Weekly Epidemiological *Bulletin*

Disease early warning system and response in Pakistan

Volume 5, Issue 16, Wednesday 23 April 2014

Highlights

Epidemiological week no. 16
(13 to 19 Apr 2014)

- **Dengue fever:** During this week, no Dengue fever lab confirmed cases have been reported from any province.
- In this week, **76** out of 87 districts and 2,436 out of 2,700 health facilities have reported to Disease Early Warning System (DEWS), compared to 79 districts with 2,604 health facilities shared weekly data in week 15, 2014 to the DEWS.
- Total **924,957** patients consultations reported in week 16, 2014 as compared to **1,037,561** consultations in week 15, 2014.
- In this week, a total of 55 alerts generated and timely responded. Altogether 28 alerts were for Measles; 10 for Leishmaniasis; 5 for NNT; 3 for Acute diarrhoea; 2 each for AJS, ARI and Typhoid fever; while 1 each for AWD, H1N1 and Diphtheria.
- 2 outbreaks were identified and timely responded.

Figure-1: 76 out of 87 districts reported to DEWS in week 16, 2014

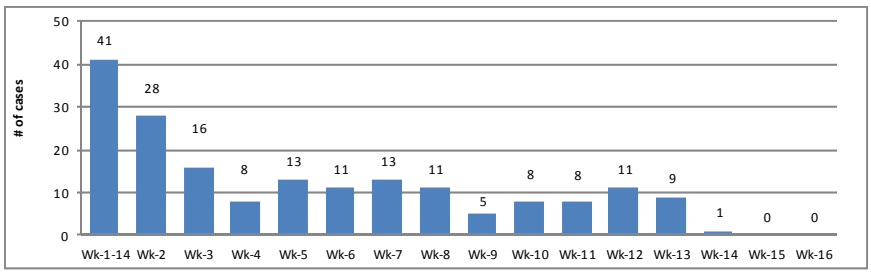
Priority diseases under surveillance in DEWS

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 16, 2014 (29 Dec 2013 to 19 Apr 2014)

Disease	# of Cases	Percentage
ARI	3,278,190	22.49%
Bloody diarrhoea	13,986	<1.00%
Acute diarrhoea	718,440	4.93%
S. Malaria	413,082	2.83%
Skin Diseases	430,898	2.96%
Unexplained fever	384,301	2.64%
Total (All consultations)	14,573,932	100%

Figure-2: Number of Dengue fever positive cases in Pakistan, Week 1 to week 16-2014



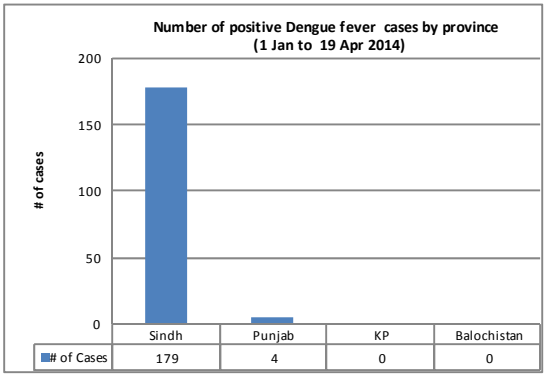
Major health events reported during the Epi-week - 16 (13 to 19 Apr 2014)

Disease	# of Cases	Percentage
ARI	173,110	18.72%
Bloody diarrhoea	865	<1.00%
Acute diarrhoea	63,991	6.92%
S. Malaria	26,158	2.83%
Skin Diseases	26,286	2.84%
Unexplained fever	21,923	2.37%
Total (All consultations)	924,957	100%

From 1st January to 19th 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 19 Apr 2014)



