



Indiana State Department of Health

WEEKLY INFLUENZA REPORT

Data as of Monday, October 19 (CDC Week 41)

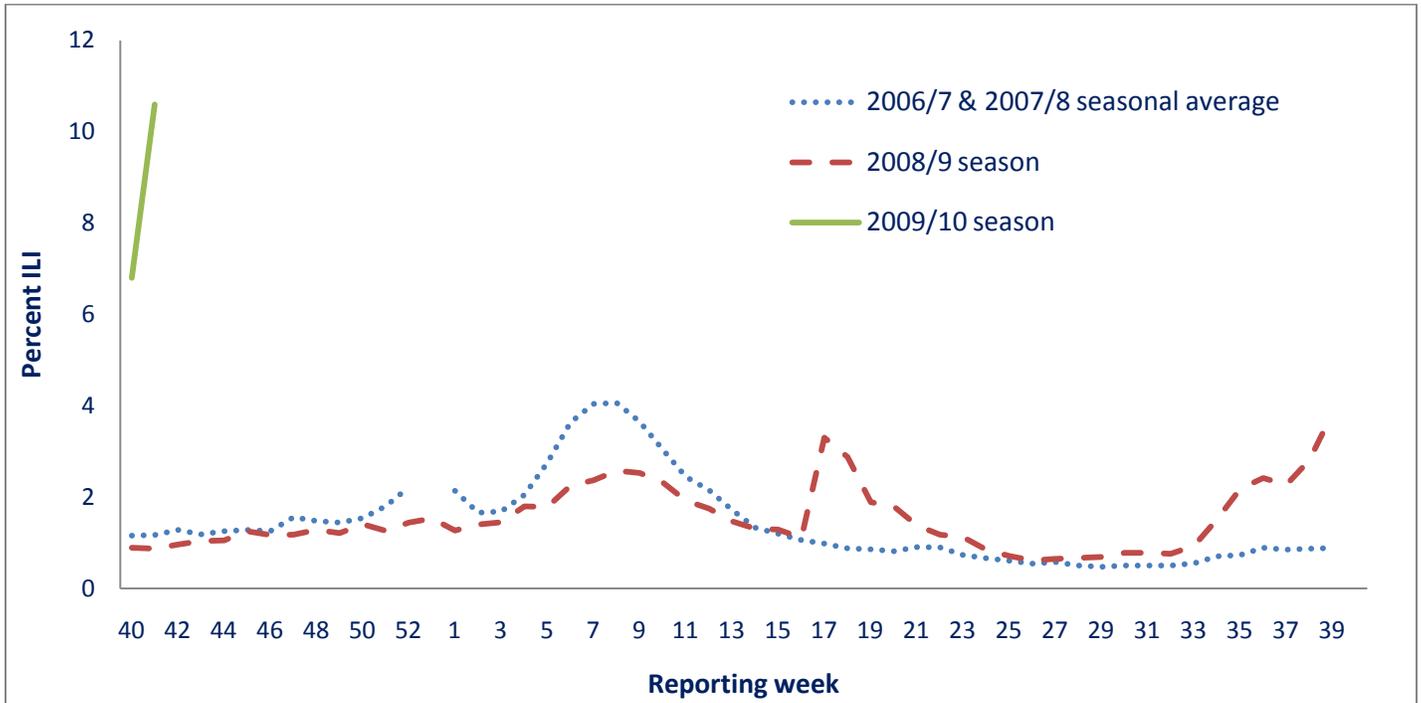
The following report is meant to provide local health departments, hospital administrators, and health professionals with an in depth understanding of the burden of influenza-like illness (ILI) and pneumonia on Indiana residents to help guide clinical practice and community mitigation efforts. Data from several surveillance programs were utilized to produce this report. While the Indiana State Department of Health (ISDH) Laboratory is currently testing a representative number of samples for the 2009 H1N1 influenza virus, the majority of the ISDH surveillance efforts are unable to discern between influenza illness due to this novel strain and other circulating viruses. Caution should be taken when examining this data, understanding that it is mostly descriptive of all circulating viruses and not just 2009 H1N1.

For further information about the data presented in this report, please call the ISDH Surveillance and Investigation Division at 317-233-7125.

