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Healthcare Personnel Influenza Vaccination Report

2020–2021 INFLUENZA SEASON ANNUAL REPORT

September 2022

Foreword

The South Carolina Department of Health and Environmental Control (DHEC) submits the 2020–2021 Influenza Season Healthcare Personnel (HCP) Influenza Vaccination Report, as 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 because of the combined efforts of hospital infection preventionists, the HIDA Advisory Committee, and DHEC staff members.

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Introduction

Healthcare personnel (HCP) are at risk of transmitting influenza – also known as the flu – 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 time missed from work, 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 2020–2021 influenza season estimated influenza vaccination in HCP to be approximately 75.9 percent, declining from the previous influenza season's coverage estimation of 80.7 percent.[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, an independent nonprofit that accredits hospitals and promotes patient safety and quality health care, 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] However, as of 2021, an original feature of the requirement, which stated that hospitals need to work towards a goal of 90 percent vaccination rate, was removed from the standard. Currently, influenza vaccine reporting is mandated under the South Carolina Hospital Infections Disclosure Act (HIDA) and HCP influenza vaccination rates are required to be reported by the 82 hospitals within South Carolina. These hospitals are comprised of 65 acute care hospitals (ACHs), which for this report includes four critical access hospitals (CAHs), six long-term acute care (LTACs) facilities, and 11 inpatient rehabilitation facilities (IRFs). Approximately 11 ACHs have an inpatient rehabilitation ward within their facility. For the purposes of this report, the vaccination data reported from those rehab wards is included in the vaccination totals reported for each ACH.

In this report, we present HCP influenza vaccination rates from 82 reporting facilities in South Carolina, arranged by facility type, employee category, and by policies for the 2020–2021 season. Additionally, vaccination trends for the past nine influenza seasons are reported to show changes over time

Methods

A total of 82 facilities were required to collect and report HCP influenza vaccination data from Oct. 1, 2020 through March 31, 2021, for the South Carolina Hospital Infections Disclosure Act (HIDA) report. This information was self-reported by Infection Preventionists from each facility through the Healthcare Personnel (HCP) Vaccination Module within the CDC National Healthcare Safety Network's (NHSN) Healthcare Personnel Safety Component.[5] Infection preventionists are professionals who work with health care personnel to keep patients from getting infections while in care. Facilities were required to follow standardized reporting definitions and methods as described in the NHSN Healthcare Personnel Safety Component Manual.[4] Due to the continued increase in workload of our state's infection preventionists caused by the ongoing COVID-19 pandemic, nine facilities were unable to report their healthcare personnel influenza seasonal survey data for the 2020–2021 influenza season.

The vaccination rate for HCP as described in the results section of this report is calculated by dividing the total number vaccinated by the total number working and multiplying that by 100:

Vaccination Rate = (Total Vaccinated / Total Working) x 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.

Denominator data, the total number working at a facility, in NHSN consisted of HCPs who were physically present within the healthcare facility for at least one working day between Oct. 1, 2020, and March 31, 2021. 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 that did not fall into one of the above categories. Data for this category is not included in this report.

Numerator data, the total number of HCP vaccinated, 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 Oct. 1, 2020, and March 31, 2021, and were:

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

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 90.89 percent, 82.81 percent and 90.10 percent, respectively. The overall state influenza vaccination rate for all HCP at all facility types for the 2020–2021 influenza season was 90.77 percent.