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Number of Outbreaks (Wk-16/2014):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
14-Apr	AJS	AJK	Poonch	Hajira Town UC/ Tehsil Hajira	0	55	0	32	An alert for high number of AJS cases was reported from THQ Hajira. During field investigation along with DoH team, it was found that there were an increase in number of AJS cases at THQ and as well as in private clinics since last 2 weeks. So far 87 patients has been line listed. Blood samples for 8 cases were taken and sent to NIH for laboratory confirmation, where 5 blood samples were found positive for Hep-E. All three water sources being use in town for drinking purposes were found contaminated. All stake holders were involved and strategy was planned for health education and implementation of hygiene practices in community and schools. Follow up is planned.
17-Apr	Leishmaniasis	Balochistan	Las Bela	(RHC) winder, Tehsil Winder	1	3	0	2	6 suspected cases of Cutaneous Leishmaniasis were reported. All the cases were found with lesions mostly on foot. All the cases had no travelling history. Symptomatic treatment is being provided through treatment centre. Information shared with DHO.
18-Apr	Leishmaniasis	KP	Mardan	Village Muslim Abad & Jan Abad, Mian Essa, Lund Khowar, Mardan	5	3	4	9	21 clinical cases of Cutaneous Leishmaniasis were reported from BHU Lund Khowar. Required doses of Inj-Glucantime supplied by WHO to KPH Mardan for all the registered cases. On job training of health staff was conducted for Intralesional administration of Inj-Glucantime. RBM focal person was informed and requested for vector control measures in the areas. Information shared with EDO Health and focal person.
14-Apr	Leishmaniasis	Punjab	Multan	Suraj Miani, Ghanta ghar, Timber Market, Doulat Gate Multan	0	5	0	2	7 clinical cases of Cutaneous Leishmaniasis were reported from Civil Hospital, Multan. All the cases had history of infection for one month or more. Vector surveillance activity has been conducted in the affected areas and IRS was conducted in affected households. 3 Health education sessions were conducted in the community. Injection-Glucantime were provided by WHO to Civil Hospital and treatment has been started. The cases were advised to cover the lesions. Information shared with EDOH.
14-Apr	AWD	Sindh	Umerkot	Village Amjad Qaimkhani UC Shadi Pali Taluka Pithoro	6	2	2	0	Outbreak of AWD was reported in media. During visit of village Amjad Qaimkhani found that 10 cases were suffering from severe Diarrhea and vomiting since last week and attended nearest GP but did not cured; feels generalized weakness and severe dehydration due to continuously watery diarrhea and vomiting. All the cases were immediately shifted to Pithoro and admitted in to private medical center, where all the cases were from same village. During field investigation, animals and garbage were found near the drinking water source. Aqua tabs, Soaps, Jerry cans, life-straw family filters, ORS and Zinc-tabs were distributed among the affected families. Health education session imparted and sensitized regarding proper hand washing. 5 water samples were collected and all were found contaminated. Information shared with DoH.

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

Disease	2013		Current week 19, 2014		2014	
	A	O	A	O	A	O
Acute watery diarrhoea	142	40	1	1	16	2
Acute jaundice syndrome	49	6	2	1	9	1
Bloody diarrhoea	45	3	0	0	13	0
CCHF	90	47	0	0	6	0
Dengue fever	300	66	0	0	4	0
Diphtheria	84	19	1	0	23	3
Measles	3357	281	28	0	485	19
Pertussis	46	10	0	0	19	2
NNT + tetanus	349	0	5	0	116	0
Malaria	25	6	0	0	0	0
Cutaneous Leishmaniasis	621	51	10	0	225	10
Others	520	5	8	0	183	5
Total	5628	534	55	2	1099	42

Figure-3: Number of alerts received and responded, week 13 to 16 2014

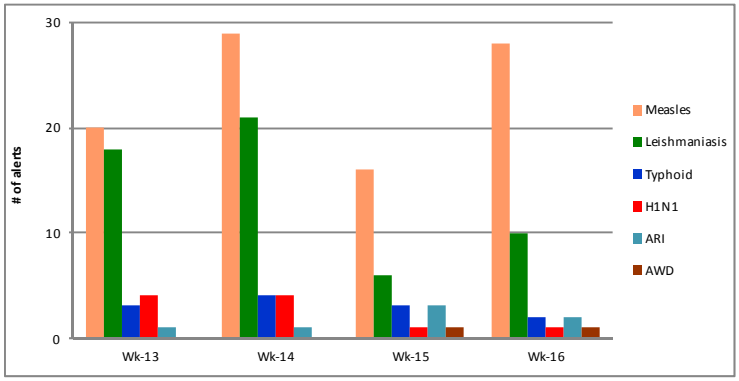
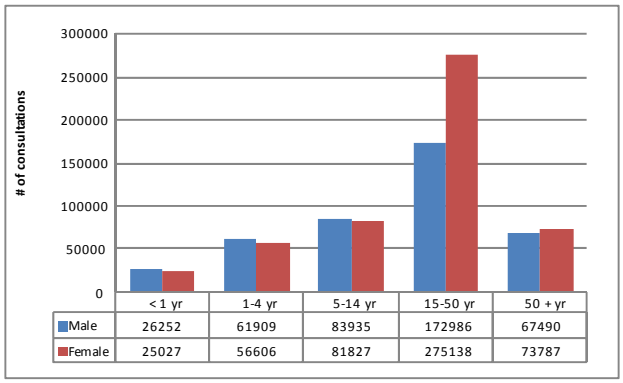