Key Points:

- The current percentage of ILI reported by the emergency department surveillance (ED) system (10.6%) has considerably surpassed the seasonal peak experienced during the 2008/9 influenza season.
- Younger populations (0-25 years of age) had the highest tendency to seek care for ILI at sentinel provider clinics.
- The rate of ILI and pneumonia-related hospitalizations per 100 inpatient beds increased 24.7% compared to the weighted moving average from the previous three weeks.
 - While all age categories experienced increases in the rate of ILI and pneumonia-related hospitalizations per 100 inpatient beds, the largest increases occurred in the 0-4 and 5-18 year old age categories.
- 27% of reporting hospitals stated that the number of ILI-related hospitalizations is currently “slightly elevated” or “elevated” compared to previous years.
 - 14% (2/14) of hospitals with “slightly elevated” or “elevated” burdens of ILI-related hospitalizations are reporting that they are having increased difficulty with managing this patient population.
- Three confirmed influenza-related deaths were reported during Week 41.
 - Two were due to 2009 H1N1 and one was not tested to delineate between seasonal influenza and 2009 H1N1.
- ILI-related absentee rates in health care personnel continued to increase during this reporting week compared to the weighted average absenteeism rate.
 - 0.77 compared to 0.52 ILI-related absences per 100 employees, representing a 48% increase.
- Since September 1, 2009, 96% (179/186) of specimens tested by the ISDH Laboratory that were positive for influenza were 2009 H1N1.
 - During week 41, 98% (56/57) of specimens that were positive for influenza were 2009 H1N1.
 - One specimen was positive for influenza B.
 - Other respiratory viruses are circulating in addition to influenza.
- During week 41, 27 Indiana schools (K-12) reported that their absenteeism rate was 20% or higher.
 - A total of 38 schools have reported 20% or higher absenteeism rates since September 14, 2009.

Percent of patients who presented at an emergency department (ED) with a chief complaint relating to influenza-like illness – Indiana, 2009/10 & 2008/9 seasons vs. 2006/7 & 2007/8 seasonal averages.*† (EDs currently reporting = 76)
 Health District-level data is available at the end of this report.



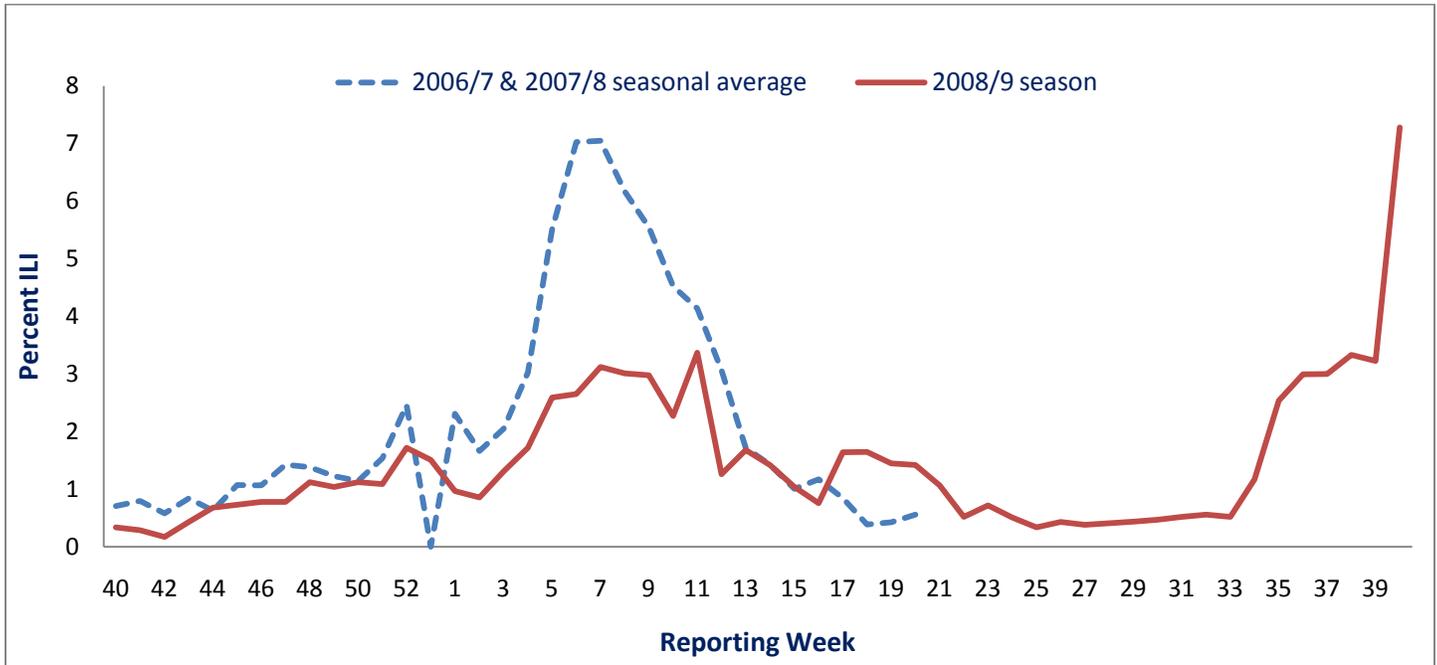
*Data obtained from the ISDH Public Health Emergency Surveillance System (PHESS). The 2008/9 season had a “Week 53” which the 2006/7 and 2007/8 seasons did not have, explaining the break in the seasonal average line.

