Weekly Epidemiological *Bulletin*

Disease early warning system and response in Pakistan

Volume 5, Issue 17, Wednesday 30 April 2014

Highlights

Epidemiological week no. 16
(20 to 26 Apr 2014)

- **Dengue fever:** During this week, no Dengue fever lab confirmed cases have been reported from any province.
- In this week, **73** out of 87 districts and 2,420 out of 2,700 health facilities have reported to Disease Early Warning System (DEWS), compared to 76 districts with 2,436 health facilities shared weekly data in week 16, 2014 to the DEWS.
- Total **950,714** patients consultations reported in week 17, 2014 as compared to **928,030** consultations in week 16, 2014.
- In this week, a total of 46 alerts generated and timely responded. Altogether 17 alerts were for Measles; 9 for Leishmaniasis; 7 for NNT; 4 for Acute diarrhoea; 3 for Scabies; 2 for Typhoid fever; while 1 each for AWD, BD, CCHF and H1N1.
- 2 outbreaks were also identified and timely responded.

Figure-1: 73 out of 87 districts reported to DEWS in week 17, 2014

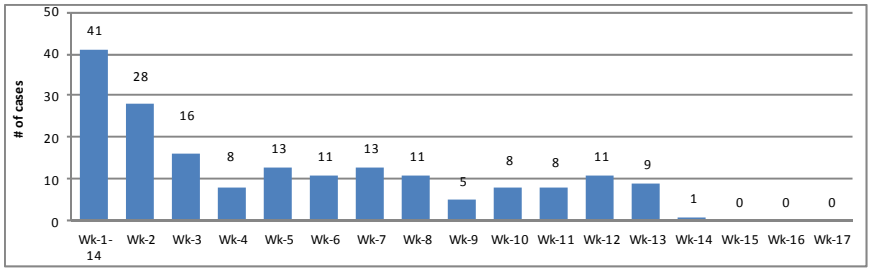
Priority diseases under surveillance in DEWS

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 17, 2014 (29 Dec 2013 to 26 Apr 2014)

Disease	# of Cases	Percentage
ARI	3,447,952	22.21%
Bloody diarrhoea	14,870	<1.00%
Acute diarrhoea	788,149	5.08%
S. Malaria	439,716	2.83%
Skin Diseases	457,739	2.95%
Unexplained fever	408,328	2.63%
Total (All consultations)	15,527,719	100%

Figure-2: Number of Dengue fever positive cases in Pakistan, Week 1 to week 17-2014



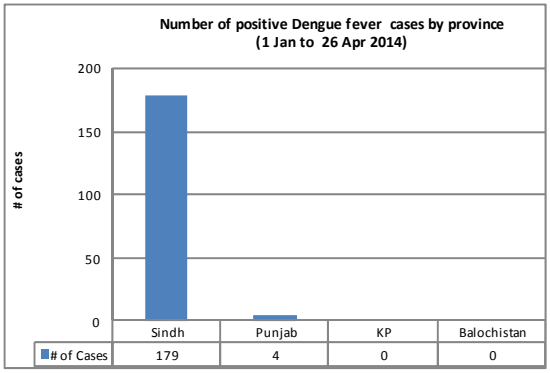
Major health events reported during the Epi-week - 17 (20 to 26 Apr 2014)

Disease	# of Cases	Percentage
ARI	169,055	17.78%
Bloody diarrhoea	883	<1.00%
Acute diarrhoea	69,445	7.30%
S. Malaria	26,622	2.80%
Skin Diseases	26,707	2.81%
Unexplained fever	23,844	2.51%
Total (All consultations)	950,714	100%

From 1st January to 26th April 2014, a total of 183 lab confirmed Dengue fever cases were reported, out of them 179 positive cases were from Sindh province; while 4 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 positive Dengue fever cases by province (1 Jan to 26 Apr 2014)



