Weekly Epidemiological *Bulletin*

Disease early warning system and response in Pakistan

Volume 5, Issue 19, Wednesday 14 May 2014

Highlights

Epidemiological week no. 19
(4 to 10 May 2014)

- **Dengue fever:** During this week, no Dengue fever lab confirmed case have been reported from any province.
- In this week, **74** out of 87 districts and 2,428 out of 2,700 health facilities have reported to Disease Early Warning System (DEWS), compared to 73 districts with 2,386 health facilities shared weekly data in week 18, 2014 to the DEWS.
- Total **920,900** patients consultations reported in week 19, 2014 as compared to **771,967** consultations in week 18, 2014.
- In this week, a total of 34 alerts generated and timely responded. Altogether 21 alerts were for Measles; 3 for Leishmaniasis; 2 for CCHF; while 1 each for Acute Watery diarrhoea, Acute diarrhoea, Diphtheria, NNT, SARI, Tetanus, Typhoid fever and Scabies.
- 9 outbreaks were also identified and timely responded.

Figure-1: 74 out of 87 districts reported to DEWS in week 19, 2014

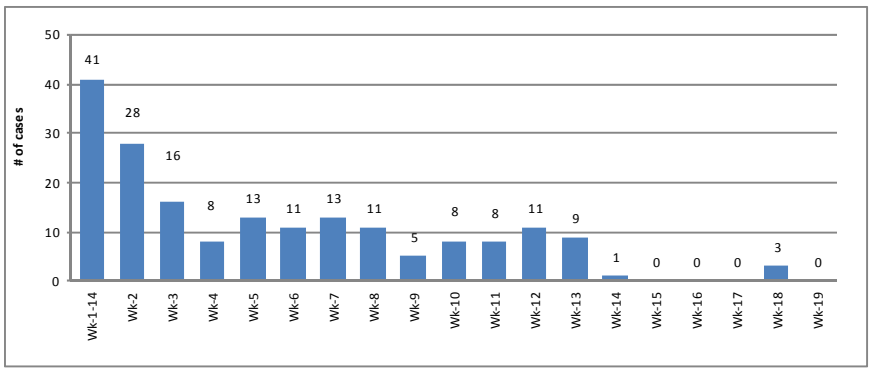
Priority diseases under surveillance in DEWS

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 19, 2014 (29 Dec 2013 to 10 May 2014)

Disease	# of Cases	Percentage
ARI	3,748,403	21.73%
Bloody diarrhoea	16,479	<1.00%
Acute diarrhoea	917,287	5.32%
S. Malaria	485,182	2.81%
Skin Diseases	507,574	2.94%
Unexplained fever	450,982	2.61%
All other consultations	11,126,652	64.49%
Total (All consultations)	17,252,559	100%

Figure-2: Number of Dengue fever positive cases in Pakistan, Week 1 to week 19-2014

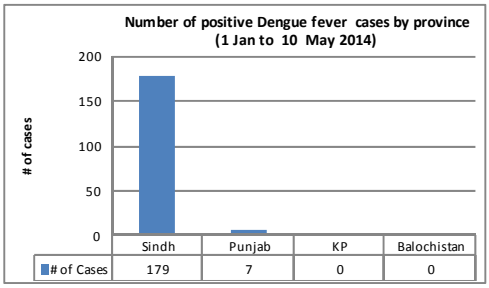


Major health events reported during the Epi-week - 19 (4 to 10 May 2014)

Disease	# of Cases	Percentage
ARI	156,914	17.04%
Bloody diarrhoea	755	<1.00%
Acute diarrhoea	69,913	7.59%
S. Malaria	25,235	2.74%
Skin Diseases	26,498	2.88%
Unexplained fever	22,995	2.50%
All other consultations	618,590	67.17%
Total (All consultations)	920,900	100%

From 1st January to 10 May 2014, a total of 186 lab confirmed Dengue fever cases were reported, out of them 179 positive cases were from Sindh province; while 7 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.



