

**2014-2015 Influenza Season**  
**Reporting through the week ending December 6, 2014**  
*(All data are provisional and may change as more reports are received.)*

**Overview:** Surveillance for the 2014 -2015 Influenza Season officially began on September 28, 2014 and will run through May 23<sup>rd</sup>, 2015. The Colorado Flu Report is published weekly to provide a concise and up to date summary of influenza activity in the State of Colorado. Current surveillance activities include: reporting of hospitalizations due to influenza, reporting of influenza-like illness (ILI) visits by selected sites, reporting of influenza testing activity by sentinel hospital labs, monitoring circulating influenza viruses through molecular typing at the state public health laboratory, outbreaks of influenza in long-term care facilities (LTCF), and reporting of pediatric deaths due to influenza.

**Synopsis:** For the week ending December 6<sup>th</sup>, influenza activity continued to increase. State laboratory virologic surveillance shows that virtually all influenza viruses currently circulating in Colorado are the H3N2 virus.

- There were 153 additional hospitalizations reported during the most recent week (compared to 57 the previous week). Of these reported cases, 51 were from the previous week (week ending 11/29) and 102 were from the most recent week. The states cumulative total is 248 hospitalizations from 23 counties.
- Influenza-like illness reported by Kaiser Permanente for the Denver-Boulder metropolitan area increased to 2%. Influenza-like illness reported by Mesa County increased to 0.9%.
- As of December 6<sup>th</sup>, 333 specimens (out of 420 submitted) tested positive by PCR at the state laboratory. Of these, 323 (97%) have confirmed positive for influenza A and 10 (3%) have confirmed positive for influenza type B.
- There were 21 additional outbreaks reported during the most recent week, 6 with an onset date during the previous week (week ending 11/29) and 15 with an onset date during the most recent week. The total number of outbreaks reported in long term care facilities is now at 24.
- No influenza-associated pediatric deaths have been reported as of December 6<sup>th</sup>.