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Number of Outbreaks (Wk-17/2014):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
26-Apr	Leishmaniasis	Balochistan	Las Bela	(RHC) winder, Tehsil Winder	0	2	0	2	4 cases of Cutaneous Leishmaniasis were reported in continuation from RHC, Tehsil Winder, district Las Bela. So far for the year 2014, a total of 45 cases have been reported. None of the cases had travel history. Cases found with lesions mostly on foot. No more cases identified during active surveillance. Symptomatic treatment were provided from the Treatment Centre.
25-Apr	Measles	Balochistan	Quetta	Killi Ramzan, Spini Road	1	2	1	2	An alert of suspected Measles cases was reported from BMC hospital. During investigation 6 suspected Measles cases belonging to one family were found with sufferings as fever, conjunctivitis, cough and rashes. All the suspected cases were provided symptomatic treatment. All the cases were found vaccinated only against BCG and Polio. Awareness session was given to the community regarding the importance and benefits of routine immunization. 3 blood samples were collected and sent to NIH for laboratory confirmation. Information shared with DoH and EPI team and requested to send vaccination team in the area to assess the immunization status of children of less than 5 years and further immunization.
25-Apr	Leishmaniasis	Khyber Pakhtunkhwa	Mardan	Village Liyasey, Kharki, UC Kharki, Mardan	3	2	2	3	10 clinical cases of Cutaneous Leishmaniasis were reported from BHU Baizo Kharki. WHO supplied required doses of Injection Glucantime to KPH Mardan for all registered cases. RBM, KPH were requested for vector control interventions in the areas and surrounding. On the job training of health staff was conducted for Intralesional administration of Injection Glucantime. Information shared with EDO Health and focal person.
22-Apr	Leishmaniasis	Punjab	Mianwali	RHC Kamar Mashani	2	3	4	2	11 cases of Cutaneous Leishmaniasis were reported from UC Kamar. Vector surveillance activity has been conducted in the affected areas and IRS was conducted in affected households. Health education sessions were conducted in the community. All the patients were referred to Kalabagh for treatment.
23-Apr	Leishmaniasis	Punjab	Multan	Timber Market, Dehli Gate, Bohar Gate, Bosan Road, Multan	0	15	1	5	21 clinical cases of Cutaneous Leishmaniasis were reported from Civil Hospital, Multan. 8 cases were reported from old walled city areas, 4 cases from Timber Market area, and 2 cases were reported from Bosan Road area. Vector surveillance activities have been conducted in the affected areas and IRS conducted in affected households. Health education sessions were conducted in the community. Injection Glucantime were also provided to Civil Hospital and treatment of the cases has been started.

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

Disease	2013		Current week 17, 2014		2014	
	A	O	A	O	A	O
Acute watery diarrhoea	142	40	1	0	17	2
Acute jaundice syndrome	49	6	0	0	9	1
Bloody diarrhoea	45	3	1	0	14	0
CCHF	90	47	1	0	7	0
Dengue fever	300	66	0	0	4	0
Diphtheria	84	19	0	0	23	3
Measles	3357	281	17	1	505	20
Pertussis	46	10	0	0	19	2
NNT + tetanus	349	0	7	0	123	0
Malaria	25	6	0	0	0	0
Cutaneous Leishmaniasis	621	51	9	1	234	11
Others	520	5	10	0	193	5
Total	5628	534	46	2	1148	44

Figure-3: Number of alerts received and responded, week 14 to 17 2014

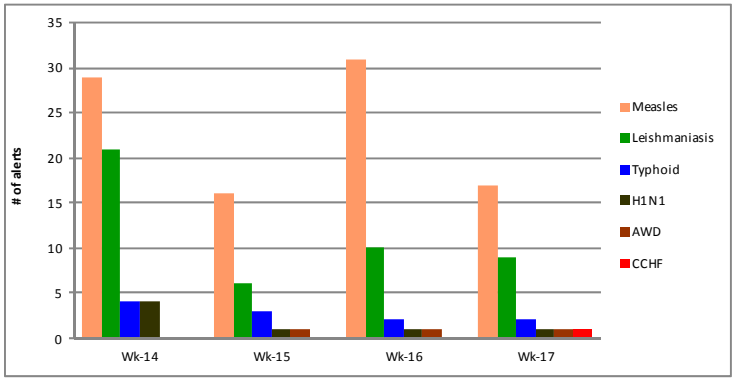
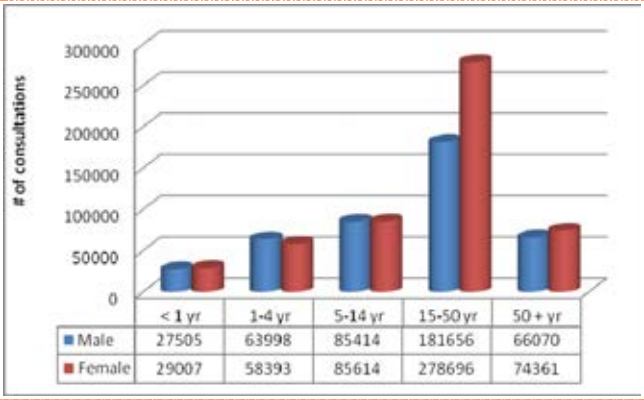