Table 1. Influenza Vaccination Percentages for All* HCP by Facility Type, 2020–2021 Influenza Season

Facility Type	Personnel Vaccinated	Total Personnel	Percent Vaccinated
ACH	110,627	121,716	90.89%
LTAC	1,310	1,582	82.81%
IRF§	2,276	2,527	90.10%
STATE (All Facilities)	114,213	125,825	90.77%

Figure 1. Healthcare Personnel Vaccination Rates by Influenza Season

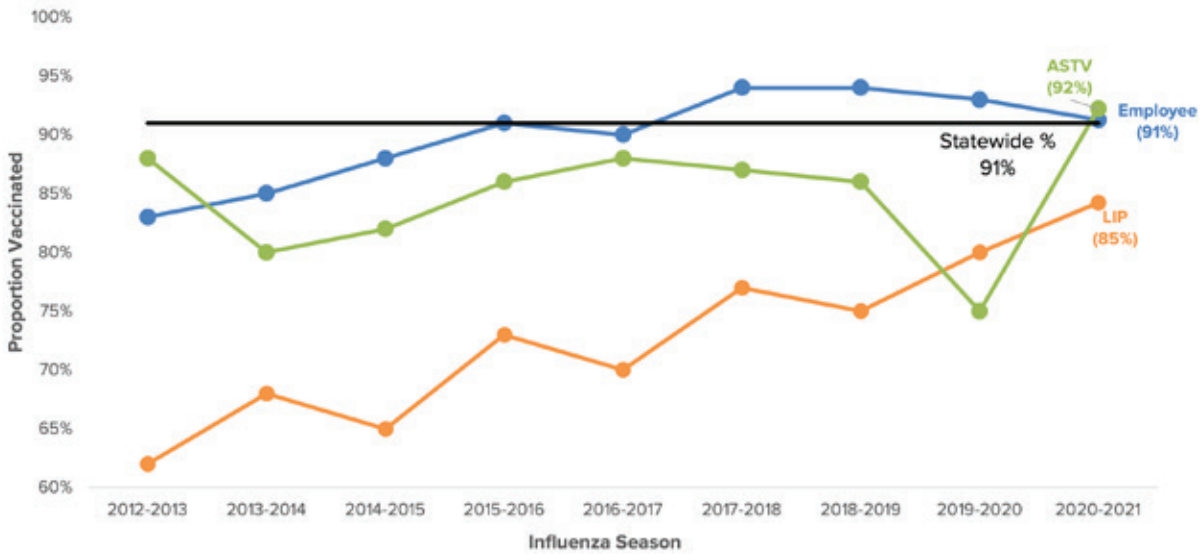


Figure 1 shows statewide influenza vaccination rates for HCP by personnel type from 2012–2013 to 2020–2021. Personnel type is divided into the three categories as described in the methods section: (1) Employees, (2) Licensed Independent Practitioners (LIPs), and (3) Adult students, trainees, and volunteers (ASTVs). The overall state influenza vaccination rate is shown in black. During 2020–2021, ASTVs had the highest influenza vaccination rate at 92.21 percent, followed by Employees and LIPs at 91.27 percent and 84.22 percent, respectively.

ASTVs demonstrated a dramatic increase in vaccination rate from the 2019–2020 season, when student volunteers were restricted in healthcare settings due to the COVID-19 pandemic and, therefore, did not contribute to a large percentage of vaccinated personnel. Employees have consistently had the highest percentage vaccinated of all personnel types starting during the 2013–2014 influenza season and continuing with an upward trend until demonstrating a consistent decline starting in the 2018–2019 season, with student volunteers surpassing employee vaccination rates in the 2020–2021 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 2020–2021 influenza season, 73 of 82 facilities responded to the Healthcare Provider (HCP) Influenza Vaccination Seasonal Survey regarding each of their HCP influenza vaccination policies. Of those 73 facility surveys, 30 (41.10 percent) facilities required HCP influenza vaccination as a condition of both employment and credentialing, 26 (35.62 percent) facilities did not require influenza vaccination as a condition of either employment or credentialing, 13 (17.81 percent) facilities required influenza vaccination as a condition of employment only, and four (5.48 percent) facilities required influenza vaccination as a condition of credentialing only. Credentialing refers to the process that healthcare providers must undergo to verify that they are qualified to provide medical services. The distribution of those 73 facilities who completed the HCP Influenza Vaccination Seasonal Survey by policy type is shown in Figure 2.

