

Early Warning and Reporting System (EWARS)

Weekly Bulletin

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This bulletin includes the updates from two surveillance systems:

1. The Early Warning Reporting System (EWARS) includes data since January 2014 till date, including comparison of same period during last year.
2. Post-earthquake hospital based syndromic surveillance system covering public and private hospitals in the 14 districts highly affected by the April 2015 Earthquake.

Section 1: The Early Warning and Reporting System (EWARS)

Highlights
<ul style="list-style-type: none"> • Two deaths from SARI were reported this week, one each from Kanti Children Hospital and Mahakali Zonal Hospital and the cases were from Khotang and Kanchanpur district respectively. • Last year, the number of Dengue cases peaked on week 47(14 cases) so it important to remain alert for new outbreak this year. • No case of Dengue, Kala-azar and Malaria was reported this week. • Two addition sentinel sites (Lamjung and Gorkha) are receiving orientation as part of EWARS expansion this week.

The EWARS has been established since 1997 in Nepal to strengthen the flow of information on vector-borne and other outbreak prone infectious diseases from the district to Epidemiology and Disease Control Division (EDCD) and Vector-Borne Disease Research and Training Center (VBDRTC), Hetauda. Rapid Response Teams (RRTs) can be mobilized at short notice to facilitate prompt outbreak response at Central, Regional and District level; they can also support the local level health institutions for investigation and outbreak control activities.

This information system is hospital-based and is currently operational in 40 hospitals (out of 81 sites) throughout Nepal (Figure 1). So far, the EWARS mainly focuses on the **weekly reporting** of number of cases and deaths (including "zero" reports) of six priority diseases/syndromes—Malaria, Kala-azar, Dengue, Acute Gastroenteritis (AGE), Cholera and Severe Acute Respiratory Infection (SARI), and other epidemic potential diseases/syndromes (like enteric fever, fever of unknown origin). It equally focuses on **immediate reporting** (to be reported within 24 hours of diagnosis) of one confirmed case of Cholera, Kala-azar severe and complicated Malaria and one suspect/clinical case of Dengue as well as 5 or more cases of AGE and SARI from the same geographical locality in one week period.

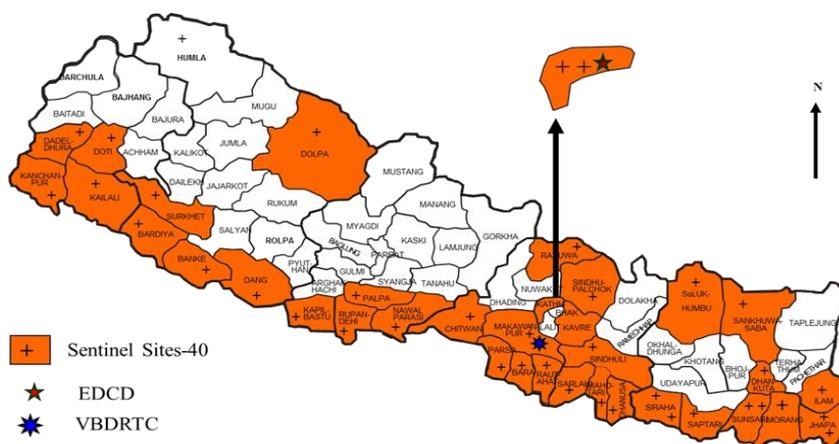


Figure 1: Sentinel sites of the Early Warning and Reporting System in Nepal set up in 2009

1.1 Acute Gastro-Enteritis and Cholera

110 cases of AGE were reported in week 46. The cases have decreased over the past few weeks. Among 110 cases, the majority of cases were from Morang (17 cases), Sunsari (13 cases), Jhapa (10 cases), Kathmandu (10 cases) and Makwanpur (7 cases).

Surveillance for Cholera is ongoing at 35 different public and private hospitals of the Kathmandu Valley.

1.2 Severe Acute Respiratory Infection (SARI)

The number of SARI cases reported through EWARS has peaked in week 11 (249 cases) and week 43(281 cases) this year and has been decreasing afterwards. Last year, the cases of SARI started to increase from week 35 and peaked on week 42 with 377 cases so it is important to remain alert for new outbreak. However, the number of SARI cases reported in week 46(198 cases) this year did not exceed the number of SARI cases reported in the same week last year (275 cases). Among 198 cases 36 cases were from Jhapa, 21 cases from Morang,17 cases from Palpa, 16 cases from Kanchanpur and 13 cases each from Illam and Kailali.

Two deaths from SARI were reported this week, one each from Kanti Children Hospital and Mahakali Zonal Hospital and the case were from Khotang and Kanchanpur district respectively.

