



Healthcare Personnel Influenza Vaccination Report

2019-2020 INFLUENZA SEASON ANNUAL REPORT

August 2021



Foreword

The South Carolina Department of Health and Environmental Control (DHEC) submits the 2019–2020 Influenza Season Healthcare Personnel (HCP) Influenza Vaccination Report, which is required by the South Carolina Hospital Infections Disclosure Act (HIDA). This document is submitted in compliance with S.C. Code Section 44-7-2430 and S.C. Code Section 44-7-2440.

DHEC gratefully acknowledges that the progress achieved through HIDA is possible only because of the combined efforts of hospital infection preventionists, the HIDA Advisory Committee, and DHEC staff members.

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Contents

Foreword	2
Introduction	4
Methods	5
Results	7
Influenza Vaccination Percentages by Facility and Healthcare Personnel Type.....	7
Influenza Vaccination Policies for Healthcare Personnel.....	8
Influenza Vaccination Rates by Facility	10
Past Influenza Vaccination Rates	13
Conclusions	14
Key Findings.....	14
Limitations.....	15
References	16

Introduction

Healthcare personnel (HCP) are at risk of transmitting influenza to their patients, coworkers, and families if they become infected. The benefits of influenza vaccination among HCP and their patients, as well as lower rates of HCP absenteeism, are well documented.¹ There is a correlation between patient risk and HCP influenza vaccination rates; the lower the HCP vaccination rates, the higher the risk for patients.² Unfortunately, national influenza vaccination coverage in HCP remains low; a Centers for Disease Control and Prevention (CDC) survey conducted during the 2019–2020 influenza season estimated influenza vaccination in HCP to be approximately 80.6%.¹

Steadily, more hospitals and healthcare facilities are requiring HCP influenza vaccination as a condition of employment and/or credentialing of their licensed independent practitioners (LIPs). 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 LIPs and non-clinical staff.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, HCP influenza vaccination rates are required to be reported by the 82 hospitals within South Carolina. These hospitals are comprised of 66 acute care hospitals (ACHs), which for this report includes critical access hospitals (CAHs), six long-term acute care (LTACs) facilities, and 10 inpatient rehabilitation facilities (IRFs).

In this report, we present HCP influenza vaccination rates from 79 of 82 reporting facilities in South Carolina, arranged by facility type, employee category, and by policies for the 2019–2020 season. Additionally, vaccination trends for the past eight influenza seasons are reported to illustrate changes over time.

Methods

A total of 82 facilities were required to collect and report HCP influenza vaccination data from October 1, 2019 through March 31, 2020 for the South Carolina Hospital Infections Disclosure Act (HIDA) report. This information was self-reported by each facility through the Healthcare Personnel (HCP) 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 Due to the COVID-19 pandemic, a reporting exemption was granted by the Centers for Medicare and Medicaid Services (CMS) to all facilities, including ACHs, LTACs, and IRFs, for data reported from October 1 to December 31, 2019.⁵ In response to this exemption, DHEC announced that CMS exempted data would need to be retro-entered into NHSN for surveillance purposes after July 31, 2020. However, because of the increased workload of our state's infection preventionists, due to the ongoing pandemic, some of the data was still unable to be entered, resulting in three facilities not reporting their influenza seasonal summary data and 20 facilities not reporting their healthcare personnel influenza seasonal survey data for the 2019–2020 influenza season.

Denominator data in NHSN consisted of HCPs who were physically present within the healthcare facility for at least one working day between October 1, 2019 and March 31, 2020. Denominators were collected separately for the following healthcare personnel types:

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 HCP in each denominator HCP type, who were physically present within the healthcare facility for at least one working day between October 1, 2019 and March 31, 2020, 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 an unknown vaccination status or did not meet any of the above numerator categories.

HCP who received the influenza vaccine when it became available for the 2019–2020 influenza season and worked within the facility at least one day from October 1, 2019 through March 31, 2020, 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 influenza vaccination received elsewhere.

Results

Influenza Vaccination Percentages by Facility and Healthcare Personnel Type

Table 1 presents influenza vaccination percentages for all HCP types for acute care hospitals (ACHs), including critical access hospitals (CAHs), long-term acute care facilities (LTACs), and inpatient rehabilitation facilities (IRFs). ACHs, LTACs, and IRFs had HCP influenza vaccination rates of 90.07%, 94.60% and 95.45%, respectively. The overall state influenza vaccination rate for all HCP at all facility types for the 2019–2020 influenza season was 90.26%.

