



Weekly Epidemiological Bulletin

Disease early warning system and response in Pakistan

Volume 5, Issue 14, Wednesday 9 April 2014

Highlights

Epidemiological week no. 14
(30 Mar to 5 Apr 2014)

- **Dengue fever:** During this week, no Dengue fever lab confirmed cases have been reported from any province.
- In this week, **77** out of 87 districts and 2,448 out of 2,700 health facilities have reported to Disease Early Warning System (DEWS), compared to 82 districts with 2,592 health facilities shared weekly data in week 13, 2014 to the DEWS.
- Total **846,666** patients consultations reported in week 14, 2014 compare to **960,672** consultations in week 13, 2014.
- In this week, a total of 72 alerts generated and timely responded. Altogether 29 alerts were for Measles; 21 for Leishmaniasis; 4 each for H1N1 and Typhoid fever; while 1 each for Acute diarrhoea, AJS, ARI, Bloody diarrhoea, Diphtheria, Meningitis, Pertussis and Scabies.
- 5 outbreaks were identified and timely responded.

Figure-1: 77 out of 87 districts reported to DEWS in week 14, 2014



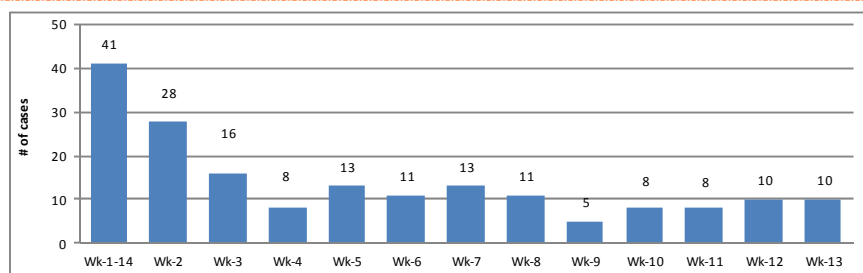
Priority diseases under surveillance in DEWS

- 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 14, 2014 (29 Dec 2013 to 5 Apr 2014)

| Disease | # of Cases | Percentage |
|----------------------------------|-------------------|-------------|
| ARI | 2,892,285 | 22.99% |
| Bloody diarrhoea | 12,086 | <1.00% |
| Acute diarrhoea | 586,830 | 4.66% |
| S. Malaria | 256,307 | 2.83% |
| Skin Diseases | 373,136 | 2.97% |
| Unexplained fever | 334,052 | 2.65% |
| Total (All consultations) | 12,582,023 | 100% |

Figure-2: Number of Dengue fever positive cases in Pakistan, Week 1 to week 14-2014

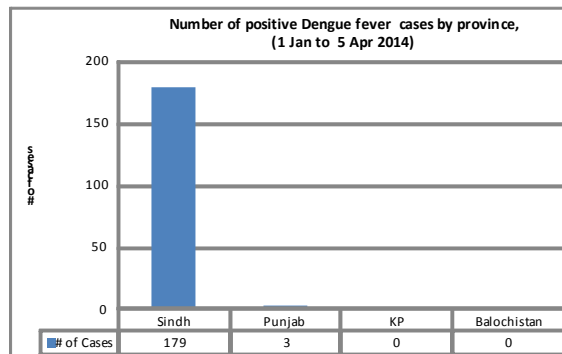


Major health events reported during the Epi-week - 13 (23 to 29 Mar 2014)

| Disease | # of Cases | Percentage |
|----------------------------------|----------------|-------------|
| ARI | 174,219 | 20.58% |
| Bloody diarrhoea | 890 | <1.00% |
| Acute diarrhoea | 49,747 | 5.88% |
| S. Malaria | 24,642 | 2.91% |
| Skin Diseases | 25,041 | 2.96% |
| Unexplained fever | 23,544 | 2.78% |
| Total (All consultations) | 846,666 | 100% |

