



Weekly Epidemiological Bulletin

Disease early warning system and response in Pakistan

Volume 5, Issue 13, Wednesday 2 April 2014

Highlights

Epidemiological week no. 13
(23 to 29 Mar 2014)

- **Dengue fever:** During this week, 10 Dengue fever lab confirmed cases have been reported, 8 cases were from Sindh province and 2 case were from Punjab province.
- In this week, **82** out of 87 districts and 2,592 out of 2,700 health facilities have reported to Disease Early Warning System (DEWS), compared to 81 districts with 2,465 health facilities shared weekly data in week 12, 2014 to the DEWS.
- Total **958,081** patients consultations reported in week 13, 2014 compare to **1,051,989** consultations in week 12, 2014.
- In this week, a total of 55 alerts generated and timely responded. Altogether 20 alerts were for Measles; 18 for Leishmaniasis; 4 for H1N1; 3 for Typhoid fever; 2 each for AJS and NNT; while 1 each for Acute diarrhoea, ARI, Bloody diarrhoea, Diphtheria, Pertussis and Scabies.
- 6 outbreaks were identified and responded and 1 ongoing outbreak monitored.

Figure-1: 82 out of 87 districts reported to DEWS in week 13, 2014



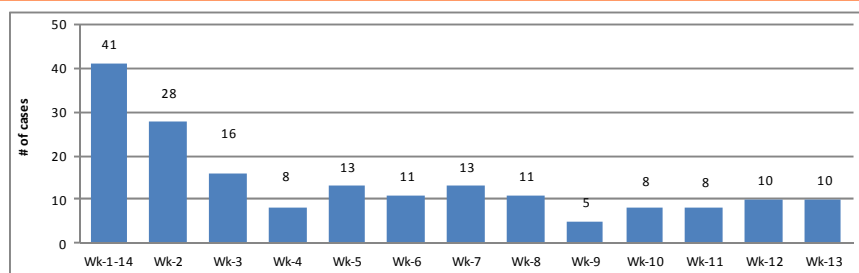
Priority diseases under surveillance in DEWS

- 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 13, 2014 (29 Dec 2013 to 29 Mar 2014)

Disease	# of Cases	Percentage
ARI	2,717,252	23.16%
Bloody diarrhoea	11,194	<1.00%
Acute diarrhoea	536,797	4.58%
S. Malaria	331,542	2.83%
Skin Diseases	347,935	2.97%
Unexplained fever	310,210	2.64%
Total (All consultations)	11,731,976	100%

Figure-2: Number of Dengue fever positive cases in Pakistan, Week 1 to week 13-2014

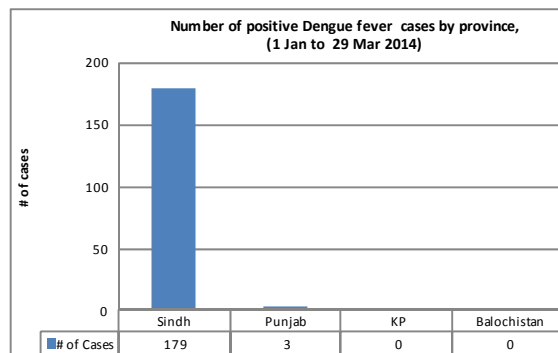


Major health events reported during the Epi-week - 13 (23 to 29 Mar 2014)

Disease	# of Cases	Percentage
ARI	197,470	20.61%
Bloody diarrhoea	1,065	<1.00%
Acute diarrhoea	50,993	5.32%
S. Malaria	28,354	2.96%
Skin Diseases	27,273	2.85%
Unexplained fever	23,832	2.49%
Total (All consultations)	958,081	100%