Figure 2. Percent of Facilities with Vaccine Policies, 2020–2021 Influenza Season

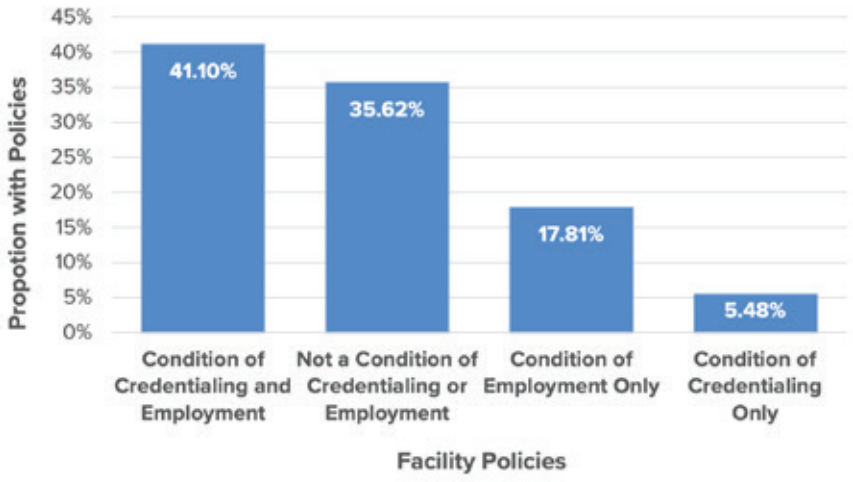


Figure 3 displays influenza vaccination rates for HCP working at facilities with and without influenza vaccination requirements. Of the four possible categories facilities could select, requiring the influenza vaccine as a "Condition of Employment Only" and as a "Condition of Credentialing and Employment" were the only selections associated with influenza rates above the statewide average of 90.77 percent.

Figure 3. HCP Vaccination Rate by Facility Influenza Vaccine Policy, 2020–2021 Influenza Season