From 1st January to 5th April 2014, a total of 182 lab confirmed Dengue fever cases were reported, out of them 179 positive cases were from Sindh province; while 3 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-14/2014):

| Date | Disease | Province | District | Area | <5M | >5M | <5F | >5F | Action Taken |
|-------|---------------|----------|-----------|--|-----|-----|-----|-----|--|
| 2-Apr | Leishmaniasis | Punjab | Chakwal | RHC Dumman | 13 | 33 | 12 | 37 | 95 cases of cutaneous Leishmaniasis were reported from RHC Dumman. All the cases had history of infection for 6-12 months. The cases went to local HCPs and tried antibiotic ointments but could not be cured. Most cases did not have any recent travel history. Health education sessions were conducted with families and in the community. Injection Glucantime were provided to nearby health facility and treatment of the cases has been started. |
| 3-Apr | Leishmaniasis | Punjab | Multan | Chungi # 22, Daulat gate, Bohar gate, Lakar Mandi, Bhutta colony, Grass Mandi, Wilayat abad, Multan; Jalalpur Peer Wala, Qasba Maral District Multan | 1 | 14 | 1 | 6 | 20 cases of cutaneous Leishmaniasis were reported from Civil Hospital Multan. On active surveillance 2 more cases were identified and referred to Civil Hospital. All the cases had history of infection for 3 months or more. The cases went to local HCPs and tried antibiotic ointments but could not be cured. Vector surveillance activity has been started in the affected areas. Health education sessions were conducted with families and in the community. Injection Glucantime were provided to Civil Hospital and treatment of the cases has been started. New foci of infection were identified in other parts of Multan district at Tehsil Jalal pur pirwala Wala and Qasba Maral. Active surveillance is also being conducted in the area and surroundings. Information shared with EDOH. |
| 2-Apr | Measles | Sindh | Jacobabad | village nazar mohammad banglani u/c bachro talka thul. | 1 | 2 | 2 | 2 | Suspected case of Measles was reported from BHU Bachro. During field investigation 6 more cases were identified. All the suspected cases were found Measles-1 vaccinated. 2 blood samples were collected and sent to laboratory confirmation. Vitamin (A) dose were given to all the suspected cases. Health education session imparted. Vaccination status of 20 children were assessed. Measles-1=(12), Measles-2=(2). Information shared with DHO. |
| 3-Apr | Measles | Sindh | Jacobabad | village nazar mohammad panhyar u/c nawra 2 talka jacobabad district jacobabad. | 3 | 4 | 3 | 7 | Suspected case of Measles was reported from BHU Mouladad, district Jacobabad. During field investigation 16 more cases were identified. 4 blood samples were collected and sent for laboratory confirmation. Vitamin (A) dose was given to all the suspected cases. Health education session imparted. Vaccination status of 20 children were assessed. Measles-1=(12), Measles-2=(2). Information shared with DHO. |
| 2-Apr | Measles | Sindh | Thatta | Haji Omar Gandhro village and Khipri village, UC Sondha,Thatta | 29 | 12 | 32 | 12 | Deaths due to suspected Measles were reported from village Haji Omar Gandhro, district Thatta. During filed investigation out of 4 deaths, 3 were due to Measles and one was due to malnutrition /diarrhea. Total 85 cases were identified in the area. Vitamin-A supplementation done and health awareness session conducted in the village. A mop up activity was conducted in the area on 15th March. DHO was requested to send a team to vaccinate the children who were still unvaccinated and cater their medical needs as well as there were children in Measles complications like conjunctivitis, etc. Information shared with DHO and follow up of the area is planned. |