From 1st January to 29th March 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-13/2014):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
24-Mar	Leishmaniasis	Balochistan	Lasbela	FC camp Bela, Tehsil Bela	0	10	0	0	10 cases of suspected Cutaneous Leishmaniasis were reported. Cases had lesion mostly on foot. None of the cases had any travelling history. All the cases were provided symptomatic treatment. Information shared with DHO.
29-Mar	Measles	Balochistan	Kalat	Village Ziarat, UC Chapper, Tehsil Kalat	10	0	9	1	13 cases of suspected Measles were reported from PPHI office. Investigation was jointly conducted with the PPHI team. All the cases were provided symptomatic treatment and Vit-A doses. During house to house survey 7 more suspected Measles cases were identified and treatment provided. Information shared with DHO and requested for outreach vaccination in the area.
28-Mar	Leishmaniasis	Khyber Pakhtunkhwa	Mardan	Village & UC Kohi Bermol, Tehsil Katlang, Mardan	1	0	1	1	3 clinical cases of Cutaneous Leishmaniasis were reported from UC Kohi Bermol. Required doses of Inj-Glucantime were placed in BHU Kohi Bermol for all registered cases. RBM, PPHI were requested for vector control interventions in the areas and surrounding. On the job training of health staff was conducted for Intralesional administration of Inj-Glucantime. EDO Health and focal person were informed.
27-Mar	H1N1	Punjab	Multan	Nawan Shehr, Multan City	0	2	0	0	1 suspected case of H1N1 Influenza reported from Nishter hospital, Multan. The case had a history of fever, cough, respiratory distress and SOB. The case was admitted to Isolation unit and nasopharyngeal samples were collected and sent to lab testing and confirmation. All the contacts were fine except one brother who had symptoms of a mild Influenza like illness. Cap- Oseltamivir were provided by WHO. Health education sessions were conducted with hospital staff, attendants, family and in the community on hand washing and prevention from airborne infections. WHO has already provided PPEs, surface disinfectants and hand sanitizers to Nishter hospital. So far total 10 confirmed cases have been reported from Multan only.
24-Mar	Leishmaniasis	Punjab	Multan	Koray Wala, Suraj Miani, Bhutta colony	0	2	0	5	4 suspected cases of Cutaneous Leishmaniasis were reported from Civil Hospital, Multan. On active surveillance 3 more cases were identified and referred to Civil Hospital. 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. Vector surveillance activity has been ordered by EDOH in the affected areas. All suspected cases did not have any recent travel history. Health education sessions were conducted with families and in the community. Inj-Glucantime were provided to Civil Hospital and treatment of the cases has been started.
27-Mar	Leishmaniasis	Sindh	Ghotki	Village Katta Mirbahar UC Sain Dino Malik taluka Dharki	0	10	0	0	5 cases of suspected Cutaneous Leishmaniasis were reported from THQ Mirpur Mathilo district Ghotki. During active surveillance found 5 more suspected cases in village Katta Mirbahar. As per statement of patient, there are sand fly in their village, Cases were treated as per protocol. Inj-Glucantime were provided to BHU for all the registered cases. Health education was given and sensitized regarding prevention of sand fly bite and use of Mosquito net and repellents. Information shared with DoH.

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

Disease	2013		Current week 13, 2014		2014	
	A	O	A	O	A	O
Acute watery diarrhoea	142	40	0	0	14	1
Acute jaundice syndrome	49	6	2	0	5	0
Bloody diarrhoea	45	3	1	0	12	0
CCHF	90	47	0	0	6	0
Dengue fever	300	66	0	0	3	0
Diphtheria	84	19	1	0	20	3
Measles	3357	281	20	1	412	16
Pertussis	46	10	1	0	17	2
NNT + tetanus	349	0	2	0	104	0
Malaria	25	6	0	0	0	0
Cutaneous Leishmaniasis	621	51	18	3	189	7
Others	520	5	10	0	156	5
Total	5628	534	55	4	938	34