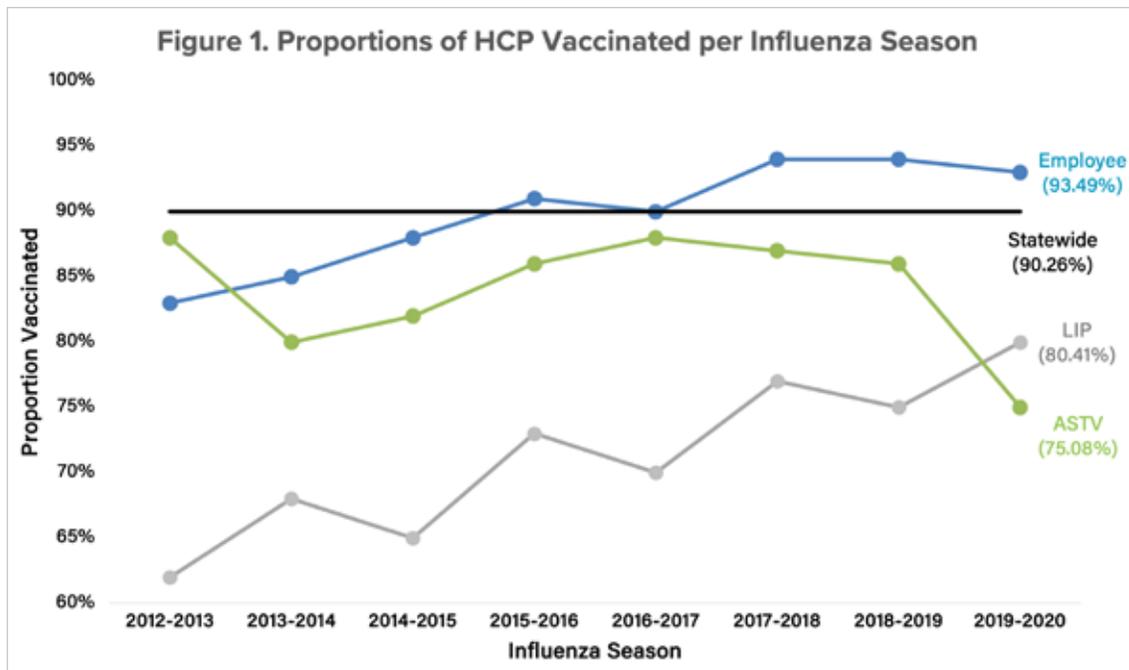
Table 1. Influenza Vaccination Percentages for All* HCP by Facility Type, 2019–2020 Influenza Season

Facility Type	Personnel Vaccinated	Total Personnel	Percent Vaccinated
ACH	98,996	109,908	90.07%
LTAC	1,629	1,722	94.60%
IRF [§]	2,475	2,593	95.45%
STATE (All Facilities)	103,100	114,223	90.26%

*All HCP: (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 exhibits statewide influenza vaccination rates for HCP by personnel type from 2012–2013 to 2019–2020. 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. During 2019–2020, employees had the highest influenza vaccination rate at 93.49%, followed by LIPs and ASTVs at 80.41% and 75.08%, respectively. Employees have consistently had the highest percentage vaccinated of all personnel types starting during the 2013–2014 influenza season and maintained an upward trend until starting to plateau during the 2017–2018 season. LIPs have been demonstrating a positive trend in vaccination rates since the 2013–2014 influenza season.



Influenza Vaccination Policies for Healthcare Personnel

During the 2019–2020 influenza season, 62 facilities responded to the Healthcare Provider (HCP) Influenza Vaccination Seasonal Survey regarding their respective HCP influenza vaccination policies. Of those 62 facility surveys, 28 (45.16%) facilities required HCP influenza vaccination as a condition of both employment and credentialing, 13 (20.97%) facilities required influenza vaccination as a condition of employment only, 4 (6.45%) facilities required influenza vaccination as a condition of credentialing only, and 17 (27.42%) facilities did not require influenza vaccination as a condition of either employment or credentialing. The distribution of those 62 facilities who completed the HCP Influenza Vaccination Seasonal Survey by policy type is shown in Figure 2.