Figure 2

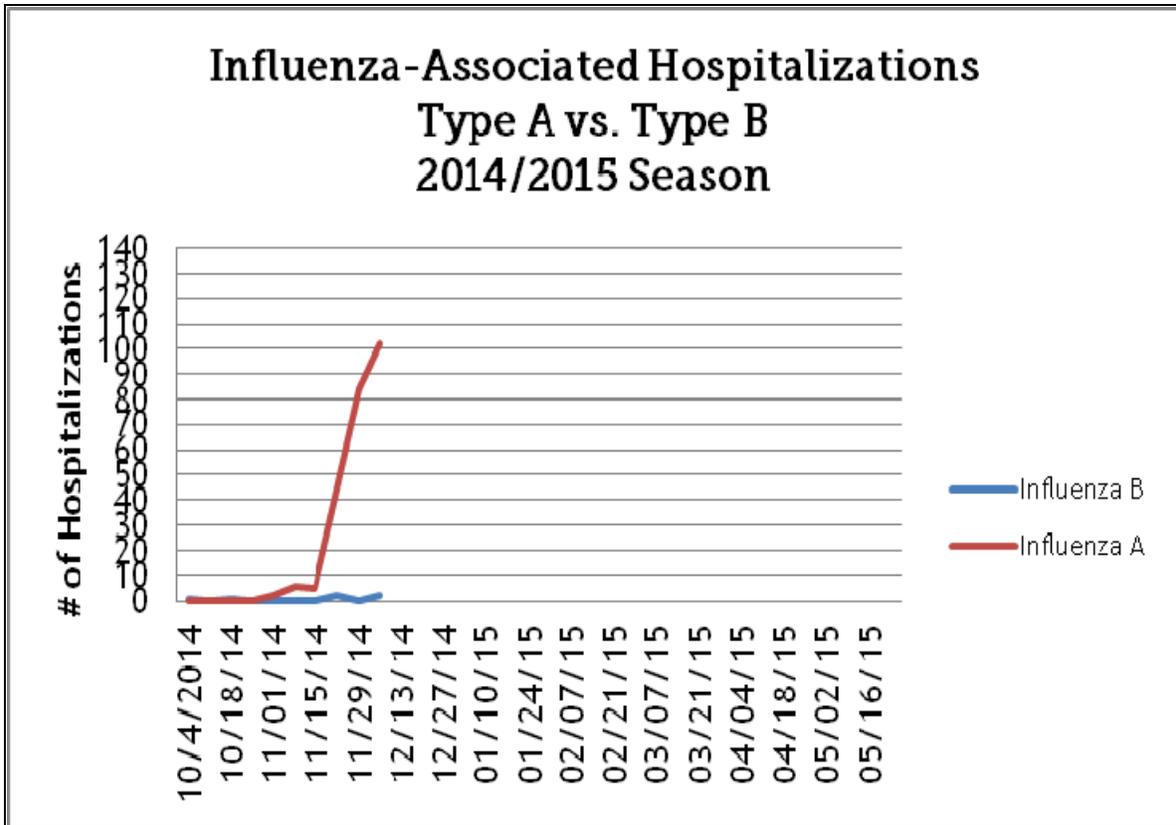
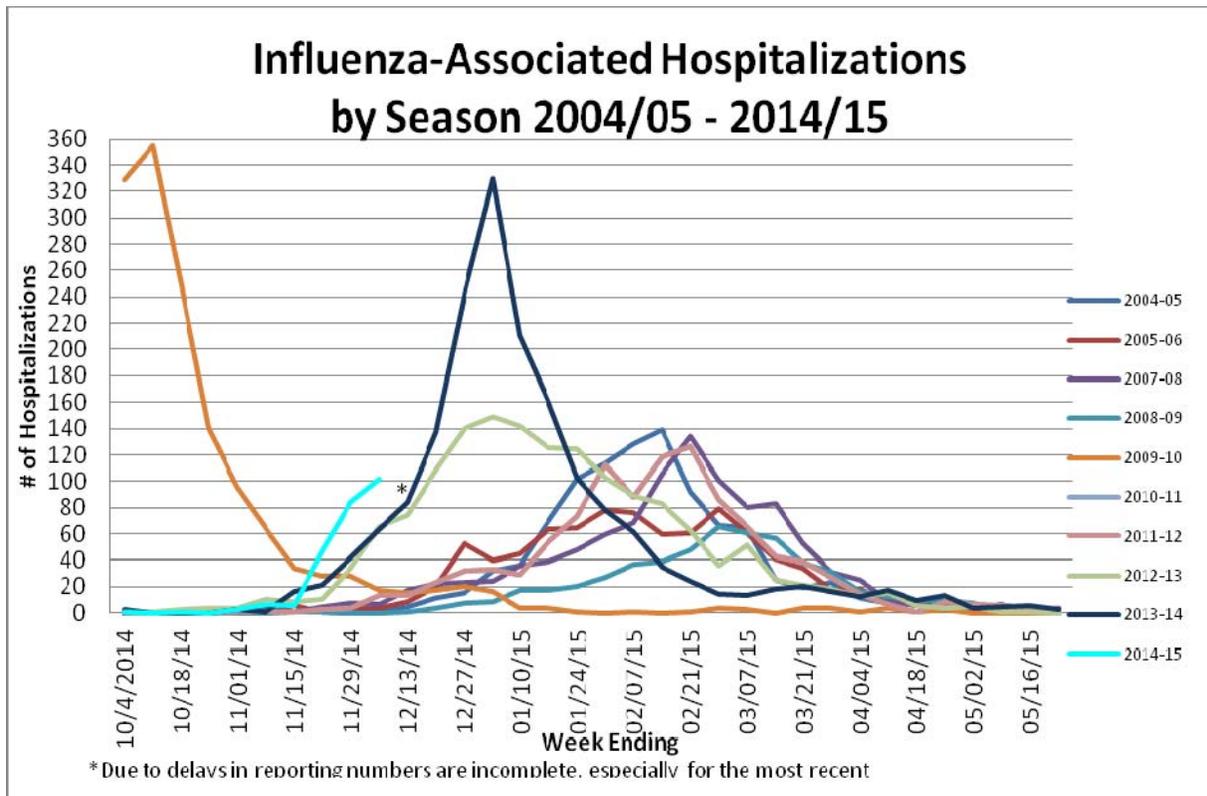


