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# Massachusetts Department of Public Health

## Massachusetts Healthcare Personnel Influenza Vaccination in Health Care Facilities during the 2018- 2019 Season

**Public Health Council**  
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# Background

- Health care personnel (HCP) are at high risk for influenza exposure and illness, and may be a source of influenza virus transmission in health care settings
- Annual immunization is the best method of preventing influenza and potentially serious complications\*
- The Massachusetts Department of Public Health (DPH) considers the prevention of influenza by promoting vaccination an organizational priority that should be part of the overall institutional commitment to improvement for licensed healthcare facilities

\* <https://www.cdc.gov/flu/prevent/keyfacts.htm>

# Background

As a condition of licensure, DPH regulations require health care facilities, including hospitals, ambulatory surgical centers, dialysis centers, clinics, nursing homes, rest homes, and adult day health programs to:

- Offer free-of-charge, annual influenza vaccine to all personnel (full and part-time employees, contracted employees, volunteers, house staff and students)
- Document receipt of influenza vaccine administered within and outside the facility or document the declination of immunization for HCP
- Report information to DPH documenting compliance with the vaccination requirement, in accordance with reporting and data collection guidelines of the Commissioner (105 CMR.)
  - 105 CMR 130.325, 105 CMR 140.150, 105 CMR 150.002(D)(8), 105 CMR 158.030(L)(8)

Centers for Medicare & Medicaid Services (CMS) Quality Reporting Programs require acute care hospitals, and non-acute hospitals to report HCP influenza data through the National Healthcare Safety Network (NHSN) of the Centers for Disease Control and Prevention (CDC)

# Performance Goal

To protect the lives and welfare of patients, employees, and communities, as well as to improve quality and reduce healthcare costs, DPH has established an overall minimum influenza vaccination rate of 90% or greater for eligible HCP at all licensed healthcare facilities.

This performance goal is intended to advance patient and HCP health and safety by ensuring optimal HCP influenza vaccination coverage, and is in alignment with the National Healthy People 2020 target of 90% influenza coverage of HCP.

[https://www.healthypeople.gov/node/4668/data\\_details](https://www.healthypeople.gov/node/4668/data_details)

# Methodology

Health Care Facilities report HCP influenza vaccination rates to DPH in two ways:

- DPH requires acute care hospitals, ambulatory surgical centers, dialysis centers and non-acute hospitals to report HCP influenza data through the National Healthcare Safety Network (NHSN) of the Centers for Disease Control and Prevention (CDC)
- Clinics, nursing homes, rest homes, and adult day health programs are required to report health care personnel influenza data directly to DPH using an online template.

# NHSN Reporting Requirements

Acute Care Hospitals, Ambulatory Surgical Centers, Dialysis Centers and Non-acute Hospitals

For each category of HCP, for the period October 1, 2018 to March 31, 2019, facilities must collect and report the number of:

- HCP vaccinated at the facility
- HCP vaccinated elsewhere (PCP office, pharmacy, etc.)
- HCP that declined vaccine
- HCP with a medical contraindication to the vaccine
- HCP with unknown vaccine status

# NHSN Measures

Acute Care Hospitals, Ambulatory Surgical Centers, Dialysis Centers and Non-acute Hospitals

Calculated aggregate percentage for all HCP across Massachusetts acute care hospitals, ambulatory surgical centers, dialysis facilities and non-acute hospitals.

## Percentage HCP vaccinated in 2018-2019

$$\text{Vaccine Coverage} = \frac{\text{HCP Vaccinated at Facility} + \text{HCP Vaccinated Elsewhere}}{\text{Total \# HCP at Facility}}$$

## Percentage HCP in facility that declined vaccine in 2018-2019

$$\text{Vaccine Declination} = \frac{\text{\# HCP Declined Vaccine}}{\text{Total \# HCP at Facility}}$$

# NHSN Measures

Acute Care Hospitals, Ambulatory Surgical Centers, Dialysis Centers and Non-acute Hospitals

## Percentage HCP in facility with a medical contraindication to vaccine in 2018-2019

$$\text{Medical Contraindication} = \frac{\text{\# HCP with Medical Contraindication}}{\text{Total \# HCP at Facility}}$$

