



Healthcare Personnel Influenza Vaccination Report
2017-2018 Influenza Season
Interim Report
May, 2019

Foreword

Hospital Infections Disclosure Act Healthcare Worker Influenza Vaccination Report 2017-2018 Influenza Season Interim Report

The 2017-2018 Influenza Season Healthcare Worker Influenza Vaccination Report is being submitted as an interim report for the 2018 South Carolina Hospital Infection Disclosure Act (HIDA). This interim report is submitted in compliance with S.C. Code Section 44-7-2430 and S.C. Code Section 44-7-2440.

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INTRODUCTION

Healthcare workers (HCWs) are at risk of transmitting influenza to their patients, coworkers, and families if they become infected. The benefits of influenza vaccination among HCWs and their patients, as well as lower rates of HCW absenteeism, are well documented.¹ There is a correlation between patient risk and HCW influenza vaccination rates; the lower the HCW vaccination rates, the higher the risk for patients.² Unfortunately, national influenza vaccination coverage in HCWs remains low; a Centers for Disease Control and Prevention (CDC) survey conducted during the 2017-2018 influenza season, estimated influenza vaccination in HCWs to be approximately 78.4%.¹

Steadily, more hospitals and healthcare facilities are requiring HCW influenza vaccination as a condition of employment and/or credentialing. In July of 2012, The Joint Commission established an infection control requirement for all Joint Commission-accredited organizations to establish an annual influenza vaccination program for all employees, including licensed independent practitioners and non-clinical staff.³ In addition to establishing a vaccination program, the Joint Commission expects organizations to implement an incremental vaccination goal to reach 90% coverage by the year 2020.³ Furthermore, influenza vaccine reporting is mandated under the South Carolina Hospital Infections Disclosure Act (HIDA). To reinforce these efforts and track progress toward achieving this goal, HCW influenza vaccination rates are reported by 65 acute care facilities, 6 long-term acute care (LTAC) facilities and 8 inpatient rehabilitation facilities (IRF) in South Carolina.

In this report, we present HCW influenza vaccination rates and policies for the 2017-2018 season. Additionally, vaccination trends for the past six influenza seasons are also reported.

METHODS

A total of 79 facilities were required to collect and report HCW influenza vaccination data from October 1, 2017 through March 31, 2018 for the South Carolina Hospital Infections Disclosure Act (HIDA) report. This information was self-reported by each facility through the Healthcare Personnel Vaccination Module within the CDC National Healthcare Safety Network's (NHSN) Healthcare Personnel Safety Component.⁴ Facilities were required to follow standardized reporting definitions and methods as described in the NHSN Healthcare Personnel Safety Component Manual.⁴

Denominator data in NHSN consisted of HCWs who were physically present within the healthcare facility for at least one working day between October 1, 2017 and March 31, 2018. Denominators were collected separately for the following healthcare worker type:

- 1) *Employees*: includes all persons who receive a direct paycheck from the reporting facility (i.e. on the facility's payroll).
- 2) *Licensed Independent Practitioners (LIPs)*: includes physicians, advanced practice nurses, and physician assistants who were affiliated with the reporting facility but not directly employed by it. Post-residency fellows were also included in this category if they were not on the facility payroll.
- 3) *Adult students, trainees, and volunteers (ASTVs)*: includes medical, nursing, and other health professional students, interns, medical residents, and volunteers age 18 years or older who are affiliated with the healthcare facility.
- 4) *Other contract personnel (optional)*: includes persons providing care, treatment, or services at the facility through a contract which did not fall into one of the aforementioned categories. Data for this category is not included in this report.

Numerator data in NHSN consisted of HCWs in each denominator HCW type, who were physically present within the healthcare facility for at least one working day between October 1, 2017 and March 31, 2018, and were:

- 1) Vaccinated, receiving an influenza vaccine administered at the healthcare facility,
- 2) Vaccinated, providing proof of receiving influenza vaccination elsewhere,
- 3) Unvaccinated, determined to have a medical contraindication,
- 4) Unvaccinated, were offered but declined influenza vaccination,
- 5) Unvaccinated, had unknown vaccination status or did not meet any of the above numerator categories.