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

| Disease | 2013 | | Current week 14, 2014 | | 2014 | |
|-------------------------|-------------|------------|-----------------------|----------|-------------|-----------|
| | A | O | A | O | A | O |
| Acute watery diarrhoea | 142 | 40 | 0 | 0 | 14 | 1 |
| Acute jaundice syndrome | 49 | 6 | 1 | 0 | 6 | 0 |
| Bloody diarrhoea | 45 | 3 | 1 | 0 | 13 | 0 |
| CCHF | 90 | 47 | 0 | 0 | 6 | 0 |
| Dengue fever | 300 | 66 | 0 | 0 | 3 | 0 |
| Diphtheria | 84 | 19 | 1 | 0 | 21 | 3 |
| Measles | 3357 | 281 | 29 | 3 | 441 | 19 |
| Pertussis | 46 | 10 | 1 | 0 | 18 | 2 |
| NNT + tetanus | 349 | 0 | 6 | 0 | 110 | 0 |
| Malaria | 25 | 6 | 0 | 0 | 0 | 0 |
| Cutaneous Leishmaniasis | 621 | 51 | 21 | 2 | 209 | 9 |
| Others | 520 | 5 | 12 | 0 | 168 | 5 |
| Total | 5628 | 534 | 72 | 5 | 1009 | 39 |

Figure-3: Number of alerts received and responded, week 11 to 14 2014

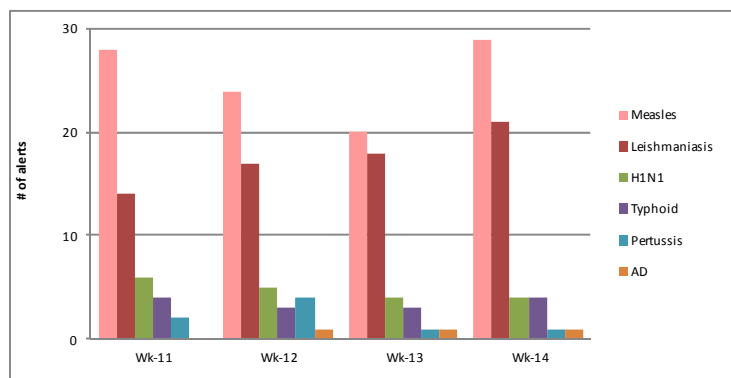
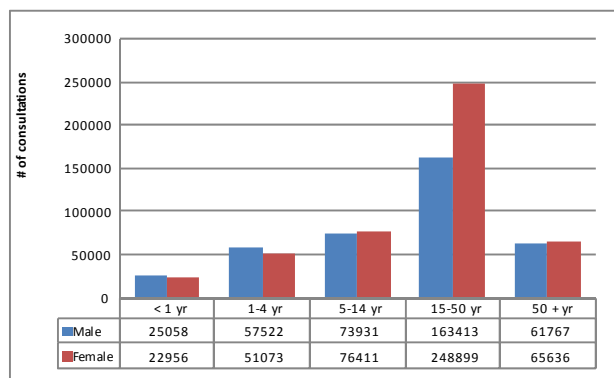
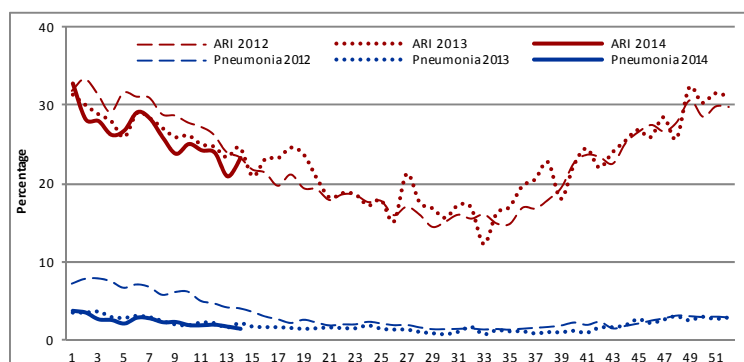


Figure-4: Number of consultations by age and gender, week 14, 2014



Province Khyber Pakhtunkhwa:

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

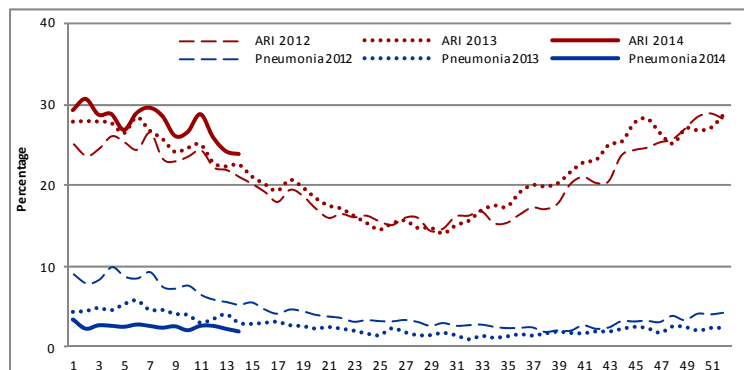


151 health facilities from 8 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 36,743 patients consultations reported in week 14, 2014.