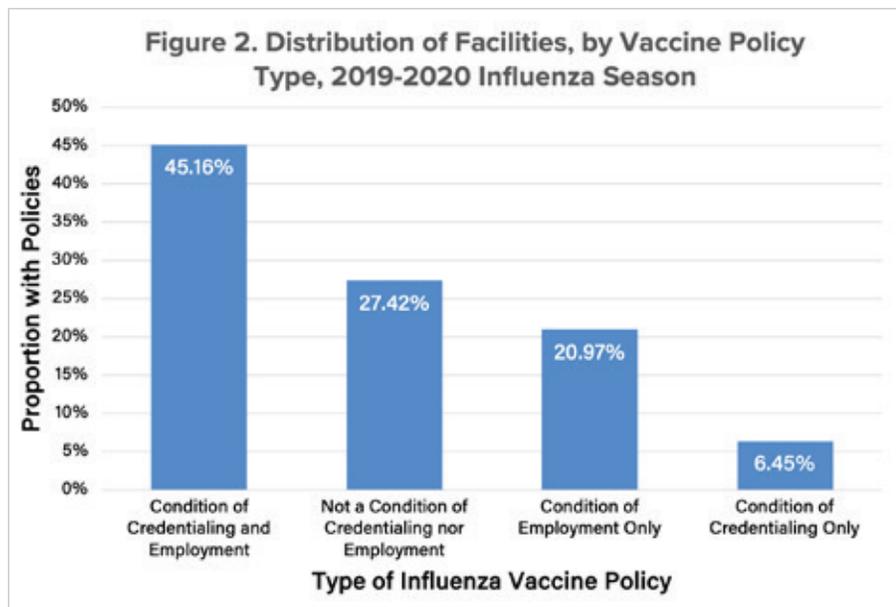
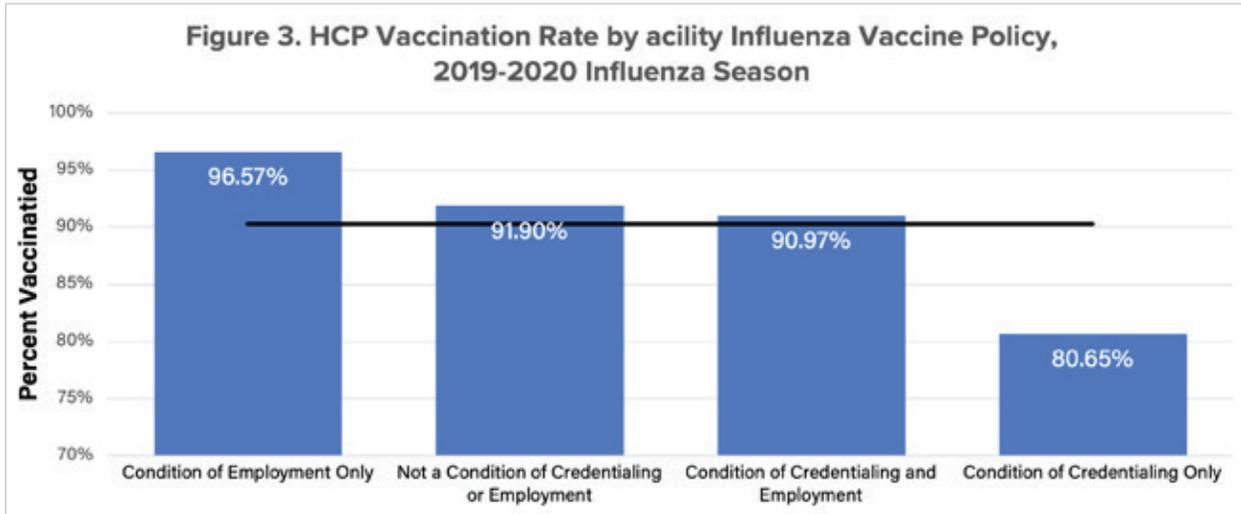
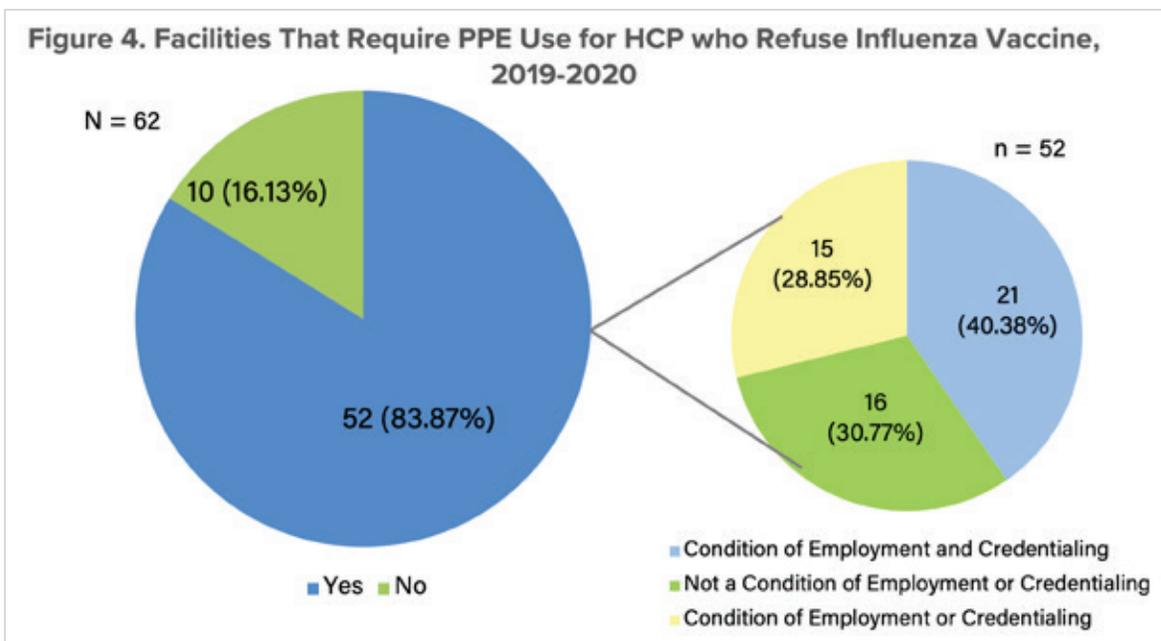