† PHESS data is very timely, so the data reported is for the most current week.

Key Findings

- Emergency room chief complaint data continues to remain elevated from the mean of the prior two influenza seasons.
- The current percentage of ILI reported by the emergency department surveillance (ED) system (10.6%) has considerably surpassed the seasonal peak experienced during the 2008/9 influenza season.
 - This data is consistent with reports received from individual hospitals last week who stated that they had a heavy burden of persons with ILI seeking treatment at their ED.
- There have been three distinct peaks of ILI activity in PHESS hospitals in 2009.

Percent of patients who presented at sentinel provider clinics with symptoms relating to influenza-like illness – Indiana, 2008/9 influenza season vs. 2006/7 and 2007/8 influenza seasonal averages.*† (Number of sentinel provider clinics who reported this week = 34)



*Data obtained from the ISDH Sentinel Influenza Surveillance System. No data is available for weeks 21-39 during the 2006/7 and 2007/8 seasons due to decreased reporting during traditionally non-influenza months.

† Sentinel data has limited timeliness, so the data reported is for the week before the most current week. This data is subject to change as sentinel sites can back-date their weekly reports.

Sentinel reported influenza-like illness (ILI) by sentinel type and reporting week – Indiana, 2008/9 season.*

Reporting Week	All Reporters (%ILI)	Universities (%ILI)	Non-Universities (%ILI)
Week 40	7.3	8.1	6.9
Week 39	3.2	3.8	2.9
Week 38	3.3	3.5	3.2

*Data obtained from the ISDH Sentinel Influenza Surveillance System. This data is subject to change as sentinel sites can back-date their weekly reports.

Sentinel reported influenza-like illness (ILI) by age category for the most current week reported – Indiana, 2008/9 season.*†

Age category (yrs)	Total number with ILI	Percent with ILI
0–4	73	9.2
5 –24	563	71.0
25–49	130	16.4
50–64	23	2.9
65+	3	0.4
Total	793	100.0

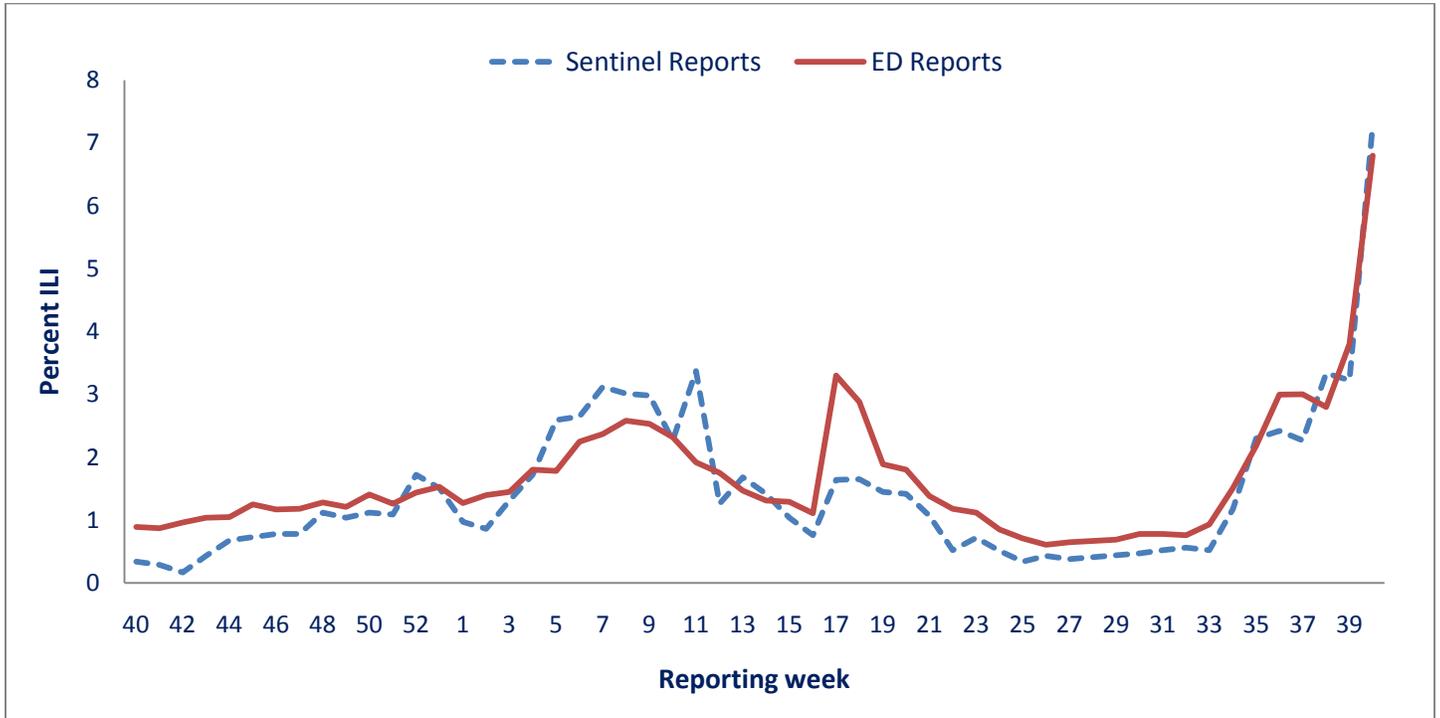
**Data obtained from the ISDH Sentinel Influenza Surveillance System.*

†Sentinel data has limited timeliness, so the data reported is for the week before the most current week. This data is subject to change as sentinel sites can back-date their weekly reports.