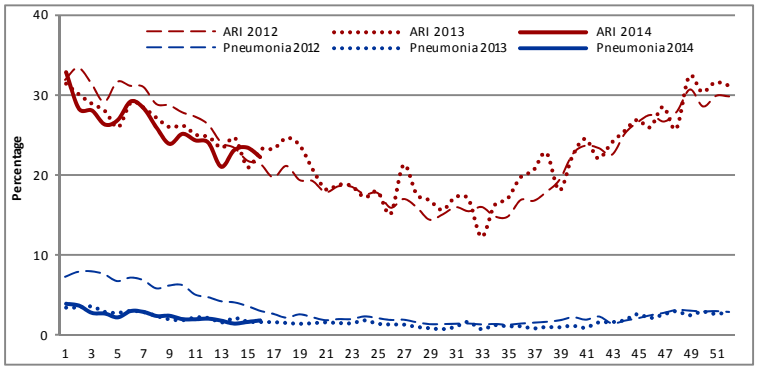
Figure-4: Number of consultations by age and gender, week 16, 2014



	< 1 yr	1-4 yr	5-14 yr	15-50 yr	50 + yr
Male	26252	61909	83935	172986	67490
Female	25027	56606	81827	275138	73787

Province Khyber Pakhtunkhwa:

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



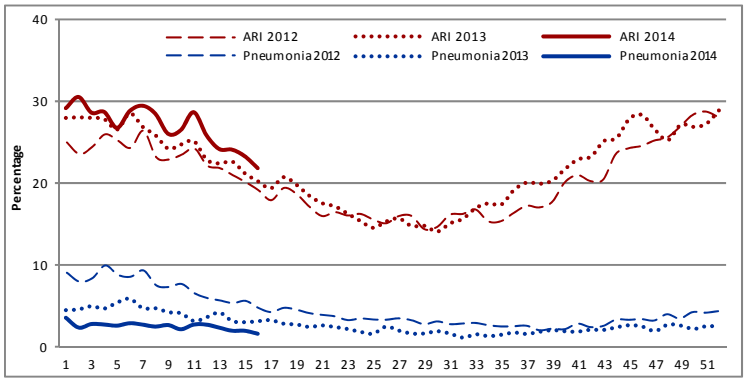
135 health facilities from 9 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 33,003 patients consultations reported in week 16, 2014.

A total of 17 alerts were reported and appropriate measures were taken. Altogether 14 alerts were for Measles; while 1 each for Diphtheria, Leishmaniasis, and NNT.

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

Province Sindh:

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



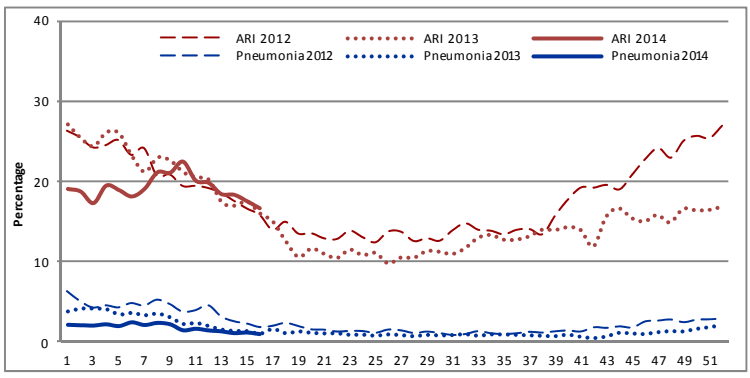
784 health facilities from 23 districts in Sindh province reported to DEWS with a total of 251,471 patient consultations in week 16, 2014.