Figure 3 displays influenza vaccination rates for HCP working at facilities with and without influenza vaccination requirements. Of the four possible categories facilities could select, requiring the influenza vaccine as a “Condition of Credentialing Only” was the only selection that reflected influenza rates below the statewide average of 90.26%.



As demonstrated in Figure 4, of the 62 completed HCP Influenza Vaccination Seasonal Surveys for 2019–2020, 52 (83.87%) reported requiring the use of personal protective equipment (PPE) for staff that did not receive the influenza vaccine. Of the 52 facilities that reported requiring the use of PPE by un-vaccinated HCP, 21 (40.38%) were facilities that had classified vaccination as a condition of employment and credentialing, 15 (28.85%) were facilities that classified vaccination as a condition of employment or credentialing, and 16 (30.77%) were facilities that did not consider vaccination as a condition of employment or credentialing.



Influenza Vaccination Rates by Facility

Table 2 shows the HCP influenza vaccination percentages from each reporting facility for the 2019–2020 influenza season. For the 2019–2020 influenza season, 79 facilities reported data and three facilities failed to report to NHSN. Facility vaccination percentages ranged from 71% to 100%. Fifty facilities reported a higher overall HCP influenza vaccination rate compared to the overall state vaccination rate of 90.26%, while 29 facilities reported a lower overall HCP influenza vaccination rate compared to the overall state vaccination rate.

Table 2. Influenza Vaccination Percentages for All Healthcare Personnel by Facility. Influenza Season: 10/01/2019–03/31/2020.