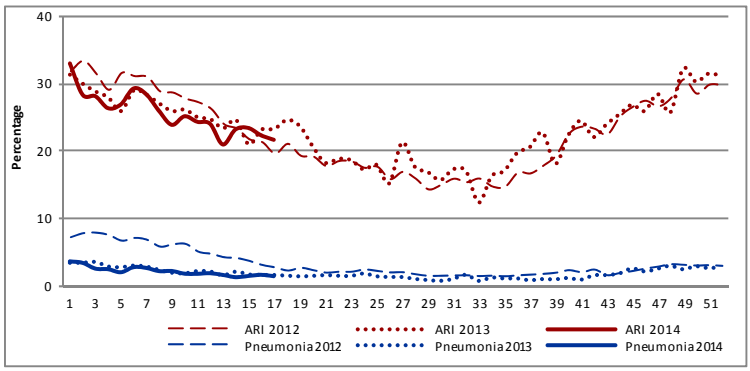
Figure-4: Number of consultations by age and gender, week 17, 2014



	< 1 yr	1-4 yr	5-14 yr	15-50 yr	50 + yr
Male	27505	63998	85414	181656	66070
Female	29007	58393	85614	278696	74361

Province Khyber Pakhtunkhwa:

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



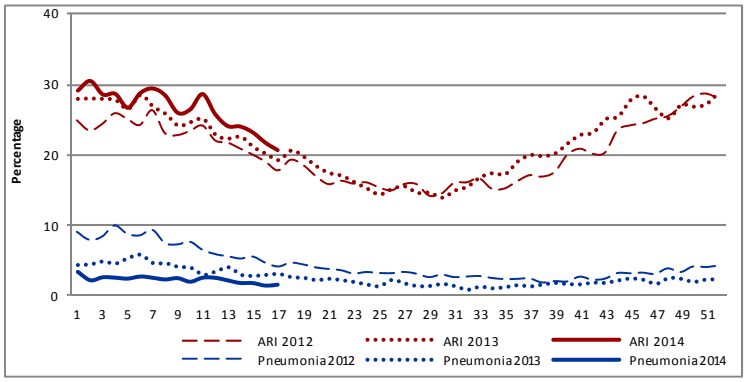
122 health facilities from 8 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 33,330 patients consultations reported in week 17, 2014.

A total of 2 alerts, 1 each for CCHF and Measles were reported and appropriate measures were taken.

Figure-5 shows the weekly trend of ARI (showing decrease) and Pneumonia (showing Stability) as compared with last week.

Province Sindh:

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



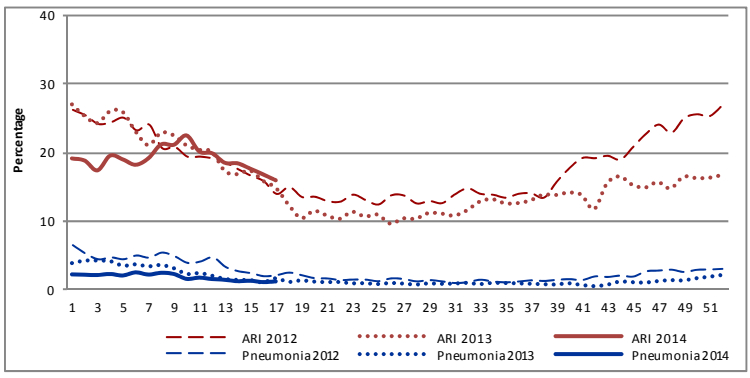
823 health facilities from 23 districts in Sindh province reported to DEWS with a total of 253,571 patient consultations in week 17, 2014.

A total of 16 alerts were received and appropriate measures were taken. Altogether 9 alerts were for Measles; 3 each for Leishmaniasis and NNT; while 1 for AWD.

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 increase as compared with last week but low from the same time period last year.