Figure 3



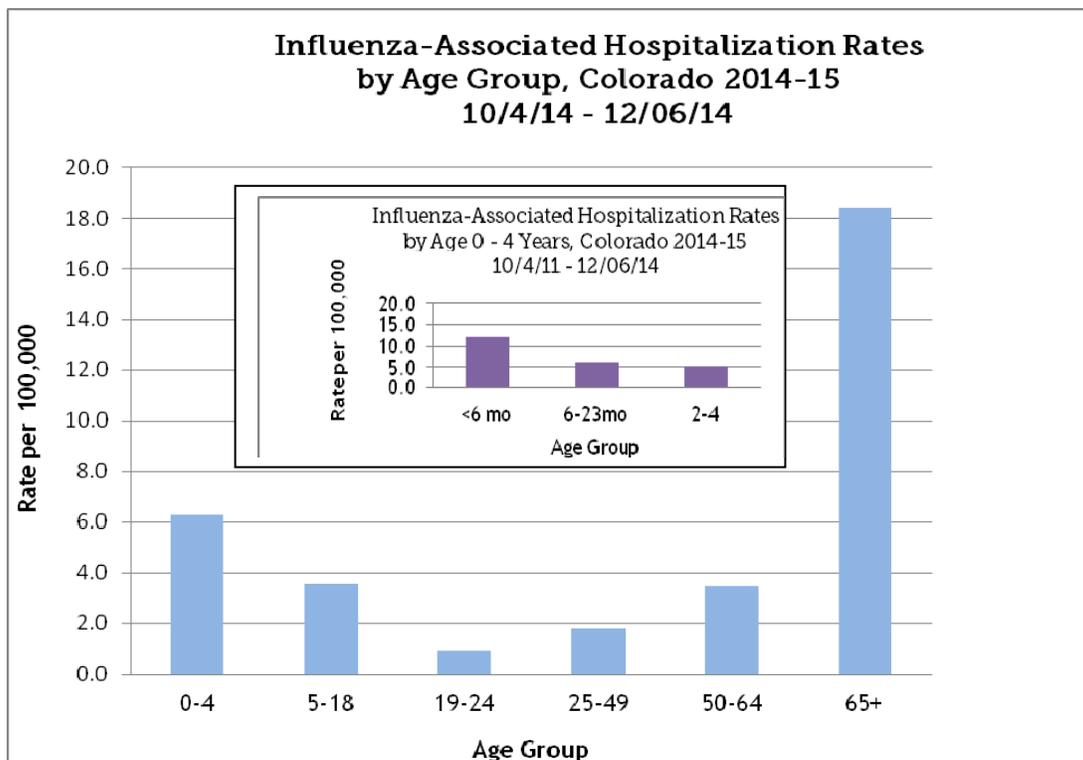
Children less than 6 months represent only 1.6% of all hospitalizations but have the second highest hospitalization rate (12.2). The 65+ year age group accounts for the largest proportion of hospitalizations (48.4%) and the highest hospitalization rate (18.4). During past seasons when influenza A (H3N2) viruses have predominated, higher overall and age-specific hospitalization rates and more mortality have been observed, especially among older people, very young children, and persons with certain chronic medical conditions compared with seasons during which influenza A (H1N1) or influenza B viruses have predominated.

Table 1

**Influenza-Associated Hospitalizations  
by Age Group, Colorado 2014-15  
10/04/2014 - 12/06/2014**

Age	No.*	%	CO pop dist	Rate per 100,000
<6 mo	4	1.6	32687	12.2
6-23mo	6	2.4	98513	6.1
2-4	11	4.4	204072	5.4
5-18	35	14.1	986589	3.5
19-24	4	1.6	435675	0.9
25-49	32	12.9	1816235	1.8
50-64	36	14.5	1039747	3.5
65+	120	48.4	651527	18.4
<b>Total</b>	<b>248</b>	<b>100.0</b>	<b>5265045</b>	<b>4.7</b>

Figure 4



The county distribution of influenza-associated hospitalizations shows widespread influenza activity but the majority of hospitalizations (83%) remain along the Front Range (figure 5). There have been a total of 248 influenza-associated hospitalizations reported from 23 counties since the season officially began on September 28<sup>th</sup> (table 2).

