



Missouri Weekly Influenza Surveillance Report 2014-2015 Influenza Season¹

Week1: January 4 – January 10, 2015

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri remained at Widespread².
- A season-to-date total of 32,528 laboratory-positive³ influenza cases have been reported in Missouri. Influenza A continued to be the predominant influenza type accounting for 93.2% of reported cases during Week 1. All seven of the laboratory-confirmed influenza cases reported by the Missouri State Public Health Laboratory (MSPHL) during Week 1 were influenza A (H3).
- CDC has antigenically characterized six influenza isolates so far this influenza season from Missouri: three were influenza A (H3N2) A/TEXAS/50/2012-like, one was influenza B/MASSACHUSETTS/02/2012-LIKE and, two were influenza A H3N2 virus antigenically similar to the A/Switzerland/9715293/2013. Influenza A/TEXAS/50/2012 and B/MASSACHUSETTS/02/2012-LIKE are included in the 2014-2015 influenza vaccine for the Northern Hemisphere. A/Switzerland/9715293/2013 is related to, but antigenically and genetically distinguishable, from the A/Texas/50/2012 vaccine virus. The CDC reports 68.4% of viruses collected from U.S. laboratories from October 1, 2014 – January 3, 2015, were antigenically different (drifted) from the influenza A H3N2 component of the 2014-2015 influenza vaccine. <http://www.cdc.gov/flu/weekly/>
- Influenza-like illness activity is above baseline for both the Missouri Outpatient ILI Surveillance Network (ILINet) and hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI was 5.44% and 3.3% through ILINet and ESSENCE respectively⁴.
- The highest rates of laboratory-positive influenza cases among children aged 0-4 years (146 cases per 100,000 population) and 65 years and older (63 cases per 100,000 population). No influenza-associated pediatric deaths have been reported in Missouri to date, this influenza season. Deaths involving Pneumonia and Influenza (P&I) reported to the Bureau of Vital Records increased to 86 deaths during Week 53, resulting in a season-to-date total of 1,070 P&I associated deaths in Missouri⁵.
- Three outbreaks of influenza or ILI were reported during Week 1 in Missouri. No ILI-associated school closures were reported during Week 1.
- National influenza activity and surveillance information is prepared by the Centers for Disease Control and Prevention (CDC). The information including a weekly report (FLUVIEW) is available online at <http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>.

¹The 2014-2015 influenza season in Missouri began CDC Week 40 (Week ending October 4, 2014) through CDC Week 20 (week ending May 23, 2015).

²Widespread is defined as: Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions AND recent (within the past 3 weeks) lab confirmed influenza in the state.

³Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

⁴Influenza-like Illness (ILI) is defined as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza.

⁵The P&I data are available one week later. The P&I data for the CDC Week provided is the most current data available.

Surveillance Data:

Interactive Maps

The county specific influenza data are provided through interactive maps available at <https://emgis.ia.mo.gov/DPS/BriefingMaps/?bookId=bc4fb84b9b884b00b85137a01ea19026>. Click on the county to view the influenza data specific to that county.

- Reported Laboratory -positive Influenza Cases by Influenza Type by County, CDC Week 1
- Reported Laboratory -positive Influenza Cases by Influenza Type by County, Season-to-Date
- Percentage of Laboratory-positive Influenza Cases Reported to be Influenza Type A

Data Tables and Graphs

Table 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Week 52-1 (December 21, 2014 – January 10, 2015)

Influenza Type	Week 52	Week 53	Week 1	2014-2015* Season-to-Date
Influenza A	6,929	5,102	2,215	30,516
Influenza B	239	238	126	1,327
Influenza Unknown Or Untyped	195	129	35	685
Total	7,363	5,469	2,376	32,528

[†]Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv).

