

PUBLIC HEALTH LABORATORY

FLUVIEW- January, 2014

Influenza-like-illness and Severe Acute Respiratory Infection surveillance Report

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Note: (All data are preliminary and may change as more reports are received)

Synopsis

The ILI burden is 2.2% slightly more than previous month December 1.47% but the intensity and impact is unchanged. This burden represents from all 10 ILI sentinel surveillance sites (Table 1).

Total of 10 throat swabs were received for virological investigations. The samples were tested for Influenza viruses using real-time reverse transcription polymerase chain reactions (RT-PCR) and found Flu B positive for two samples.

Severe acute respiratory illness (SARI) burden from the 10 sentinel sites is 9.27% (117 SARI cases out of 1278 total admitted patients). No samples were received for virological investigations by RT-PCR.

One death case due to SARI/Pneumonia was reported in 5th week of the month.

There is no Flu outbreaks reported from any of the site for the month of January.

1. Outpatient ILI surveillance

The average rate of influenza-like illness (ILI) patient visited hospitals (10 sentinel sites) for the month of January; (week 1-5th) is 2.2% (904 ILI cases out of 41952 OPD cases). The proportion of ILI rate is below 4%, ranging from 1.02 to 3.7%. There were 904 ILI cases reported from 10 ILI surveillance sites, except Mongar Hospital has missed from week 3-5th of January. Gelephu Hospital has reported the highest number of ILI cases (330 ILI cases) followed by Tashigang Hospital, (221 ILI cases); however the report shows Tashigang and Trongsa Hospital is burdened more with high ILI rate (7.01%) and 5.36% compare to Gelephu Hospital (3.14%) and other sites (Fig. 1 and Table 2). The report shows Samtse and Mongar Hospital has got no ILI cases for the whole January month; (Table 2). Trend of ILI increases towards the end week of the month comparing to the previous year's average ILI cases (Year 2010 to 2013) of the same month but the impact and intensity is unchanged (Fig. 2).