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Number of Outbreaks (Wk-19/2014):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
5-May	Measles	Khyber Pakhtunkhwa	Mardan	Village Bara Banda, Misri Banda, Sherin Kot, Nowshera	1	1	2	1	An alert of 5 suspected Measles cases were reported from MMC Hospital Mardan. All the cases were belongs to Sherin Kotto of Nowshera District. The cases were found partially vaccinated for routine vaccination, Vitamin-A was given to all the suspected cases. EDOH and focal person EPI were informed and requested for outreach vaccination.
6-May	Measles	Khyber Pakhtunkhwa	Mardan	Isolation Unit, Children Ward, DHQ Hospital Mardan	6	1	5	2	An alert of 14 suspected Measles cases were reported from Children OPD of DHQ Hospital Mardan. Most of the cases were found partially vaccinated for routine vaccination but unimmunized for measles vaccine (verbal history). Vitamin-A doses were given to all the suspected cases. EDO-H Focal person & EPI Coordinator were informed and requested for outreach immunization in the area. On the job training of concerned health staff was conducted.
7-May	Measles	Khyber Pakhtunkhwa	Mardan	Isolation Unit, Children Unit, Mardan Medical Complex, Mardan	6	2	4	2	An alert of 14 suspected Measles cases were reported Mardan Medical Complex Hospital Mardan. All cases were reported from different locations and no clustering was found. Vitamin-A dose was given to all the suspected cases. EDO-H Focal person & EPI Coordinator were informed and requested for outreach immunization in the area.
8-May	Measles	Khyber Pakhtunkhwa	Swabi	Children Ward, DHQ Hospital Swabi	2	1	2	2	An alert for 7 suspected Measles cases were reported from Children OPD of DHQ Hospital Swabi. All the cases were from different localities, most of them found partially vaccinated for routine vaccination but unimmunized for measles vaccine (verbal history). Vitamin-A was given to all the suspected cases. EDO-H Focal person & EPI Coordinator were informed and requested for outreach immunization in the area.
8-May	Measles	Khyber Pakhtunkhwa	Swabi	Isolation Unit, Children Unit, Bacha Khan Medical Complex, Swabi	5	2	3	1	Alert for 11 suspected Measles cases were reported from Children Unit of Bacha Khan Medical Complex Hospital Swabi. All the cases were sporadic and no clustering was found. Most of the children were found partially vaccinated for routine immunization and unimmunized for measles vaccination (verbal history). Vitamin-A was given to all the suspected cases. EDO-H Focal person & EPI Coordinator were informed and requested for outreach immunization in the area.
9-May	Leishmaniasis	Khyber Pakhtunkhwa	Mardan	Village & UC Kohi Bermol, Tehsil Katlang, Mardan	4	2	3	6	15 clinical cases of Cutaneous Leishmaniasis were reported from BHU Kohi Bermol. WHO supplied required doses of Inj-Glucantime to KPH Mardan for all the registered cases. On the job training of health staff was conducted for Intralesional administration of Inj-Glucantime. EDO Health, RBM focal person was informed and requested for vector control measures in the areas.
6-May	SARI	Punjab	Lahore	Sheikh Zaid Hospital Lahore	0	1	0	0	A suspected case of Severe Acute Respiratory Illness(Suspected MERS-COV) is admitted in Sheikh Zaid Hospital Lahore. Patient belongs to village Hundal, district Sialkot. Case Management and Isolation was ensured, latest guidelines were shared with Consultant Pulmonologist. Nasal swab and Bronchial secretions was collected and sent to NIH for detection of virus found negative. Health education sessions were conducted with the family and attendants on care of the case and prevention from MERS-COV. Hand washing, gloves and masks were provided to attendants and hospital staff. There is Travel History of the Patient to KSA. List of close contacts is maintained for observation. Surveillance Officer WHO along with DSC visits the hospital, Personal Protective Equipment's, N95 were provided to ICU staff. EDO(H) Sialkot visited patient home and guide all preventive steps to the close contacts. Additional Director Epidemics and EDO(H) Lahore was Informed and initial Investigation details are shared with them.
6-May	Leishmaniasis	Punjab	Mianwali	RHC Kamar Mashani	4	6	0	3	An alert for 13 new cases of Cutaneous Leishmaniasis were reported from UC Kamar. There was no history of travelling found. All the cases had history of infection for months or more. Vector surveillance activity has been conducted in the affected area and IRS was conducted in affected households. Health education sessions were conducted in the community. Injection Glucantime were not available in the Hospital therefore patients were referred to Kalabagh and Chapri for treatment.
6-May	Measles	Sindh	Karachi	New Muslimabad , UC2 , near Faruqi masjid , Landhi town	1	0	2	0	DEWS team was informed about a death due to suspected Measles. The THO informed that it is a highly security compromised area and a police van needs to accompany to reach the household. The DSP of the area was contacted and he was requested to arrange a police escort. According to history, case aged 30 months at the time of death was in the usual state of health when she developed high grade fever and cough. She also developed mouth ulcers , conjunctivitis and rash on 20th April 2014. The next day she developed breathlessness and was rushed to nearby Social Security hospital but referred to NICH, and she was diagnosed with Pneumonia due to Measles and treatment got started. Unfortunately the child kept on deteriorating and was in need of a ventilator on 25th April which was currently not available at NICH so the family took her to a private hospital but could not survived and passed away on 26th April. She was not vaccinated against Measles. There were two more un vaccinated children found in the family who got Measles, Vitamin-A supplementation was done and now recovered, and people in the area briefed about the importance of vaccination for the children. The Town Health Officer informed about the cases and requested to carry out the mop up activities in the area. Follow up planned.