A total of 11 alerts were received and appropriate measures were taken. Altogether 4 alerts were for Leishmaniasis; 3 each for Measles 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 also shows 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



1,213 health facilities from 26 districts in Punjab province reported to DEWS with a total of 586,978 patients consultations in week 16, 2014.

Total 12 alerts were received and appropriate measures were taken. Altogether 3 alerts each were for Acute diarrhoea and Measles; 2 each for Typhoid fever and ARI; while 1 each for H1N1 and AJS 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.

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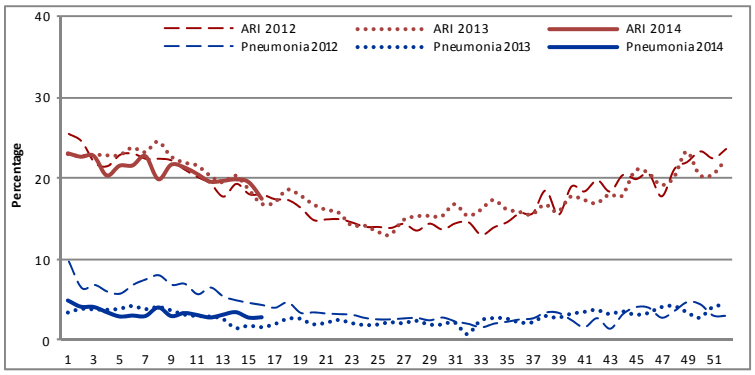
Province Balochistan:

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



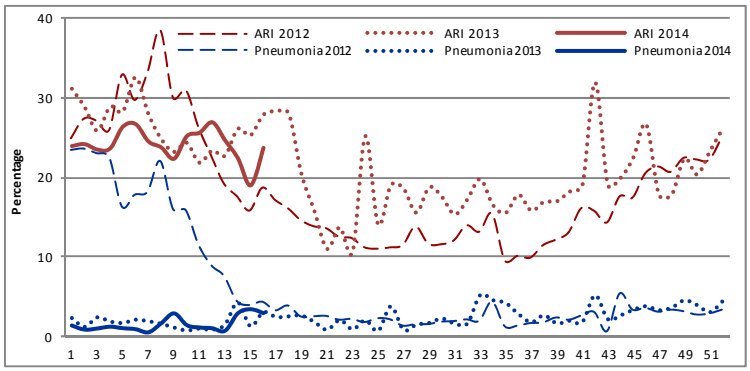
212 health facilities from 8 districts in Balochistan province reported to DEWS with a total of 36,826 patients consultations in week 16, 2014.

7 alerts were reported and appropriate measures were taken. Altogether 4 alerts were for Measles; while 3 for Leishmaniasis.

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

FATA:

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



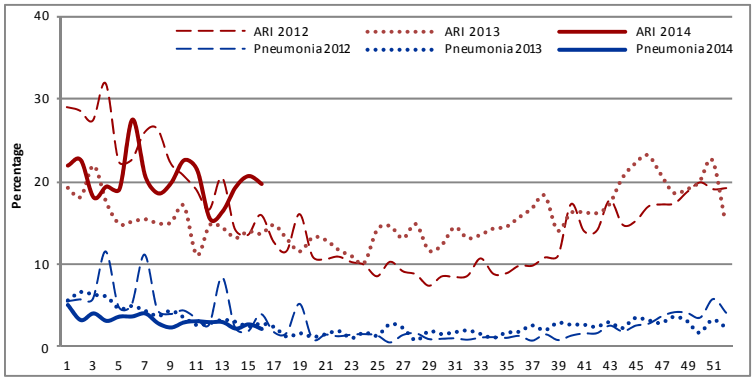
19 health facilities from 2 agencies in FATA reported to DEWS with a total of 4,793 patients consultations in week 16, 2014.