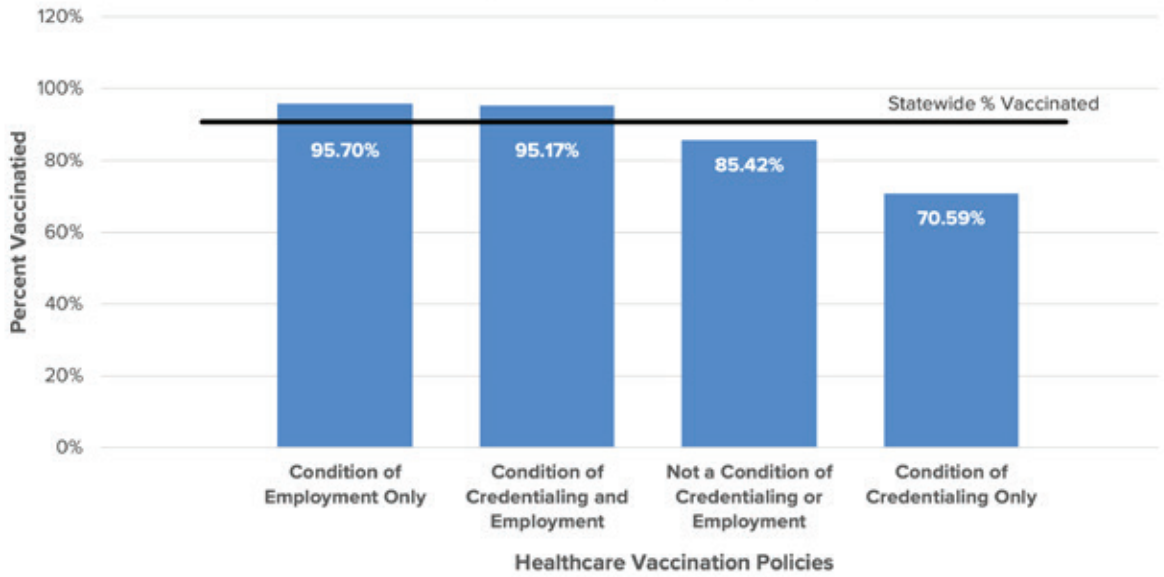
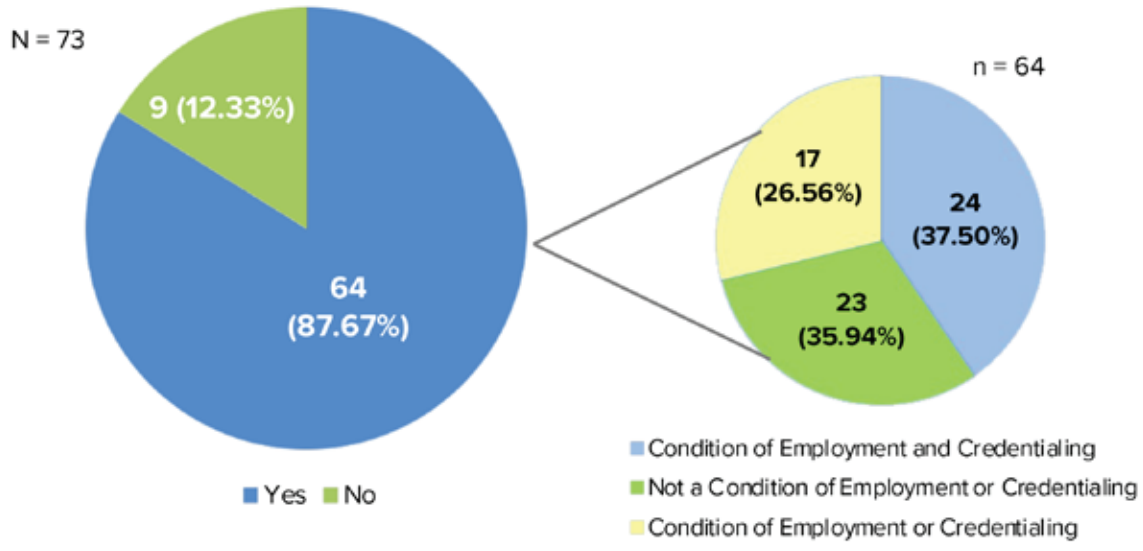


Figure 4. Facilities That Require PPE Use for HCP who Refuse Influenza Vaccine, 2020–2021



As demonstrated in Figure 4, of the 73 completed HCP Influenza Vaccination Seasonal Surveys for 2020–2021, 64 (87.67 percent) reported requiring the use of personal protective equipment (PPE) for staff that did not receive the influenza vaccine. Of the 64 facilities that reported requiring the use of PPE by un-vaccinated HCP, 24 (37.50 percent) were facilities that had classified vaccination as a condition of employment and credentialing, 17 (26.56 percent) were facilities that classified vaccination as a condition of employment or credentialing, and 23 (35.94 percent) 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 2020–2021 influenza season. For the 2020–2021 influenza season, 82 facilities reported data to NHSN. Facility vaccination percentages ranged from 51 percent to 100 percent. Forty-nine facilities reported a higher overall HCP influenza vaccination rate compared to the overall state vaccination rate of 90.77 percent, while 30 facilities reported a lower overall HCP influenza vaccination rate compared to the overall state vaccination rate. Three facilities reported vaccination rates equal to the state average of 90.77 percent.

Table 2. Influenza Vaccination Percentages for All Healthcare Personnel by Facility. Influenza Season: 10/01/2020–03/31/2021.