Key Findings

- The percent of patients presenting at sentinel providers with ILI remains elevated compared to the mean of the prior two influenza seasons.
- ILI activity during the current time period is not expected and signals the possibility of an unusual influenza season.
- Universities continue to experience slightly higher levels of ILI in their population compared to other sentinel sites.
 - Elevated reports of ILI from university-affiliated sentinel providers appear to be leading to some of the perceived increase of ILI in the entire community.
- Younger populations (0-25 years of age) had the highest tendency (80.2% of the patient population) to seek care for ILI at sentinel provider clinics.

Emergency department versus sentinel provider clinic data regarding the percent of patients presenting with influenza-like illness – Indiana, 2008/9 influenza season.*



*Data obtained from the ISDH Sentinel Influenza Surveillance System and the ISDH Public Health Emergency Surveillance System (PHESS).

† Sentinel data has limited timeliness, so the data reported is for the week before the most current week. This data is subject to change as sentinel sites can back-date their weekly reports.

Reporting Week	ED Surveillance (%ILI)	Sentinel Surveillance (%ILI)
Week 40	6.8	7.3
Week 39	3.8	3.2
Week 38	2.8	3.3

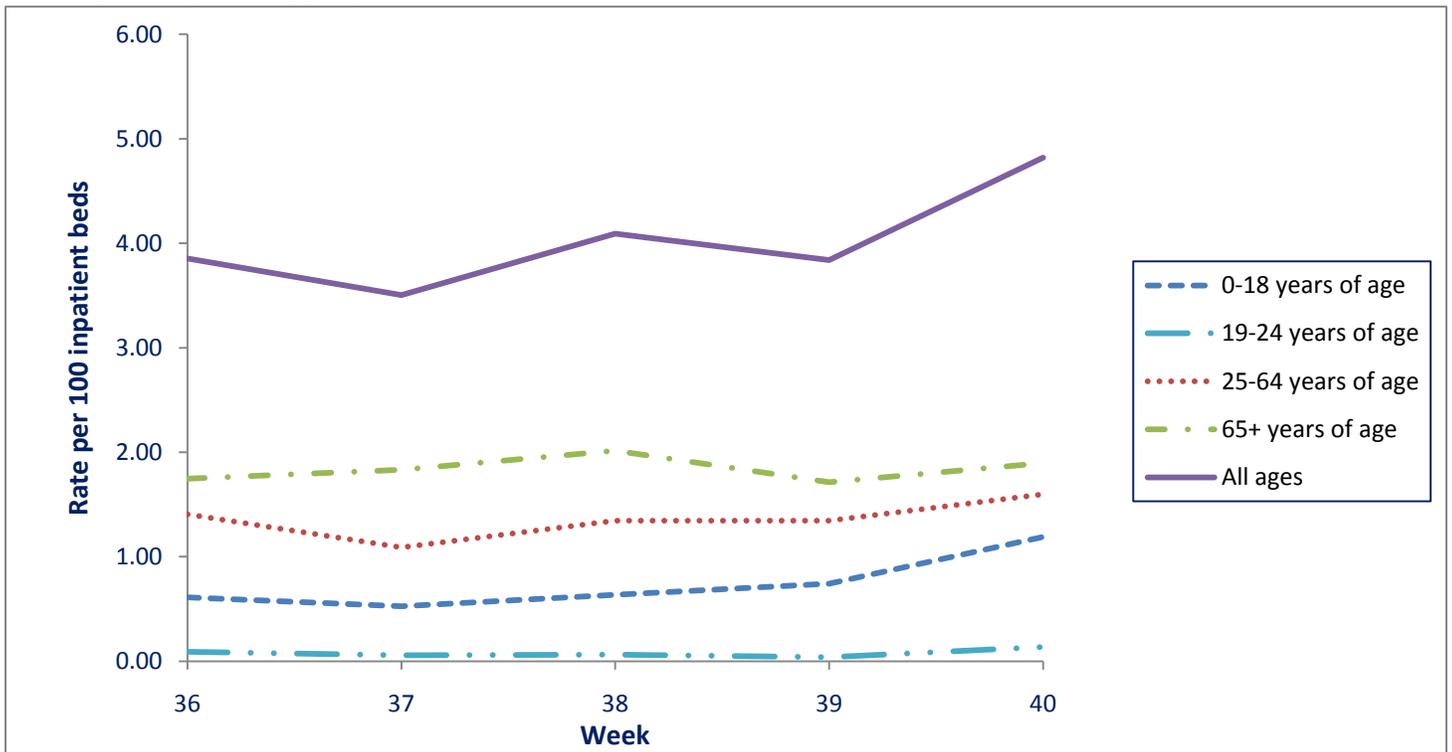
Key Findings

- Sentinel ILI and emergency room chief complaint data continue to follow common trends.