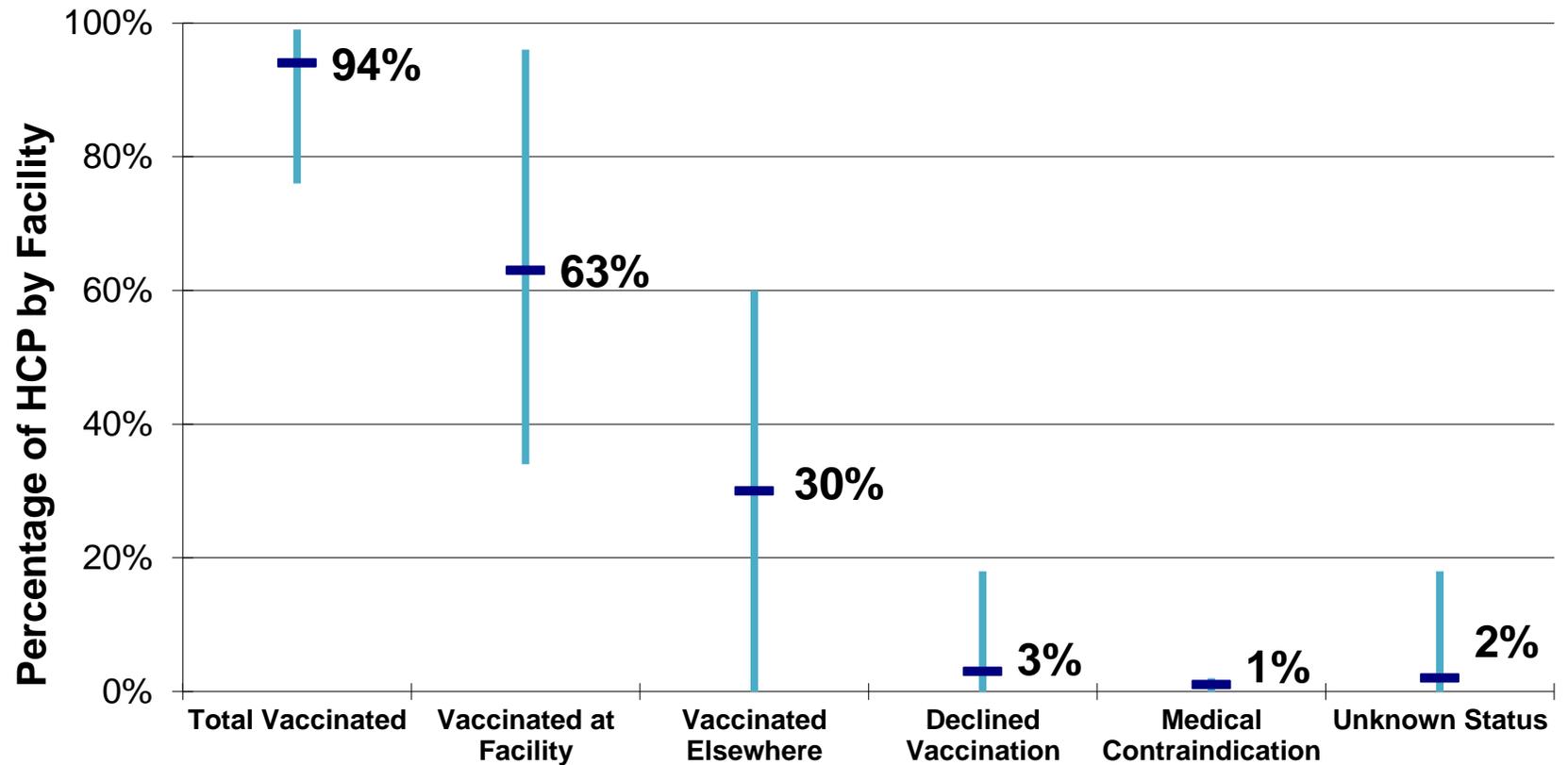
## Percentage HCP in facility with unknown influenza vaccine status in 2018-2019

$$\text{Unknown Vaccine Status} = \frac{\text{\# HCP with Unknown Vaccine Status}}{\text{Total \# HCP at Facility}}$$

# Median and Range of HCP Influenza Vaccine Coverage at Massachusetts Acute Care Hospitals 2018-2019

## Key Findings

- The statewide median for vaccine coverage was 94%
- 54 (75%) facilities achieved vaccine coverage of 90% or greater
- Most HCP were vaccinated at their workplace
- Median declination of vaccine was 3%



**N=72 acute care hospitals**

\*Median and range are measures of HCP vaccine coverage by reporting MA acute care hospitals

# Acute Care Hospital Healthcare Personnel Vaccine Coverage in Aggregate 2018-2019

	Mean State Aggregate HCP Vaccine Coverage	Range
<b>Total HCP Vaccinated</b>	255,755 (95%)	(76 - 99%)
Vaccinated at Facility	186,322 (73%)	(34 - 96%)
Vaccinated Elsewhere	69,433 (27%)	(0- 60%)
<b>HCP Declined Vaccination</b>	7,623 (3%)	(0 - 18%)
<b>HCP with a Medical Contraindication</b>	1,370 (1%)	(0 - 2%)
<b>HCP with Unknown Vaccination Status</b>	4,795 (2%)	(0 - 18%)