A total of 14 alerts were reported and appropriate measures were taken. Altogether 12 alerts were for Measles; while 1 each for Diphtheria and Leishmaniasis. Figure-5 shows the weekly trend of ARI (showing increase) and Pneumonia (showing decrease) as compare with last week.

Province Sindh:

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



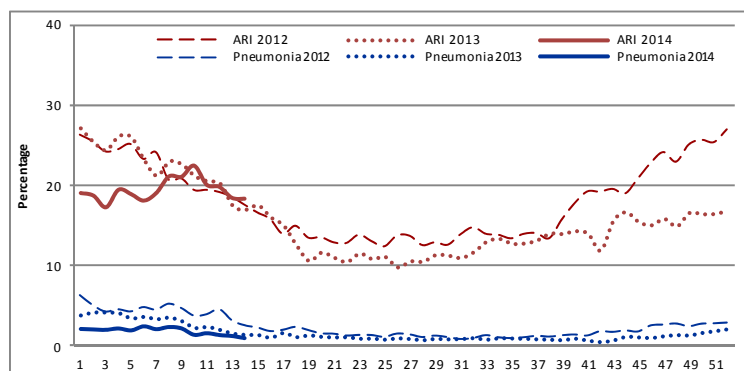
797 health facilities from 23 districts in Sindh province reported to DEWS with a total of 218,487 patient consultations in week 14, 2014.

A total of 21 alerts were received and appropriate measures were taken. Altogether 14 alerts were for Measles; 5 for Leishmaniasis; while 1 each for NNT and 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 shows minor decrease as compare with last week and low from the same time period last year.

Province Punjab:

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



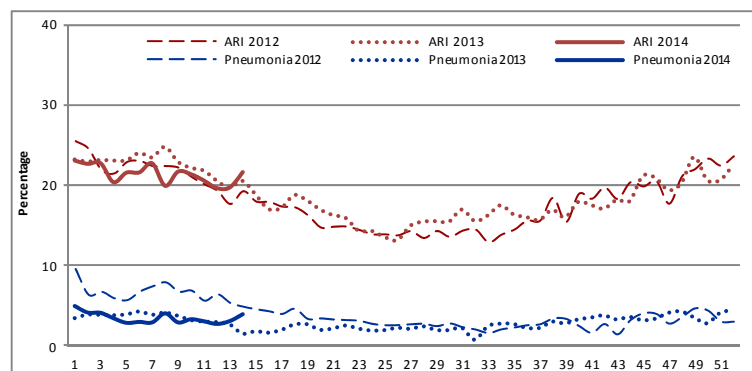
1,203 health facilities from 26 districts in Punjab province reported to DEWS with a total of 542,288 patients consultations in week 14, 2014.

Total 18 alerts were received and appropriate measures were taken. Altogether 4 alerts each were for H1N1 and Typhoid fever; 2 each for Leishmaniasis and NNT; while 1 each for Bloody diarrhoea, AJS, ARI, Measles, Meningitis 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



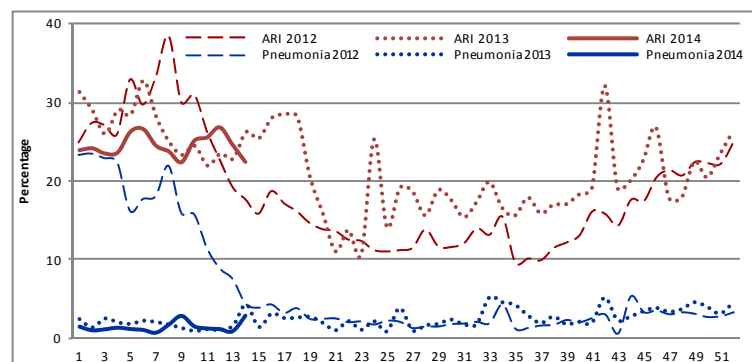
193 health facilities from 9 districts in Balochistan province reported to DEWS with a total of 30,769 patients consultations in week 14, 2014.