1.3 Enteric Fever

The number of cases of enteric fever has peaked in week 37 this year (71 cases). In week 46, 16 cases of enteric fever were reported, including 3 from Morang and Saptari each and two from Siraha and Jhapa each.

1.4 Malaria

No case of Malaria was reported this week. Eighty four cases were reported through EWARS so far this year. The total number of Malaria cases reported in 2014 was 120.

1.5 Dengue

No case of Dengue was reported this week. Forty nine cases of Dengue were reported so far this year. Last year, the number of Dengue cases peaked on week 47(14 cases) so it important to remain alert for new outbreak.

1.6 Kala-azar

No case of Kala-azar was reported in week 46. 126 cases of Kala-azar are reported through EWARS till date this year. The number of Kala-azar cases reported through the EWARS was 200 in 2014.

Post-Earthquake Hospital Based Syndromic Disease Surveillance

Epidemiology and Disease Control Division (EDCD) has been continuing post-earthquake hospital based syndromic surveillance system. The system covers 38 hospitals and primary health care centres in 14 earthquake affected districts; however 7 districts reported in last three weeks.

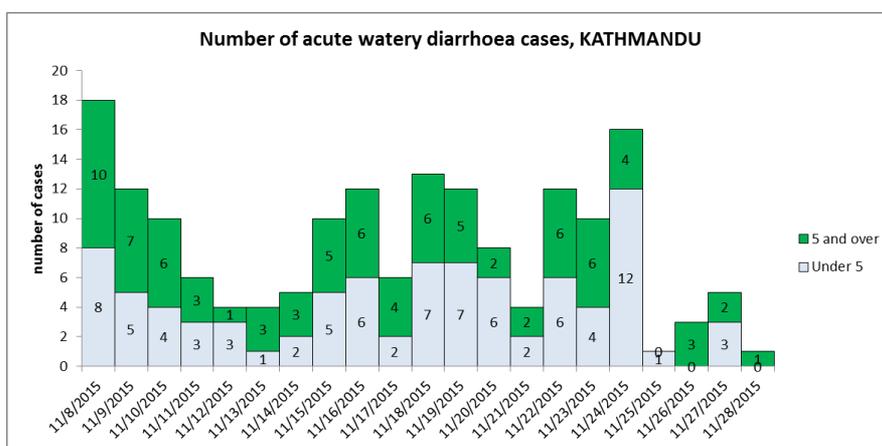
The objective of hospital based syndromic surveillance is to rapidly identify any increase in a number of outbreak prone syndromes. It helps us to ensure that outbreaks are not missed. The number of syndromes crossing the threshold level (doubling of the average of the previous 7 days, with a minimum of 5 cases) triggers an alert. But only one case triggers the alert for suspected cholera and fever with rash. Similarly, more than 5 cases in a 7 days' period trigger an alert for fever with jaundice.

The surveillance includes 8 syndromes: **Influenza like illness (ILI)**, **severe acute respiratory infection (SARI)**, **acute watery diarrhoea**, **acute bloody diarrhoea**, **suspected cholera**, **fever with rash**, **fever with jaundice** and **fever without rash and jaundice**. In this report, the data analysis was done for last three weeks.

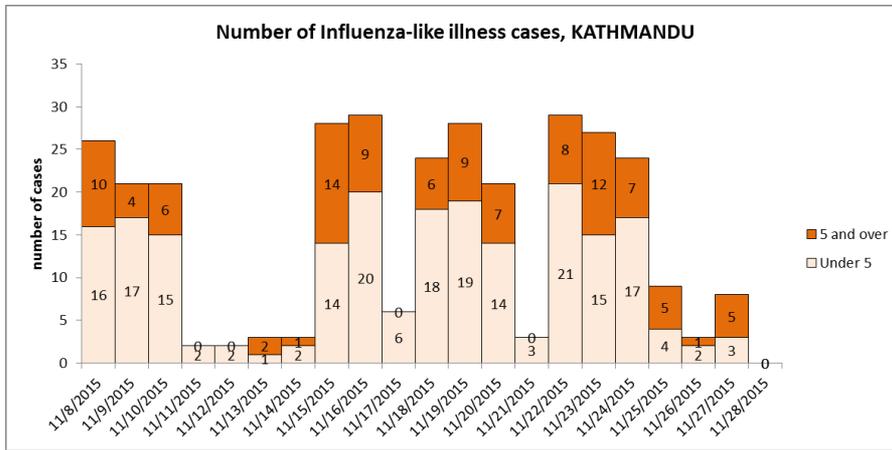
Highlights
<ul style="list-style-type: none"> ▪ The number of Acute watery diarrhoea peaked on 8th November with 22 cases and seems to be fluctuating afterwards. ▪ Only two cases of Acute bloody diarrhoea were seen in last three weeks. ▪ The number of Influenza like Illness (ILI) peaked on 15th November with 36 cases and seems to be in fluctuating afterwards. ▪ The number of Severe Acute Respiratory Infection (SARI) peaked on 15th November with 25 cases and seems to be fluctuating afterwards. ▪ Few cases of Fever with jaundice were seen in last three weeks. ▪ The number of Fever with rash peaked on 8th November with 5 cases. ▪ The number of Fever without rash and jaundice peaked on 8th November with 91 cases.