Table 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 1 (January 4 – January 10, 2015)

Age Group	Week 1 Cases	Week 1 Rate [‡]	2014-2015* Season-to-Date	2014-2015* Season-to-Date Rate [‡]
00-04	552	146	6,295	1,660
05-14	333	42	10,072	1,282
15-64	936	24	11,665	294
65+	555	63	4,496	509
Total	2,376	39	32,528	540

[†]Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Table 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 1 (January 4 – January 10, 2015)

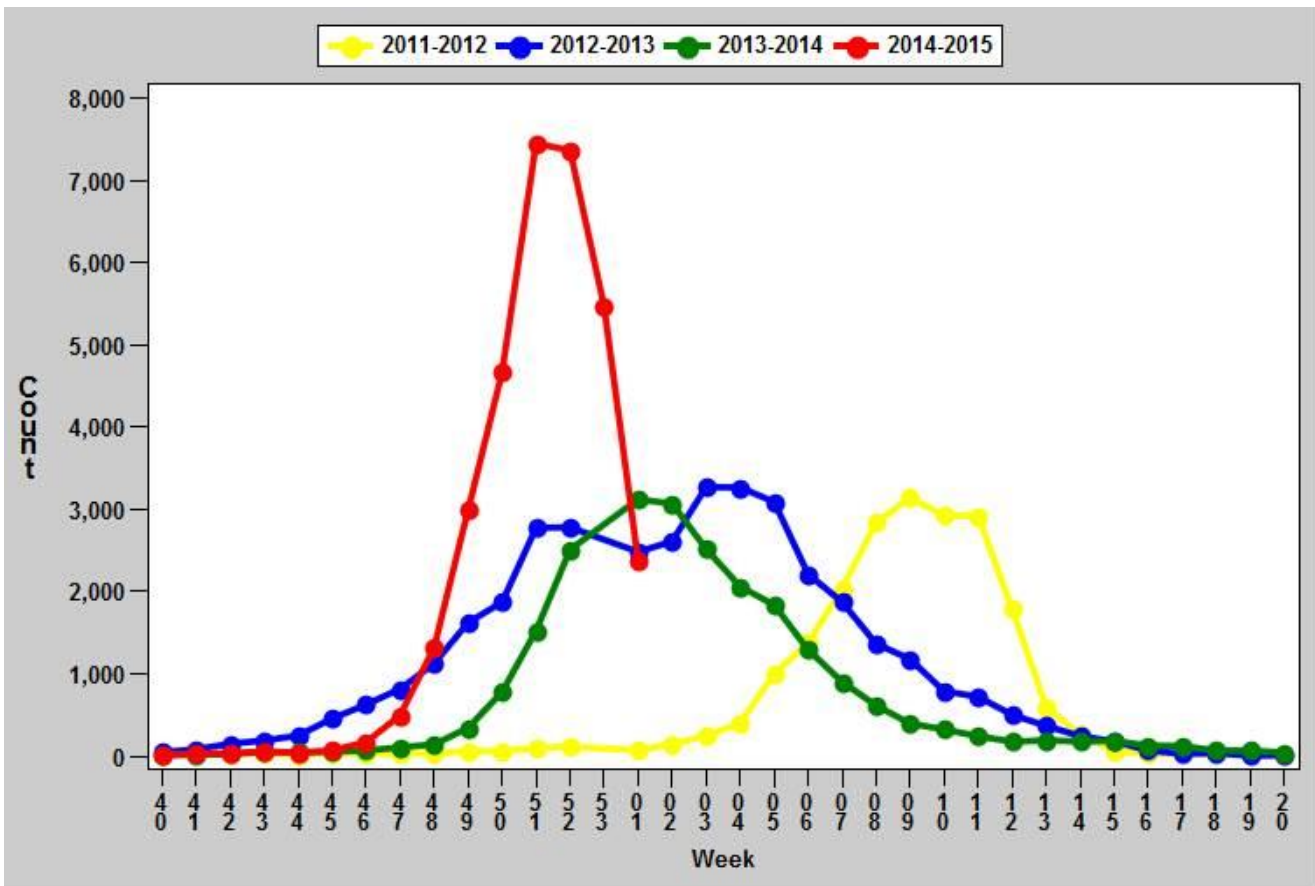
District	Week 1 Cases	Week 1 Rate [‡]	2014-2015* Season-to-Date	2014-2015* Season-to-Date Rate [‡]
CE	141	21	4,747	708
EA	659	29	10,578	472
NW	822	52	8,953	567
SE	272	57	3,731	786
SW	482	46	4,519	428
Total	2,376	39	32,528	540

