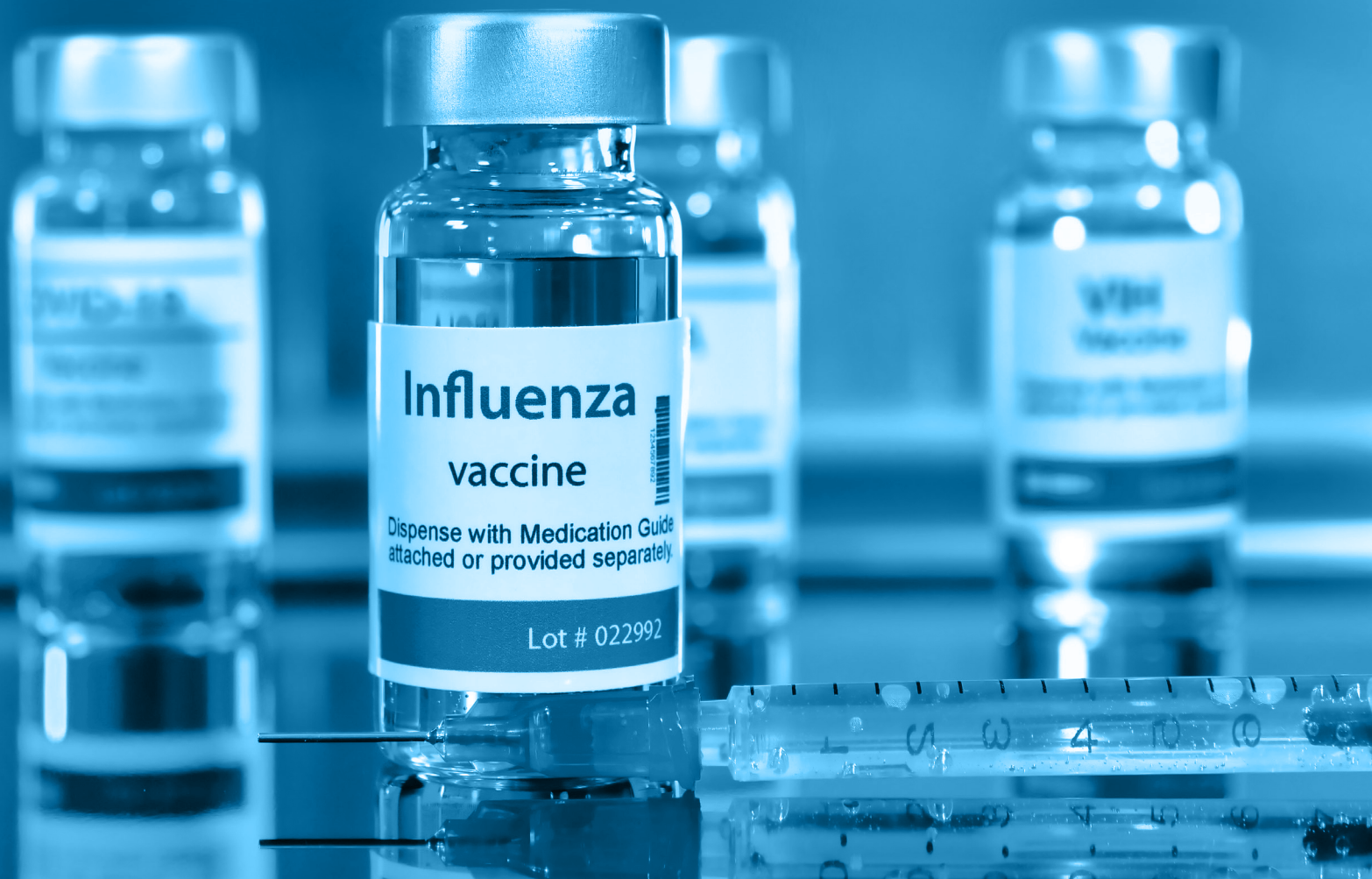




Healthcare Personnel Influenza Vaccination Report

2022–2023 Influenza Season Annual Report

January 2025



Foreword

The South Carolina Department of Public Health (DPH) submits the 2022-2023 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.