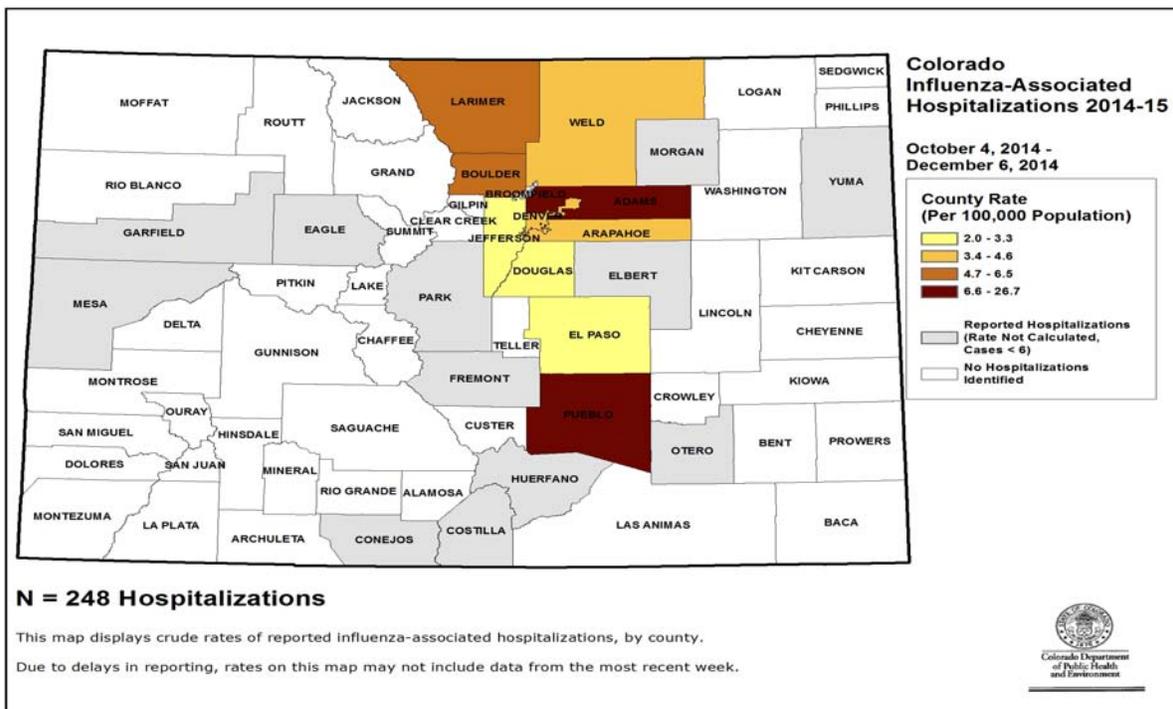
Table 2

### Influenza-Associated Hospitalizations by County by Diagnosis date 2014/15

County	11/30/14 through 12/06/14 Current Week Diagnosed Cases					10/04/14 through 12/06/14 Cumulative Diagnosed Cases					Rate per 100,000
	2009 H1N1	H3	Type A	Type B	TOTAL	2009 H1N1	H3	Type A	Type B	TOTAL	
<b>Total</b>	0	49	50	3	102	1	141	101	5	248	4.7
Adams	0	15	3	0	18	0	34	4	0	38	8.1
Arapahoe	0	8	4	1	13	0	16	7	0	23	3.8
Boulder	0	1	4	0	5	0	8	12	0	20	6.5
Broomfield					0	0	2	0	0	2	3.4
Conejos					0	0	1	0	0	1	12.2
Costilla	0	1	0	0	1	0	1	0	0	1	28.5
Denver	0	6	4	1	11	0	19	10	1	30	4.6
Douglas	0	0	1	1	2	0	2	3	1	6	2.0
Eagle					0	0	2	0	0	2	3.8
El Paso	0	5	6	0	11	0	8	12	0	20	3.0
Elbert	0	0	1	0	1	0	0	1	0	1	4.2
Fremont					0	0	0	1	0	1	2.2
Garfield					0	0	2	0	0	2	3.5
Huerfano					0	0	1	0	0	1	15.5
Jefferson	0	2	2	0	4	0	13	2	3	18	3.3
Larimer	0	0	8	0	8	0	5	11	0	16	5.1
Mesa	0	1	1	0	2	1	2	1	0	4	2.7
Morgan	0	0	2	0	2	0	1	4	0	5	17.7
Otero	0	1	0	0	1	0	1	0	0	1	5.4
Park					0	0	0	1	0	1	6.2
Pueblo	0	7	11	0	18	0	16	27	0	43	26.7
Weld	0	2	2	0	4	0	7	4	0	11	4.1
Yuma	0	0	1	0	1	0	0	1	0	1	9.9

Counties listed above have reported influenza-associated hospitalizations during the 2014/15 season