Province Punjab:

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



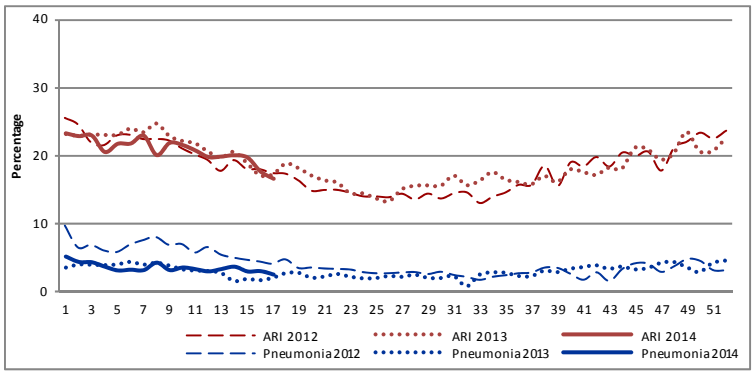
1,184 health facilities from 25 districts in Punjab province reported to DEWS with a total of 612,456 patients consultations in week 17, 2014.

Total 17 alerts were received and appropriate measures were taken. Altogether 4 alerts were for Acute diarrhoea; 3 each for NNT and Scabies; 2 each for Typhoid fever and Leishmaniasis; while 1 each for Bloody diarrhoea, H1N1 and Measles were responded in Punjab province.

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

Province Balochistan:

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



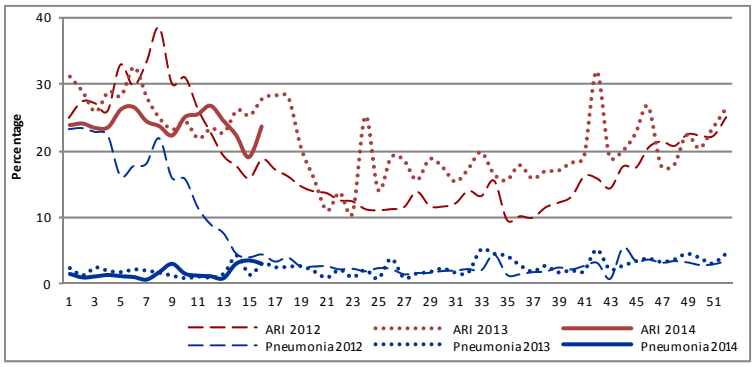
218 health facilities from 8 districts in Balochistan province reported to DEWS with a total of 37,475 patients consultations in week 17, 2014.

7 alerts were reported and appropriate measures were taken. Altogether 6 alerts were for Measles; while 1 for Leishmaniasis.

In this week the weekly proportion of ARI showing decrease 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



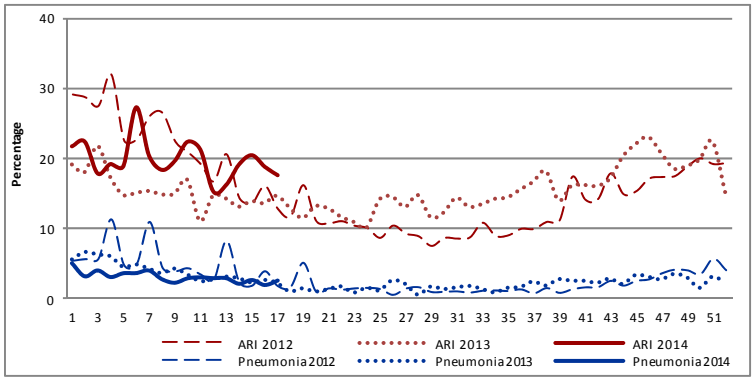
19 health facilities from 2 agencies in FATA reported to DEWS with a total of 4,793 patients consultations in week 16, 2014.

4 alerts were received and responded in FATA in week 16, 2014. Altogether 2 alerts were for Leishmaniasis; while 1 each for Measles and NNT.

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

State of Azad Jammu and Kashmir:

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



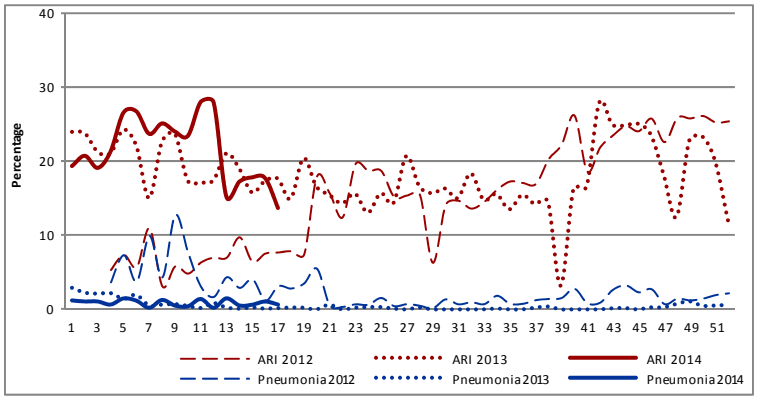
69 health facilities from 8 districts in AJ&K reported to DEWS with a total of 12,544 patients consultations in week 17, 2013.