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

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Abbreviations

ACH	Acute Care Hospital	HIDA	Hospital Infections Disclosure Act
ASTV	Adult Students, Trainees, and Volunteers	IP	Infection Preventionist
CAH	Critical Access Hospital	ICU	Intensive Care Unit <i>(used interchangeably with Critical Care Unit)</i>
CCU	Critical Care Unit <i>(used interchangeably with Intensive Care Unit)</i>	IRF	Inpatient Rehabilitation Facility
CDC	Centers for Disease Control and Prevention	LIP	Licensed Independent Practitioner
COVID-19	Coronavirus Disease 2019	LTACH	Long-Term Acute Care Hospital
HAI	Health care-Associated Infection	NHSN	National Healthcare Safety Network
HCP	Health care Personnel	PPE	Personal Protective Equipment

Introduction

Influenza is transmitted person to person, primarily via droplets, and health care personnel (HCP) infection may be the first step in the causal pathway within health care settings. Once an HCP is infected with influenza, the risk of transmission to contacts (e.g., their patients, coworkers and families) increases. There is a correlation between patient risk and HCP influenza vaccination rates; the lower the HCP vaccination rates, the higher the risk for patients.³ Despite the evidence that the influenza vaccine protects recipients and reduces absenteeism, presenteeism, and disease transmission to vulnerable patients, national influenza vaccination coverage among HCP remains low.⁴ A Centers for Disease Control and Prevention (CDC) survey conducted during the 2022-2023 influenza season estimated influenza vaccination in HCP to be approximately 75.9 percent, a decrease from the previous influenza season's coverage estimation of 79.9 percent.²

In July 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.⁵ However, as of 2021, an original feature of the requirement that stated hospitals need to work towards a goal of a 90 percent vaccination rate was removed to align with changes in the Healthy People 2030 goals.⁶

Currently, influenza vaccine reporting is mandated under the South Carolina Hospital Infections Disclosure Act (HIDA), and hospitals within South Carolina must report HCP influenza vaccination rates. These hospitals are comprised of 61 acute care hospitals (ACHs), which for this report include three critical access hospitals (CAHs), six long-term acute care (LTACHs) hospitals, and 12 inpatient rehabilitation facilities (IRFs). Approximately 12 ACHs have a rehabilitation ward within their facility. For this report, the vaccination data reported from those rehab wards is included in the vaccination totals reported for each respective ACH.

This report presents HCP influenza vaccination rates from 99% of the reporting facilities in South Carolina, arranged by facility type, employee category and policies for the 2022-2023 season. Additionally, vaccination trends for the past 11 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, 2022, through March 31, 2023, per the South Carolina Hospital Infections Disclosure Act (HIDA). Eighty-one of the 82 facilities complied with the reporting requirement. This information was 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.¹ Infection preventionists are professionals who work with health care personnel to keep patients from getting infections while receiving care. Facilities were required to follow standardized reporting definitions and methods as described in the NHSN Healthcare Personnel Safety Component Manual.¹

Denominator data shows the total number working at a facility in NHSN consisted of HCP who were physically present within the health care facility for at least one working day between Oct.1, 2022, and March 31, 2023. Denominators were collected separately for the following health care 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)*: include physicians, advanced practice nurses, and physician assistants 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 aged 18 years or older affiliated with the health care 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 consisted of HCP in each denominator HCP type who were physically present within the health care facility for at least one working day between Oct. 1, 2022, and March 31, 2023, and were:

1. Vaccinated, receiving an influenza vaccine given at the health care 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 the above categories.

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:

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

Total vaccinated includes personnel:

1. Vaccinated, receiving an influenza vaccine administered at the health care facility,
2. Vaccinated, providing proof of influenza vaccination received elsewhere.

Results

Influenza Vaccination by Facility Type and HCP 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 hospitals (LTACHs) and inpatient rehabilitation facilities (IRFs). ACHs, LTACHs and IRFs recorded HCP influenza vaccination rates of 81.17 percent, 64.78 percent, and 82.43 percent, respectively. The overall state influenza vaccination rate for all HCP at all facility types for the 2022-2023 influenza season was 81.02 percent.