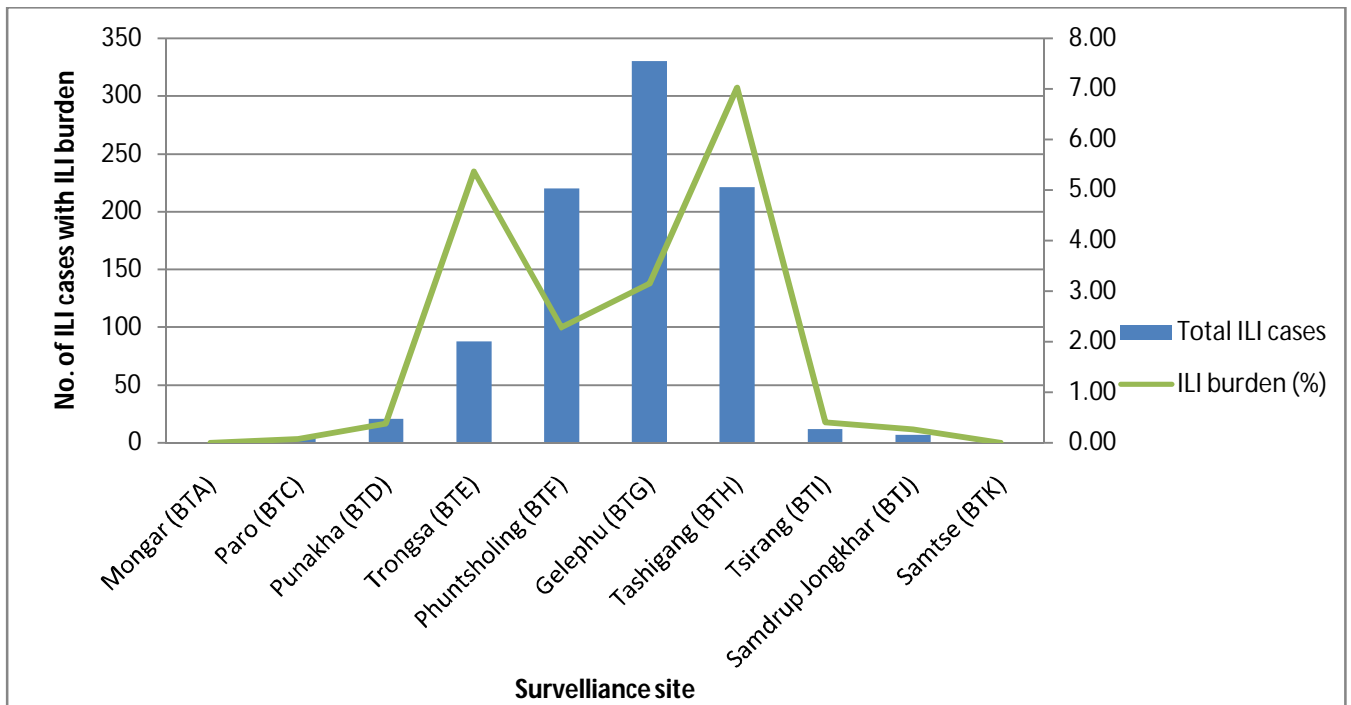


Figure 1: The number of ILI cases with average ILI burden (%) from each site in January month; (Data source: Weekly ILI report from surveillance site)

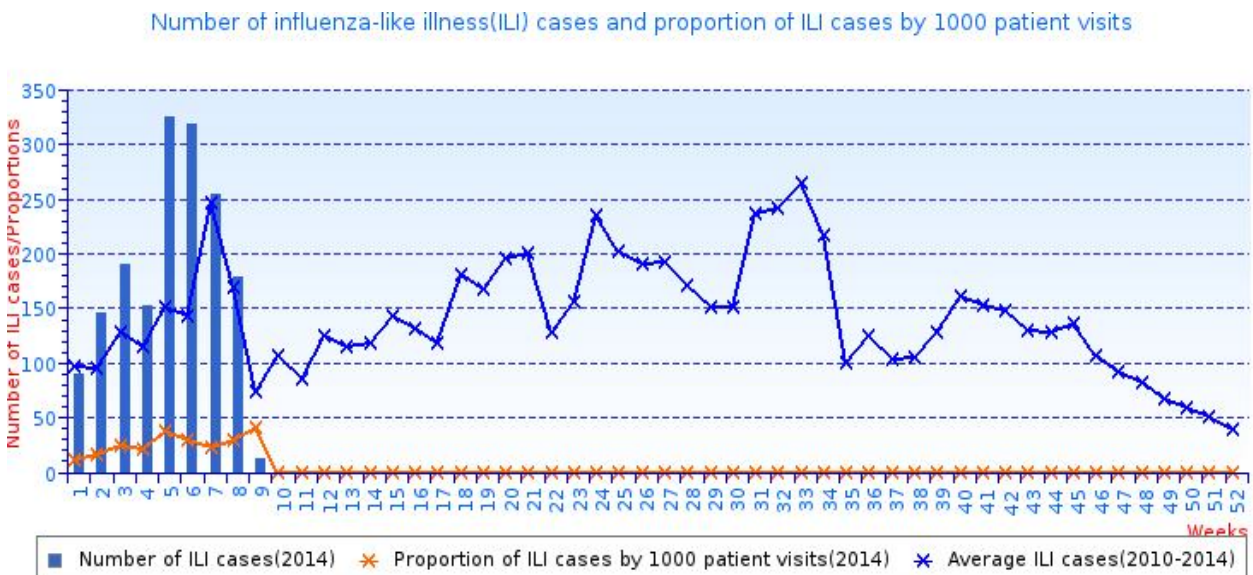


Figure 2: Number of ILI cases reported till 5th week of January 2014 is compared to the previous year's average ILI cases (Year 2010 to 2013). (Data source: weekly report from sentinel sites.)

Table No. 1: Sentinel sites for ILI/SARI Surveillance. *Although ILI and SARI samples are collected and tested from JDWNRH, weekly case reporting is not done due to difficulty in obtaining data from the facility.

Western region	Central region	Eastern region
JDWNR Hospital*	Trongsa Hospital	Trashigang Hospital
Paro Hospital	Tsirang Hospital	Mongar RR Hospital
Punakha Hospital	Gelephu RR Hospital(Sarpang)	SamdrupJongkhar Hospital
P/ling Hospital(Chukha)		
Samtse Hospital		

Table 2: ILI & SARI surveillance for the month of January, 2014

Sentinel Site	ILI	Tot OPD	ILI burden %	SARI	Total IPD	SARI burden%
Mongar (BTA)	0	1151	0.00	0	4	0.00
Paro (BTC)	5	6021	0.08	13	203	6.40
Punakha (BTD)	21	5815	0.38	4	173	2.31
Trongsa (BTE)	88	1622	5.36	4	23	17.39
Phuntsholing (BTF)	220	3095	2.28	49	109	44.95
Gelephu (BTG)	330	10642	3.14	8	330	2.42
Tashigang (BTH)	221	2956	7.01	3	130	2.31
Tsirang (BTI)	12	3426	0.40	6	101	5.94
Samdrup Jongkhar (BTJ)	7	2623	0.27	23	93	24.73
Samtse (BTK)	0	4601	0.00	7	112	6.25