[†] Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡] Incidence Rate per 100,000 population

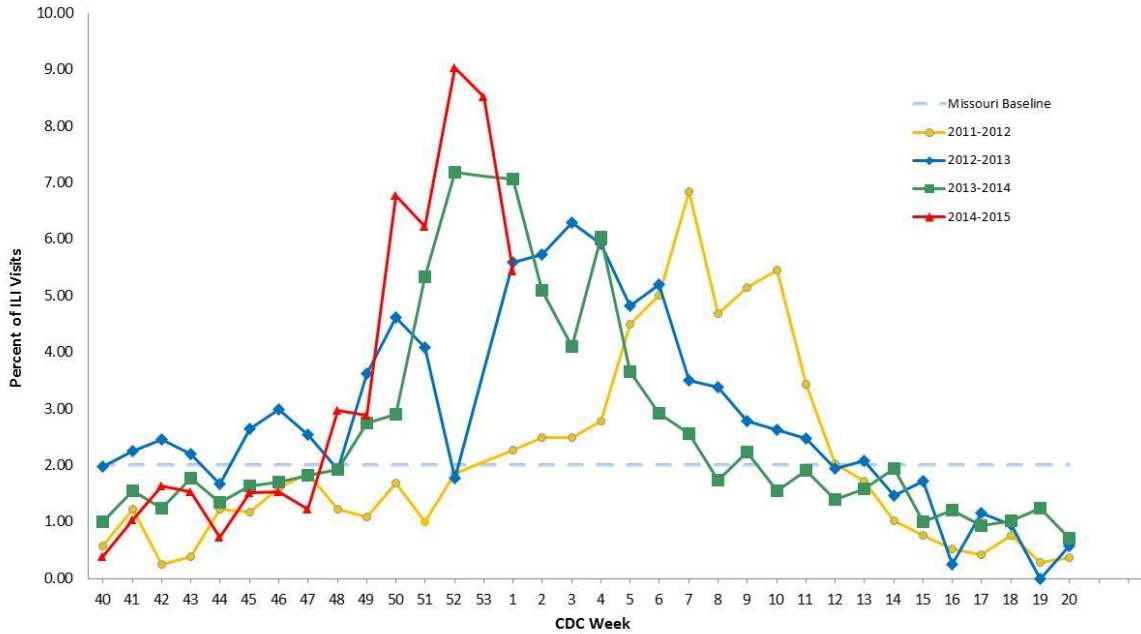
Graph 1. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2011-2015*