- Both sentinel and emergency rooms have shown at least 3 peaks of ILI activity since March 2009.

Number of newly hospitalized patients with influenza-like illness and/or pneumonia syndrome, by age category – Indiana, 2009/10 influenza season. Health District-level data is available at the end of this report.*

	This week's numbers [80 hospitals (15,455 beds) reporting]			Total since September 9, 2009		
	Age category (yrs)	Total number	Rate per 100 inpatient beds †	Age category (yrs)	Total number	Rate per 100 inpatient beds †
Number of persons hospitalized with influenza and/or pneumonia syndrome	0-4	90	0.58	0-4	338	0.42
	5-18	94	0.61	5-18	252	0.32
	19-24	21	0.14	19-24	60	0.08
	25-49	118	0.76	25-49	442	0.55
	50-64	129	0.83	50-64	634	0.79
	65+	293	1.90	65+	1473	1.84
	Unknown	0	0.00	Unknown	5	0.01
Total	745	4.82	Total	3204	4.01	

Rate of new influenza-like illness and/or pneumonia syndrome hospitalizations per 100 available inpatient beds, by reporting week and age category – Indiana, 2009/10 influenza season.* † (Some age categories were grouped to improve the ability to decipher the figure)



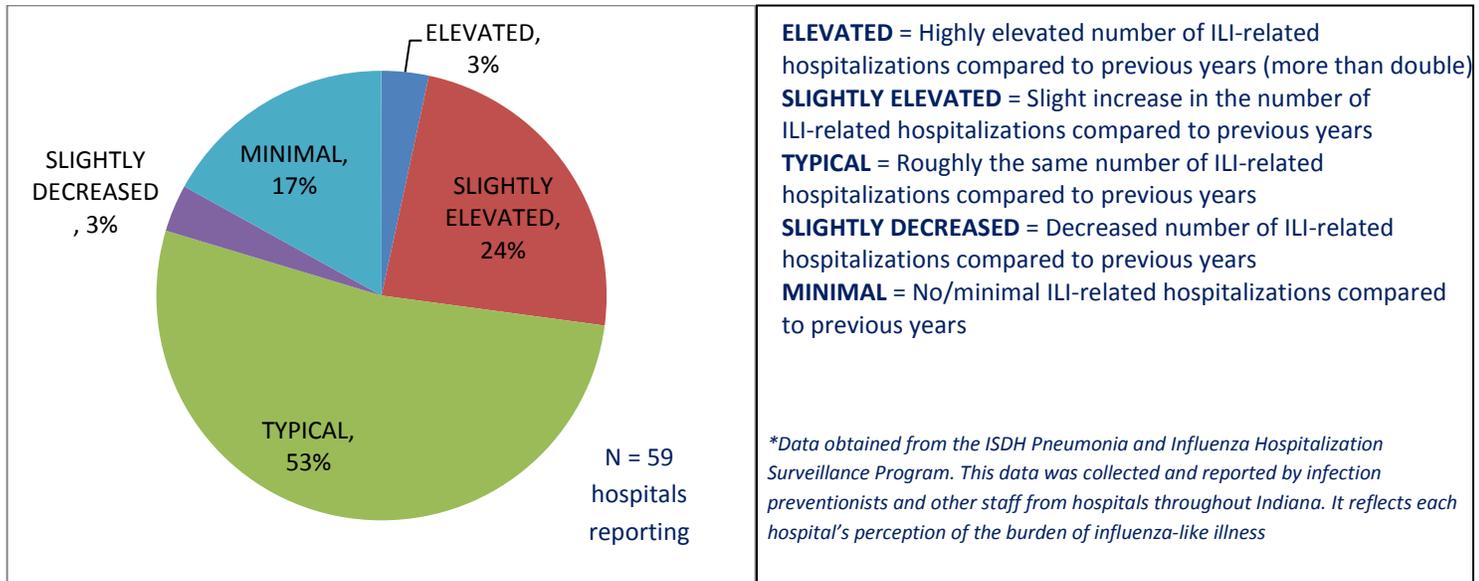
*Data obtained from the ISDH Pneumonia and Influenza Hospitalization Surveillance Program. This data was collected and reported by infection preventionists and other staff from hospitals throughout Indiana. It reflects cases who presented with symptoms or had ICD-9/10 codes relating to influenza-like illness and/or pneumonia.