Figure-3: Number of alerts received and responded, week 16 to 19 2014

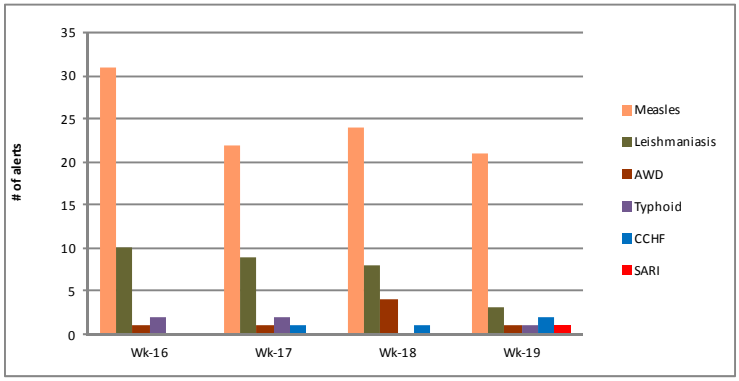
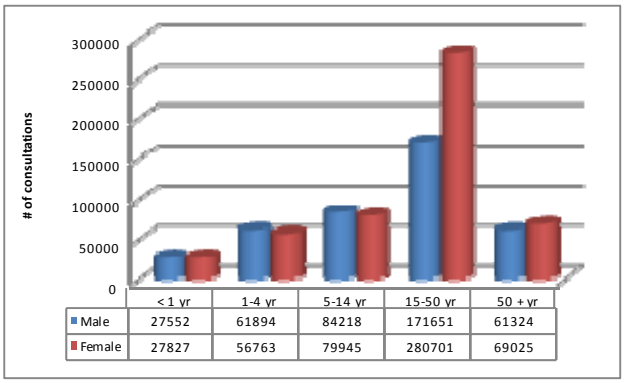


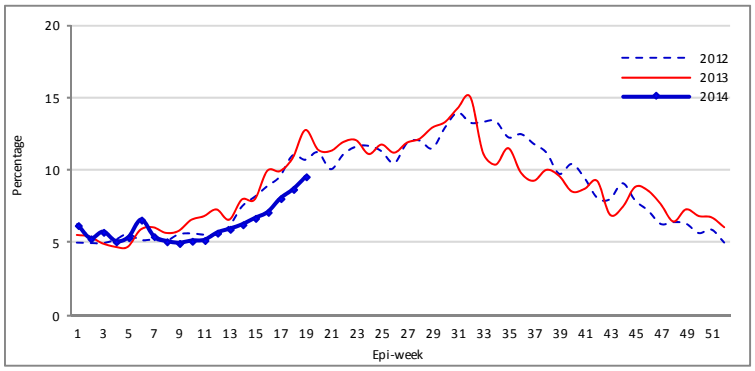
Figure-4: Number of consultations by age and gender, week 19, 2014