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Statewide Average	**114,213**	**125,825**	**90.77%**	**—**
Abbeville Area Medical Center	318	399	80%	Lower
Aiken Regional Medical Centers*	1,057	1,383	76%	Lower
Allendale County Hospital	99	190	52%	Lower
Anmed Health	1,981	2,018	98%	Higher
Anmed Health Rehabilitation Hospital	196	204	96%	Higher
Anmed Health Women's And Children's Hosptial	1,518	1,533	99%	Higher
Baptist Easley Hospital	478	480	100%	Higher
Beaufort Memorial Hospital*	2,187	2,263	97%	Higher
Bon Secours St. Francis Eastside	251	333	75%	Lower
Bon Secours St. Francis Hospital – Downtown*	2,796	3,229	87%	Lower
Bon-Secour St. Francis Xavier Hospital	1,585	1,611	98%	Higher
Cannon Memorial Hospital	286	289	99%	Higher
Carolina Pines Regional Medical Center	607	622	98%	Higher

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Cherokee Medical Center	464	569	82%	Lower
Coastal Carolina Hospital	551	566	97%	Higher
Colleton Medical Center*	453	880	51%	Lower
Continuecare Hospital At Palmetto Health Baptist	118	134	88%	Lower
Conway Medical Center	1,942	2,077	94%	Higher
East Cooper Medical Center*	771	1,071	72%	Lower
Edgefield County Healthcare	172	189	91%	Same
Encompass Health Rehabilitation Hospital Of Bluffton	161	170	95%	Higher
Encompass Health Rehabilitation Hospital Of Columbia	290	322	90%	Lower
Encompass Health Rehabilitation Hospital Of Florence	206	242	85%	Lower
Encompass Health Rehabilitation Hospital Of Rock Hill	214	226	95%	Higher
Georgetown Memorial Hospital	1,159	1,239	94%	Higher
Grand Strand Regional Medical Center*	1,671	2,337	72%	Lower
Greenville Memorial Hospital*	11,983	12,193	98%	Higher
Greenwood Regional Rehabilitation Hospital	182	197	92%	Higher
Greer Memorial Hospital	621	629	99%	Higher
Hampton Regional Medical Center	249	285	87%	Lower
Hillcrest Memorial Hospital	613	618	99%	Higher
Hilton Head Hospital	614	634	97%	Higher
Kershawhealth Medical Center	1,088	1,104	99%	Higher
Lake City Community Hospital	334	381	88%	Lower
Lexington Medical Center	4,372	5,610	78%	Lower
Mcleod Health Cheraw	458	475	96%	Higher
Mcleod Health Clarendon	499	524	95%	Higher
Mcleod Loris	575	631	91%	Same
Mcleod Medical Center - Dillon	388	412	94%	Higher
Mcleod Regional Medical Center	7,683	8,508	90%	Lower
Mcleod Seacoast	1,047	1,137	92%	Higher
Medical University Hospital Authority	12,217	12,571	97%	Higher

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Midlands Regional Rehabilitation Hospital	80	109	73%	Lower
Mount Pleasant Hospital	808	817	99%	Higher
Musc Health Chester Medical Center	399	407	98%	Higher
Musc Health Columbia Medical Center Downtown	859	1,347	64%	Lower
Musc Health Florence Medical Center	1,591	1,702	93%	Higher
Musc Health Florence Rehabilitation Center	223	233	96%	Higher
Musc Health Florence Women's Pavilion	216	227	95%	Higher
Musc Health Lancaster Medical Center*	1,138	1,214	94%	Higher
Musc Health Marion Medical Center	392	413	95%	Higher
Musc Health Rehabilitation Hospital, An Affilate Of Encompass Health	188	207	91%	Same
Newberry County Hospital	533	550	97%	Higher
Ngh Long Term Acute Care Hospital	241	244	99%	Higher
Oconee Medical Center	946	958	99%	Higher
Patewood Memorial Hospital	1,985	2,019	98%	Higher
Pelham Medical Center	703	899	78%	Lower
Piedmont Medical Center	2,587	2,724	95%	Higher
Prisma Health Baptist	3,189	3,233	99%	Higher
Prisma Health Baptist Parkridge	1,111	1,117	99%	Higher
Prisma Health Richland	7,051	7,099	99%	Higher
Prisma Health Tuomey Hospital*	1,960	1,971	99%	Higher
Prisma Health-Upstate Laurens County Hospital	417	422	99%	Higher
Providence Hospitals Ne	305	510	60%	Lower
Regency Hospital Of Florence	159	162	98%	Higher
Regency Hospital Of Greenville	186	254	73%	Lower
Regional Medical Center Of Orangeburg And Calhoun Counties (Rmc)	1,977	2,122	93%	Higher
Roper Hospital*	5,064	5,378	94%	Higher
Roper St. Francis Hospital - Berkeley	834	845	99%	Higher
Self Regional Healthcare	2,737	2,749	100%	Higher
Shriners Hospitals For Children	275	281	98%	Higher