†The number of inpatient beds is the total number of available inpatient beds currently available at the reporting hospitals and include the following bed classifications: intensive care unit, medical and surgical, medical and surgical negative pressure isolation, pediatrics, pediatric intensive care unit, emergency department, emergency department negative pressure isolation, and skilled beds.

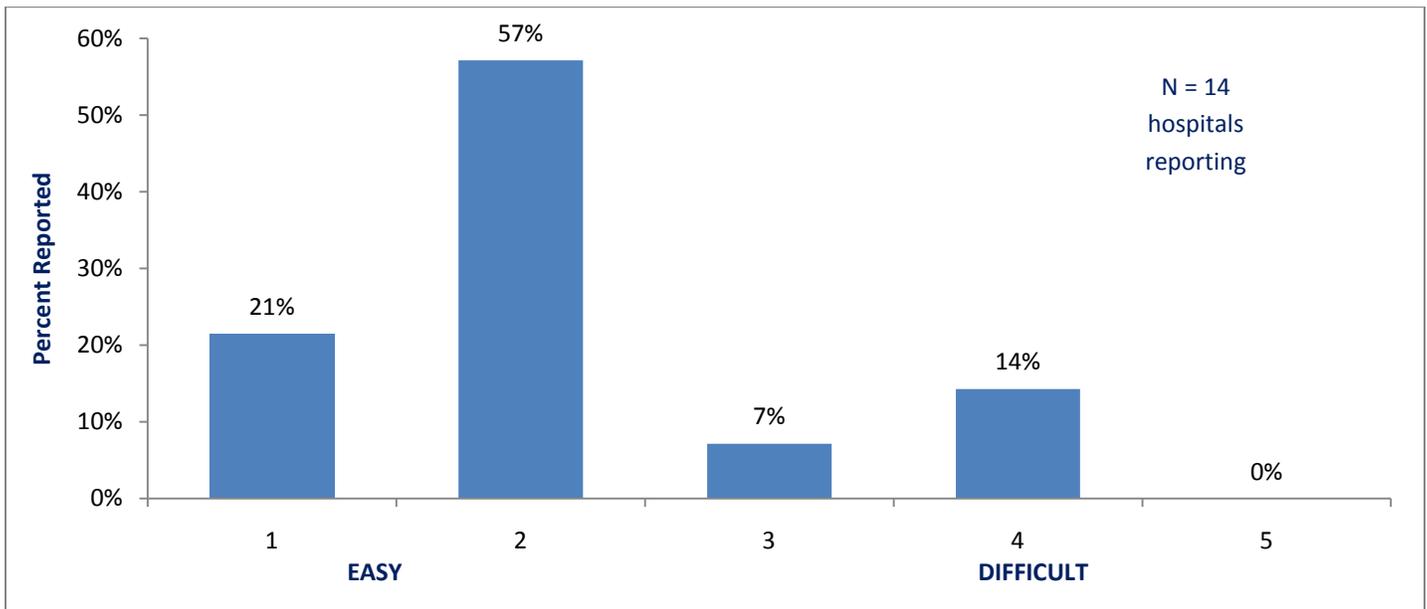
Key Findings

- The rate of ILI and pneumonia-related hospitalizations per 100 inpatient beds increased 24.7% compared to the weighted moving average from the previous three weeks.
 - A weighted moving average (utilizing the previous three weeks' data) is used as the baseline to determine if significant increases/decreases are occurring in ILI and pneumonia -related hospitalization rates.
- While all age categories experienced increases in the rate of ILI and pneumonia-related hospitalizations per 100 inpatient beds, the largest increases occurred in the 0-4 and 5-18 year old age categories.
- Persons 65 years of age and older continue to have the highest rate of hospitalizations and deaths associated with ILI and pneumonia. This data is unable to delineate between 2009 H1N1 and other causes of ILI and pneumonia, so it is not reflective solely of the burden of 2009 H1N1. National reports still find that 2009 H1N1-associated hospitalizations are occurring mainly in children and young adults.
- Reported cases of pneumonia syndrome are inclusive of all pneumonias, not just influenza-associated pneumonias (e.g., Klebsiella, MRSA).
- The hospitalization data were reported from either admitting or discharge diagnosis depending on each hospital's ability to report their data.

Extent of the burden of influenza-like illness-related hospitalizations per hospital reports – Indiana, Current Reporting Week, 2009/10 influenza season.*



Self-reported ability to manage (1 to 5, with 5 being “difficult to manage”) the current burden of influenza-like illness-related hospitalizations in hospitals reporting “slightly elevated” or “elevated” levels – Indiana, Current Reporting Week, 2009/10 influenza season.



