.

Hospital Care:

WHO's guidelines for use of antiviral medicines, which refer to both seasonal and pandemic influenza, should continue to be followed.

- Treatment with antivirals should be started within 48 hours after onset of illness for better clinical results.
- For hospitalized patients with suspected influenza H1N1, empirical antiviral treatment with oral or enteric Oseltamivir should be started as soon as possible with waiting lab results.
- For outpatients who are at higher risk for complications from influenza, neuraminidase inhibitor as soon as possible is also recommended.
- Patients who have severe or deteriorating influenza and patient who are at higher risk of severe or complicated influenza should be treated as soon as possible with Oseltamivir.

Alerts and outbreaks, week 12, 2014



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