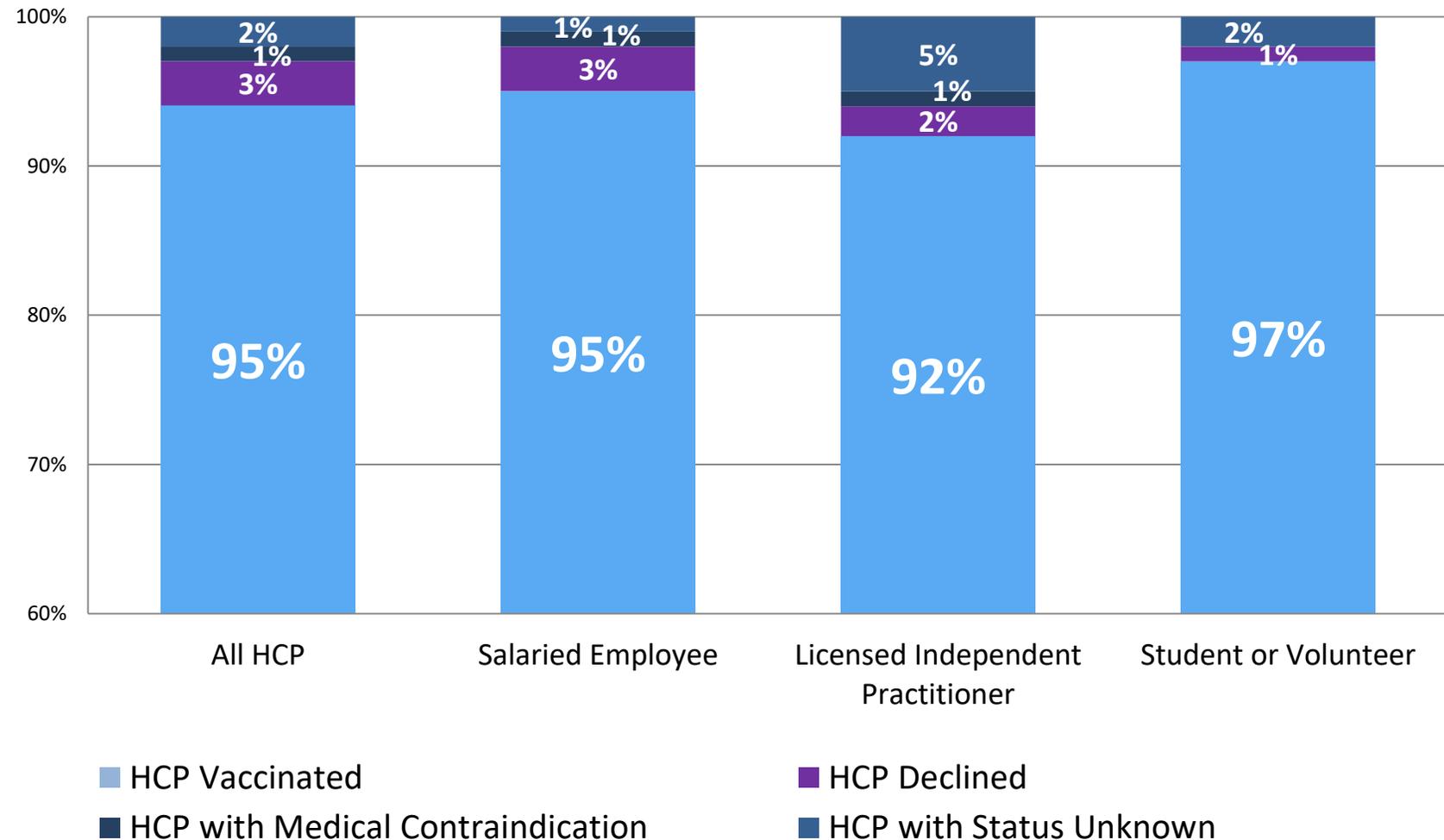
N=269,543

\*Mean Percentages may add up to >100% due to rounding

# Overall HCP Influenza Vaccine Coverage in Massachusetts ACHs by HCP Type 2018-2019

## Key Findings

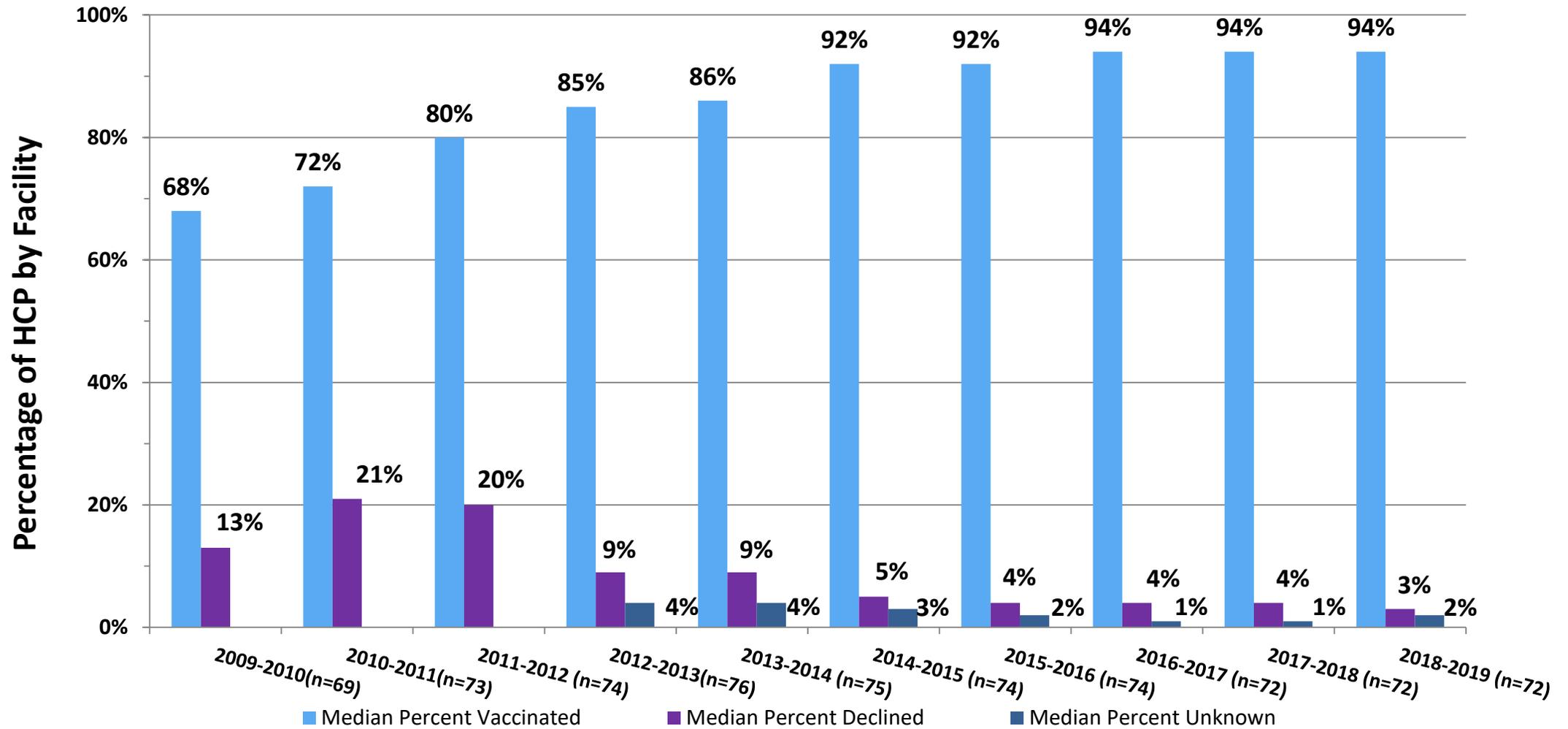
- All HCP categories at acute care hospitals met the 2020 Healthy People Goal of 90% vaccination coverage
- Licensed Independent Practitioners are more likely to have an unknown vaccination status (5%)