[†] Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

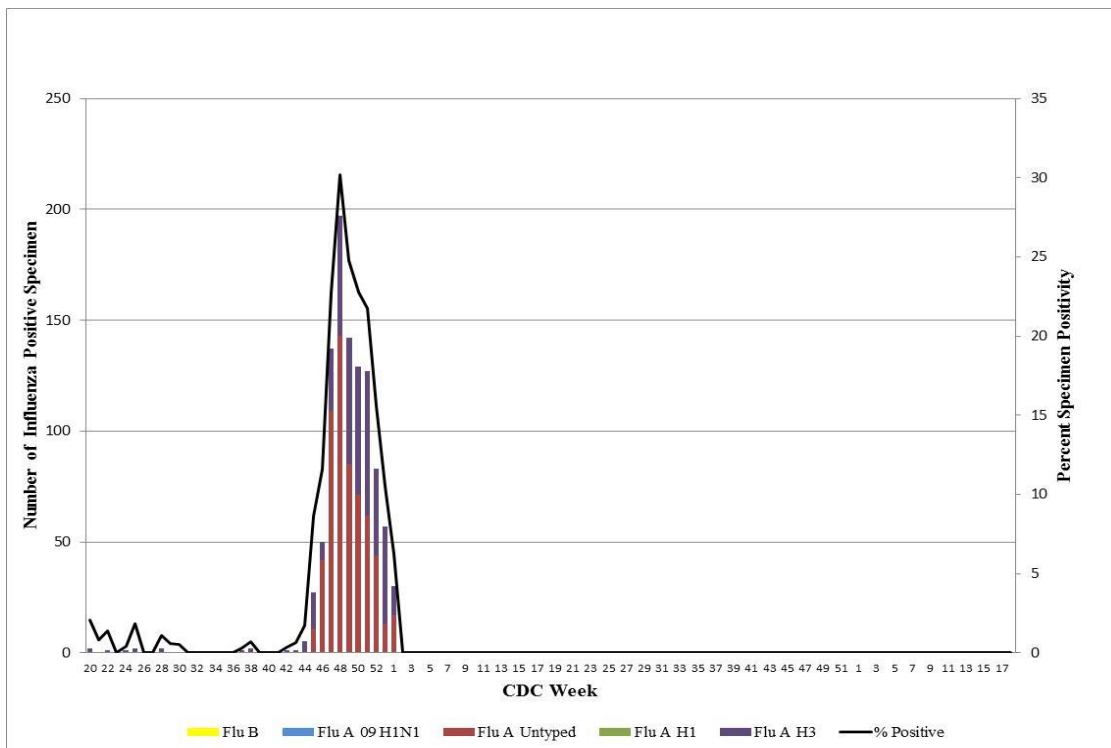
*2014-2015 Season-to-Date through the week ending January 10, 2015 (Week 1). Data Source: Missouri Health Information Surveillance System (WebSurv).

Graph 2. Percentage of Visits for Influenza-like-Illness (ILI), Missouri Outpatient ILI Surveillance Network (ILINet) 2011-2015*



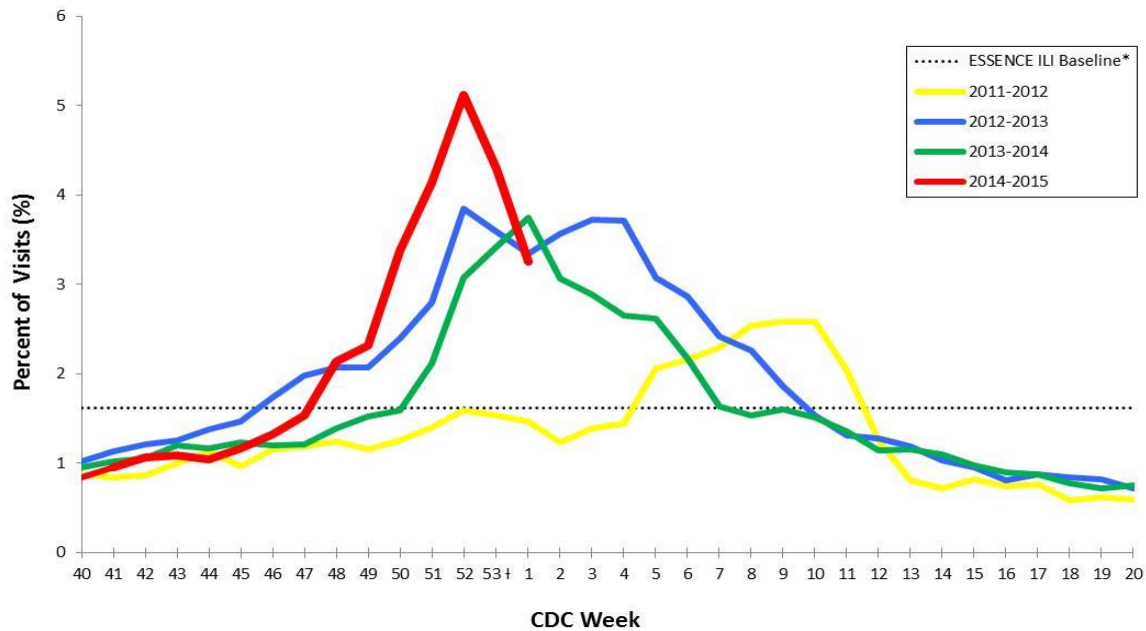
*2014-2015 Season-to-Date through the week ending January 10, 2015 (Week 1)