Table 1. Influenza Vaccination for All HCP* by Facility Type, 2022-2023 Influenza Season

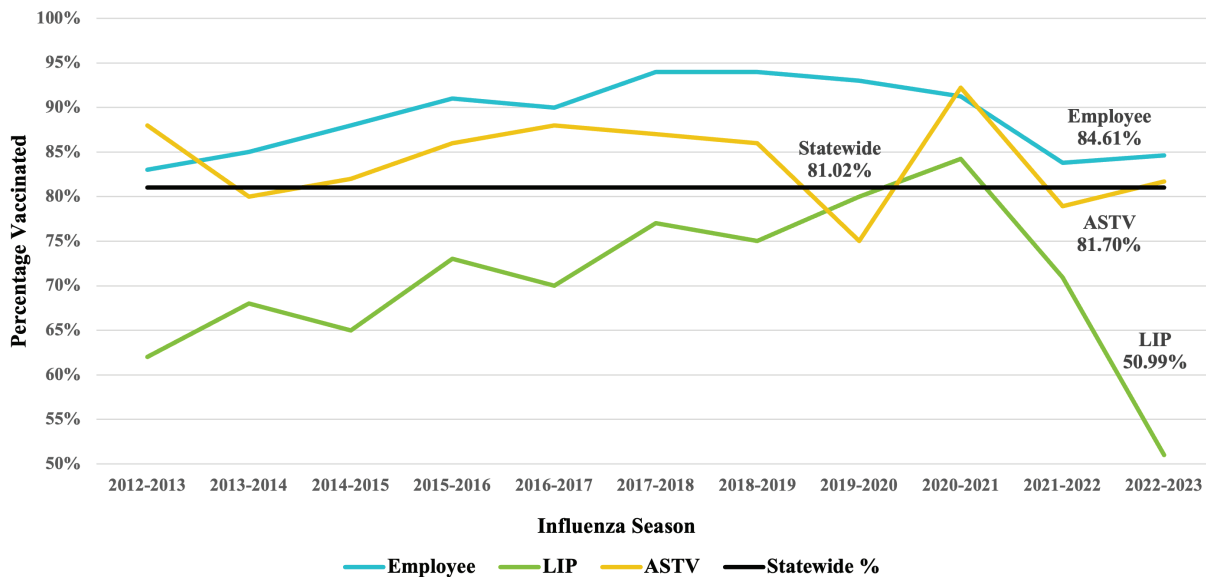
Facility Type	Personnel Vaccinated	Total Personnel	Percent Vaccinated
ACH	102,883	126,750	81.17%
LTACH	1,019	1,573	64.78%
IRF [§]	3,452	4,188	82.43%
STATE (All Facilities)	107,354	132,511	81.02%

*All HCP: (Employees + LIPs + ASTVs)

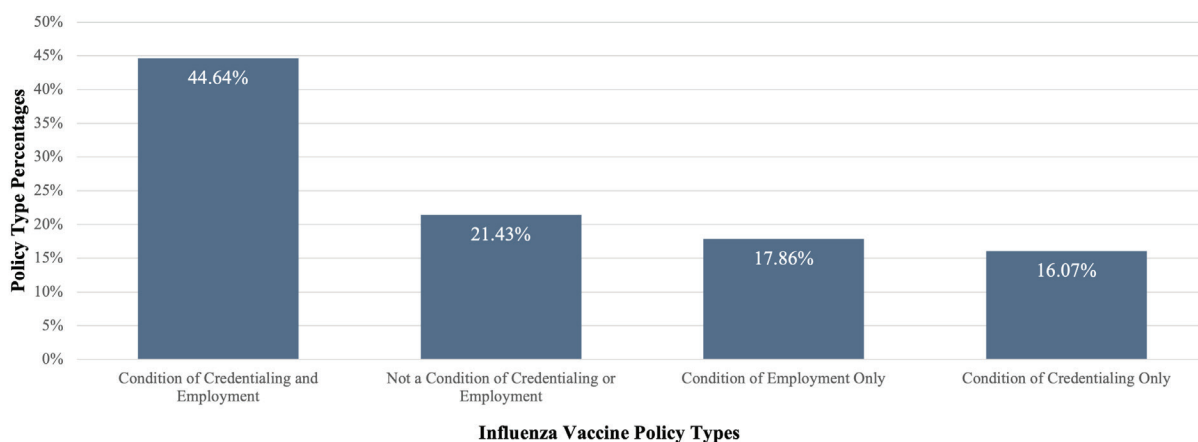
§ IRF data in the table are reported by free-standing IRFs only.