HCWs who received the influenza vaccine prior to October 1, 2017, were included in the summary data counts. The following formula is used to calculate the vaccination rate as described in the results section of this report:

$$\text{Vaccination Rate} = (\text{Total Vaccinated} / \text{Total Working}) \times 100$$

Total vaccinated includes personnel:

- 1) Vaccinated, receiving an influenza vaccine administered at the healthcare facility,
- 2) Vaccinated, providing proof of receiving influenza vaccination elsewhere.

RESULTS

Influenza Vaccination Percentages by Facility and Healthcare Worker Type

Table 1 displays influenza vaccination percentages for all HCW types for acute care facilities, long-term acute care facilities (LTAC), and inpatient rehabilitation facilities (IRF). Acute care, LTAC, and IRF had HCW influenza vaccination rates of 91.05%, 92.44% and 93.84%, respectively. The overall state influenza vaccination rate for all HCWs at all facility types for the 2017-2018 influenza season was 91.13%.

Table 1. Influenza Vaccination Percentages for All* HCW by Facility Type, 2017 – 2018 Influenza Season

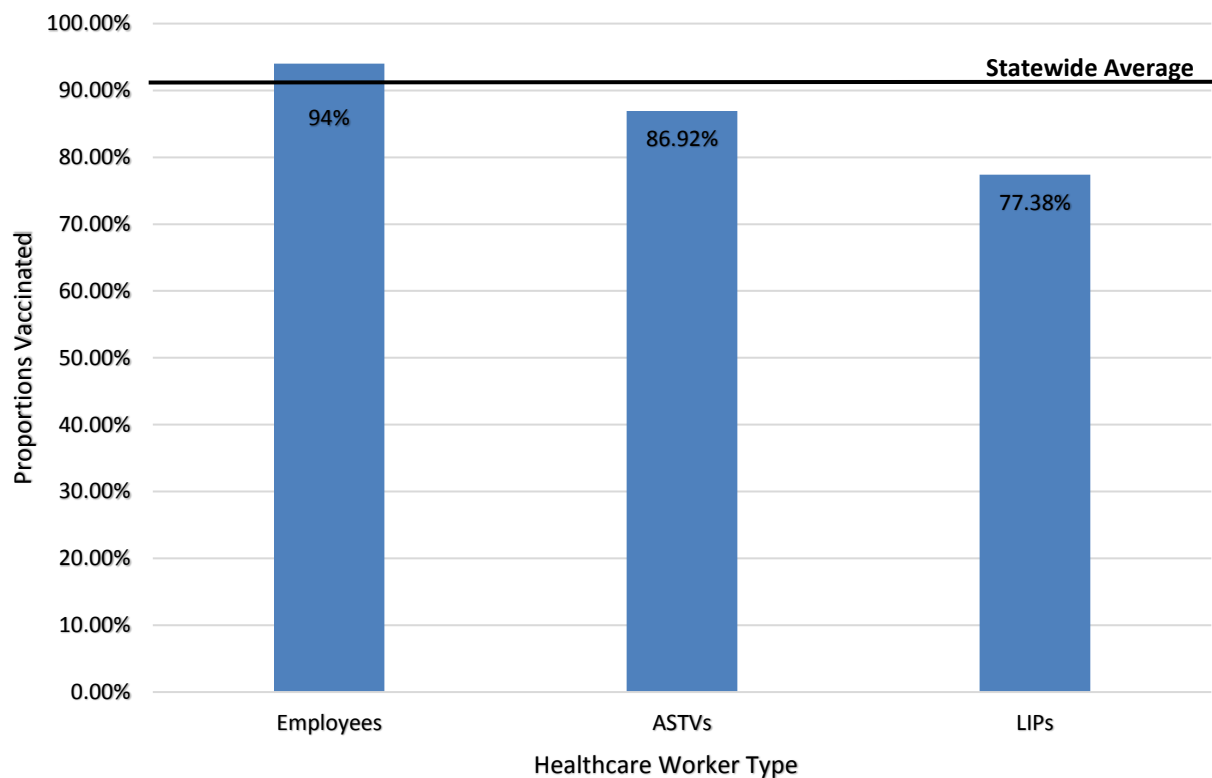
Facility Type	Personnel Vaccinated	Total Personnel	Percent Vaccinated
Acute Care	112,014	123,026	91.05%
LTAC	1,639	1,773	92.44%
IRF [§]	2,576	2,745	93.84%
STATE (All Facilities)	116,229	127,544	91.13%

*All HCWs = (Employees + LIPs+ ASTVs)

§IRF data in table reported by free standing IRFs only. IRF locations within acute care settings are included in the data presented for acute care facilities.