Graph 3. St. Louis Children’s Hospital Season-to-Date PCR (+) Influenza Test by CDC Week



*Data Source: St. Louis Children’s Hospitals
 *This data is based on testing in all age groups in St Louis metro and SE Missouri
 *Influenza Season begins Week Ending October 4, 2014 (CDC Week 40)

Graph 4. Percentage of Emergency Room Visits with Chief Complaint of Influenza-like Illness (ILI), ESSENCE Participating Hospitals in Missouri, 2011-2015[†]



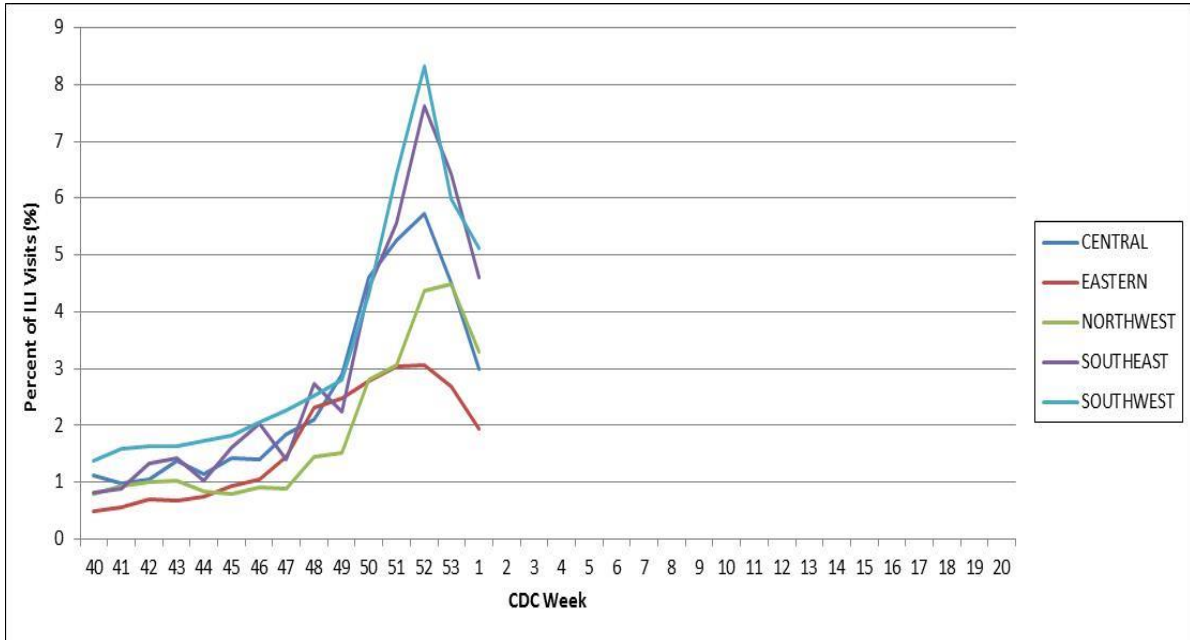
[†] Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. Includes data from 96 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>).
 *ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three years (2011-13) when percentage of ILI visits were less than 2% of total visits, plus two standard deviations.