Figure-3: Number of alerts received and responded, week 10 to 13 2014

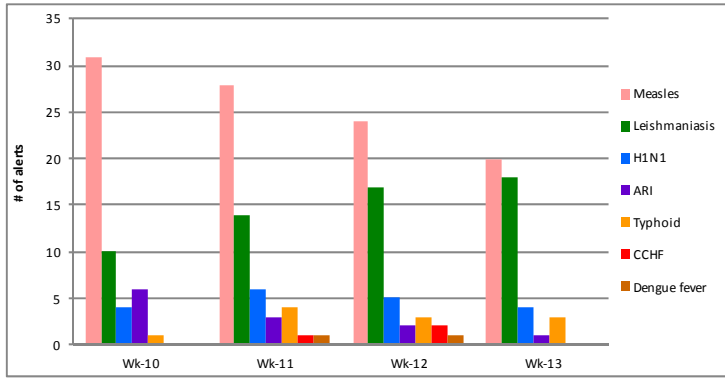
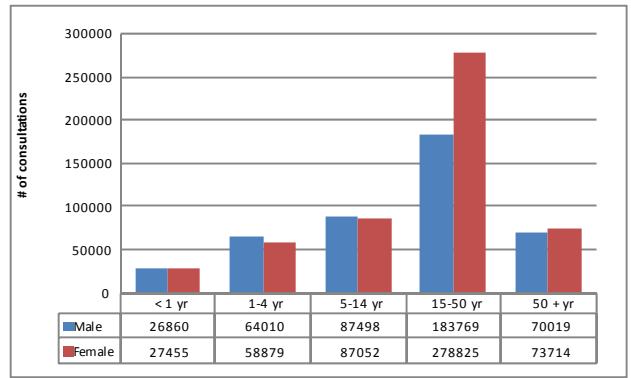
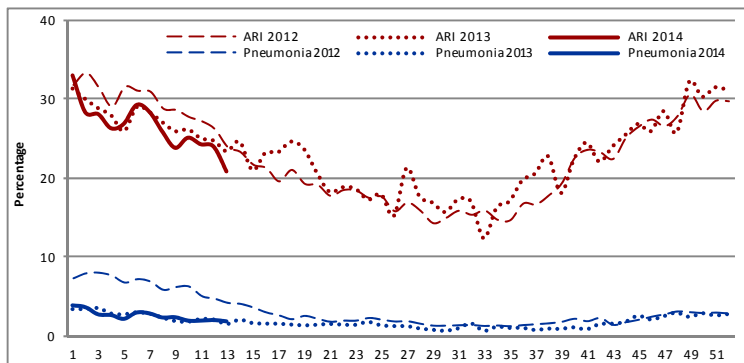


Figure-4: Number of consultations by age and gender, week 13, 2014



Province Khyber Pakhtunkhwa:

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



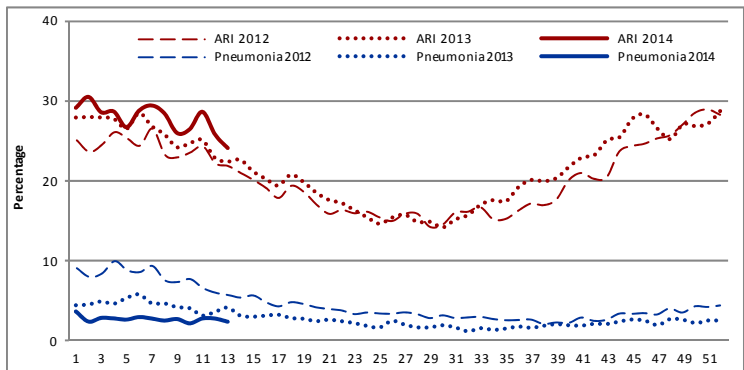
134 health facilities from 9 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 31,654 patients consultations reported in week 13, 2014.

A total of 11 alerts were reported and appropriate measures were taken. Altogether 10 alerts were for Measles; while 1 for AJS.

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

Province Sindh:

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



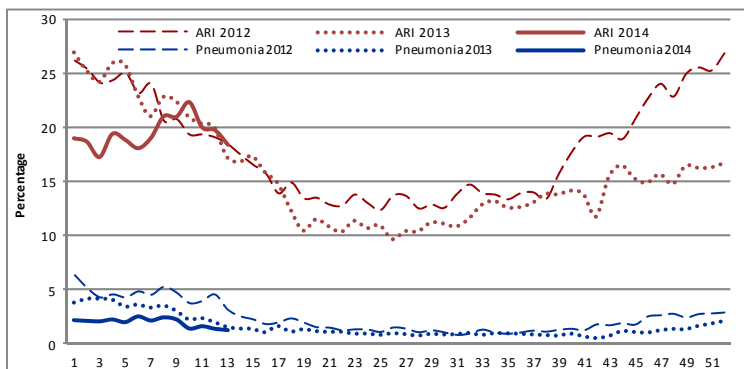
771 health facilities from 23 districts in Sindh province reported to DEWS with a total of 263,865 patient consultations in week 13, 2014.

A total of 7 alerts were received and appropriate measures were taken. Altogether 5 alerts were for Leishmaniasis; while 2 for Measles.

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 compare with last week and low from the same time period last year.