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Spartanburg Hospital For Restorative Care	462	555	83%	Lower
Spartanburg Medical Center	5,600	7,780	72%	Lower
Spartanburg Medical Center Mary Black Campus	916	1,310	70%	Lower
Spartanburg Rehabilitation Institute	147	207	71%	Lower
Summerville Medical Center	682	824	83%	Lower
Tidelands Health Rehabilitation Hospital, An Affiliate Of Encompass Health	389	410	95%	Higher
Trident Medical Center*	1,514	1,848	82%	Lower
Union Medical Center	273	337	81%	Lower
Vibra Hospital Of Charleston	144	233	62%	Lower
Waccamaw Community Hospital	1,240	1,325	94%	Higher
Williamsburg Regional Hospital	238	298	80%	Lower

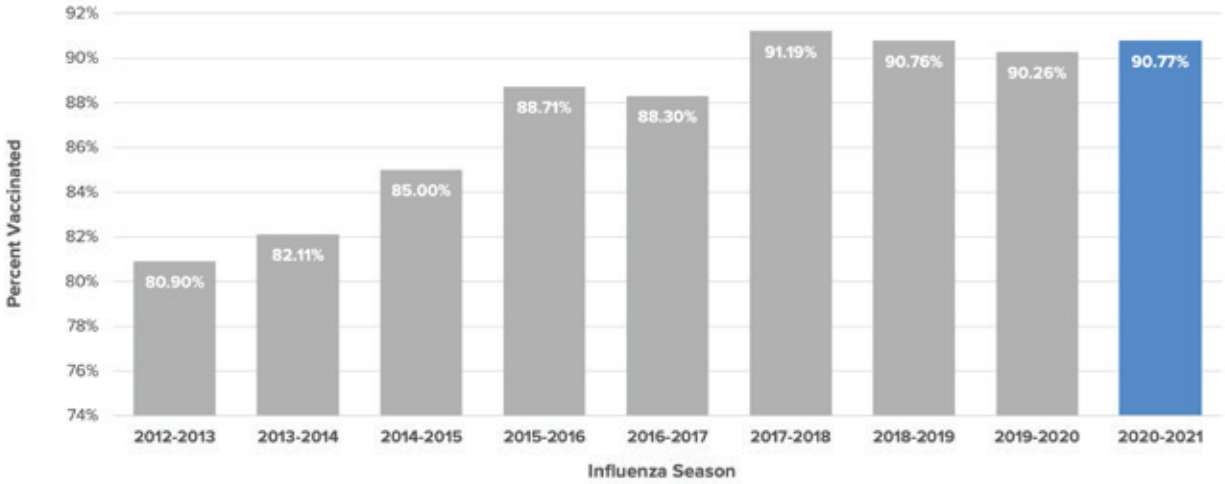
NOTE: Higher means that the facility had a higher HCP vaccination percent than the state average, **Lower** means that the facility had a lower HCP vaccination rate than the state average, and N/A means that the facility failed to report their HCP influenza vaccination rates to NHSN for the 2020–2021 influenza season; therefore, data is not available.