Figure 1 shows statewide influenza vaccination rates for HCWs by personnel type. Personnel type is stratified into the three categories as described in the methods section: (1) Employees, (2) Licensed Independent Practitioners (LIPs), and (3) Adult students, trainees, and volunteers (ASTVs). The overall state influenza vaccination rate is shown in black. Employees had the highest influenza vaccination rate at 94.00%, followed by ASTVs and LIPs at 86.92% and 77.39%, respectively.

Figure 1. Statewide Influenza Vaccination Rates for Healthcare Workers by Type, 2017-2018 Season



Influenza Vaccination Policies for Healthcare Workers

During the 2017-2018 influenza season, 62 facilities responded to a survey, the Healthcare Provider (HCP) Influenza Vaccination Seasonal Survey, regarding their respective HCW influenza vaccination policies. Of those 62 facilities, 27 (43.55%) facilities required HCW influenza vaccination as a condition of both employment and credentialing, 32 (51.61%) facilities required influenza vaccination as a condition of employment only, 31 (50.00%) facilities required influenza vaccination as a condition of credentialing only, and 26 (41.94%) facilities did not require influenza vaccination as a condition of either employment or credentialing. The rates of influenza vaccination

policies among the 62 facilities that responded to the HCP Influenza Vaccination Seasonal Survey are presented in figure 2.