5 alerts were reported and appropriate measures were taken. Altogether 4 alerts were for Leishmaniasis; while 1 for Measles.

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

FATA:

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



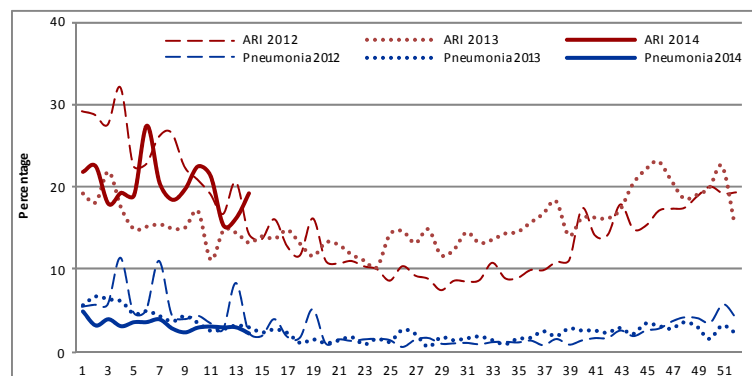
23 health facilities from 2 agencies in FATA reported to DEWS with a total of 5,963 patients consultations in week 14, 2014.

9 alerts were received and responded in FATA in week 14, 2014. Altogether 6 alerts were for Leishmaniasis; while 3 for NNT.

The proportion of ARI showing decrease, while Pneumonia shows increase as compared with last week.

State of Azad Jammu and Kashmir:

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



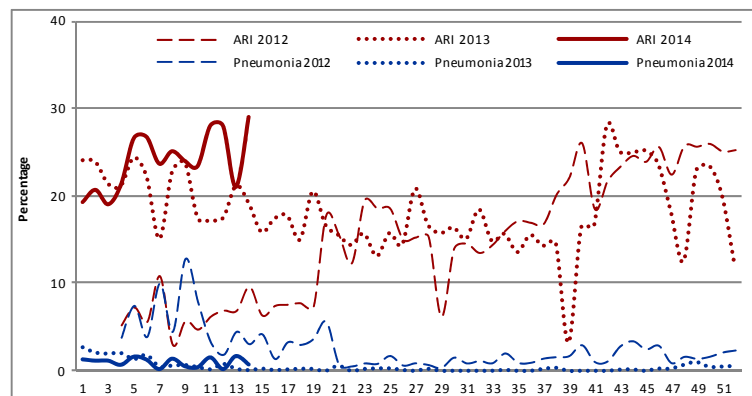
76 health facilities from 8 districts in AJ&K reported to DEWS with a total of 11,565 patients consultations in week 14, 2014.

5 alerts, 3 were for Leishmaniasis; while 1 each for Acute diarrhoea and Measles were reported from AJ&K in week 14, 2014 and appropriate measures were taken.

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

Islamabad:

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



5 health facilities reported to DEWS on time with a total of 851 patients consultations in week 14, 2014.

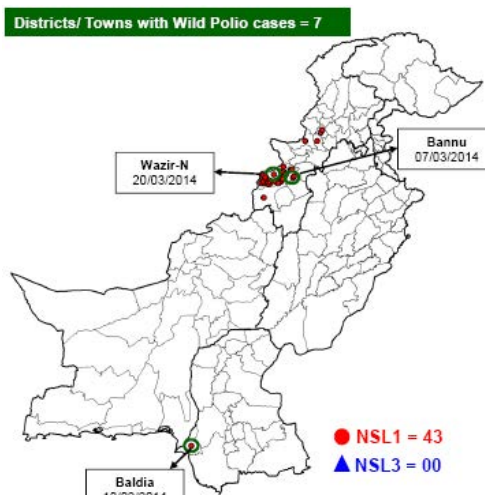
No alert for any disease was reported from Islamabad in week 14, 2014.