	< 1 yr	1-4 yr	5-14 yr	15-50 yr	50 + yr
Male	27552	61894	84218	171651	61324
Female	27827	56763	79945	280701	69025

Province Khyber Pakhtunkhwa:

Figure-5: Weekly trend of Acute diarrhoea, province Khyber Pakhtunkhwa



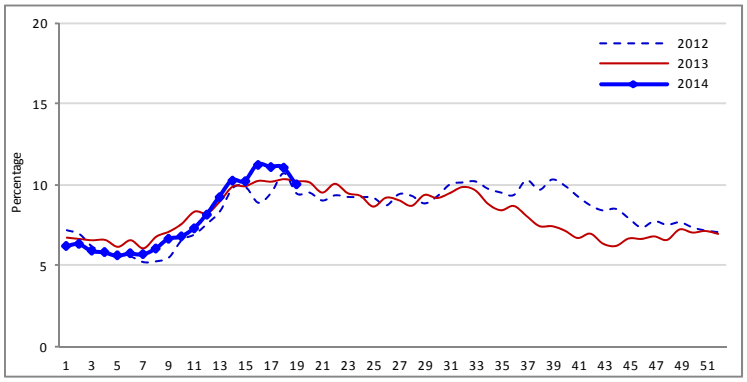
108 health facilities from 7 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 26,051 patients consultations reported in week 19, 2014.

A total of 6 Measles alerts were reported and appropriate measures were taken.

Figure-5 shows the weekly trend of Acute diarrhoea showing continuously increase from week 9, 2014, and having the same pattern as compared with last year.

Province Sindh:

Figure-6: Weekly trend of Acute diarrhoea, province Sindh

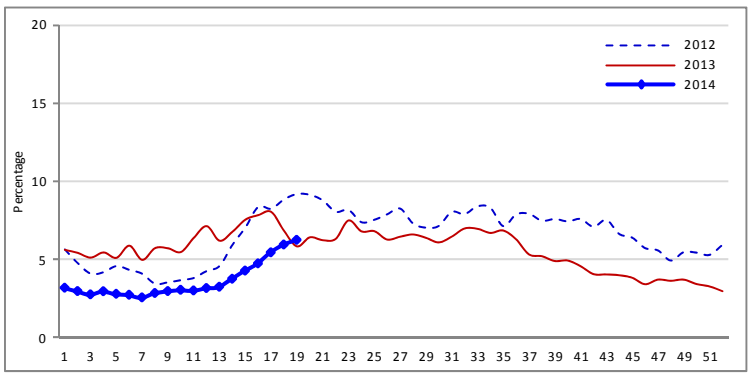


802 health facilities from 23 districts in Sindh province reported to DEWS with a total of 258,853 patient consultations in week 19, 2014.

A total of 9 alerts were received and appropriate measures were taken. Altogether 7 alerts were for Measles; while 1 each for AWD and NNT.
The proportion of AD for the province is showing decrease as compared with last week, and now lower from the same time period last year.

Province Punjab:

Figure-7: Trend of Acute diarrhoea, province Punjab



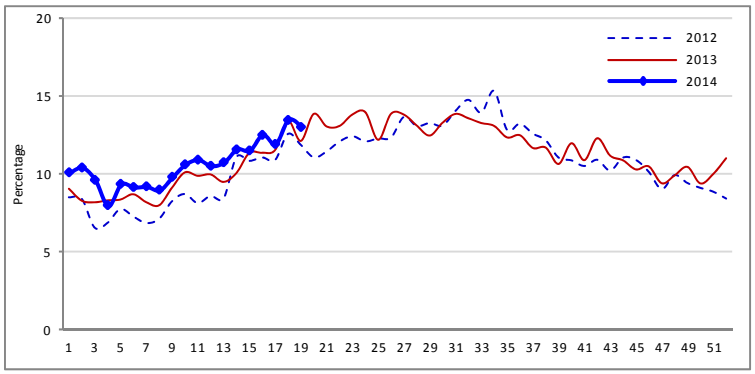
1,254 health facilities from 27 districts in Punjab province reported to DEWS with a total of 593,865 patients consultations in week 19, 2014.

