



DELAWARE HEALTH AND SOCIAL SERVICES

Division of Public Health

**Influenza Vaccination Rates among Healthcare Personnel in  
Delaware Acute Care Hospitals for  
2012-2013, 2013-2014 and 2014-2015 Influenza Seasons**

Delaware Health and Social Services  
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## **Introduction**

The Advisory Committee on Immunization Practices (ACIP) recommends that all healthcare personnel and persons in training for healthcare professions should be vaccinated annually against influenza.<sup>1</sup> Persons who are infected with influenza virus can transmit the virus to others, particularly those who are at high risk for complications from influenza (e.g., elderly, immunocompromised, etc.). Vaccination of working age adults, including healthcare personnel, has been associated with reduced risk of influenza illness and reduced work absenteeism. Also, vaccination of healthcare personnel has been shown to reduce deaths among nursing home patients and elderly hospitalized patients.<sup>2</sup> The Healthy People 2020 goal for healthcare personnel influenza vaccination in the United States is 90% (i.e., 90% of healthcare personnel in every facility receive the influenza vaccine)<sup>3</sup>.

As with healthcare-associated infections (HAI) outcome measures, showing facility-specific healthcare personnel influenza vaccination percentages may influence performance and encourage facilities with lower vaccination percentages to improve their vaccination efforts.

## **Methods**

'Healthcare personnel' comprise the following four categories regardless of full-time/part-time status or patient contact:

- (1) **Employees:** This includes all persons who receive a direct paycheck from the reporting facility (i.e., on the facility's payroll), regardless of clinical responsibility or patient contact.
- (2) **Licensed independent practitioners (LIPs):** This includes physicians (MD, DO), advanced practice nurses, and physician assistants who are affiliated with the reporting facility, but are not directly employed by it (i.e., they do not receive a paycheck from the facility), regardless of clinical responsibility or patient contact. Post-residency fellows are also included in this category if they are not on the facility's payroll.
- (3) **Adult students/trainees and volunteers:** This includes medical, nursing, or other health professional students, interns, medical residents, or volunteers aged 18 or older who are affiliated with the healthcare facility, but are not directly employed by it (i.e., they do not receive a paycheck from the facility), regardless of clinical responsibility or patient contact.
- (4) **Other contract personnel (optional):** Facilities may also report on individuals who are contract personnel. However, reporting for this category is optional at this time. Contract personnel are defined as persons providing care, treatment or services at the facility through a contract who do not fall into any of the above-mentioned denominator categories.

### **The healthcare personnel vaccination rate for the 2014-2015 season is calculated as:**

**Denominator:** Number of healthcare personnel who meet the criteria above and were physically present in the healthcare facility for at least one working day between October 1 and March 31 (i.e., the measure reporting period) of the following year. Prior to the 2014-2015 season, the requirement was that the healthcare worker had to be physically present for at least 30 working days during the measure reporting period.'

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<sup>1</sup> Centers for Disease Control and Prevention. "Prevention and control of seasonal influenza with vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009." MMWR 58, no. Early Release (2009):1-52.

<sup>2</sup> Centers for Disease Control and Prevention. Healthcare Personnel Vaccination Module: Influenza Vaccination Summary <http://www.cdc.gov/nhsn/pdfs/hps-manual/vaccination/4-hcp-vaccination-module.pdf>

<sup>3</sup> Healthy People 2020 Goal: <http://www.healthypeople.gov/2020/topicsobjectives/topic/immunization-and-infectious-diseases/objectives>

**Numerator:** Number of healthcare personnel from the denominator population who received the influenza vaccine during the time from when the vaccine became available (e.g., August or September) through March 31 of the following year. The healthcare personnel either had to receive the vaccine at the healthcare facility or provide documentation of influenza vaccination outside of the healthcare facility to be included in the numerator.

Although data are available for four healthcare personnel groups, CDC’s recommendation is to present a total vaccination percentage inclusive of all healthcare personnel by healthcare facility.

**Comparison Group**

CDC recommends using the Healthy People 2020 goal for healthcare personnel influenza vaccination of 90 percent as the standard against which each facility’s vaccination rate should be compared. Since this benchmark stays standard from year to year, each facility can show progress towards a goal that is shared among all states in the nation.

**Results**

During the 2014-2015 influenza season, Delaware’s average vaccination rate for healthcare personnel in the eight acute care hospitals was 89.3 percent, slightly below the Healthy People 2020 (HP 2020) goal of 90 percent (Table 1). Healthcare personnel vaccination rates ranged from 67.8 percent (St. Francis) to 95.6 percent (Nanticoke), with five of the eight hospitals exceeding the HP 2020 goal (Nanticoke, Milford, Wilmington, Christiana and Beebe). The overall vaccination rate, however, was higher in the 2013-2014 season than in the 2014-2015 season (92.0 percent compared with 89.3 percent).

Among the seven hospitals with historical data, five showed an improved rate in 2014-2015 when compared with the 2012-2013 season. Relative improvements were 6.5 percent for Wilmington, 6.1 percent for Nanticoke and 5.5 percent for Kent Hospital (Figure 1).

**Table 1. Numbers of Healthcare Personnel and Influenza Vaccination Rates for Delaware Acute Care Hospitals; 2014-2015, 2013-2014 and 2012-2013 Influenza Seasons\***

Hospital	2014-2015 Season		2013-2014 Season		2012-2013 Season	
	Number of Healthcare Personnel	Percent Vaccinated (Number)	Number of Healthcare Personnel	Percent Vaccinated (Number)	Number of Healthcare Personnel	Percent Vaccinated (Number)
Al duPont	3,970	85.0% (3,375)	---	---	---	---
Beebe	3,212	71.7% (2,304)	2,276	74.7% (1,701)	2,192	68.0% (1,491)
Christiana, CCHS <sup>4</sup>	12,289	94.6% (11,620)	12,933	94.0% (12,156)	8,140	91.6% (7,460)
Kent, Bayhealth	4,338	91.5% (3,971)	3,583	92.1% (3,299)	2,534	94.1% (2,384)
Milford, Bayhealth	2,023	93.1% (1,884)	1,712	91.6% (1,569)	941	91.2% (858)
Nanticoke	1,468	95.6% (1,404)	1,234	93.5% (1,154)	965	90.2% (870)
St. Francis <sup>5</sup>	1,893	67.8% (1,284)	1,288	91.5% (1,178)	1,511	76.6% (1,157)
Wilmington, CCHS <sup>4</sup>	4,851	93.9% (4,553)	6,076	94.3% (5,731)	2,154	88.2% (1,899)
<b>ALL HOSPITALS</b>	<b>34,044</b>	<b>89.3% (30,395)</b>	<b>29,102</b>	<b>92.0% (26,788)</b>	<b>18,437</b>	<b>87.4% (16,119)</b>

\* - Data were generated through CDC’s National Safety Healthcare Network (NHSN) on September 8, 2015.

<sup>4</sup> CCHS: Christiana Care Health Services

<sup>5</sup> Vaccination status could not be determined for licensed independent practitioners (physicians, advanced practice nurses and physician assistants) during 2014-2015 season. Excluding licensed independent practitioners, the healthcare personnel vaccination rate was 95.2%.

**Figure 1. Influenza Vaccination Rates among Healthcare Personnel by Delaware Hospital, by Influenza Seasons, Compared with Healthy People 2020 Goal of 90 Percent**