Analysis of information on 8 syndromes collected from hospitals in the earthquake affected 14 districts within 21 days shows that except in Kathmandu district, no remarkable observations (increase or decrease) of outbreak prone syndromes were noticed. Reports were received from Kavre, Lalitpur, Nuwakot, Okhaldhunga, Rasuwa, and Ramechhap districts, while Bhaktapur, Dhading, Dolakha, Gorkha, Makwanpur, Sindhuli and Sindhupalchowk districts did not report in last week.

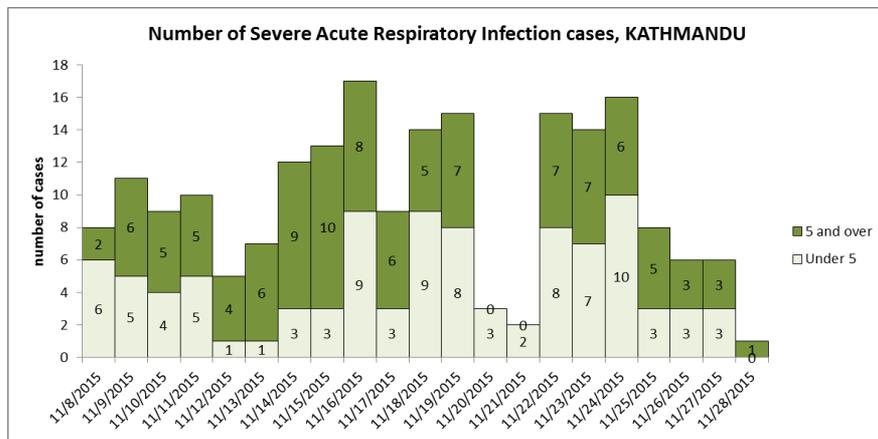
In Kathmandu, the number of acute watery diarrhoea has been fluctuating and a peak was observed on 8th November with 18 cases.



The number of influenza like illness was seen similar on 16th and 22nd November with 29 cases in Kathmandu Valley.



The number of Severe Acute Respiratory Infection(SARI) has peaked on 16th November with 17 cases in Kathmandu Valley.



Acknowledgement

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Timeliness & completeness of reporting from sentinel sites

Site Code	Sentinel Sites	Timeliness (%)	Completeness (%)	Site code	Sentinel Sites	Timeliness (%)	Completeness (%)
101	Mechi ZH, Jhapa	98	100	125	MZH, Kanchanpur	98	100
102	Koshi ZH, Morang	98	100	126	DH, Doti	68	94
103	DH, Sunsari	82	98	127	DH, Bardiya	98	100
104	BPKIHS, Dharan	98	100	128	DH, Mahottari	14	90
105	DH, Dhankuta	98	100	129	DH, Dadeldhura	90	22
106	SZH, Saptari	18	98	130	DH, Rasuwa	22	28
107	RKUP, Lahan, Siraha	98	100	131	DH, Sankhuwasabha	0	0
108	DH, Siraha	52	98	132	AMDA Hosp. Jhapa	98	100
109	JZH, Dhanusha	22	40	133	DH, Chautara	68	100
110	DH, Rautahat	76	100	134	DH, Sarlahi	4	94
111	DH, Bara	0	0	135	DH, Sindhuli	12	90
112	NSRH, Parsa	86	96	136	DH, Illam	94	98
113	DH, Makawanpur	32	100	137	Dhulikhel H., Kavre	34	98
114	NZH, Chitwan	26	94	138	DH, Solukhumbu	38	100
115	Kanti CH, Kathmandu	78	100	139	DH, Dolpa	0	0
116	STH, Kathmandu	98	100	140	DH, Humla	0	0
117	UMH, Palpa	98	100				
118	PCH, Nawalparasi	98	100				
119	PBH, Kapilvastu	98	34				
120	LZH, Rupandehi	98	100				
121	RSRH Dang	14	18				
122	MWRH, Surkhet	98	100				
123	BZH, Banke	58	88				
124	SZH, Kailali	98	100				