Province Punjab:

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



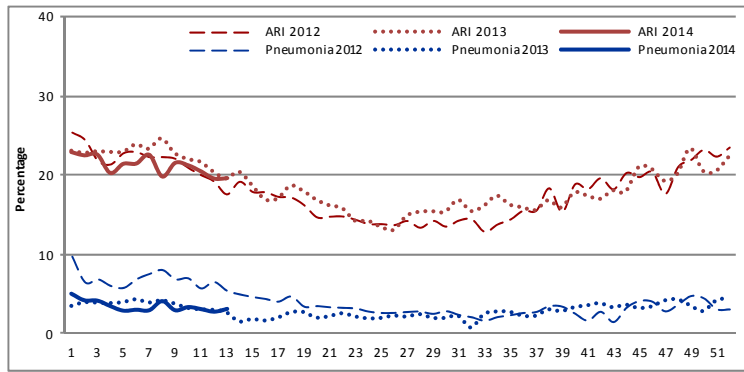
1,318 health facilities from 26 districts in Punjab province reported to DEWS with a total of 600,615 patients consultations in week 13, 2014.

Total 16 alerts were received and appropriate measures were taken. Altogether 4 alerts were for H1N1; 3 each for Leishmaniasis and Typhoid fever; while 1 each for Acute diarrhoea, AJS, ARI, Bloody diarrhoea, Diphtheria 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



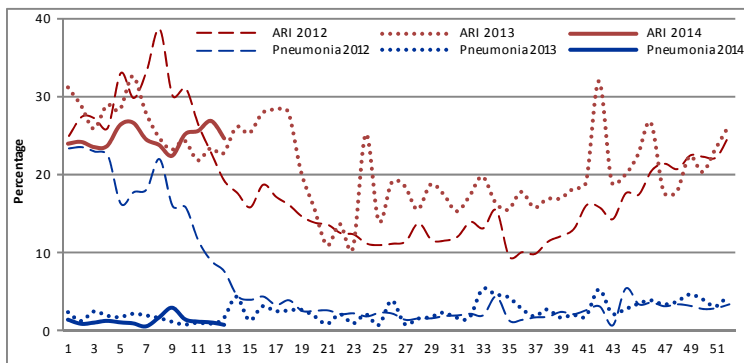
250 health facilities from 12 districts in Balochistan province reported to DEWS with a total of 36,534 patients consultations in week 13, 2014.

9 alerts were reported and appropriate measures were taken. Altogether 5 alerts were for Measles; 3 for Leishmaniasis; while 1 for Pertussis.

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

FATA:

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



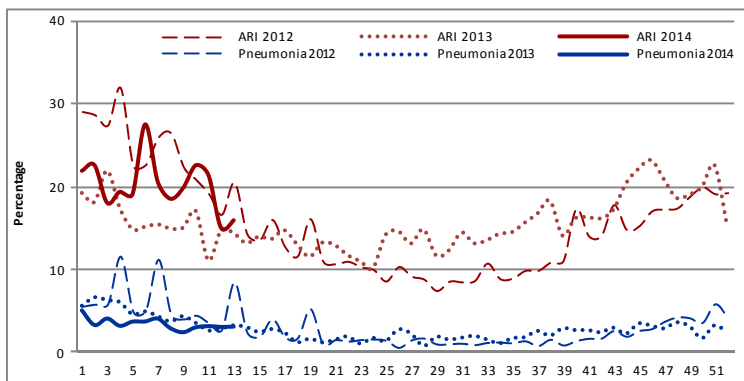
37 health facilities from 3 agencies in FATA reported to DEWS with a total of 9,910 patients consultations in week 13, 2014.

7 alerts were received and responded in FATA in week 13, 2014. Altogether 5 alerts were for Leishmaniasis; while 2 for NNT.