No alert for any disease was reported from AJ&K in week 17, 2014.

Weekly trend of ARI showing decrease as compared with last week but higher from same time period last year; and vigilant monitoring of the situation is required; while Pneumonia also shows minor increase as compared with last year.

Islamabad:

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



4 health facilities reported to DEWS on time with a total of 1,338 patients consultations in week 18, 2014.

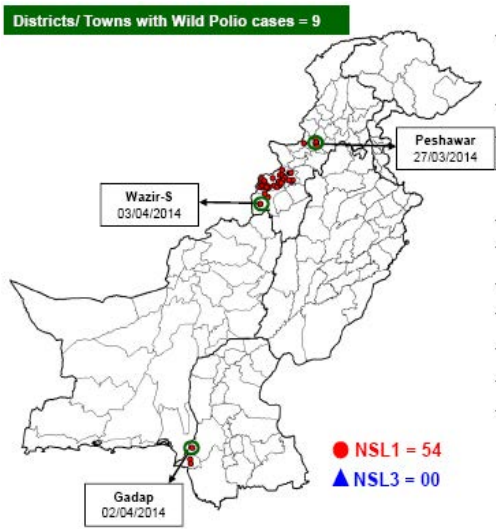
No alert for any disease was reported from Islamabad in week 17, 2014.

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

Distribution of Wild Polio Virus cases in Pakistan 2013 and 2014

In this week 17 (20 to 26 Apr 2014), five new type-1 wild polio cases have been reported in the country, four from Federally Administered Tribal Areas (three from North Waziristan and one from South Waziristan agency) and one from Sindh (Gadap Town Karachi). This brings the total number of polio cases in 2014 to 54 (compared to 8 in 2013 till this time) from 9 districts/towns/tribal agencies/FR areas (compared to 7 in 2013 till this time).

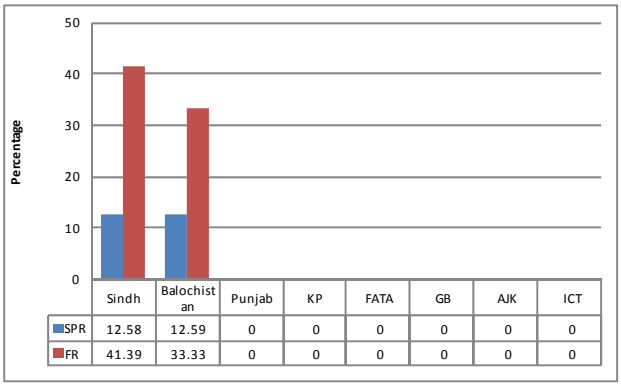
Province	2013			2014		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	7	-	-	-	-	-
Sindh	10	-	-	4	-	-
Khyber Pakhtunkhwa	11	-	-	8	-	-
FATA	65	-	-	42	-	-
Balochistan	-	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	-	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	93	-	-	54	-	-



Malaria:

The Table and chart given below shows the Malaria slide positivity and Falciparum ratio in week 17, 2014. Total number of Malaria cases tested in this week is 4,181 out of which 526 were found positive; 324 for P. Vivax; 94 for P. Falciparum; while 108 for Mixed (SPR = 12.58%; F.R = 38.40%).

Malaria tests \Province	Sindh	Balochistan	KPK	Punjab	GB	FATA	AJK	ICT
P. Vivax	194	130	0	0	0	0	0	0
P. Falciparum	31	63	0	0	0	0	0	0
Mixed	106	2	0	0	0	0	0	0
# tested	2632	1549	0	0	0	0	0	0
SPR	12.58	12.59	0	0	0	0	0	0
FR	41.39	33.33	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 26th April 2014, a total of 71 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 illnesses and deaths in young and middle aged adults. So far, 57 suspected cases have been reported from Punjab where majority (32) of the cases reported from Multan whereas 17 cases from Lahore, while 2 each from Rawalpindi and Islamabad. One case from district Loralai (Balochistan province) was also reported from Nishter hospital Multan, which did not survived and died on the date of admission. Out of these 57 suspected cases, 27 cases were laboratory confirmed for H1N1. 18 out of all the lab confirmed cases died due to the severity of the disease (CFR= 66.66%).

From Khyber Pakhtunkhwa province this year 14 suspected cases have been reported and 4 of these are found positive for H1N1. 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 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 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 17, 2014