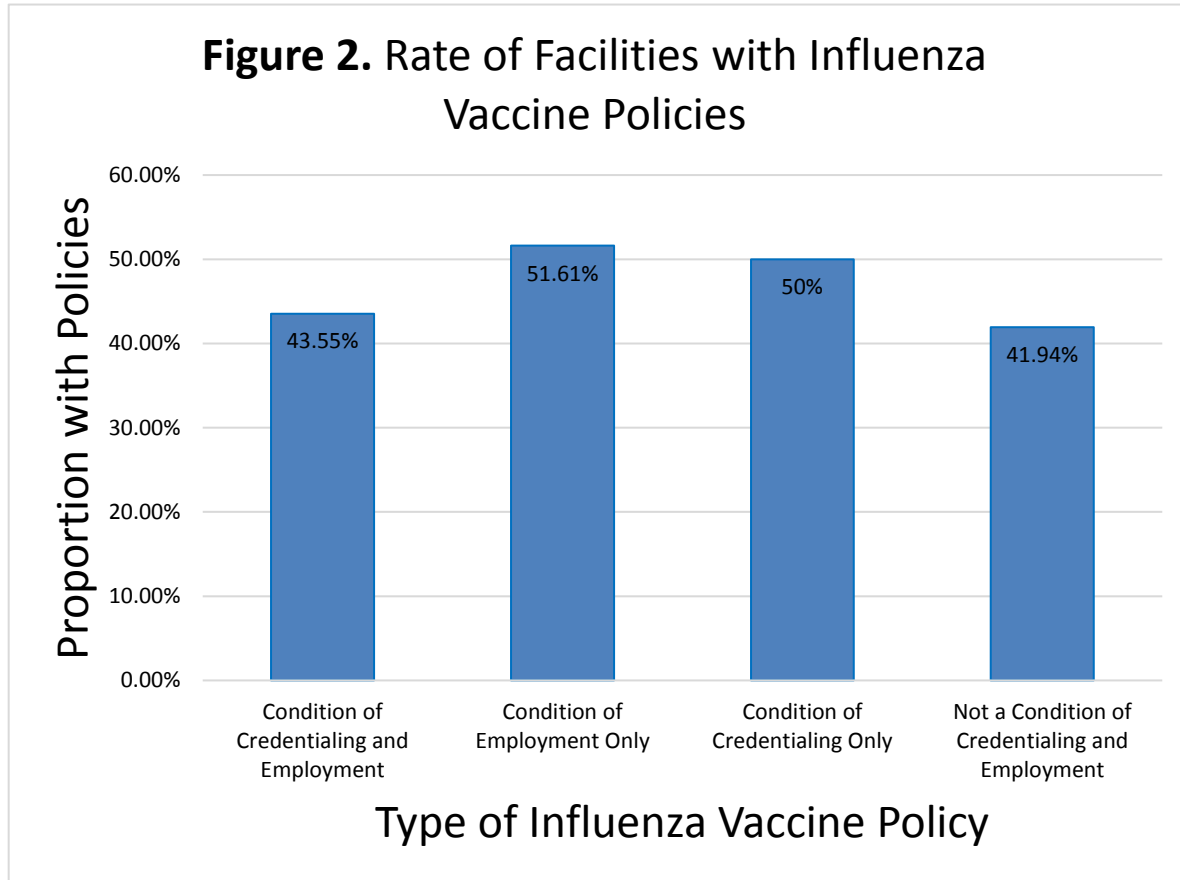
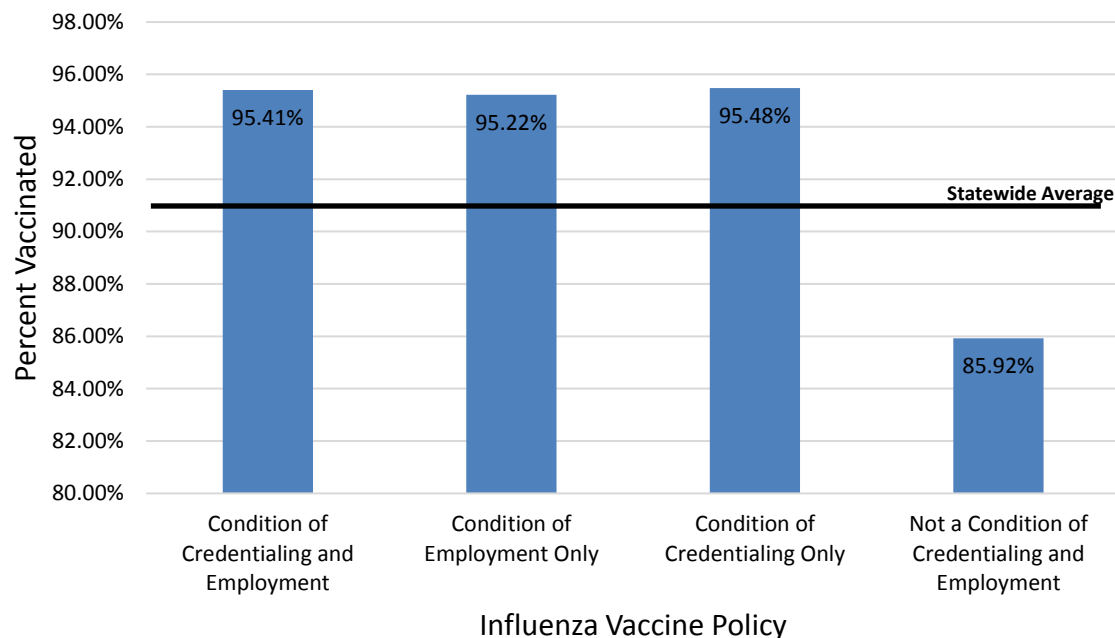


Figure 3 displays influenza vaccination rates for HCWs working at facilities with and without influenza vaccination requirements. Influenza vaccination rates were higher among HCWs whose facilities reported influenza vaccination as a condition of employment and/or credentialing compared to the overall state influenza vaccination rate.

Figure 3. HCW Vaccination Rate by Facility Influenza Vaccine Policy



Facilities that required vaccination of HCWs as a condition of both credentialing and employment reported an average influenza vaccination rate of 95.41%, compared to the overall state rate of 91.13%. Facilities that required HCW influenza vaccination as a condition of solely employment had an average vaccination rate of 95.22% and facilities that required the HCW influenza vaccination as a condition of only credentialing had an average vaccination rate of 95.48%. HCWs at facilities where the HCW influenza vaccination was not required for either credentialing or employment had an average vaccination rate of 85.92%.