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

State of Azad Jammu and Kashmir:

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



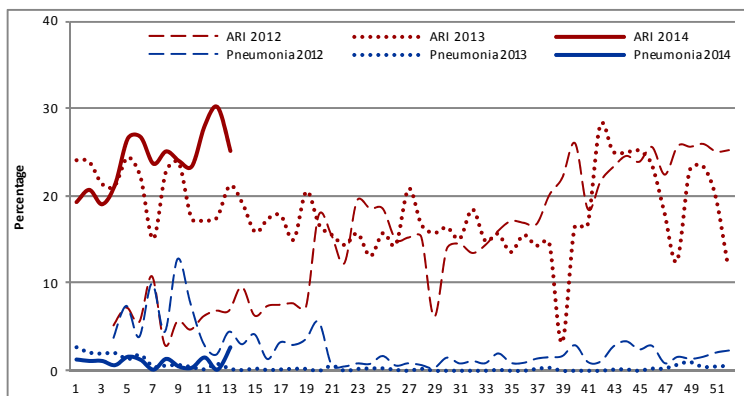
79 health facilities from 8 districts in AJ&K reported to DEWS with a total of 15,112 patients consultations in week 13, 2014.

4 alerts, 2 each were for Measles and Leishmaniasis were reported from AJ&K in week 13, 2014 and appropriate measures were taken.

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

Islamabad:

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



3 health facilities reported to DEWS on time with a total of 391 patients consultations in week 13, 2014.

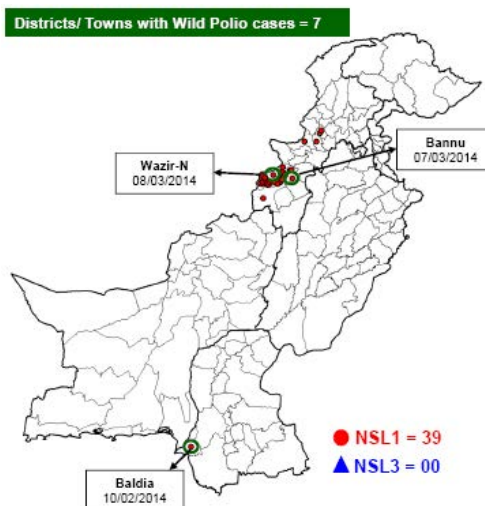
1 alert for Measles reported from Islamabad in week 13, 2014 and appropriate measures were taken.

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

Distribution of Wild Polio Virus cases in Pakistan 2013 and 2014

In this week 13 (23 to 29 Mar 2014), three new wild type-1 polio cases were reported from Federally Administered Tribal Areas (North Waziristan Agency). This brings the total number of polio cases in 2014 to 39 (compared to 6 in 2013 till this time) from 7 districts/towns/tribal agencies/FR areas (compared to 6 in 2013 till this time).

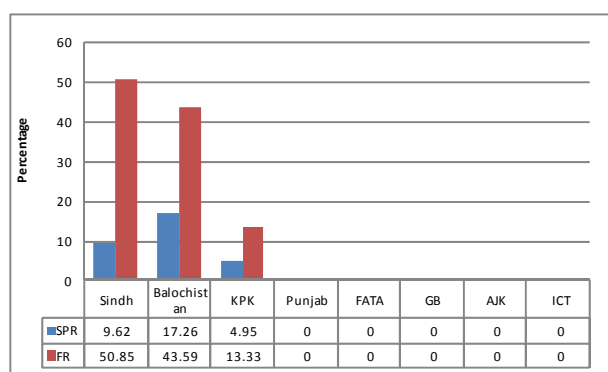
Province	2013			2014		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	7	-	-	-	-	-
Sindh	10	-	-	1	-	-
Khyber Pakhtunkhwa	11	-	-	5	-	-
FATA	65	-	-	33	-	-
Balochistan	-	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	-	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	93	-	-	39	-	-



Malaria:

The Table and chart at below shows the Malaria slide positivity and Falciparum ratio in week 13, 2014. Total number of Malaria cases tested in this week is 3,879 out of which 362 were found positive; 192 for P. Vivax; 46 for P. Falciparum; while 124 for Mixed (SPR = 9.33%; F.R = 46.96%).

Malaria tests \ Province	Sindh	Balochistan	KPK	Punjab	GB	FATA	AJK	ICT
P. Vivax	144	22	26	0	0	0	0	0
P. Falciparum	26	16	4	0	0	0	0	0
Mixed	123	1	0	0	0	0	0	0
# tested	3047	226	606	0	0	0	0	0
SPR	9.62	17.26	4.95	0	0	0	0	0
FR	50.85	43.59	13.33	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 29th March 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, 50 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 14 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 50 cases, 25 cases were laboratory confirmed for H1N1. 9 out of all the lab confirmed cases were died due to the severity of the disease (CFR= 36%).