Figure 5



**Virology Surveillance:** Since the season began on September 28<sup>th</sup>, among 333 PCR positive specimens tested at the state laboratory; 323 (97%) have confirmed positive for influenza A and 10 (3%) have confirmed positive for influenza type B. Of the 323 specimens confirmed for influenza A, 320 (99%) subtyped for H3. Of the 10 specimens confirmed for influenza B, 5 (50%) were Victoria lineage, 4 (40%) were Yamagata lineage, and one (10%) is pending lineage. Influenza B/Yamagata-Lineage viruses were characterized as B/Massachusetts/2/2012-like, which is included as an influenza B component of the 2014-2015 Northern Hemisphere trivalent and quadrivalent influenza vaccines. Influenza B/Victoria Lineage viruses were characterized as B/Brisbane/60/2008-like, the virus that is included as an influenza B component of the 2014-2015 Northern Hemisphere quadrivalent influenza vaccine.

Table 3

**CDPHE laboratory Influenza Type and Subtyping Results\*  
2014-2015 Influenza Season**

	<b>Current Week ** (Week Ending 12/06/14)</b>	<b>Cumulative (10/04/2014-12/06/2014)</b>
<b>Total Positive for A</b>	77 (97%)	323 (97%)
<b>2009 H1N1</b>	0 (0%)	0 (0%)
<b>H3</b>	77 (100%)	320 (99%)
<b>A (pending subtype)</b>	0 (0%)	3 (1%)
<b>Total Positive for B</b>	2 (3%)	10 (3%)
<b>Victoria Lineage</b>	1 (50%)	5 (50%)
<b>Yamagata Lineage</b>	1 (50%)	4 (40%)
<b>B (pending lineage)</b>	0 (0%)	1 (10%)
<b>Total Positive by PCR</b>	79	333

\*By week of diagnosis

\*\*Due to delays in reporting numbers are incomplete especially for the most recent week

**Influenza-Like Illness (ILI) Surveillance:** The percentages shown in the graphs below are based on the number of primary care office visits assigned a diagnosis consistent with influenza-like illness divided by the total number of clinic visits for the week from Kaiser Permanente Colorado (Denver-Boulder area) and Primary Care Partners, P.C. in Mesa County. For the week ending December 6th, the percent of Kaiser ILI visits increased from 1.2% to 2%. Mesa County ILI increased to 0.9% (compared to 0.3% the previous week).