Rehab wards within ACHs are included in the data presented for ACHs.

Figure 1 shows statewide influenza vaccination rates for HCP by personnel type from the 2012-2013 influenza season to the 2022-2023 influenza season. Personnel type is divided into 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 for the 2022-2023 influenza season was 81.02 percent, represented by the horizontal black line. During the 2022-2023 influenza season, Employees had the highest influenza vaccination rate at 84.61 percent, followed by ASTVs and LIPs at 81.70 percent and 50.99 percent, respectively.

Figure 1. Health Care Personnel Vaccination Rates by Influenza Season

On average, Employees have had the highest percentage vaccinated of all HCP types starting with the 2013-2014 influenza season and continuing with an upward trend until demonstrating a decline beginning in the 2018-2019 season, now reflected at 84.61 percent in 2022-2023. During the 2022-2023 influenza season, the ASTV vaccination rate was 81.70 percent, exceeding the statewide average. LIPs previously demonstrated a positive trend in vaccination rates since the 2013-2014 influenza season; however, since the 2021-2022 influenza season, LIP vaccination rates have drastically decreased by 28.13 percent.

Figure 2. Rate of Facilities with Vaccine Policies 2022-2023 Influenza Season

Influenza Vaccination Policies for Health Care Personnel

During the 2022-2023 influenza season, 56 of 81 facilities responded to the Healthcare Personnel (HCP) Influenza Vaccination Seasonal Survey regarding their facility's HCP influenza vaccination policies. Of those 56 facility surveys, 25 (44.64 percent) facilities required HCP influenza vaccination as a condition of both employment and credentialing, 12 (21.43 percent) facilities did not require influenza vaccination as a condition of either employment or credentialing, 10 (17.86 percent) facilities required influenza vaccination as a condition of employment only, and nine (16.07 percent) facilities required influenza vaccination as a condition of credentialing only.

Credentialing refers to the process that health care providers must undergo to verify that they are qualified to provide medical services. The distribution of health care facility vaccination policies for those 56 facilities that completed the HCP Influenza Vaccination Seasonal Survey 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 and Employment" and as a "Condition of Employment Only," were the only selections associated with influenza rates above the statewide rate of 81.02 percent.

Figure 3. HCP Vaccination Rate by Facility Influenza Vaccine Policy 2022-2023 Influenza Season