Key Findings

- 27% of reporting hospitals stated that the number of ILI-related hospitalizations is currently “slightly elevated” or “elevated” compared to previous years.
 - 14% of hospitals (2/14) with “slightly elevated” or “elevated” burdens of ILI-related hospitalizations are reporting that they are having increased difficulty with managing this patient population.

Number of new deaths associated with influenza-like illness and/or pneumonia syndrome, by age category – Indiana, 2009/10 influenza season. Health District-level data is available at the end of this report.*

	This week's numbers [80 hospitals (15,455 beds) reporting]		Numbers since September 9, 2009	
	Age category (yrs)	Total number	Age category (yrs)	Total number
Number of deaths associated with influenza and/or pneumonia syndrome	0-4	1	0-4	1
	5-18	0	5-18	1
	19-24	0	19-24	0
	25-49	2	25-49	9
	50-64	3	50-64	9
	65+	7	65+	39
	Unknown	0	Unknown	0
	Total	13	Total	59

**Data obtained from the ISDH Pneumonia and Influenza Hospitalization Surveillance Program. This data was collected and reported by infection preventionists and other staff from hospitals throughout Indiana. It reflects cases who presented with symptoms or had ICD-9/10 codes relating to influenza-like illness and/or pneumonia.*

Key Findings

- The 13 reported Indiana deaths were from ILI and/or pneumonia syndrome. These are not confirmed 2009 H1N1 deaths or influenza-associated pneumonias.
- Influenza associated deaths are reportable to the health department within 72 hours of knowledge of death under the communicable disease rule.

Number of new deaths associated with laboratory confirmed influenza, by age category – Indiana, June 2009-present*

	This week's numbers		Numbers since June 1, 2009	
	Age category (yrs)	Total number (2009 H1N1 case)	Age category (yrs)	Total number (2009 H1N1 case)
Number of deaths associated with influenza and/or pneumonia syndrome	0-4	0 (0)	0-4	0 (0)
	5-18	1 (0)	5-18	2 (1)
	19-24	0 (0)	19-24	1 (1)
	25-49	2 (2)	25-49	4 (4)
	50-64	0 (0)	50-64	1 (1)
	65+	0 (0)	65+	0 (0)
	Unknown	0 (0)	Unknown	0 (0)
	Total	3 (2)	Total	8 (7)

**Data obtained from the ISDH Laboratory and via the Indiana mandatory influenza-related death reporting rule. The case must be a confirmed influenza case to be counted.*

Key Findings:

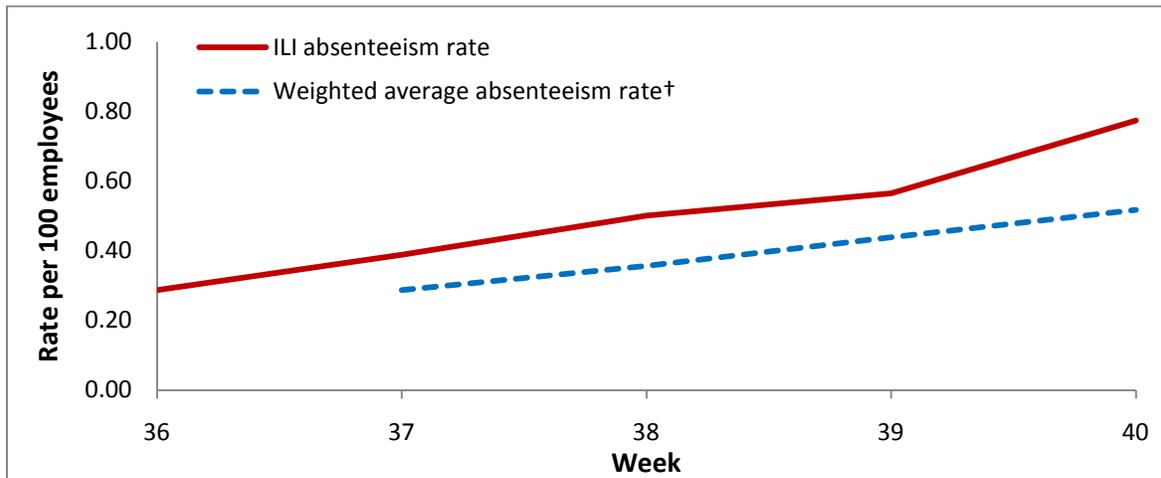
- Three confirmed influenza-related deaths were reported during Week 41.
 - Two were due to 2009 H1N1 and one was not tested to delineate between seasonal influenza and 2009 H1N1

Number of health care personnel who missed work due to influenza-like illness – Indiana, 2009/10 influenza season. Health District-level data is available at the end of this report.*

	This week's numbers (63 hospitals reporting)	Weekly average since September 9, 2009
Total with ILI	415	262
Total # of employees	53606	50248
Rate per 100 employees	0.77	0.52

**Data obtained from the ISDH Pneumonia and Influenza Hospitalization Surveillance Program. This data was collected and reported by infection preventionists and other staff from hospitals throughout Indiana. It reflects the number of health care personnel who reported missing work due to influenza-like illness in a given week.*

Rate of health care professional ILI-related absenteeism – Indiana, 2009/10 influenza season*



**Data obtained from the ISDH Pneumonia and Influenza Hospitalization Surveillance Program.*

† The “weighted average absenteeism rate” is a weighted moving average that utilizes data from the previous three reporting weeks. It is used as a threshold to determine if the current week’s rate is higher or lower than what is expected based on previous weeks’ data. There is no comparison data for Week 36.