N=269,543 ACH HCPs

\*Percentages may add up to greater than 100% due to rounding.

# Trends Over Time: Acute Care Hospitals



Median HCP vaccine coverage remained constant in 2018-19 and exceeded the Healthy People 2020 benchmark of 90%.

# 2018-2019 Results: Ambulatory Surgical Centers

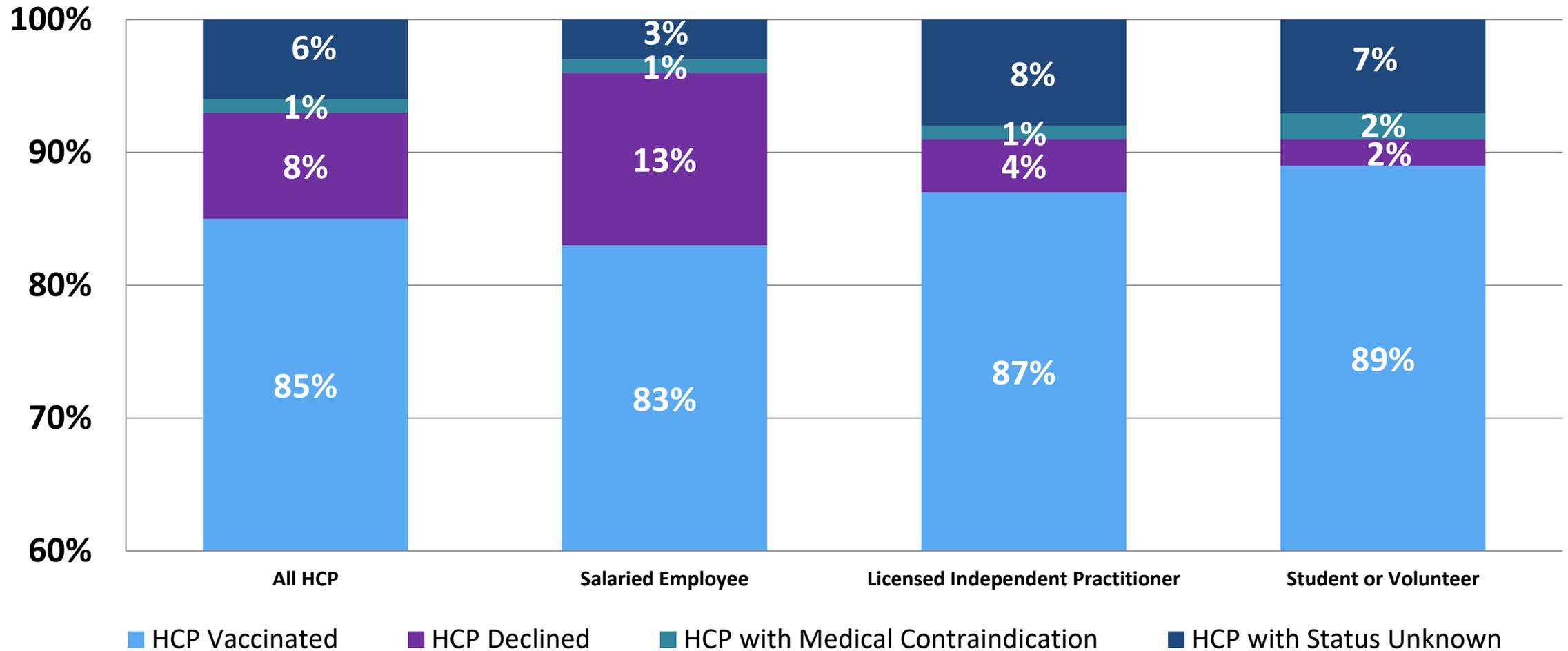
## Mean percentage of HCP at Ambulatory Surgical Centers Vaccinated against Influenza During 2018-2019 Season

	Mean % Vaccinated	Range
<b>Total Vaccinated</b>	86%	(44-100%)
<b>Total Exceptions</b>		
Declined	9%	(0-38%)
Medical	1%	(0-8%)
Unknown	4%	(0-47%)
<b><u>Location Vaccinated</u></b>		
<b>At Place of Employment</b>	60%	(0-100%)
<b>Outside Place of Employment</b>	40%	(0-100%)