2. Virology Surveillance

Total of 10 ILI throat swabs were received for virological investigations, all samples were tested for influenza viruses by using real-time reverse transcription polymerase chain reactions (RT-PCR) and found 2 samples positive for Flu B (1 from Paro and 1 from Phuntsholing Hospital) and rest Negative (Table 3). The samples were received only from 4 sentinel sites, Mongar, Paro, Phuntsholing and Trashigang Hospital, rest 7 sites has got no ILI samples to send to PHL (Table 3). Last year 2013 Flu A/H3 was found most predominant strain circulating in Bhutanese population and also in Asia region as a worldwide; however Flu B was detected towards the end of the year. Flu B strains detection was found still active in January month in Bhutanese population, 2014 (Figure 3).

Number of specimens positive for influenza by subtype

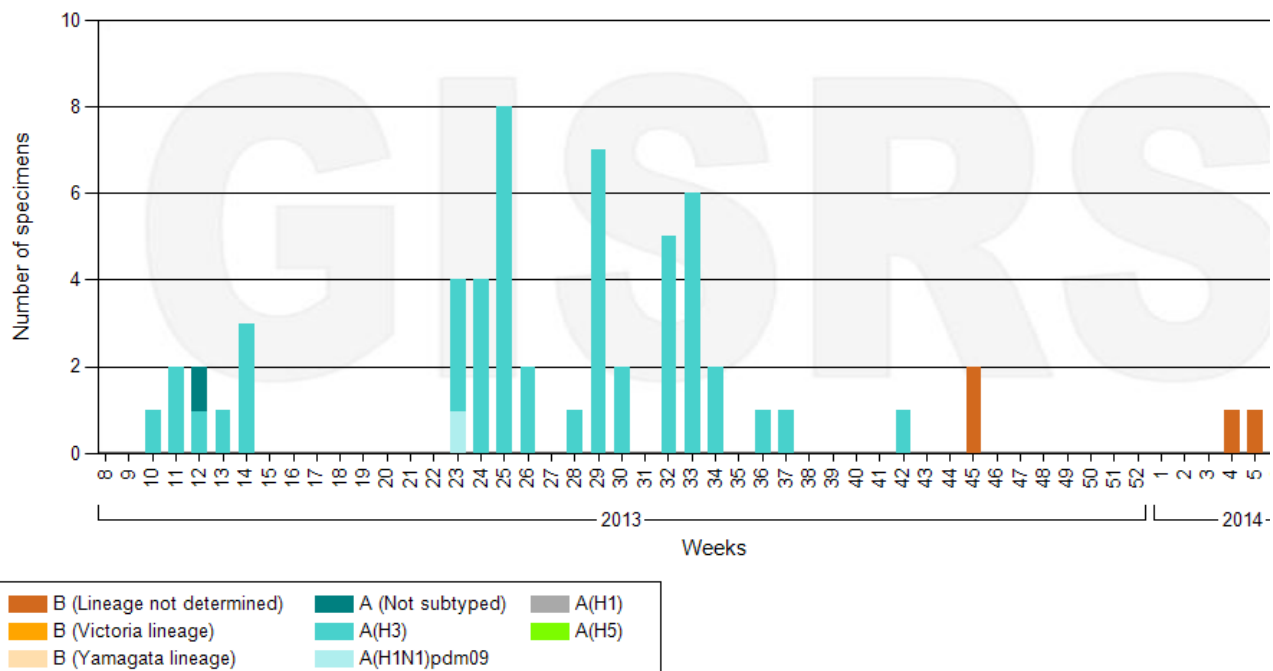


Figure 3: Number of specimens positive for influenza by subtype in Bhutan compared with previous year 2013 to till week 5th of January 2014. (Source: [FluNet\(www.who.int/flunet \)](http://www.who.int/flunet)GISRS)

Table 3: ILI throat swab samples received from sentinel surveillance site

Sl. No.	Surveillance Site	No. of samples received	FluA/ H1	FluA/ H3	FluA/ pdmH1	Flu A/ unsubtyed	Flu B	Remarks	Total
1	Mongar (BTA)	1							1
2	Thimphu (BTB)	0							0
3	Paro (BTC)	1					1		1
4	Punakha (BTD)	0							0
5	Trongsa (BTE)	0							0
6	P/ling (BTF)	6					1		6
7	Gelephu (BTG)	0							0
8	Tashigang (BTH)	2							2
9	Tsirang (BTI)	0							0
10	S/Jongkhar (BTJ)	0							0
11	Samtse (BTK)	0							0
			0	0	0	0	2	0	10