Table 4. Percentage of Emergency Room Visits with Chief Complaint of Influenza-like Illness (ILI) from ESSENCE Participating Hospitals by Age Group, Missouri, CDC Week 1 (January 4 – January 10, 2015)

District	Age 0-4	Age 5-17	Age 18-44	Age 45-64	Age 65+	Total Percentage
Northwest	2.6%	4.1%	3.4%	3.4%	2.9%	3.3%
Central	9.3%	2.9%	2.7%	2.3%	1.9%	3.0%
Eastern	2.8%	2.3%	2.0%	2.0%	1.3%	1.9%
Southeast	11.8%	7.2%	3.9%	2.7%	3.3%	4.6%
Southwest	13.8%	9.4%	4.2%	3.6%	2.4%	5.1%
Statewide	5.9%	4.9%	3.1%	2.8%	2.1%	3.3%

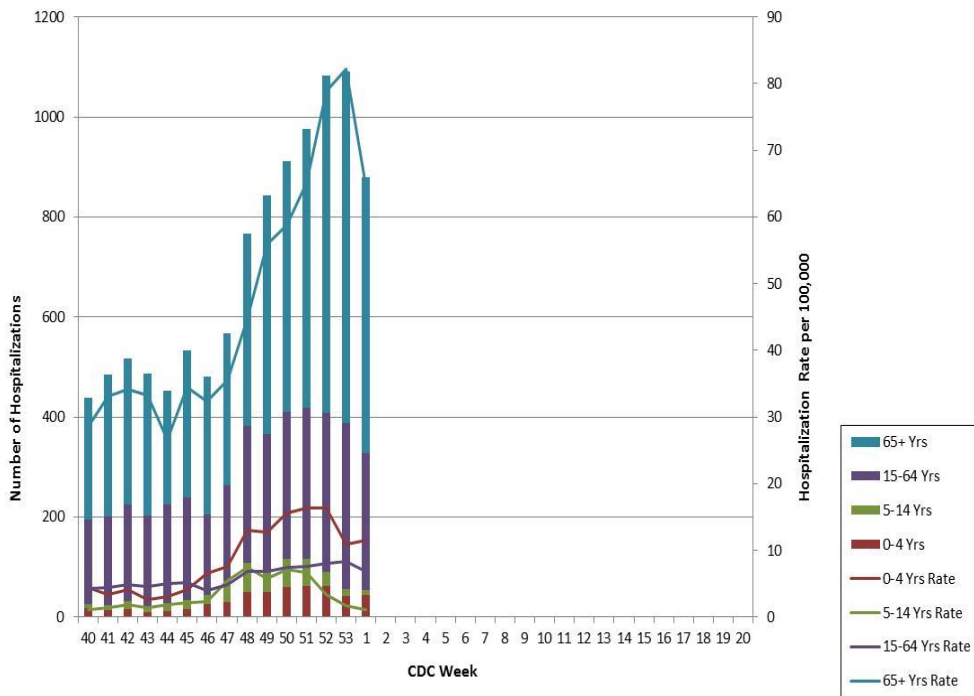
[†] Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. ESSENCE includes data from 96 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>).

Graph 5. Percentage of Emergency Room Visits with the Chief Complaint of Influenza-like Illness (ILI) for each District by CDC Week, ESSENCE Participating Hospitals in Missouri, 2014-2015*



† Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. ESSENCE includes data from 95 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>).
 *2014-2015 Season-to-Date through the week ending January 10, 2015 (Week 1)

Graph 6. Number and Rate of Patients by Age Group Hospitalized with Influenza and/or Pneumonia Syndromes at Participating Missouri Hospitals, by CDC Week, 2014-2015*



† Data Source: Hospitalization data from Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE HL7 messaging portal. Includes data from 96 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>). Population data from DHSS Population MICA 2012 (<http://health.mo.gov/data/mica/mica/population.php>).
 *2014-2015 Season-to-Date through the week ending January 10, 2015 (Week 1)

Additional Influenza Data Sources:

St Louis Children's Hospital Laboratory: <http://slchlabbtestguide.bjc.org/Default.aspx?url=228e5af5-6e12-4f73-a451-f12f6ab1215e>

Centers for Disease Control and Prevention: National Influenza Surveillance (FLUVIEW)
<http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/