Of the 62 facilities that answered questions about their respective HCW influenza vaccination policies, 45 reported requiring the use of personal protective equipment (PPE) for staff that did not receive the influenza vaccine. Of the 45 facilities that

reported requiring the use of PPEs by un-vaccinated HCWs, 22 were facilities that classified the vaccine as a condition of employment and credentialing, nine of them were facilities that classified the influenza-vaccine as a condition of employment or credentialing, and 14 were facilities that did not consider the influenza vaccine as a condition of employment or credentialing.

Influenza Vaccination Rates by Facility

Table 2 shows the influenza vaccination percentages for all HCWs at each reporting facility for the 2017-2018 influenza season. Facility vaccination percentages ranged from 61% to 100%. Forty-seven facilities reported a higher overall HCW influenza vaccination rate compared to the overall state vaccination rate, while 29 facilities reported a lower overall HCW influenza vaccination rate compared to the overall state vaccination rate. Three facilities reported vaccination rates almost equal to the state vaccination rate.

Table 2. Influenza Vaccination Percentages for All* Healthcare Personnel by Facility, 2017-2018 Influenza Season.

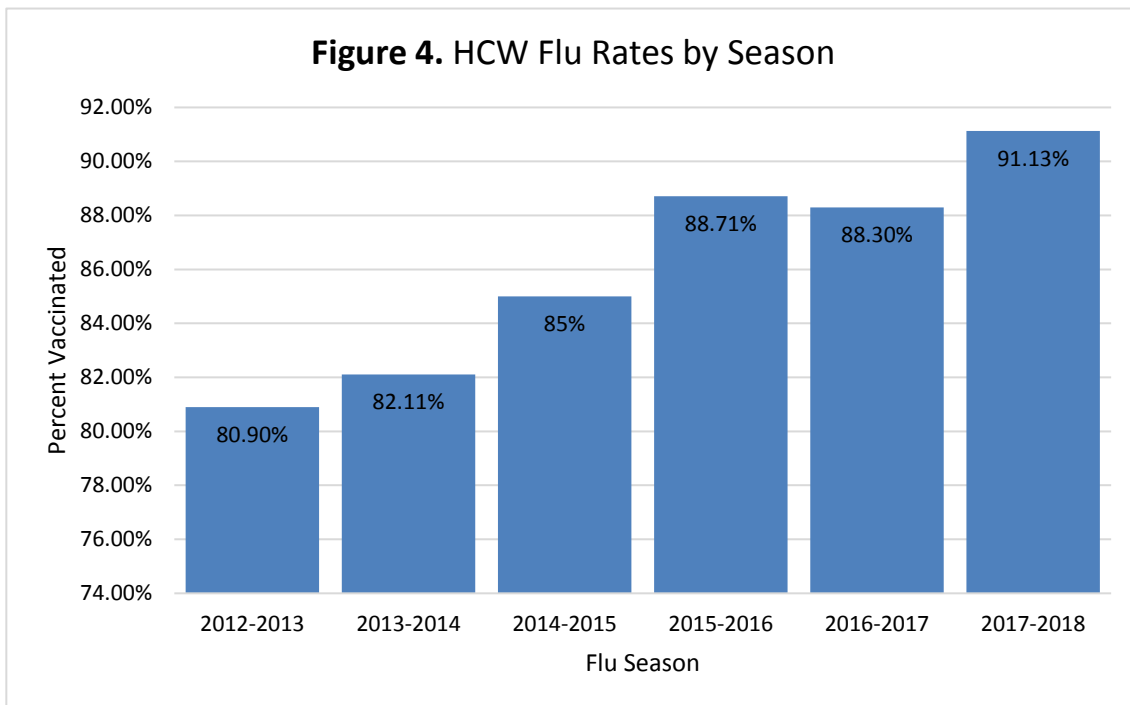
Hospital	Personnel Vaccinated	Total Personnel	Percent Vaccinated	Vaccine Rate Compared to State Average
Abbeville Area Medical Center	365	462	79%	Lower
Aiken Regional Medical Centers	1291	1340	96%	Higher
Allendale County Hospital	178	213	84%	Lower
AnMed Health	2617	2629	100%	Higher
AnMed Health Cannon	414	417	99%	Higher
AnMed Health Rehabilitation Hospital	303	308	98%	Higher
AnMed Health Women's and Children's Hospital	893	895	100%	Higher
Baptist Easley	1165	1191	98%	Higher
Beaufort Memorial Hospital	1170	1892	94%	Higher
Bon Secours St. Francis Downtown	2557	2711	94%	Higher
Bon Secours St. Francis Eastside	1854	1904	97%	Higher
Bon Secours St. Francis Xavier	1894	2254	84%	Lower
Carolina Pines Regional Medical Center	718	770	93%	Higher
Coastal Carolina Medical Center	549	558	98%	Higher