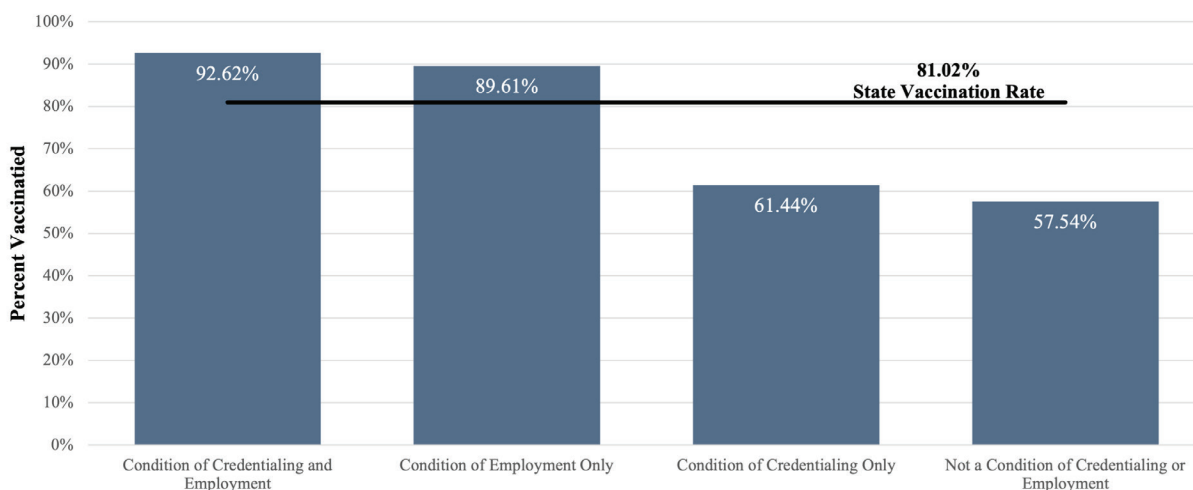
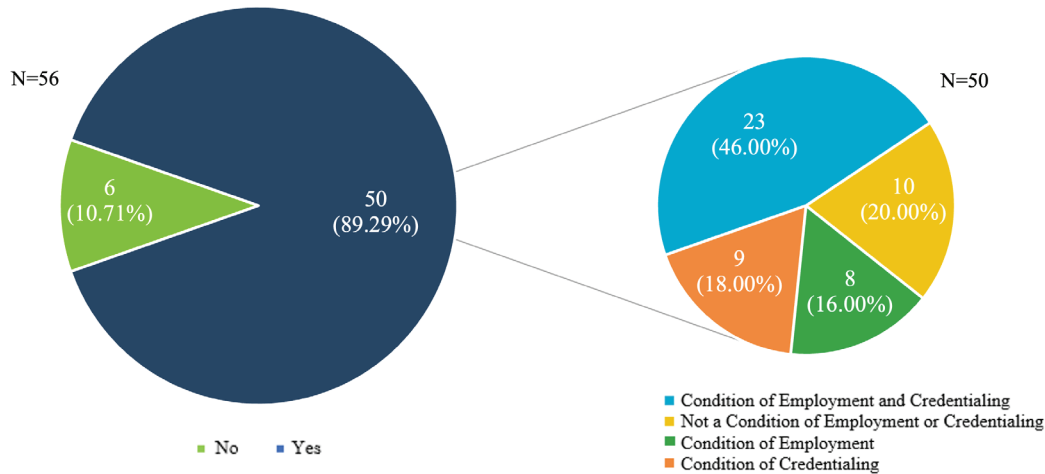


Figure 4 demonstrates that of the 56 facilities who completed the HCP Influenza Vaccination Seasonal Surveys for 2022-2023, 50 (89.29 percent) reported requiring personal protective equipment (PPE) for staff that did not receive the influenza vaccine. Of the 50 facilities that reported requiring the PPE use by un-vaccinated HCP, 23 (46.00 percent) were facilities that had classified vaccination as a condition of employment and credentialing, eight (16.00 percent) were facilities that classified vaccination as a condition of employment only, nine (18.00 percent) were

facilities that classified vaccination as a condition of credentialing only, and 10 (20.00 percent) were facilities that did not consider vaccination as a condition of employment or credentialing.

Figure 4. Facilities That Require PPE Use for HCP Who Refuse Influenza Vaccine, 2022-2023



Influenza Vaccination Rates by Facility

Table 2 shows each reporting facility's HCP influenza vaccination percentages for the 2022-2023 influenza season. Eighty-one facilities reported data to NHSN; facility vaccination percentages ranged from 31 percent to 99 percent. Forty-six facilities reported a higher HCP influenza vaccination rate compared to the overall state vaccination rate of 81.02 percent. In comparison, 35 facilities reported a lower HCP influenza vaccination rate compared to the overall state vaccination rate. No facilities reported vaccination rates equal to the state rate of 81.02 percent.