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Statewide Average	103,100	114,223	90.26%	—
Abbeville Area Medical Center	358	456	79%	Lower
Aiken Regional Medical Center	N/A	N/A	N/A	N/A
Allendale County Hospital	139	196	71%	Lower
Anmed Health	2,669	2,694	99%	Higher
Anmed Health Rehabilitation Hospital	227	235	97%	Higher
Anmed Health Women's And Children's Hospital	894	899	99%	Higher
Baptist Easley Hospital	682	692	99%	Higher
Beaufort Memorial Hospital	1,377	1,719	80%	Lower
Bon Secours St. Francis Eastside	1,527	1,533	100%	Higher
Bon Secours St. Francis Hospital – Downtown	2,423	2,444	99%	Higher
Bon-Secour St. Francis Xavier Hospital	1,817	2,172	84%	Lower
Cannon Memorial Hospital	316	316	100%	Higher
Carolina Pines Regional Medical Center	948	967	98%	Higher
Cherokee Medical Center	707	759	93%	Higher
Coastal Carolina Hospital	369	432	85%	Lower
Colleton Medical Center	605	705	86%	Lower
Continuecare Hospital At Palmetto Health Baptist	123	129	95%	Higher
Conway Medical Center	1,521	2,046	74%	Lower
East Cooper Medical Center	698	906	77%	Lower
Edgefield County Healthcare	191	220	87%	Lower

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Encompass Health Rehabilitation Hospital Of Bluffton	181	182	99%	Higher
Encompass Health Rehabilitation Hospital Of Charleston	228	244	93%	Higher
Encompass Health Rehabilitation Hospital Of Columbia	396	409	97%	Higher
Encompass Health Rehabilitation Hospital Of Florence	223	239	93%	Higher
Encompass Health Rehabilitation Hospital Of Rock Hill	226	235	96%	Higher
Georgetown Memorial Hospital	1,260	1,320	95%	Higher
Grand Strand Regional Medical Center	2,183	2,533	86%	Lower
Greenville Memorial Hospital	13,075	13,256	99%	Higher
Greenwood Regional Rehabilitation Hospital	201	205	98%	Higher
Greer Memorial Hospital	854	868	98%	Higher
Hampton Regional Medical Center	254	269	94%	Higher
Hillcrest Memorial Hospital	644	645	100%	Higher
Hilton Head Hospital	459	518	89%	Lower
Kershawhealth Medical Center	966	1,153	84%	Lower
Lake City Community Hospital	425	438	97%	Higher
Lexington Medical Center	4,426	6,159	72%	Lower
Mcleod Health Cheraw	402	462	87%	Lower
Mcleod Health Clarendon	577	761	76%	Lower
Mcleod Loris	575	858	67%	Lower
Mcleod Medical Center - Darlington	122	132	92%	Higher
Mcleod Medical Center - Dillon	442	516	86%	Lower
Mcleod Regional Medical Center	7,330	8,574	85%	Lower
Mcleod Seacoast	839	960	87%	Lower
Mount Pleasant Hospital	1,010	1,339	75%	Lower
Medical University Hospital Authority (Musc)	N/A	N/A	N/A	N/A
Musc Health Chester Medical Center	266	269	99%	Higher
Musc Health Florence Medical Center	1,681	1,783	94%	Higher
Musc Health Florence Rehabilitation Center	263	269	98%	Higher