Total 8 alerts were received and appropriate measures were taken. Altogether 2 alerts were for Measles; while 1 each for Acute diarrhoea, SARI, Typhoid fever, Diphtheria, Leishmaniasis and Scabies were responded in Punjab province.

The weekly trend of AD in Punjab showing increase as compared with last few weeks, and high from same time period last year.

Province Balochistan:

Figure-8: Weekly trend of Acute diarrhoea, province Balochistan



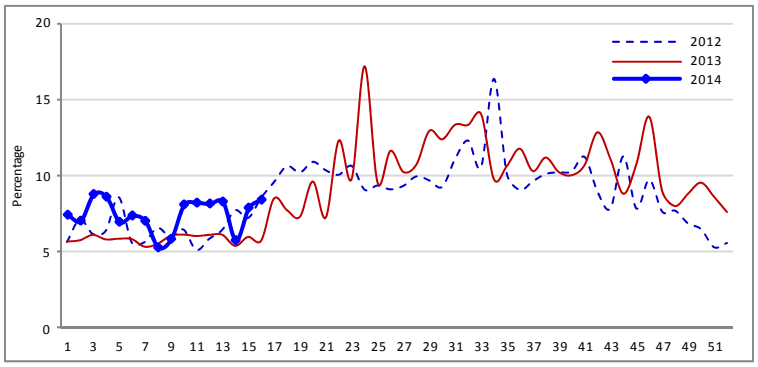
190 health facilities from 8 districts in Balochistan province reported to DEWS with a total of 28,550 patients consultations in week 19, 2014.

6 alerts were reported and appropriate measures were taken. Altogether 3 alerts were for Measles; 2 for CCHF; while 1 for Tetanus.

In this week the weekly proportion of AD showing decrease as compared with last week and high from the same time period last year.

FATA:

Figure-9: Weekly trend of Acute diarrhoea, FATA



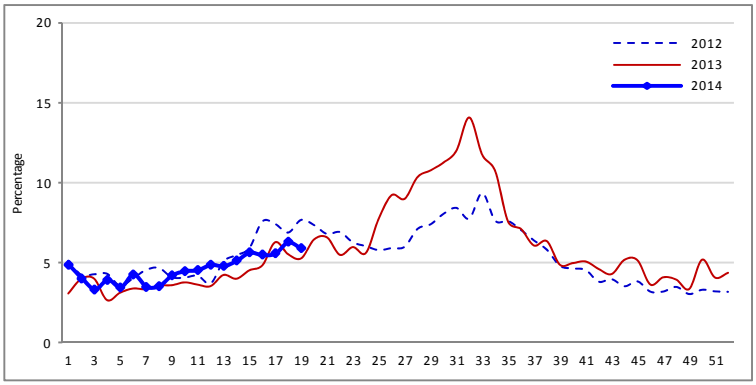
19 health facilities from 2 agencies in FATA reported to DEWS with a total of 4,793 patients consultations in week 16, 2014.

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 Acute diarrhoea, AJ&K



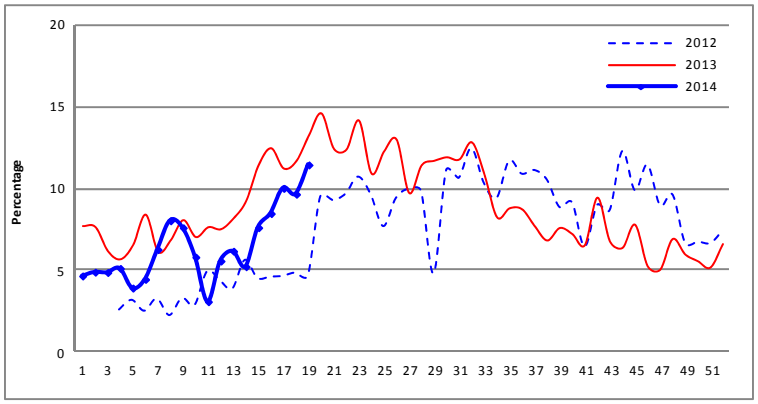
70 health facilities from 8 districts in AJ&K reported to DEWS with a total of 12,804 patients consultations in week 19, 2013.