Hospital	Personnel Vaccinated	Total Personnel	Percent Vaccinated	Vaccine Rate Compared to State Average
Colleton Medical Center	612	692	88%	Lower
ContinueCare Hospital at Prisma Health Baptist	110	112	98%	Higher
Conway Medical Center	1301	1988	65%	Lower
East Cooper Regional Medical Center	911	946	96%	Higher
Edgefield County Hospital	211	236	89%	Lower
Encompass Health Rehabilitation Hospital of Rock	213	221	96%	Higher
Encompass Health Rehabilitation Hospital of Charleston	296	314	94%	Higher
Encompass Health Rehabilitation Hospital of Columbia	348	355	98%	Higher
Encompass Health Rehabilitation Hospital of Florence	235	263	89%	Lower
Grand Strand Regional Medical Center	1996	2241	89%	Lower
Greenville Health System Laurens County Hospital	522	525	99%	Higher
Greenville Memorial Hospital	13282	13365	99%	Higher
Greenwood Regional Rehabilitation Center	213	221	96%	Higher
Greer Memorial Hospital	788	797	99%	Higher
Hampton Regional Hospital	230	245	94%	Higher
Hillcrest Memorial	488	489	100%	Higher
Hilton Head Hospital	742	752	99%	Higher
Kershaw Health Medical Center	1175	1176	100%	Higher
Lake City Community Hospital	400	425	94%	Higher
Lexington Medical Center	3593	5658	64%	Lower
Mary Black Health System Gaffney	289	434	67%	Lower
McLeod Medical Center-Darlington	101	105	96%	Higher
McLeod Medical Center-Dillon	475	491	97%	Higher
McLeod Health Cheraw	349	409	85%	Lower
McLeod Health Clarendon	540	623	87%	Lower
McLeod Health Loris	736	881	84%	Lower
McLeod Health Seacoast	534	558	96%	Higher
McLeod Regional Medical Center	7754	8167	95%	Higher
Medical University Hospital Authority (MUSC)	11250	11590	97%	Higher
Mount Pleasant Hospital	1012	1036	98%	Higher
MUSC Health Chester Medical Center	230	255	90%	Lower
MUSC Health Florence Medical Center	1501	1755	86%	Lower
MUSC Health Florence Rehabilitation Center	752	841	89%	Lower
MUSC Health Florence Women's Pavilion	691	778	89%	Lower
MUSC Health Lancaster Medical Center	884	1053	84%	Lower
MUSC Health Marion Medical Center	462	536	86%	Lower

Hospital	Personnel Vaccinated	Total Personnel	Percent Vaccinated	Vaccine Rate Compared to State Average
Newberry County Hospital	624	636	98%	Higher
North Greenville Long Term Acute Care	231	235	98%	Higher
Oconee Medical Center	1069	1076	99%	Higher
Patewood Memorial Hospital	1890	1908	99%	Higher
Pelham Medical Center	866	949	91%	Same
Piedmont Medical Center	2055	2778	74%	Lower
Prisma Health Baptist	3589	3939	91%	Same
Prisma Health Parkridge	988	1102	90%	Lower
Prisma Health Richland	7105	7580	94%	Higher
Prisma Health Tuomey	1717	1963	87%	Lower
Providence Health	821	1342	61%	Lower
Providence Health-Northeast	277	399	69%	Lower
Regency Hospital of Florence	176	186	95%	Higher
Regency Hospital of Greenville	232	247	94%	Higher
Regional Medical Center of Orangeburg and Calhoun Counties	1709	1890	90%	Lower
Roper Hospital	2695	2863	94%	Higher
Self Regional Healthcare	2926	2943	100%	Higher
Shriners Hospital for Children- Greenville	345	347	99%	Higher
Spartanburg Hospital for Restorative Care	529	579	91%	Same
Spartanburg Medical Center	5919	6935	85%	Lower
Spartanburg Medical Center Mary Black Campus	1323	994	75%	Lower
Spartanburg Rehabilitation Institute	204	213	96%	Higher
Summerville Medical Center	804	871	92%	Higher
Tidelands Georgetown	1416	1422	100%	Higher
Tidelands Waccamaw	1416	1424	99%	Higher
Trident Medical Center	2806	3196	88%	Lower
Union Medical Center	379	395	96%	Higher
Vibra of Charleston	361	414	87%	Lower
Williamsburg Regional Hospital	280	303	92%	Higher

