

Massachusetts Healthcare Personnel Influenza Vaccination in Health Care Facilities

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- 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/professionals/infectioncontrol/healthcaresettings.htm>

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; and
- 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, 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).

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

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

- Consistent with the Centers for Medicare & Medicaid Services (CMS) Quality Reporting Programs, 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 the DPH Healthcare Associated Infection (HAI) Prevention Program.

NHSN requires facilities to provide the number of HCP physically at the facility for one or more days between October 1 and March 31 of the influenza season for each of the following three categories:

- Employees on facility payroll;
- Licensed independent practitioners; and
- Students/trainees and volunteers

For each category of HCP, for the period October 1, 2016 to March 31, 2017, 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; and
- HCP with unknown vaccine status

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

Percentage HCP vaccinated in 2016-2017

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

Percentage HCP in facility that declined vaccine in 2016-2017

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

Percentage HCP in facility with a medical contraindication to vaccine in
2016-2017

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

Percentage HCP in facility with unknown influenza vaccine status in 2016-2017

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

Facilities were required to report directly to DPH by April 15, 2017:

- Total number of employees as of December 31, 2016;
- Total number of employees receiving seasonal influenza vaccination provided by the health care facility between August 1, 2016 and March 31, 2017;
- Total number of employees receiving seasonal influenza vaccination administered outside the health care facility between August 1, 2016 and March 31, 2017; and
- Total number of employees who declined vaccination between August 1, 2016 and March 31, 2017.

- The facility vaccination rate was calculated by dividing the number of facility HCPs vaccinated by the total number of facility HCPs.

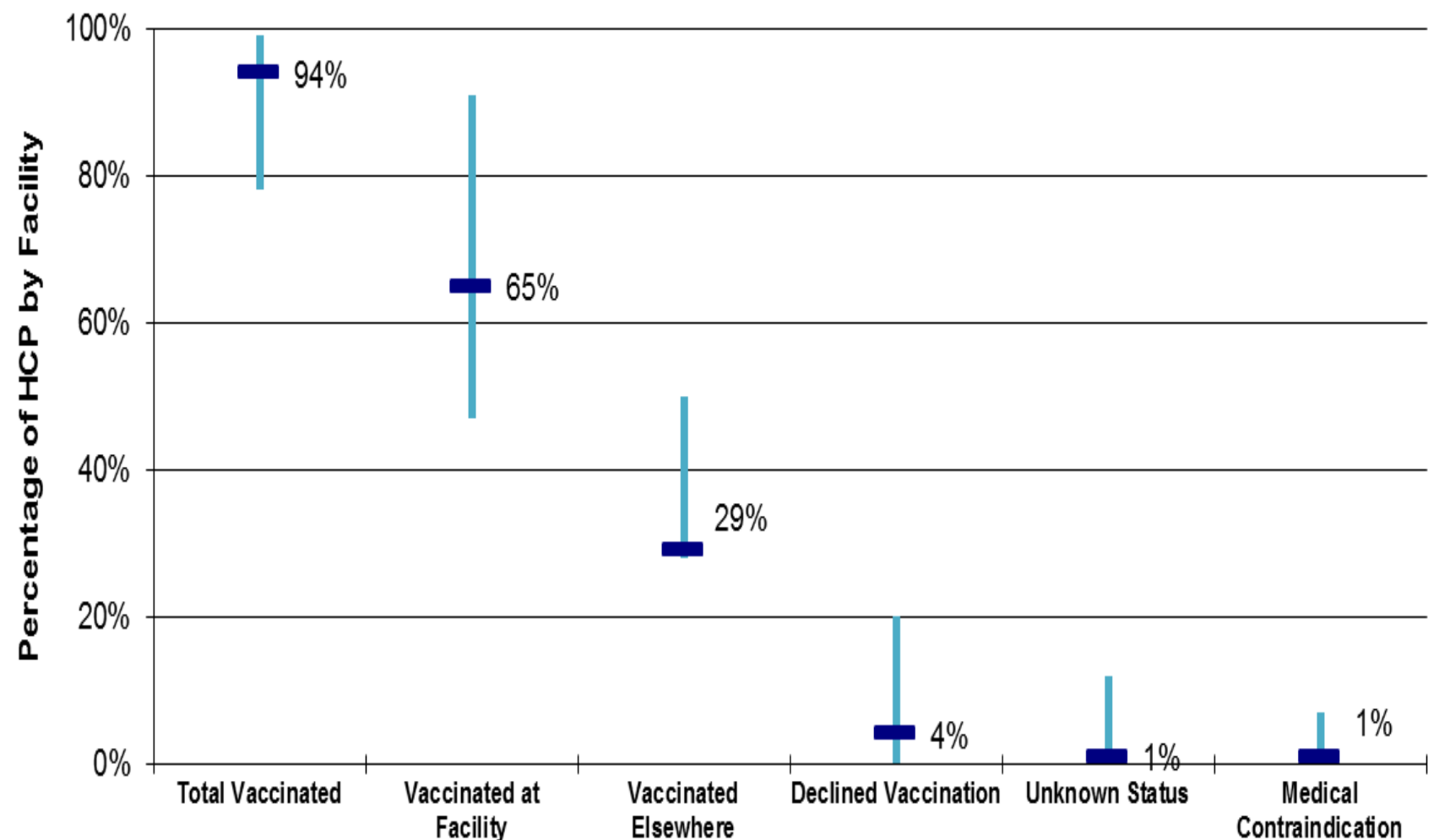
$$\text{Vaccine Coverage} = \frac{\text{HCP Vaccinated at Facility} + \text{HCP Vaccinated Elsewhere}}{\text{Total \# HCP at Facility}}$$