Figure 6

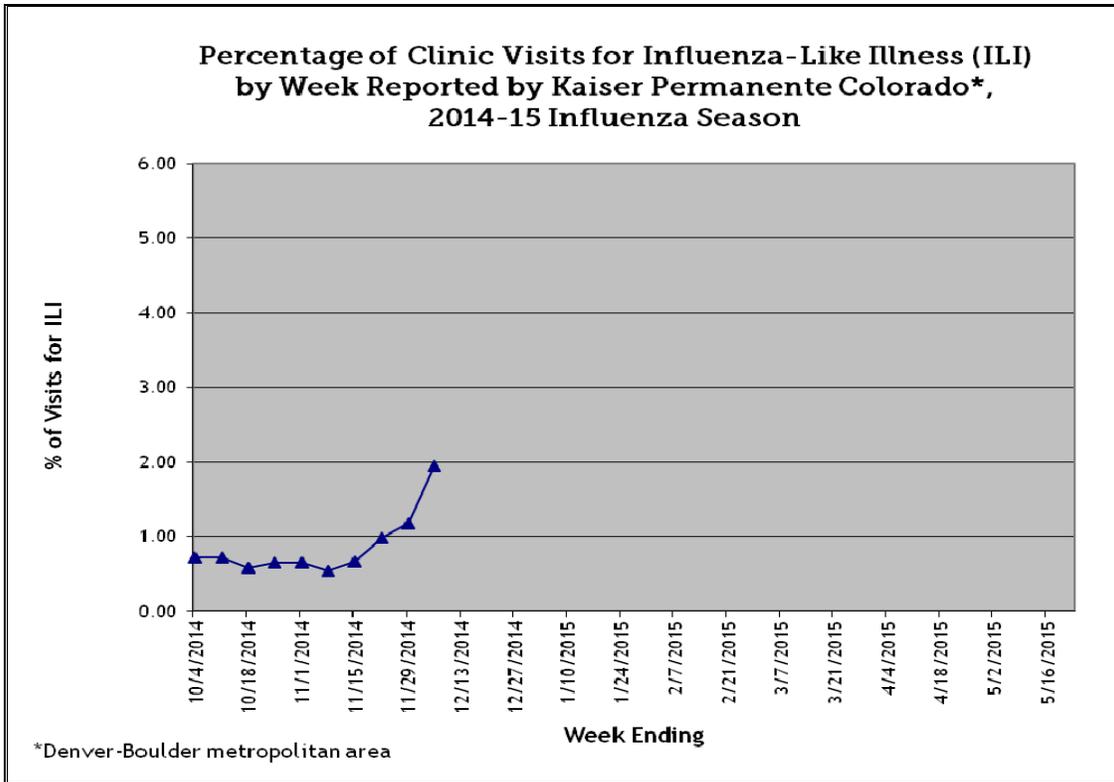
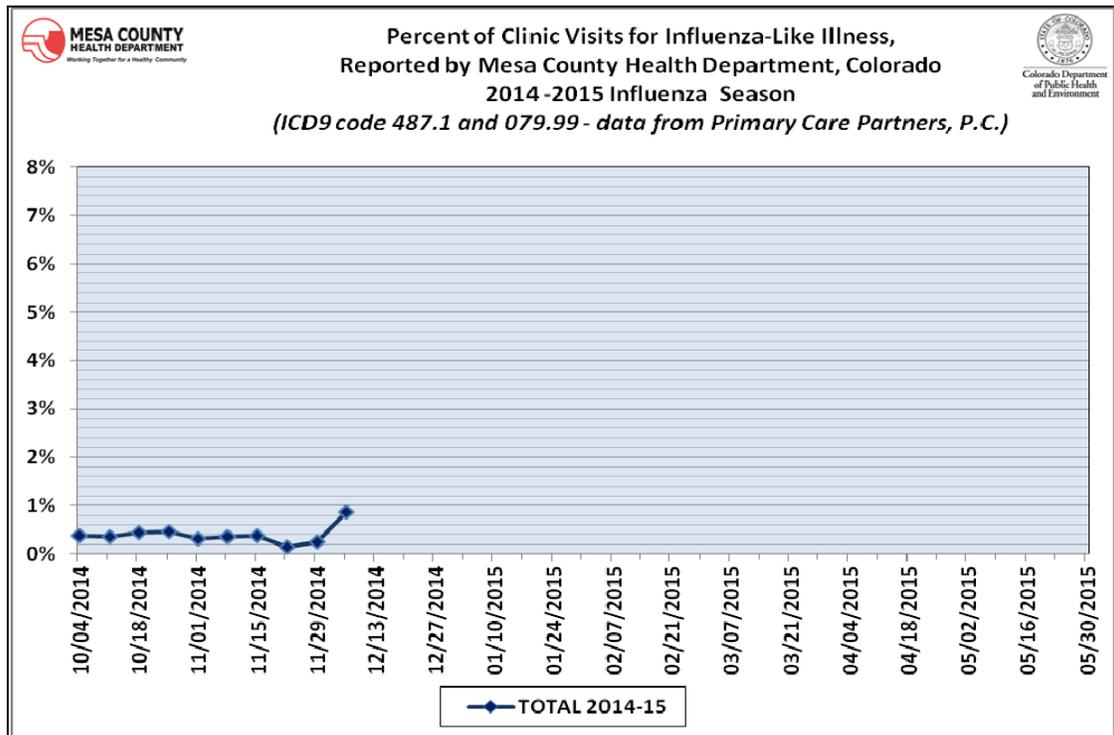