Past Influenza Vaccination Rates

Figure 4 provides a snapshot of HCW statewide vaccination rates over the past six influenza seasons. South Carolina has experienced a 10.23 point improvement in HCW vaccination rates since the 2012-2013 season.



CONCLUSIONS

This report presents South Carolina HCW influenza vaccination surveillance data by facility and healthcare personnel type for the 2017-2018 influenza season. The information gathered in this report is self-reported by each facility and has not been validated by the South Carolina Department of Health and Environmental Control.

Key Findings:

- All HIDA reporting facilities in South Carolina complied with the HAI mandatory reporting requirement to report HCW influenza vaccination summary data for the 2017-2018 influenza season. All reported data were submitted to the Healthcare Personnel Vaccination Module within the NHSN Healthcare Personnel Safety

Component.

- Vaccination rates for all HCW types by facility during the 2017-2018 influenza season ranged from 61% to 100%. The overall state influenza vaccination rate for all HCW types was 91.13%. Acute care facilities, LTAC facilities, and IRFs reported influenza vaccination rates of 91.05%, 92.44% and 93.84% respectively.
- When compared to the overall state influenza vaccination rate, ASTVs and LIPs rates are lower, at 86.92% and 77.39%, respectively. It is important to note that ASTV and LIP rates may be underreported due to barriers in capturing the vaccination statuses of these healthcare personnel by facility's employee health departments.
- Sixty-two South Carolina facilities had conditional influenza vaccination policies regarding employment and/or credentialing for healthcare personnel during the 2017-2018 influenza season. Of the 62 facilities that completed the Healthcare Provider (HCP) Influenza Vaccination Seasonal Survey, 27 (43.55%) facilities required HCW influenza vaccination as a condition of both employment and credentialing, 32 (51.61%) facilities required vaccination as a condition of employment only, and 31 (50.00%) facilities required vaccination as a condition of credentialing only. Twenty-six (41.94%) facilities did not require vaccination as a condition of employment or credentialing.

Limitations:

There are several limitations of the data presented in this report. The first limitation is the lack of information regarding vaccination campaigns/incentives within hospitals.

Although hospitals may not require mandatory influenza vaccines for employment and/or credentialing, it is possible that they have active influenza vaccination campaigns. These campaigns may even incentivize employees to receive the influenza vaccine. Information regarding incentives and educational campaigns are not considered for this report.

The second limitation is the variety of data collection methods within each facility. Hospitals rely on different employees, employee health nurses or infection preventionists, to track vaccination numbers and gather data. The methods of tracking these vaccination numbers may differ based on the type of employee recording the data. Other facilities may not have the staff capacity to feasibly assign a staff member to track influenza vaccination data onsite or follow up with employees that were vaccinated offsite. These methods or lack of methods are not considered for this report.

Finally, this report reflects healthcare worker influenza vaccine rates in acute care and critical access hospitals, inpatient rehabilitation facilities (IRF), and long-term acute care facilities (LTAC). Information regarding outpatient providers and long-term care or skilled nursing facilities is not reflected in this data.

Despite limitations, this report provides an invaluable view into HCW influenza vaccination data which can be used by healthcare facilities for improvement in their HCWs' influenza vaccination rates. The data in this report also allows healthcare consumers to make informed decisions when selecting healthcare providers in South Carolina.

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