* Denotes Acute Care Hospitals that have an Inpatient Rehabilitation Ward within their hospital. Vaccination data reported for individual rehabilitation wards in ACH were included in hospital totals.

Past Influenza Vaccination Rates

Figure 5 provides a snapshot of HCP statewide vaccination rates over the past nine influenza seasons. South Carolina has demonstrated a total of 12.2 percent improvement in HCP vaccination rates since the 2012–2013 season and has maintained a vaccination rate greater than 90 percent since the 2016–2017 influenza season.

Figure 5. All HCP Influenza Vaccine Rates by Influenza Season



Conclusions

This report presents South Carolina HCP influenza vaccination surveillance data by facility and healthcare personnel type for the 2020–2021 influenza season. The information gathered in this report is self-reported by each facility and has not been validated by DHEC.

Key Findings

- All HIDA reporting facilities (82) in South Carolina complied with the HAI mandatory reporting requirement to report HCP influenza vaccination summary data for the 2020–2021 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 2020–2021 influenza season ranged from 51 percent to 100 percent. The overall state influenza vaccination rate for all HCP types was 90.77 percent, demonstrating a slight increase from 90.26 percent in 2019–2020. Despite the removal of the Joint Commission standard that encouraged hospitals to reach a goal of 90 percent vaccination rate, the South Carolina average was higher than previous years. and ACHs, LTACs, and IRFs reported influenza vaccination rates of 90.89 percent, 82.81 percent and 90.10 percent respectively.
- With the removal of the Joint Commission standard that encouraged hospitals to achieve 90 percent influenza vaccination coverage amongst healthcare workers, the percentage of hospitals that required influenza vaccination as a condition of employment and credentialing decreased from 45.16 percent to 41.10 percent. Despite that change, the state average was higher than it has been in the previous two years despite less of a requirement for workers to be vaccinated. Research by Sani et al. (2022) suggests that HCP were more likely to receive the influenza vaccination because of improved knowledge and attitudes about vaccination because of the COVID-19 pandemic.[6]
- When compared to the overall state influenza vaccination rate, LIP's rates are lower, at 84.22 percent. Rates for employees and ASTVs are higher than the state average, reporting 91.27 percent and 92.21 percent, respectively. 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 challenges in capturing the vaccination statuses of these healthcare personnel by facility's employee health departments.
- Only 73 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 2020–2021 influenza season. Of the 73 facilities that completed the HCP Influenza Vaccination Seasonal

Survey, 30 (40.10 percent) facilities required HCP influenza vaccination as a condition of both employment and credentialing, 26 (35.62 percent) facilities did not require vaccination as a condition of employment nor credentialing, 13 (17.81 percent) facilities required vaccination as a condition of employment only, and four (5.48 percent) facilities required vaccination as a condition of credentialing only. Compared to the 2019–2020 survey, facilities that do not require the HCP influenza vaccination as a condition of both employment and credentialing in 2020–2021 increased significantly, from 27.42 percent to 35.62 percent. This change is likely a result of the updated Joint Commission standard removing the goal of 90 percent vaccination rate amongst healthcare providers. Sixty-four (87.67 percent) of the 73 facilities that completed the HCP influenza Vaccination Seasonal Survey required the use of PPE by unvaccinated HCP.

Limitations

There are several limitations of the data presented in this report. The first is the COVID-19 pandemic that continued during the 2020–2021 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 2020–2021 healthcare personnel (HCP) influenza season.

The second limitation is the lack of information regarding vaccination campaigns and incentives within hospitals. Although hospitals may not require influenza vaccination for employment and/or credentialing, it is possible that they have active influenza vaccination campaigns. These campaigns may help get employees to agree 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 enough workers to 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 that 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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