N=39 reporting ASCs

# 2018-2019 Results: Ambulatory Surgical Centers

## Overall Ambulatory Surgical Center Vaccination of HCP by Personnel Category



N=2,174 ASC HCP

# 2018-2019 Results: Dialysis Centers

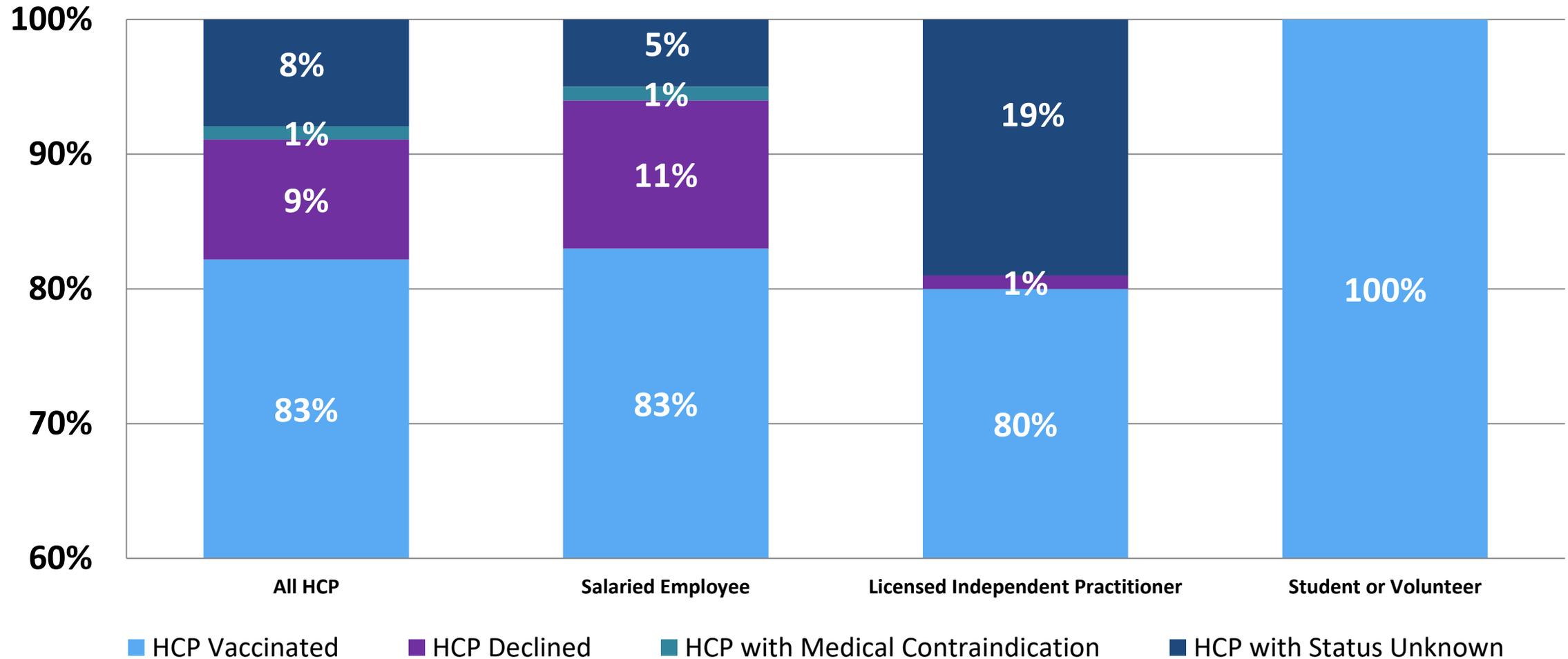
## Mean Percent of Dialysis Center HCP Vaccinated against Influenza During the 2018-2019 Season

	Mean % Vaccinated	Range
<b>Total Vaccinated</b>	83%	(23-100%)
<b>Total Exceptions</b>		
Declined	9%	(0-37%)
Medical	1%	(0-6%)
Unknown	7%	(0-50%)
<b><u>Location Vaccinated</u></b>		
At Place of Employment	71%	(25-100%)
Outside Place of Employment	29%	(0-75%)