3. Severe Acute Respiratory Infections surveillance (SARI)

SARI burden from the 10 sentinel sites was found 9.15% (117 SARI cases out of 1278 IPD cases). No SARI sample was received for virological investigations. SARI cases were increased in week 5th of January compare to the previous two years average SARI cases but the intensity and impact is unchanged (Figure 4). Phuntsholing Hospital has reported highest number of SARI cases i.e. 44 cases of total 109 admitted patients and SARI burden was found 44.95% followed by Samdrup Jongkhar Hoospital 24.73% (Fig. 5 and Table 2).

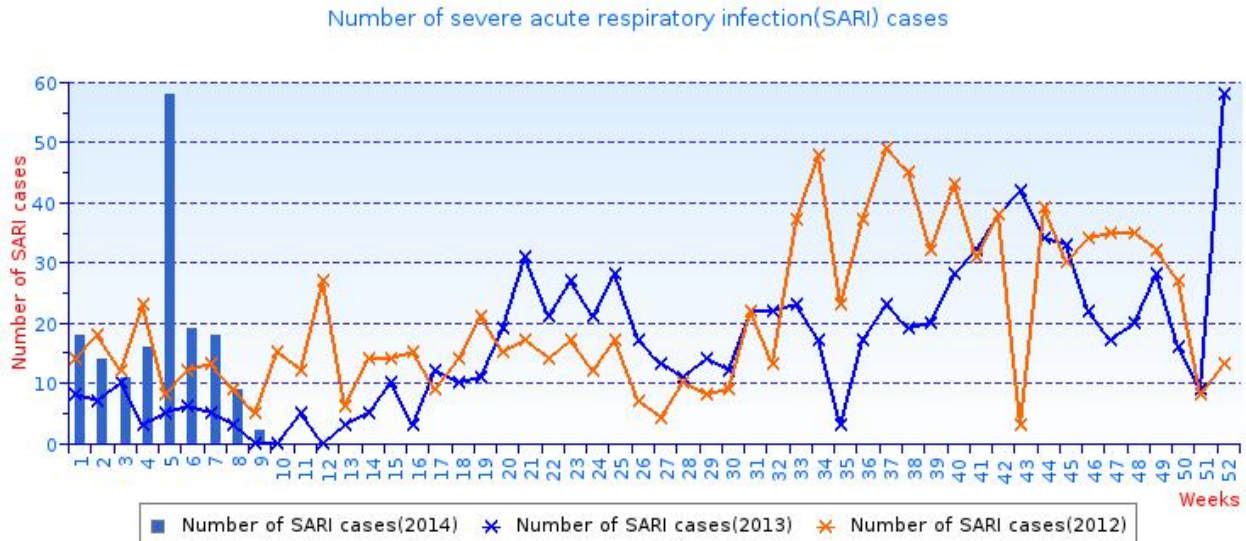


Figure 4: Number of SARI cases from week 1-5th January 2014 compared with previous year 2012 & 2013.