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

Distribution of Wild Polio Virus cases in Pakistan 2013 and 2014

In this week 14 (30 Mar to 5 Apr 2014), four new wild type-1 polio cases were reported, three from Federally Administered Tribal Areas (North Waziristan Agency) and one from Khyber Pakhtunkhwa (Bannu district). This brings the total number of polio cases in 2014 to 43 (compared to 6 in 2013 till this time) from 7 districts/towns/tribal agencies/FR areas (compared to 6 in 2013 till this time).

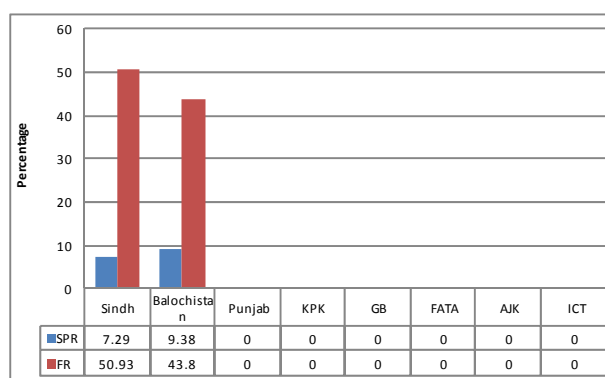
| Province | 2013 | | | 2014 | | |
|--------------------|-----------|----------|----------|-----------|----------|----------|
| | P1 | P3 | P1+P3 | P1 | P3 | P1+P3 |
| Punjab | 7 | - | - | - | - | - |
| Sindh | 10 | - | - | 1 | - | - |
| Khyber Pakhtunkhwa | 11 | - | - | 6 | - | - |
| FATA | 65 | - | - | 36 | - | - |
| Balochistan | - | - | - | - | - | - |
| AJ&K | - | - | - | - | - | - |
| Gilgit-Baltistan | - | - | - | - | - | - |
| Islamabad | - | - | - | - | - | - |
| Total | 93 | - | - | 43 | - | - |



Malaria:

The Table and chart at below shows the Malaria slide positivity and Falciparum ratio in week 14, 2014. Total number of Malaria cases tested in this week is 4,421 out of which 183 were found positive; 68 for P. Vivax; 46 for P. Falciparum; while 102 for Mixed (SPR = 9.98%; F.R = 48.16%).

| Malaria tests \ Province | Sindh | Balochistan | KPK | Punjab | GB | FATA | AJK | ICT |
|--------------------------|-------|-------------|-----|--------|----|------|-----|-----|
| P. Vivax | 106 | 77 | 0 | 0 | 0 | 0 | 0 | 0 |
| P. Falciparum | 10 | 58 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mixed | 100 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| # tested | 2961 | 1460 | 0 | 0 | 0 | 0 | 0 | 0 |
| SPR | 7.29 | 9.38 | 0 | 0 | 0 | 0 | 0 | 0 |
| FR | 50.93 | 43.8 | 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:

From 1st January to 5th April 2014, a total of 64 suspected cases of H1N1 and SARI were reported in the country, while an increase in the number of Influenza cases have been noted in southern parts of the Punjab province.

Contd. : Influenza A (H1N1):

There are reports of critical illness and deaths in young and middle aged adults. So far, 51 suspected cases have been reported from Punjab where majority (18) of the cases reported from Multan whereas 9 cases from Lahore, 6 from Khanewal, 3 from DG Khan, and 15 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 on the date of admission. Out of these 51 cases, 23 cases were laboratory confirmed for H1N1. 11 out of all the lab confirmed cases were died due to the severity of the disease (CFR= 47.82%).