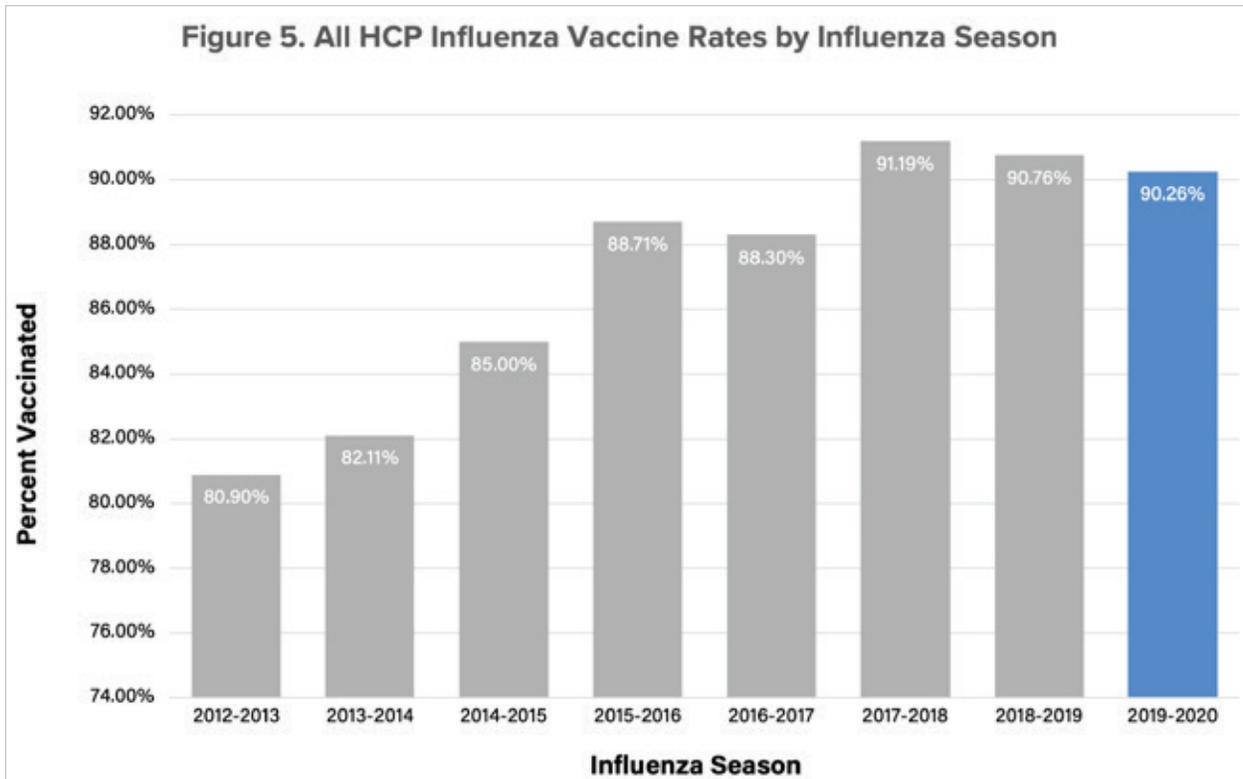
Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Musc Health Florence Women's Pavilion	222	231	96%	Higher
Musc Health Lancaster Medical Center	1,165	1,209	96%	Higher
Musc Health Marion Medical Center	431	454	95%	Higher
Newberry County Hospital	553	560	99%	Higher
Ngh Long Term Acute Care Hospital	232	237	98%	Higher
Oconee Medical Center	1,275	1,283	99%	Higher
Palmetto Health Baptist	3,320	3,386	98%	Higher
Palmetto Health Baptist Parkridge	1,056	1,068	99%	Higher
Palmetto Health Richland	6,847	7,017	98%	Higher
Patewood Memorial Hospital	2,044	2,074	99%	Higher
Pelham Medical Center	1,399	1,540	91%	Higher
Piedmont Medical Center	N/A	N/A	N/A	N/A
Prisma Health Tuomey Hospital	1,795	1,874	96%	Higher
Prisma Health-Upstate Laurens County Hospital	458	461	99%	Higher
Providence Hospitals Ne	336	471	71%	Lower
Regency Hospital Of Florence	171	178	96%	Higher
Regency Hospital Of Greenville	193	211	91%	Higher
Regional Medical Center Of Orangeburg And Calhoun Counties (Rmc)	1,828	2,090	87%	Lower
Roper Hospital	3,207	3,559	90%	Lower
Roper St. Francis Hospital - Berkeley	880	1,199	73%	Lower
Self Regional Healthcare	2,573	2,585	100%	Higher
Shriners Hospitals For Children--- Greenville	489	493	99%	Higher
Sisters Of Charity Providence Hospitals Downtown	1,237	1,584	78%	Lower
Spartanburg Hospital For Restorative Care	599	651	92%	Higher
Spartanburg Medical Center	6,686	7,781	86%	Lower
Spartanburg Medical Center Mary Black Campus	1,766	2,003	88%	Lower
Spartanburg Rehabilitation Institute	200	217	92%	Higher
Summerville Medical Center	803	923	87%	Lower

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Tidelands Health Rehabilitation Hospital, An Affiliate Of Encompass Health	330	358	92%	Higher
Trident Medical Center	1,412	1,790	79%	Lower
Union Medical Center	664	693	96%	Higher
Vibra Hospital Of Charleston	311	316	98%	Higher
Waccamaw Community Hospital	1,268	1,334	95%	Higher
Williamsburg Regional Hospital	251	277	91%	Higher

NOTE: **Higher** means that the facility had a higher HCP vaccination percent than the state average, **Lower** means that the facility had a lower HCP vaccination rate than the state average, and **N/A** means that the facility failed to report their HCP influenza vaccination rates to NHSN for the 2019–2020 influenza season; therefore, data is not available.