- The overall mean percentage of HCPs vaccinated by facility type was calculated as the mean of all facility vaccination rates.

Median and Range of HCP Influenza Vaccine Coverage at Massachusetts Acute Care Hospitals 2016-2017

Key Findings

- The statewide median for vaccine coverage was 94%
- 59 (82%) facilities achieved vaccine coverage of 90% or greater
- Most HCP were vaccinated at their workplace
- Median declination was only 4%



N=72 acute care hospitals

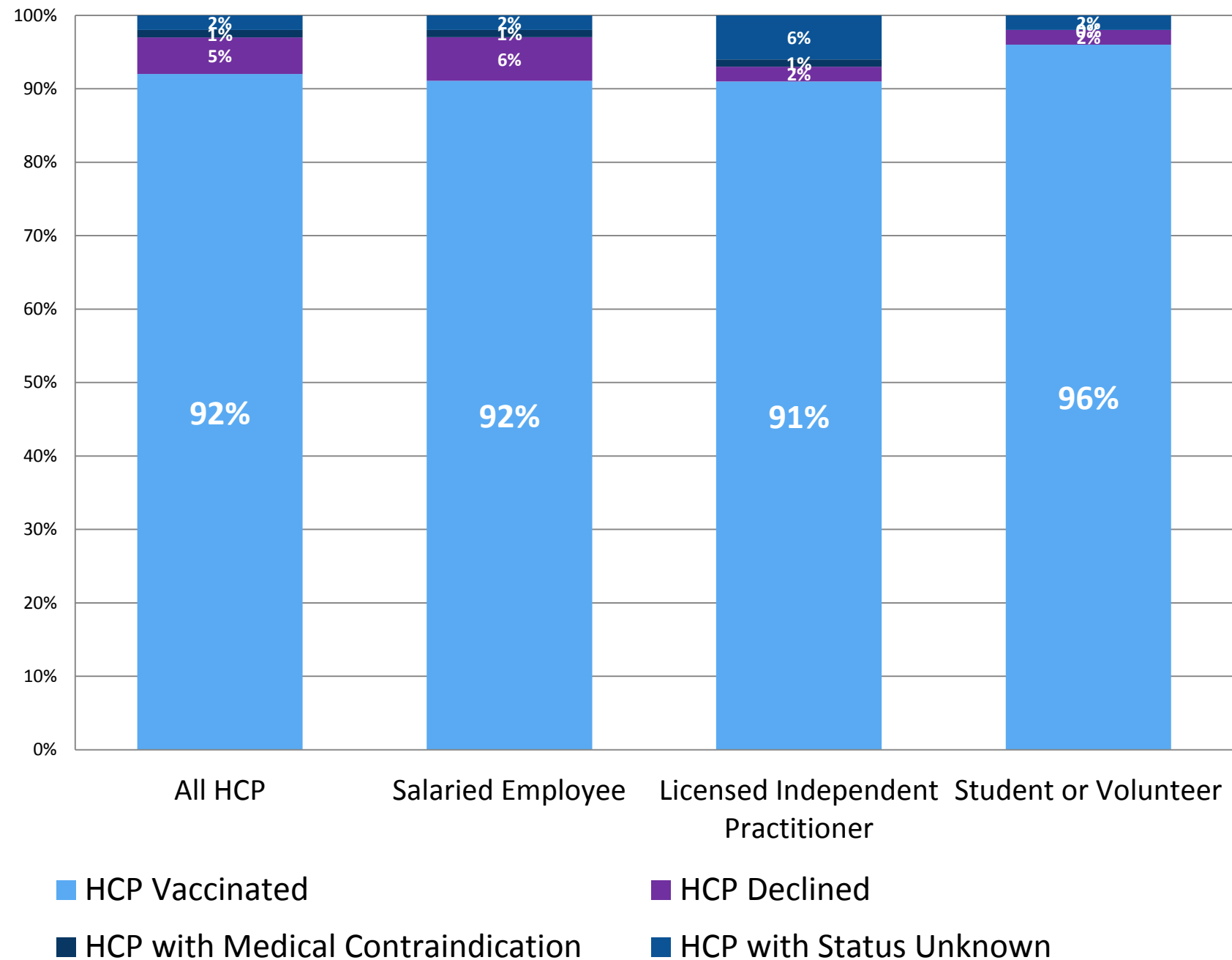
Acute Care Hospital Healthcare Personnel Vaccine Coverage in Aggregate

	Mean State Aggregate HCP Vaccine Coverage	Range
Total HCP Vaccinated	240,095 (92%)	(77 - 99%)
Vaccinated at Facility	175,626 (73%)	(47 - 91%)
Vaccinated Elsewhere	64,469 (27%)	(4 - 50%)
HCP Declined Vaccination	12,735 (5%)	(0 - 20%)
HCP with Unknown Vaccination Status	5,710 (2%)	(0 - 12%)
HCP with a Medical Contraindication	1,759 (1%)	(0 - 7%)