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



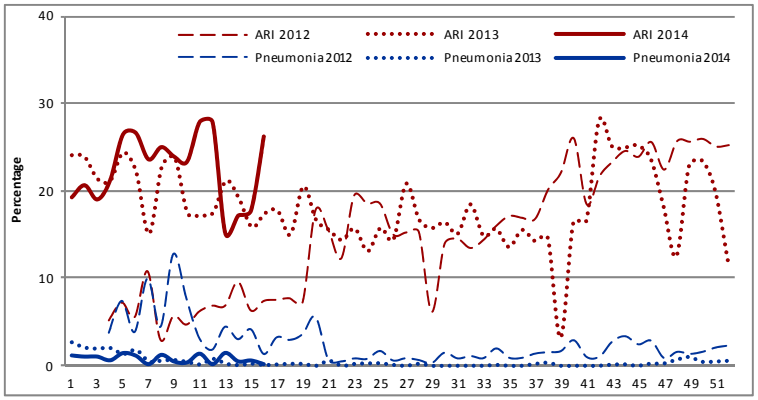
69 health facilities from 8 districts in AJ&K reported to DEWS with a total of 11,162 patients consultations in week 16, 2013.

1 alert for AJS was reported from AJ&K in week 16, 2014 and appropriate measures were taken.

Weekly trend of ARI showing minor decrease as compared with last week but higher from same time period last year; and vigilant monitoring of the situation is required; while Pneumonia shows minor decrease as compare 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 724 patients consultations in week 16, 2014.

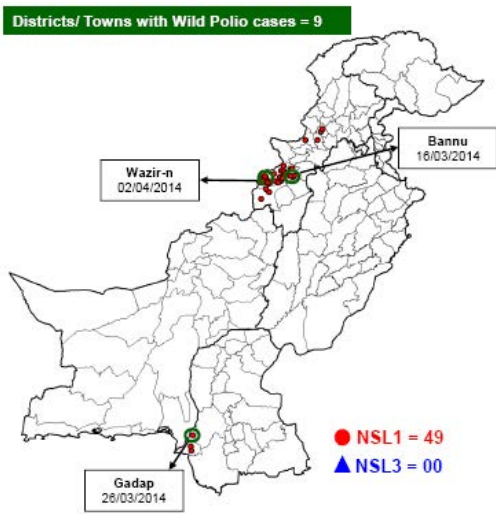
No alert for any disease was reported from Islamabad in week 16, 2014.

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 16 (13 to 19 Apr 2014), two new type-1 wild polio cases have been reported in the country, one each from Federally Administered Tribal Areas (North Waziristan agency) and Sindh (Gaddap Town Karachi). This brings the total number of polio cases in 2014 to 49 (compared to 6 in 2013 till this time) from 9 districts/towns/tribal agencies/FR areas (compared to 6 in 2013 till this time).

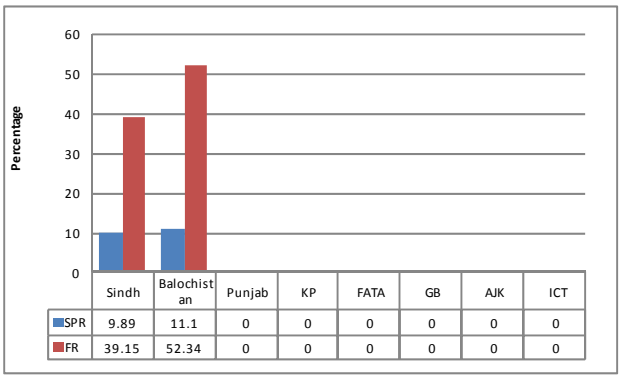
Province	2013			2014		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	7	-	-	-	-	-
Sindh	10	-	-	3	-	-
Khyber Pakhtunkhwa	11	-	-	7	-	-
FATA	65	-	-	39	-	-
Balochistan	-	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	-	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	93	-	-	49	-	-



Malaria:

The Table and chart given below shows the Malaria slide positivity and Falciparum ratio in week 16, 2014. Total number of Malaria cases tested in this week is 3,574 out of which 365 were found positive; 208 for P. Vivax; 74 for P. Falciparum; while 83 for Mixed (SPR = 10.21%; F.R = 43.01%).

Malaria tests \Province	Sindh	Balochistan	KPK	Punjab	GB	FATA	AJK	ICT
P. Vivax	157	51	0	0	0	0	0	0
P. Falciparum	18	56	0	0	0	0	0	0
Mixed	83	0	0	0	0	0	0	0
# tested	2610	964	0	0	0	0	0	0
SPR	9.89	11.1	0	0	0	0	0	0
FR	39.15	52.34	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 19th 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 16, 2014