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 H1A and H1B respectively. There is much that the public, patients, clinicians, and public health community can do 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:

- Infected 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:

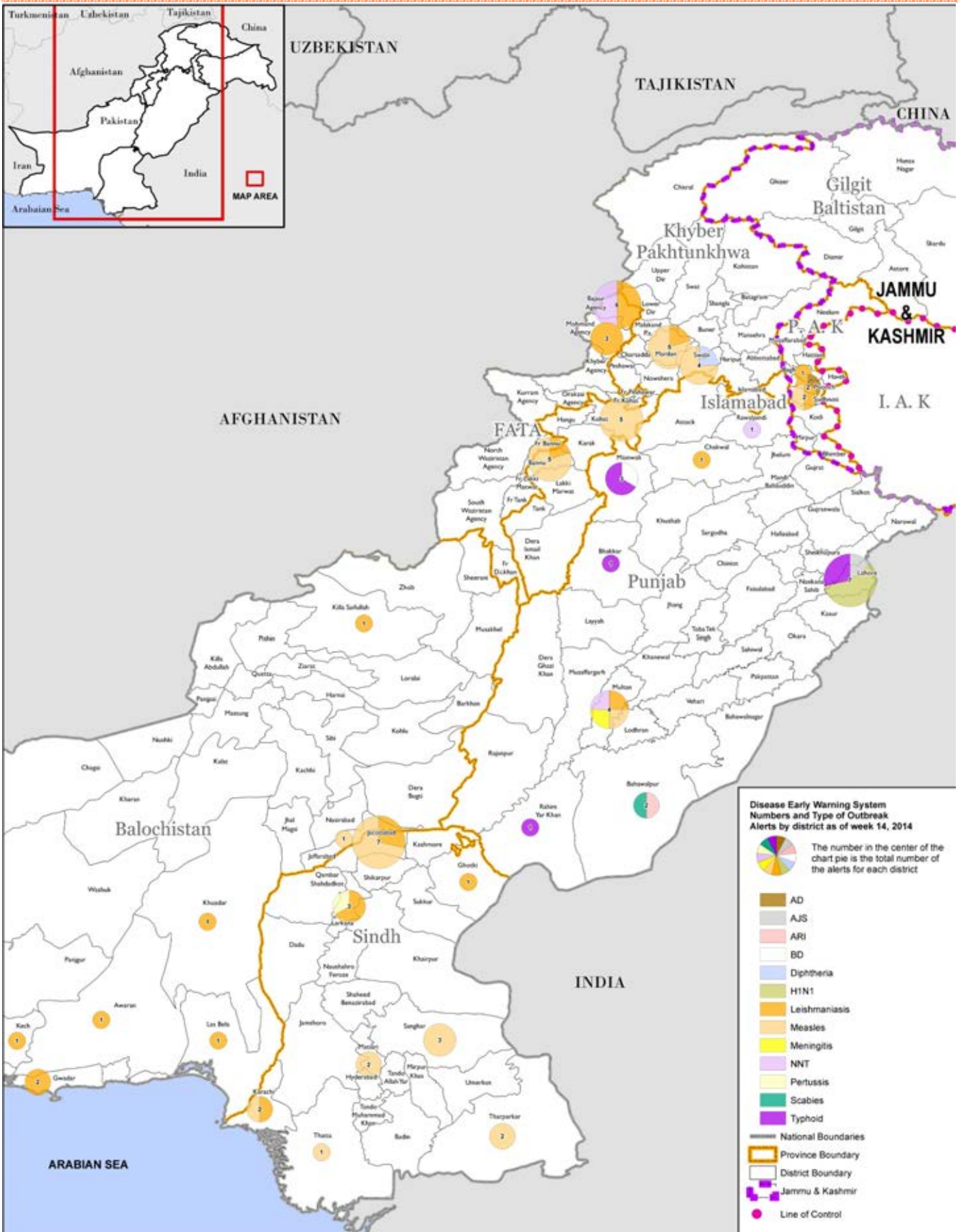
- Influenza patients staying at home away from contacts; take plenty of fluids, covering coughs and sneezes (do not spit) and washing hands frequently may help to reduce the spread. If soap and water are not available, use a hand sanitizer.
- Inform family and friends about your illness and try to avoid 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 antiviral 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 14, 2014



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