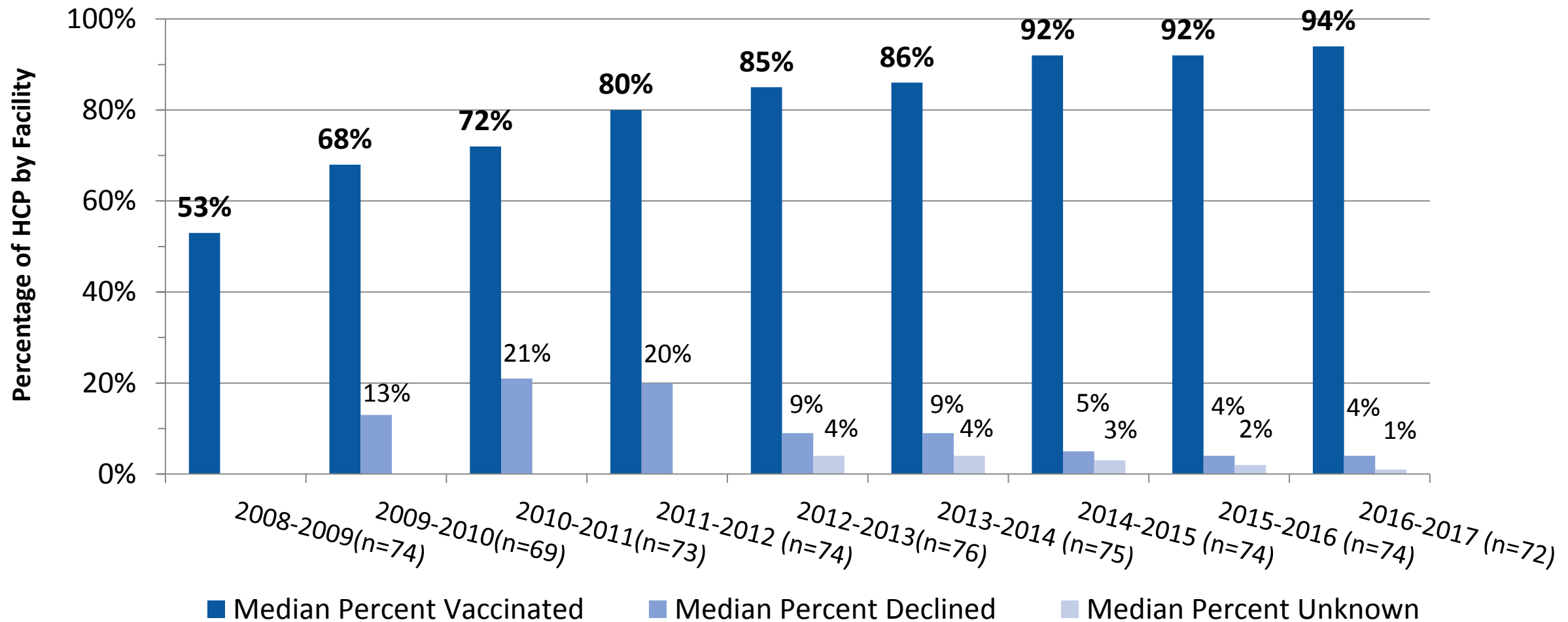
Overall HCP Influenza Vaccine Coverage in Massachusetts ACHs by HCP Type

Key Findings

- Overall, salaried employees were most likely to decline vaccine when compared to other HCP types. This may be partially explained by salaried employees having the most complete reporting.
- Licensed Independent Practitioners were most likely to have unknown vaccine status.