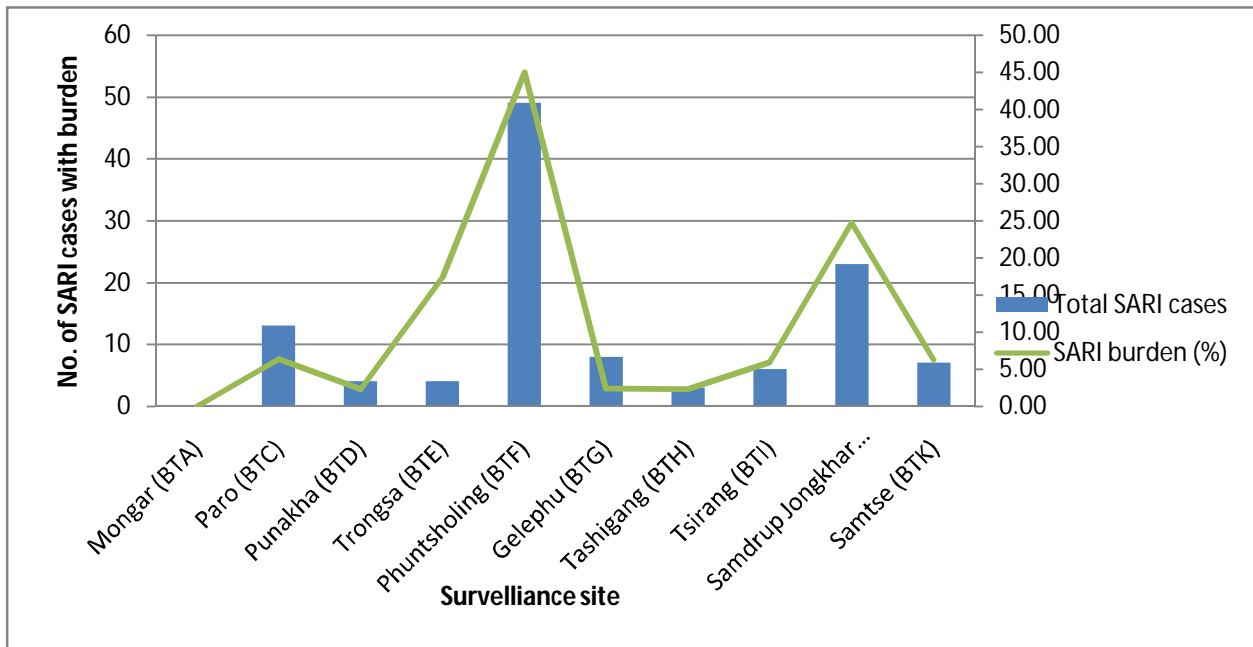


Figure 5: The number of SARI cases with average SARI burden (%) from each site in January month; (Data source: Weekly SARI report from surveillance site)

4. Age Distribution among ILI and SARI cases

The most affected age group by ILI was found between 15-29 years with 23% (208 of 904 of total ILI cases) and the most affected age group by SARI was found between 0-1 years, 27.35% (32 of 117 of total SARI cases), (Table 4, Fig. 6).

Table 4: ILI and SARI age categorization

	0-1yr	2-4yr	5-14yr	15-29yr	30-64yr	65+
ILI %	20.58	14.05	15.49	23.01	22.01	4.87
SARI %	27.35	9.40	7.69	26.50	17.95	11.11

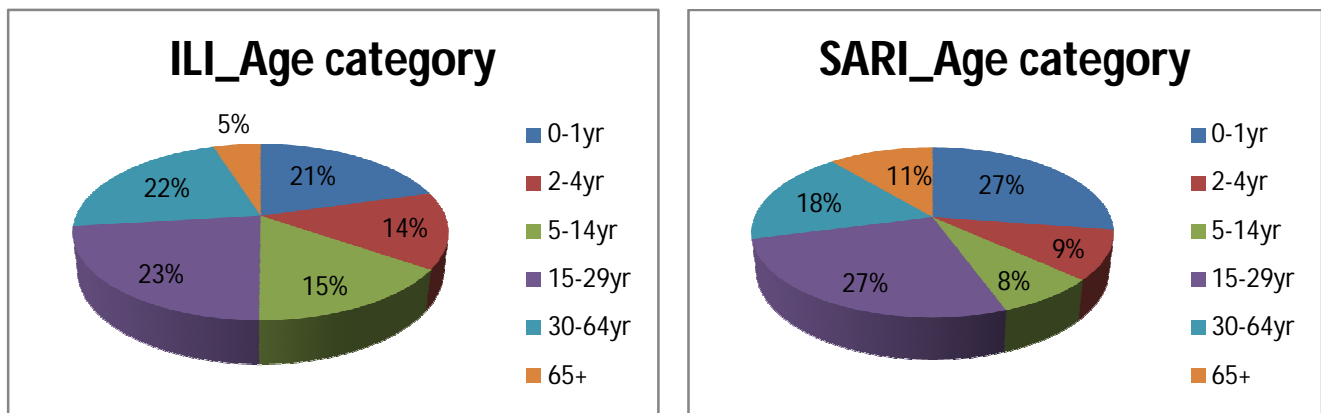


Figure 6: Age distribution among ILI & SARI cases; (Data source: Weekly ILI report from surveillance site)

5. Deaths due to SARI/Pneumonia

One death case was reported in 5th week of January from Phuntsholing Hospital. The case was 35 year old male died probably due to SARI/pneumonia. Cause of death could not be ruled out by Influenza virus since SARI throat swab specimen was not collected for confirmation by using real-time RT-PCR in PHL.

6. Influenza Outbreaks

There was no influenza outbreak reported for the month of October.