Table 2. Influenza Vaccination Rates by Facility, 2022-2023 Influenza Season

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Statewide Average	107,354	132,511	81.02%	N/A
Abbeville Area Medical Center	273	369	74%	Lower
Aiken Regional Medical Center	969	1,484	65%	Lower
Allendale County Hospital	51	166	31%	Lower
AnMed Health Cannon	254	267	95%	Higher
AnMed Health Medical Center	3,087	3,260	95%	Higher
AnMed Health Rehabilitation (run by Encompass)	235	274	86%	Higher
AnMed Health Women's and Children	446	472	94%	Higher

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Beaufort County Memorial Hospital	1,665	1,718	97%	Higher
Bon Secours St. Francis Eastside	567	892	64%	Lower
Bon Secours St. Francis Hospital - Downtown	2,656	3,320	80%	Lower
Bon Secours St. Francis Xavier Hospital	1,124	1,194	94%	Higher
Carolina Pines Regional Medical Center	828	856	97%	Higher
Cherokee Medical Center	336	520	65%	Lower
Coastal Carolina Medical Center	509	652	78%	Lower
Colleton Medical Center	310	444	70%	Lower
Continue Care Hospital at Prisma Health Baptist	91	176	52%	Lower
Conway Medical Center	2,296	2,343	98%	Higher
East Cooper Regional Medical Center	815	876	93%	Higher
Edgefield County Hospital	178	184	97%	Higher
Encompass Rehabilitation Hospital of Columbia	298	340	88%	Higher
Encompass Rehabilitation Hospital of Florence	196	257	76%	Lower
Encompass Rehabilitation Hospital of Greenville	202	254	80%	Lower
Encompass Rehabilitation Hospital of Hilton Head/Bluffton	207	229	90%	Higher
Encompass Rehabilitation Hospital of Rock Hill	223	249	90%	Higher
Grand Strand Regional Medical Center	924	2,542	36%	Lower
Greenwood Regional Rehabilitation Hospital	172	205	84%	Higher
Hampton Regional Medical Center	167	299	56%	Lower
Hilton Head Regional Medical Center	590	752	78%	Lower
Kershaw Health	737	753	98%	Higher
Lexington Medical Center	4,264	5,923	72%	Lower
MUSC Columbia Medical Center Northeast/ Providence Hospital Northeast	795	885	90%	Higher
MUSC Health Black River Medical Center	299	331	90%	Higher

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
MUSC Health Chester Regional Medical Center	576	613	94%	Higher
MUSC Health Columbia Medical Center Downtown	1,263	1,437	88%	Higher
MUSC Health Florence Medical Center	1,785	1,867	96%	Higher
MUSC Health Florence Rehabilitation Center	209	221	95%	Higher
MUSC Health Florence Women's Pavilion	220	233	94%	Higher
MUSC Health Lancaster Medical Center	959	1,044	92%	Higher
MUSC Health Marion Medical Center	353	417	85%	Higher
MUSC Health Rehabilitation Hospital, an Affiliate of Encompass Health	287	332	86%	Higher
McLeod Health Cheraw	438	491	89%	Higher
McLeod Health Clarendon	524	590	89%	Higher
McLeod Loris	486	544	89%	Higher
McLeod Medical Center - Dillon	406	440	92%	Higher
McLeod Regional Medical Center	9,099	10,332	88%	Higher
McLeod Seacoast	1,320	1,480	89%	Higher
Medical University Hospital Authority (MUSC)	12,235	15,097	81%	Lower
Midlands Regional Rehabilitation Hospital	111	242	46%	Lower
Mount Pleasant Hospital	447	458	98%	Higher
Newberry County Memorial Hospital	772	816	95%	Higher
Pelham Health System	724	1,090	66%	Lower
Piedmont Medical Center	2,375	2,608	91%	Higher
Prisma Health Baptist	2,570	3,261	79%	Lower
Prisma Health Baptist Easley Hospital	915	1,176	78%	Lower
Prisma Health Greenville Memorial Hospital	9,019	10,312	87%	Higher
Prisma Health Greer Memorial Hospital	1,193	1,565	76%	Lower
Prisma Health Hillcrest Hospital	748	1,054	71%	Lower
Prisma Health Laurens County Hospital	592	845	70%	Lower
Prisma Health North Greenville Hospital	286	524	55%	Lower