N=61 Reporting Facilities

# 2018-2019 Results: Dialysis Centers

## Overall Dialysis Center Vaccination of HCP by Personnel Category



N=2,294 Dialysis HCPs

# 2018-2019 Results: Non-Acute Care Hospitals

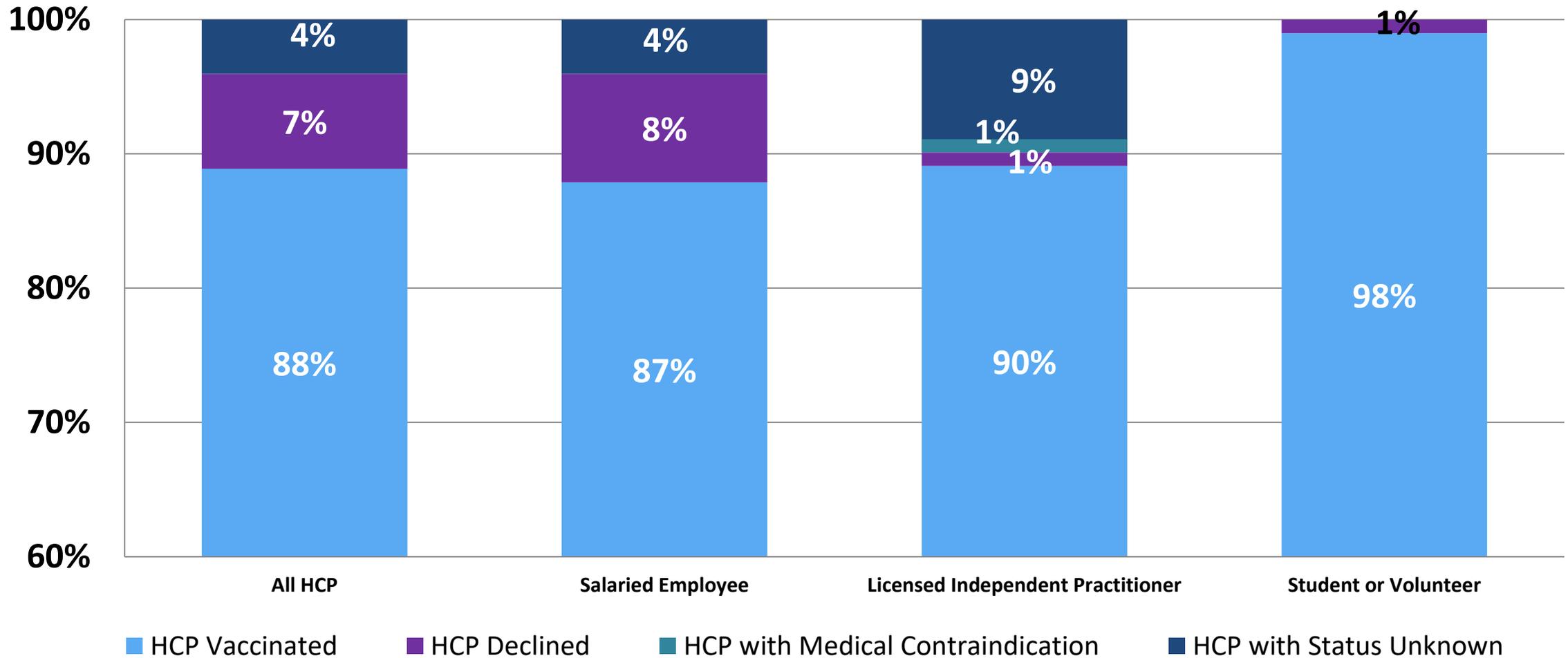
## Mean Percent of Non-Acute Care Hospital HCP Vaccinated against Influenza During the 2018-2019 Season

	Mean % Vaccinated	Range
<b>Total Vaccinated</b>	82%	(45-99%)
<b>Total Exceptions</b>		
Declined	9%	(0-28%)
Medical	1%	(0-5%)
Unknown	8%	(0-51%)
<b><u>Location Vaccinated</u></b>		
<b>At Place of Employment</b>	69%	(50-93%)
<b>Outside Place of Employment</b>	31%	(7-50%)

N=31 Reporting Facilities

# 2018-2019 Results: Non-Acute Care Hospitals

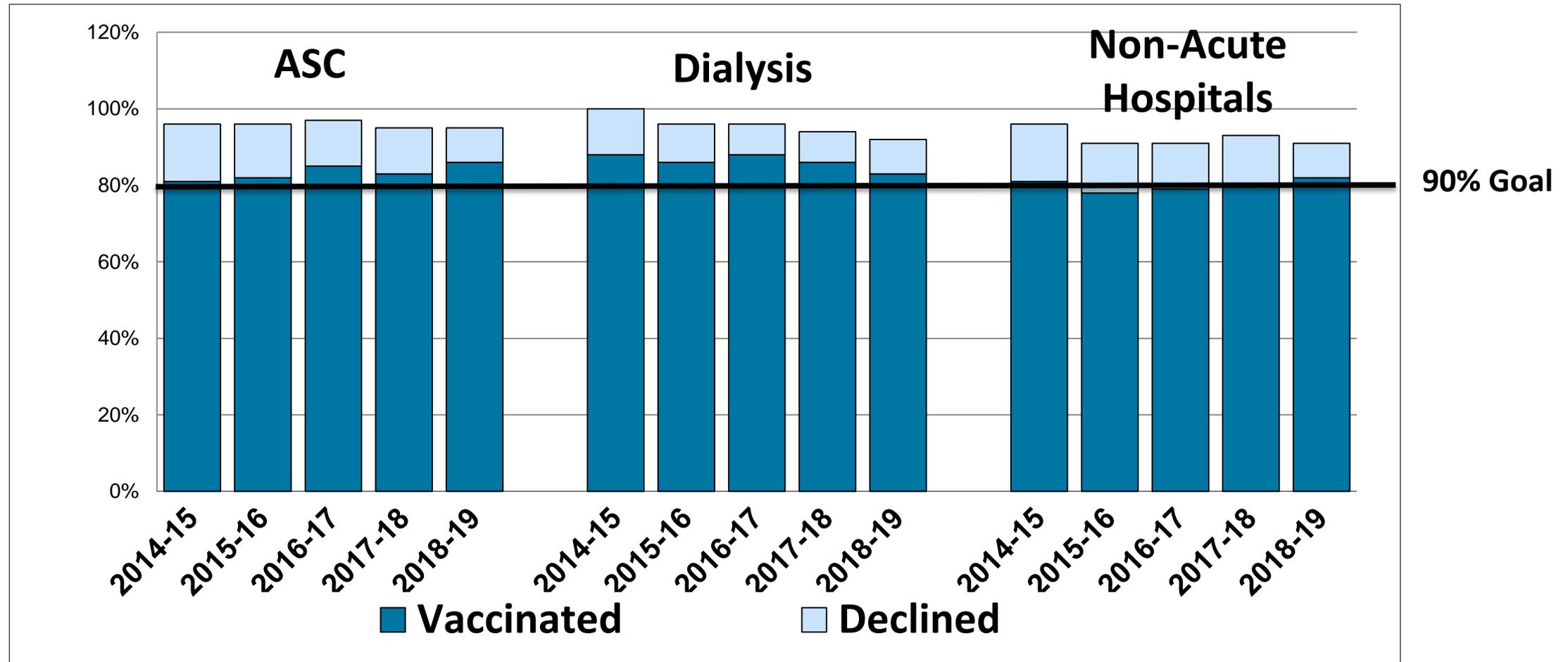
## Overall Non-Acute Care Hospital Vaccination of HCP by Personnel Category