Number of health care personnel who missed work due to any illness – Indiana, 2009/10 influenza season. Preparedness District-level data is available at the end of this report. (This data was reported only if a hospital was unable to report influenza-like illness-related absences.)*

	This week's numbers (6 hospitals reporting)	Weekly average since September 9, 2009
Total with any illness	189	171
Total # of employees	10553	6724
Rate per 100 employees	1.79	2.54

**Data obtained from the ISDH Pneumonia and Influenza Hospitalization Surveillance Program. This data was collected and reported by infection preventionists and other staff from hospitals throughout Indiana. It reflects the number of health care personnel who reported missing work due to any illness in a given week.*

Key Findings:

- ILI-related absentee rates in health care personnel continued to increase during this reporting week compared to the weighted average absenteeism rate.
 - 0.77 compared to 0.52 ILI-related absences per 100 employees, representing a 48% increase.

ISDH Laboratory data regarding circulating influenza viruses – Indiana, 2009/10 influenza season.*

PCR Result	This week's total		Total since September 1, 2009	
	Number	Percent of specimens received	Number	Percent of specimens received
Pandemic 2009 A/H1N1 virus	56	60.9%	179	44.6%
Influenza A/H3 seasonal virus	0	0.0%	6	1.5%
Influenza A/H1 seasonal virus	0	0.0%	0	0.0%
Influenza B seasonal virus	1	1.1%	1	0.2%
Influenza negative	28	30.4%	189	47.1%
Inconclusive	1	1.1%	8	2.0%
Unsatisfactory specimen†	6	6.5%	24	6.0%
Total	92	100.0%	407	100.0%

*Data obtained from the ISDH Laboratory via specimens submitted from the ISDH Sentinel Influenza Surveillance System.

†Unsatisfactory specimens include specimens that leaked in transit, were too long in transit, or were inappropriately labeled.

2009 H1N1-positive samples by age group – Indiana, 2009/10 influenza season.*

	This week's numbers		Numbers since September 1, 2009	
	Age category (yrs)	Total number	Age category (yrs)	Total number
2009 H1N1-positive specimens	0-4	3	0-4	8
	5-18	28	5-18	75
	19-24	20	19-24	80
	25-49	4	25-49	12
	50-64	1	50-64	1
	65+	0	65+	0
	Unknown	0	Unknown	3
	Total	56	Total	179

*Data obtained from the ISDH Laboratory via specimens submitted from the ISDH Sentinel Influenza Surveillance System.

OTHER CIRCULATING VIRUSES RECENTLY IDENTIFIED BY THE ISDH LABORATORY:

Other Respiratory Viruses	This Week	Total Since Sept. 1
Adenovirus	0	1
Coxsackie B Virus	2	19
Echovirus	0	1
Enterovirus NOS	0	13
Parainfluenza 2 Virus	0	6
Parainfluenza 3 Virus	0	1
Rhinovirus	2	4
Total	4	45

Key Findings:

- During week 41, 98% (56/57) of specimens that were positive for influenza were 2009 H1N1.
 - One specimen was positive for influenza B.
- Since September 1, 2009, 96% (179/186) of specimens that were positive for influenza were 2009 H1N1.
- Other respiratory viruses are circulating in addition to influenza.

Number of schools (K-12) reporting a 20% or more absenteeism rate – Indiana, 2009/10 school year*

Health District†	Current Week	Total since September 14, 2009
1	1	1
2	4	6
3	0	0
4	4	3
5	7	11
6	9	10
7	0	0
8	1	1
9	1	2
10	0	4
Total	27	38

**Data is self reported by schools to the Indiana Department of Education and/or to their local health department. Schools report children absent due to any illness, not just influenza-like illness.
†A map of what counties are included in each Health District is included at the end of this report.*

Key Findings:

- During week 41, 27 Indiana schools (K-12) Indiana reported that their absenteeism rate was 20% or higher.
 - At total of 38 schools have reported 20% or higher absenteeism rates since September 14, 2009.

Guidance updates: Please see www.cdc.gov/h1n1flu

Featured resources:

- www.in.gov/flu
- www.cdc.gov/h1n1flu
- www.who.int