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:

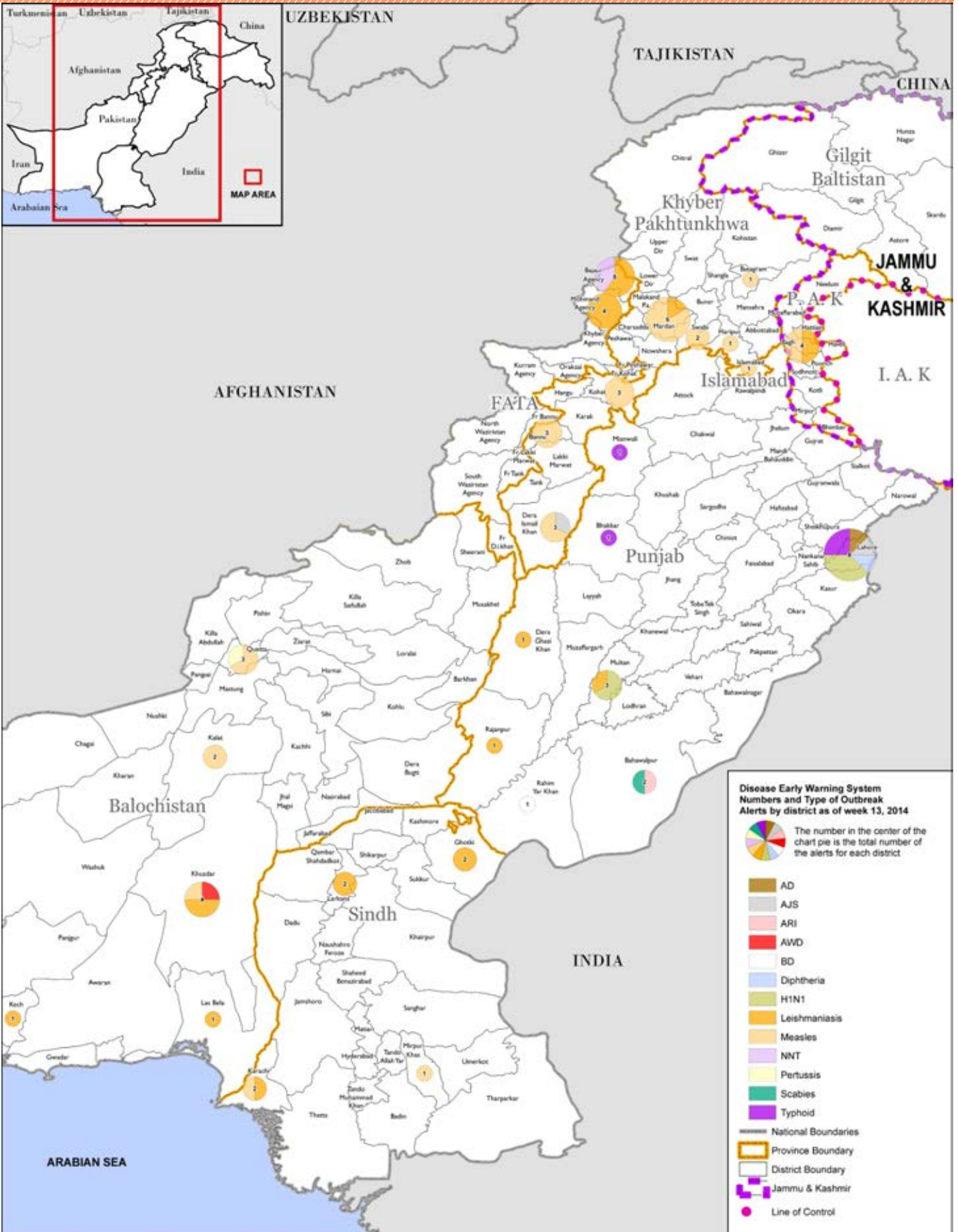
- Influenza patients staying at home away from contacts; take plenty of fluids, covering coughs and sneezes (do not spit) and washing hands frequently may help to reduce the spread. If soap and water are not available, use a hand sanitizer.
- Inform family and friends about your illness and try to avoid 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 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 13, 2014



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 For Correspondence: NIH: eic.nih@gmail.com; WHO: Tel : +92-051-9255184-5, Fax : +92-051-9255083; E-mail: wr@pak.emro.who.int.