N=20,441 Non-Acute HCP

# Trends Over Time: ASCs, Dialysis Centers, and Non-Acute Hospitals

Mean Percent of HCP Vaccination and Declination Rates for Ambulatory Surgical Centers, Dialysis Centers and Non-Acute Hospitals: 2014-2019 Influenza Seasons



# Clinic, Nursing Home, Rest Home, and Adult Day Health Program Measures

Facilities were required to report directly to DPH via an online survey by April 15, 2019:

- Total number of employees who worked at least one day between October 1, 2018 and March 31, 2019;
- Total number of employees receiving influenza vaccination provided by the health care facility for the 2018-2019 influenza season;
- Total number of employees receiving influenza vaccination administered outside the health care facility for the 2018-2019 influenza season;
- Total number of employees who declined vaccination for the 2018-2019 influenza season;
- Total number of employees who reported medical contraindications to influenza vaccination for the 2018-2019 influenza season; and
- Total number of employees with unknown vaccination status for the 2018-2019 influenza season.

# 2018-2019 Results: Clinics

## Mean Percent of Clinic HCP Vaccinated against Influenza During the 2018-2019 Season

	Mean % Vaccinated	Range
<b>Total Vaccinated</b>	68%	(0-100%)
<b>Total Exceptions</b>		
Declined	23%	(0-100%)
Medical	1%	(0-18%)
Unknown	8%	(0-88%)
<b><u>Location Vaccinated</u></b>		
<b>At Place of Employment</b>	39%	(0-100%)
<b>Outside Place of Employment</b>	62%	(0-100%)

N=172 Reporting Facilities

# 2018-2019 Results: Nursing Homes

## Mean Percent of Nursing Home HCP Vaccinated Against Influenza During the 2018-2019 Season

	Mean % Vaccinated	Range
<b>Total Vaccinated</b>	72%	(16-100%)
<b>Total Exceptions</b>		
Declined	16%	(0-65%)
Medical	1%	(0-26%)
Unknown	10%	(0-74%)
<b><u>Location Vaccinated</u></b>		
<b>At Place of Employment</b>	69%	(0-99%)
<b>Outside Place of Employment</b>	31%	(1-100%)

N=315 Reporting Facilities

# 2018-2019 Results: Rest Homes

## Mean Percent of Rest Home HCP Vaccinated Against Influenza During the 2018-2019 Season

	Mean % Vaccinated	Range
<b>Total Vaccinated</b>	64%	(18-100%)
<b>Total Exceptions</b>		
Declined	29%	(0-82%)
Medical	1%	(0-10%)
Unknown	7%	(0-60%)
<b><u>Location Vaccinated</u></b>		
<b>At Place of Employment</b>	48%	(0-100%)
<b>Outside Place of Employment</b>	52%	(0-100%)