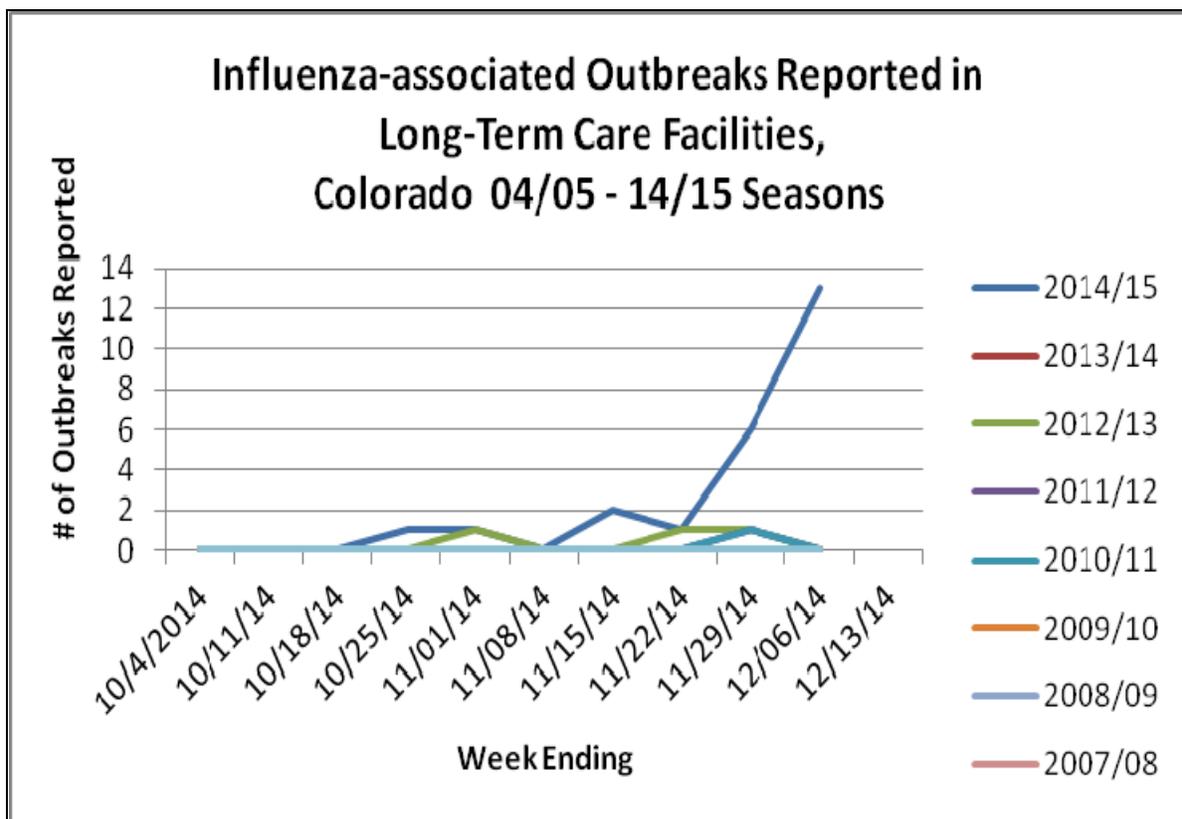
Figure 7



**Influenza-Associated Outbreaks in Long-term Care Facilities:** Each year, between 5 and 55 long-term care facilities in Colorado report an influenza outbreak. It is estimated that 33% of residents develop influenza-like illness during a confirmed outbreak, and among residents with influenza-like illness, an estimated 14% are hospitalized and 6% die. While all influenza associated outbreaks in any setting are reportable to public health per state regulations, for the purpose of this surveillance report, we only count influenza outbreaks that occur in residential settings (such as long term care facilities, correctional facilities, and boarding schools).

As of the week ending December 6<sup>th</sup>, 24 influenza-associated outbreaks were reported in long-term care facilities (LTCF). This is the highest number of LTCF outbreaks reported during this time (through the week ending 12/6) since outbreaks became a reportable condition (04/05 season).

Figure 8



**Pediatric Deaths Associated with Influenza:** Pediatric influenza-associated deaths have been a reportable condition in Colorado since the 2004-05 influenza season. During the 2003-2004 season 12 pediatric deaths were reported, since then an average of 2.75 deaths have been reported each season, excluding the pandemic. No pediatric influenza-associated deaths have been reported during the 2014/15 season (as of the week ending December 6<sup>th</sup>).

**Influenza-Associated Pediatric Deaths  
2003/04-2014/15 Influenza Season**

Season	Deaths
2003-04	12
2004-05	2
2005-06	2
2006-07	1
2007-08	2
2008-09	7*
2009-10	12**
2010-11	3
2011-12	0
2012-13	5
2013-14	0
2014-15	0 (as of 12/6)

\*Includes death reported in 08-09 season but after defined season dates which may have been acquired on domestic and/or international travel.

\*\* 2009 H1N1 Pandemic

To view the weekly CDC flu surveillance Reports, go to:  
<http://www.cdc.gov/flu/about/season/index.htm>