5 alerts were reported from AJ&K and appropriate measures were taken in week 19 2014. Altogether 3 alerts were for Measles; while 2 for Leishmaniasis.

Weekly trend of AD showing decrease as compared with last week but higher from same time period last year; vigilant monitoring of the situation is required.

Islamabad:

Figure-11: Weekly trend of Acute diarrhoea, Islamabad



4 health facilities reported to DEWS on time with a total of 777 patients consultations in week 19, 2014.

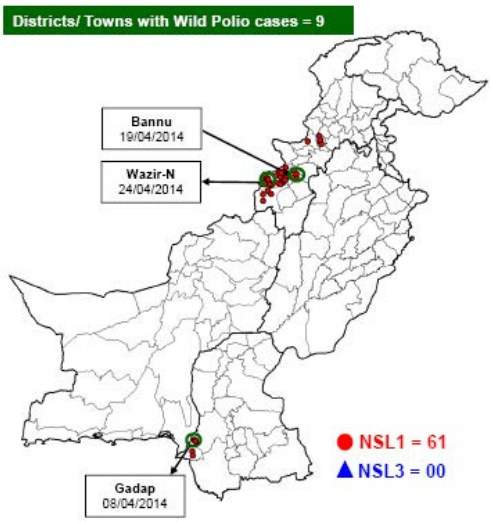
No alert for any disease was reported from Islamabad in week 19, 2014.

Weekly trend of AD showing continuously increase from last couple of weeks but lower from same time period last year. Vigilant monitoring of the situation is required.

Distribution of Wild Polio Virus cases in Pakistan 2013 and 2014

In this week 19 (4 to 10 May 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 (Gadap town Karachi). This brings the total number of polio cases in year 2014 to 61 (compared to 11 in year 2013 till this time) from 9 districts/ towns/tribal agencies/FR areas (compared to 8 in year 2013 till this time).

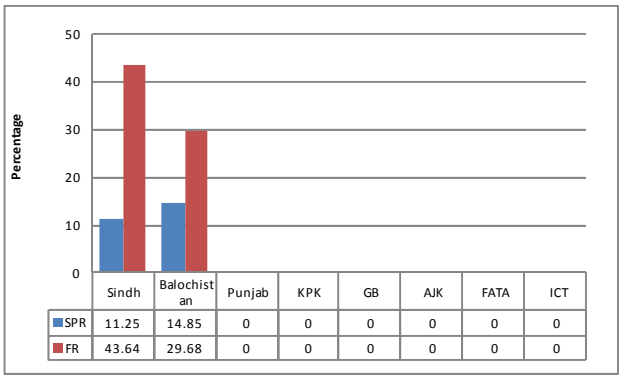
Province	2013			2014		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	**7**	-	-	-	-	-
Sindh	**10**	-	-	**5**	-	-
Khyber Pakhtunkhwa	**11**	-	-	**9**	-	-
FATA	**65**	-	-	**47**	-	-
Balochistan	-	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	-	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	**93**	-	-	**61**	-	-



Malaria:

The Table and chart given below shows the Malaria slide positivity and Falciparum ratio in week 19, 2014. Total number of Malaria cases tested in this week is 3,431 out of which 439 were found positive; 278 for P. Vivax; 76 for P. Falciparum; while 85 for Mixed (SPR = 12.80%; F.R = 36.67%).

Malaria tests \Province	Sindh	Balochistan	KPK	Punjab	GB	FATA	AJK	ICT
P. Vivax	124	154	0	0	0	0	0	0
P. Falciparum	17	59	0	0	0	0	0	0
Mixed	79	6	0	0	0	0	0	0
# tested	1956	1475	0	0	0	0	0	0
SPR	11.25	14.85	0	0	0	0	0	0
FR	43.64	29.68	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 73 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, 59 suspected cases have been reported from Punjab where majority (32) of the cases reported from Multan whereas 18 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 59 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 19, 2014