Past Influenza Vaccination Rates

Figure 5 provides a snapshot of HCP statewide vaccination rates over the past eight influenza seasons. South Carolina has experienced a total of 11.57 percent improvement in HCP vaccination rates since the 2012–2013 season until this current reported season. However, a slight downward trend has persisted starting after the 2017–2018 season.



Conclusions

This report presents South Carolina HCP influenza vaccination surveillance data by facility and healthcare personnel type for the 2019–2020 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 but three HIDA reporting facilities in South Carolina complied with the HAI mandatory reporting requirement to report HCP influenza vaccination summary data for the 2019–2020 influenza season. All reported data were submitted to the Healthcare Personnel Vaccination Module within the NHSN Healthcare Personnel Safety Component.
- Vaccination rates for all HCP types by facility during the 2019–2020 influenza season ranged from 71% to 100%. The overall state influenza vaccination rate for all HCP types was 90.26%, a slight decrease from 90.76% in 2018–2019. ACHs, LTACs, and IRFs reported influenza vaccination rates of 90.07%, 94.60% and 95.45% respectively.
- When compared to the overall state influenza vaccination rate, LIPs and ASTVs rates are lower, at 80.41% and 75.08%, respectively; however, employees' rate is higher than the state rate with 93.49% being vaccinated. It is important to note that LIP and ASTV rates may be underreported due to barriers like the COVID-19 pandemic's impact on reporting, and the mandatory use of masking, in capturing the vaccination statuses of these healthcare personnel by facility's employee health departments.
- Only 62 of the 82 required facilities completed the HCP Influenza Vaccination Seasonal Survey regarding conditional influenza vaccination policies regarding employment and/or credentialing and personal protective equipment (PPE) requirements if not vaccinated for the 2019–2020 influenza season. Of the 62 facilities that completed the HCP Influenza Vaccination Seasonal Survey, 28 (45.16%) facilities required HCP influenza vaccination as a condition of both employment and credentialing, 13 (20.97%) facilities required vaccination as a condition of employment only, 4 (6.45%) facilities required vaccination as a condition of credentialing only, and 17 (27.42%) did not require vaccination as a condition of employment or credentialing. Compared to the 2018–2019 survey, facilities who require the HCP influenza vaccination as a condition of both employment and credentialing in 2019–2020 increased significantly from 28.79% to 45.16%. Fifty-two (83.87%) of the 62 facilities that completed the HCP influenza Vaccination Seasonal Survey required the use of PPE by un-vaccinated HCP.

Limitations

There are several limitations of the data presented in this report. The first is the COVID-19 pandemic that has taken place during the 2019–2020 influenza season. Due to the increased workload of hospital Infection Preventionists (IPs) along with changes and delays in reporting requirements, some facilities were unable to provide the required summary and survey data for 2019–2020 healthcare personnel (HCP) influenza season. During the COVID-19 pandemic, facilities required source control, wearing facemasks, at all times by HCP while in healthcare facilities. The requirement of source control may have contributed to decreased rates of HCP receiving their influenza vaccine since personnel were required to wear a mask regardless of their influenza vaccination status. Additionally, very mild influenza activity during 2019 – 2020 reduced typical influenza vaccine promotion activities and may have reduced perceived threat from the disease and influenza vaccine uptake. It is also important to note that the COVID-19 vaccine was not yet available during the 2019–2020 Influenza season, reinforcing the use of HCP source control.

The second limitation is the lack of information regarding vaccination campaigns and incentives within hospitals. Although hospitals may not require mandatory influenza vaccination for employment and/or credentialing, it is possible that they have active influenza vaccination campaigns. These campaigns may incentivize employees to receive the influenza vaccine. However, information regarding incentives and educational campaigns are not considered for this report.

The third limitation is the variety of data collection methods within each facility. Hospitals rely on different employees (e.g., employee health nurses, infection preventionists, education department personnel, human resources, and/or volunteer departments) 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 HCP influenza vaccine rates in ACHs/CAHs, IRFs, and LTACs, only. Information regarding outpatient providers and long-term care or skilled nursing facilities is not reflected in this data.

Despite limitations, this report provides a valuable view into HCP influenza vaccination data which can be used by healthcare facilities for improvement in their HCP 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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