Facility Name	Total Vaccinated	Total Number of HCP	Vaccination Percentage	Vaccine Rate Compared to State Average
Prisma Health Oconee Memorial Hospital	1,459	1,727	84%	Higher
Prisma Health Parkridge	837	1,327	63%	Lower
Prisma Health Patewood Hospital	726	1,094	66%	Lower
Prisma Health Richland	5,450	6,420	85%	Higher
Prisma Health Tuomey	1,589	1,906	83%	Higher
Regency Hospital of Florence	151	188	80%	Lower
Regency Hospital of Greenville	126	184	68%	Lower
Regional Medical Center of Orangeburg and Calhoun Counties (RMC)	1,955	2,051	95%	Higher
Roper Hospital	4,594	4,806	96%	Higher
Roper St. Francis Hospital Berkeley	513	534	96%	Higher
Self Regional Healthcare	2,685	2,707	99%	Higher
Shriners Hospitals for Children	337	346	97%	Higher
Spartanburg Hospital for Restorative Care	365	501	73%	Lower
Spartanburg Medical Center	5,122	8,508	60%	Lower
Spartanburg Medical Center Mary Black Campus	1,006	1,526	66%	Lower
Spartanburg Rehabilitation Institute	171	247	69%	Lower
Summerville Medical Center	529	968	55%	Lower
Tidelands Georgetown Memorial Hospital	1,571	1,644	96%	Higher
Tidelands Health Rehabilitation Hospital an Affiliate of Encompass Health-Murrells Inlet and Little River	138	163	85%	Higher
Tidelands Waccamaw Community Hospital	1,336	1,406	95%	Higher
Trident Medical Center	874	2,455	36%	Lower
Union Medical Center	144	228	63%	Lower

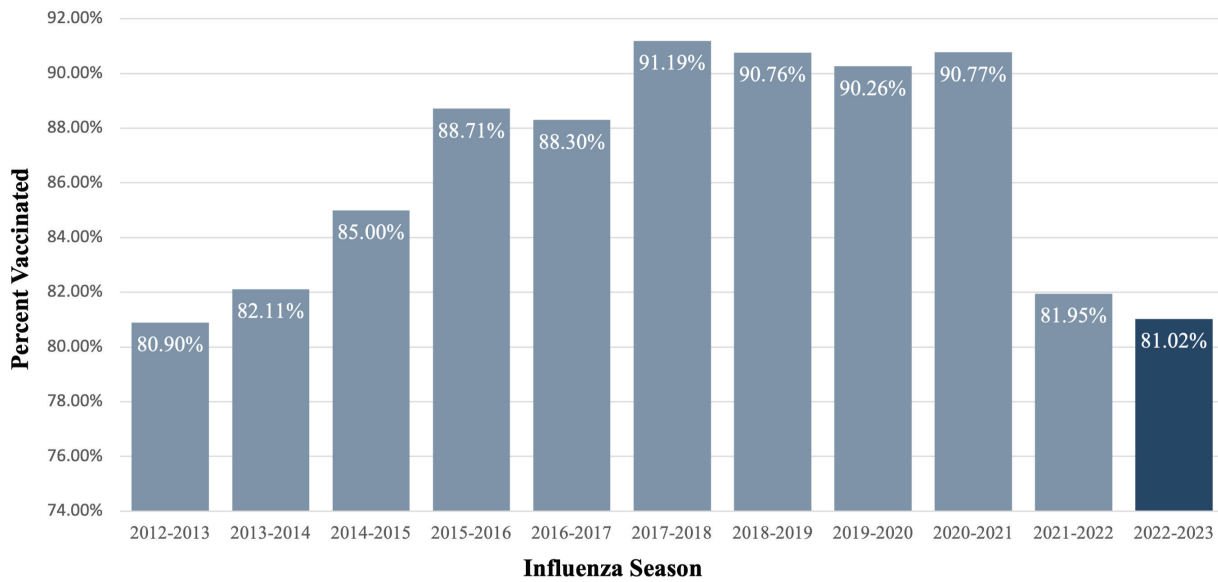
NOTE: **Higher** means that the facility had a higher HCP vaccination percent than the state rate, **Lower** means that the facility had a lower HCP vaccination rate than the state rate, and **N/A** means that the facility failed to report their HCP influenza vaccination rates to NHSN for the 2022-2023 influenza season; therefore, data is not available.