Trends Over Time Acute Care Hospitals



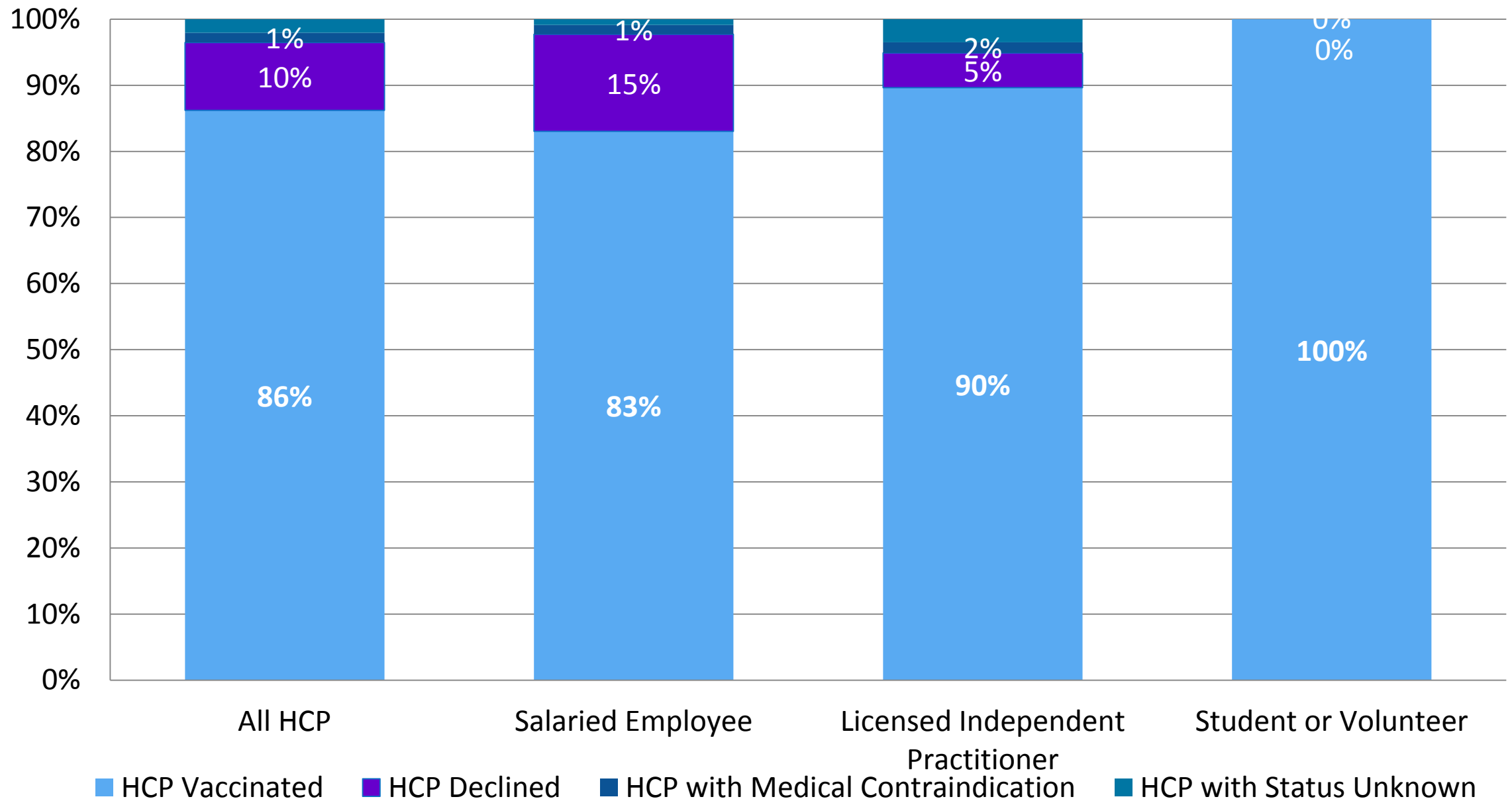
Median HCP vaccine coverage increased slightly in 2016-17 and met the Healthy People 2020 benchmark of 90%. The median declination rate remained 4% in 2016-17.

Mean percentage of HCP at Ambulatory Surgical Centers Vaccinated against Influenza During 2016-2017 season

	Mean % Vaccinated	Range
Total Vaccinated	85%	(43-100%)
Vaccine Declination Rate	11%	(0-57%)
HCP with Unknown Vaccination Status	2%	(0-30%)
HCP with a Medical Contraindication	2%	(0-12%)
Location Vaccinated		
At Place of Employment	44%	(0-90%)
Outside Place of Employment	41%	(3-100%)