N=29 Reporting Facilities

# 2018-2019 Results: Adult Day Health Programs

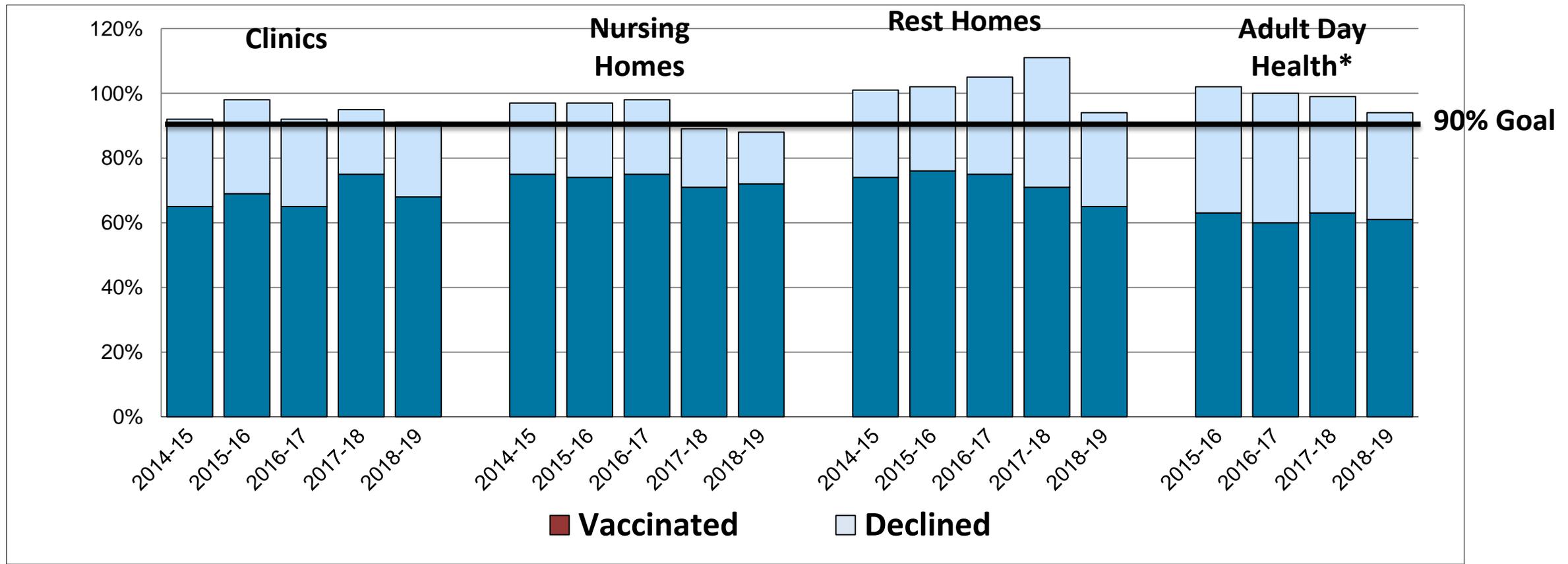
## Mean Percent of Adult Day Health HCP Vaccinated against Influenza During the 2018-2019 Season

	Mean % Vaccinated	Range
<b>Total Vaccinated</b>	61%	(0-125%)
<b>Total Exceptions</b>		
Declined	33%	(0-100%)
Medical	3%	(0-39%)
Unknown	4%	(0-50%)
<b><u>Location Vaccinated</u></b>		
<b>At Place of Employment</b>	50%	(0-100%)
<b>Outside Place of Employment</b>	50%	(0-100%)

N=123 Reporting Programs

# Trends Over Time: Clinics, Nursing Homes, Rest Homes and Adult Day Health Programs

Mean Percent of HCP Influenza Vaccinations and Declinations as Reported by Massachusetts Clinics, Nursing Homes, Rest Homes and Adult Day Health Programs: 2014-2019 Seasons



\* 2015-2016 Season was the first year Adult Day Health Programs were required to report

# ACH, ASC, Dialysis and Non-Acute Hospital Seasonal Survey Findings

Hospitals, ASCs and dialysis centers completed a voluntary survey on HCP influenza vaccination campaigns and policies. DPH received responses from 184 facilities and provided the following results:

- Facilities report using a variety of methods to vaccinate HCP including: having a mobile vaccination cart; providing vaccination during nights and weekends; and offering vaccination in common/easily accessible areas
- Facilities report using several means of communication including: sending email reminders; providing education on the benefits and risks of vaccination; providing feedback on rates to administration; and tracking unit-based vaccination rates
- When HCP report that they receive influenza vaccination at an off-site location, over 82% of all respondents required documentation of vaccination status
- 64% of ACHs report requiring influenza vaccination as a policy with either termination or other consequences for unvaccinated personnel, while between 12-43% of ASCs, dialysis and non-acute hospitals have this policy in place

# Conclusions

- Overall acute care hospital vaccine coverage exceeds the DPH and Healthy People 2020 benchmark for the fifth consecutive year
- No other facility type reached the established overall performance goal
- Four facility types reported higher vaccination rates in 2018-2019 when compared to 2014-2015 season: Acute Care Hospitals, Ambulatory Surgical Centers, Non-Acute Hospitals, and Clinics

# DPH Public Health Actions

- Reinforcement of the reporting requirement and statewide performance goal during trainings, and on-site visits in adult day health programs, rest homes and nursing homes
- Monitoring trends and reporting annual compliance with the HCP influenza vaccination requirements
- Promotion of continuous quality improvement, by recommending licensed facilities share vaccination rates with all staff, including administrators, boards of directors, practice managers, ombudsperson and patient/family councils
- DPH created and distributed a job aid during the 2018-2019 season to assist clinics, adult day health centers, nursing homes and rest homes in tracking and monitoring HCP influenza vaccination progress; based on feedback, DPH will refine the tool for the upcoming influenza season
- Collaboration with public health partners to intensify efforts to improve immunization rates among HCP, especially among low outliers

# Enhanced DPH Public Health Response

- DPH will develop programming to support and publicly recognize healthcare facilities' commitment to high flu vaccination rates among health care personnel
- DPH is hosting an October 2019 webinar to improve healthcare personnel influenza coverage. Program content will include: Influenza disease burden, key facts about the current season; surveillance and reporting; and strategies for increasing HCP coverage
- January 2020 webinar is planned to provide updated information for the current influenza season. Topics will include: National and Massachusetts flu activity; best practices to promote HCP influenza vaccination; and guidance on data submission
- Influenza Vaccination Recognition: DPH will provide facilities that achieve vaccination rates of 90% and higher and report on the work done to address selected barriers with a certificate of commendation

# Next Steps

- DPH will share this update with all licensed healthcare facilities with recommendations to distribute broadly within each facility and to use the reported data to drive improvement.
- This update and facility specific results will be available on the MDPH website:  
<https://www.mass.gov/service-details/flu-vaccination-reports-healthcare-personnel>
- Please direct any questions to:

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