* Denotes ACHs that have a rehab ward within their hospital; vaccination data reported for individual rehab wards in ACH were included in ACH totals.

Past Influenza Vaccination Rates

Figure 5 provides a snapshot of HCP statewide vaccination rates over the past 11 influenza seasons. The 2022-2023 influenza season rate displays a 1.13 percent decrease since the 2021-2022 influenza season. Prior to the 2021-2022 influenza season, South Carolina maintained a vaccination rate greater than 90 percent from the 2017-2018 influenza season through the 2020-2021 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 health care personnel type for the 2022-2023 influenza season. The information gathered in this report is reported by each facility and has not been validated by DPH.

Key Findings

- 81 HIDA reporting facilities in South Carolina complied with the mandatory requirement to report HCP influenza vaccination summary data for the 2022-2023 influenza season. One HIDA reporting facility was omitted from this report due to the facility failing to respond and sign the attestation letter after multiple attempts at communication were made. 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 2021-2022 influenza season ranged from 31 percent to 99 percent. The overall state influenza vaccination rate for all HCP types was 81.02 percent, demonstrating a decrease from 81.95 percent in the 2021-2022 influenza season. The South Carolina 2022-2023 influenza season vaccination rate is the lowest since the 2013-2014 influenza season. ACHs, LTACHs, and IRFs reported influenza vaccination rates of 81.17 percent, 64.78 percent, and 82.43 percent respectively.
- LIP rates are the lowest, reporting 50.99 percent compared to the overall state influenza vaccination rate. Rates for Employees and ASTVs are higher than the state rate, at 84.61 and 81.70 percent, respectively. It is important to note that LIP rates may be underreported due to barriers, including the COVID-19 pandemic's impact on reporting and challenges in capturing the vaccination statuses of these health care personnel by the facility's employee health or credentialing departments.
- Only 56 of the 81 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 for unvaccinated HCP for the 2022-2023 influenza season. Of the 56 facilities that completed the HCP Influenza Vaccination Seasonal Survey, 23 (46.00 percent) facilities required HCP influenza vaccination as a condition of both employment and credentialing, 10 (20.00 percent) facilities did not require vaccination as a condition of employment nor credentialing, eight (16.00 percent) facilities required vaccination as a condition of employment only, and nine (18.00 percent) facilities required vaccination as a condition of credentialing only. Compared to the 2021-2022 influenza season, 8 fewer facilities completed the HCP Influenza Vaccination Seasonal Survey. Regarding PPE requirements, 50 (89.29 percent) of the 56 facilities that completed the HCP Influenza Vaccination Seasonal Survey required PPE use by unvaccinated HCP.

Limitations

The data presented in this report has several limitations. The first is the COVID-19 pandemic that continued throughout the 2022-2023 influenza season. Due to the increased workload of hospital infection preventionists, changes and delays in reporting requirements, some facilities could not provide the required HCP vaccination summary and survey data for the 2022-2023 influenza season.

The second limitation is the inability to directly correlate changes in the Healthy People 2030 goals to the data presented in the report. Comparison between years helps to identify overall trends, but without specific information related to facility accreditation, it is difficult to quantify the true impact of these goal changes.

The third 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, they may have active influenza vaccination campaigns. These campaigns may encourage employees to receive the influenza vaccine. However, this report does not consider information regarding incentives and educational campaigns.

The fourth 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, credentialing, 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 staffing capacity to assign a staff member to track influenza vaccination data onsite or follow up with employees who were vaccinated offsite. The varied methods, or lack thereof, are not considered for this report.

Finally, this report only reflects HCP influenza vaccine rates in ACHs/CAHs, IRFs, and LTACHs. This data does not reflect information regarding outpatient providers and long-term care or skilled nursing facilities. Regardless, CMS-certified skilled nursing facilities must report their annual HCP influenza vaccination summary data to NHSN, beginning with the 2023-2024 influenza season.

Despite its limitations, this report provides a valuable view of HCP influenza vaccination data that health care facilities can use to improve their HCP influenza vaccination rates. Importantly, the report allows health care consumers to make informed decisions when selecting health care facilities in South Carolina.

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DEPARTMENT OF
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