N=48 reporting ASCs

Overall Ambulatory Surgical Center Vaccination of HCP by Personnel Category

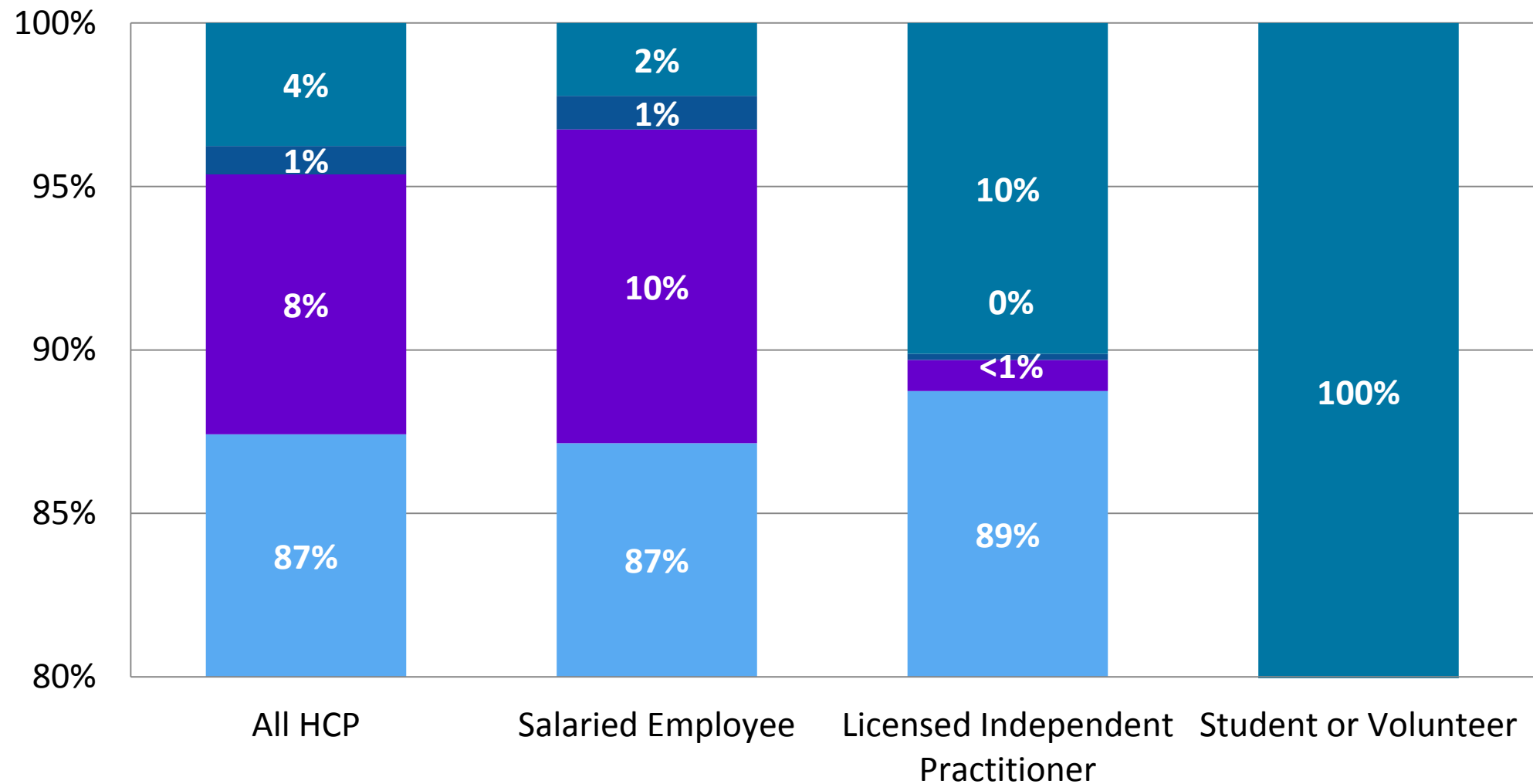


Mean Percent of Dialysis Center HCP Vaccinated against Influenza During the 2016-2017 Season

	Mean % Vaccinated	Range
Total Vaccinated	88%	(50-100%)
Vaccination Declination Rate	8%	(0-50%)
HCP with Unknown Vaccination Status	3%	(0-24%)
HCP with a Medical Contraindication	1%	(0-11%)
Location Vaccinated		
At Place of Employment	57%	(20-97%)
Outside Place of Employment	30%	(3-59%)

N=73 Reporting Facilities

Overall Dialysis Center Vaccination of HCP by Personnel Category

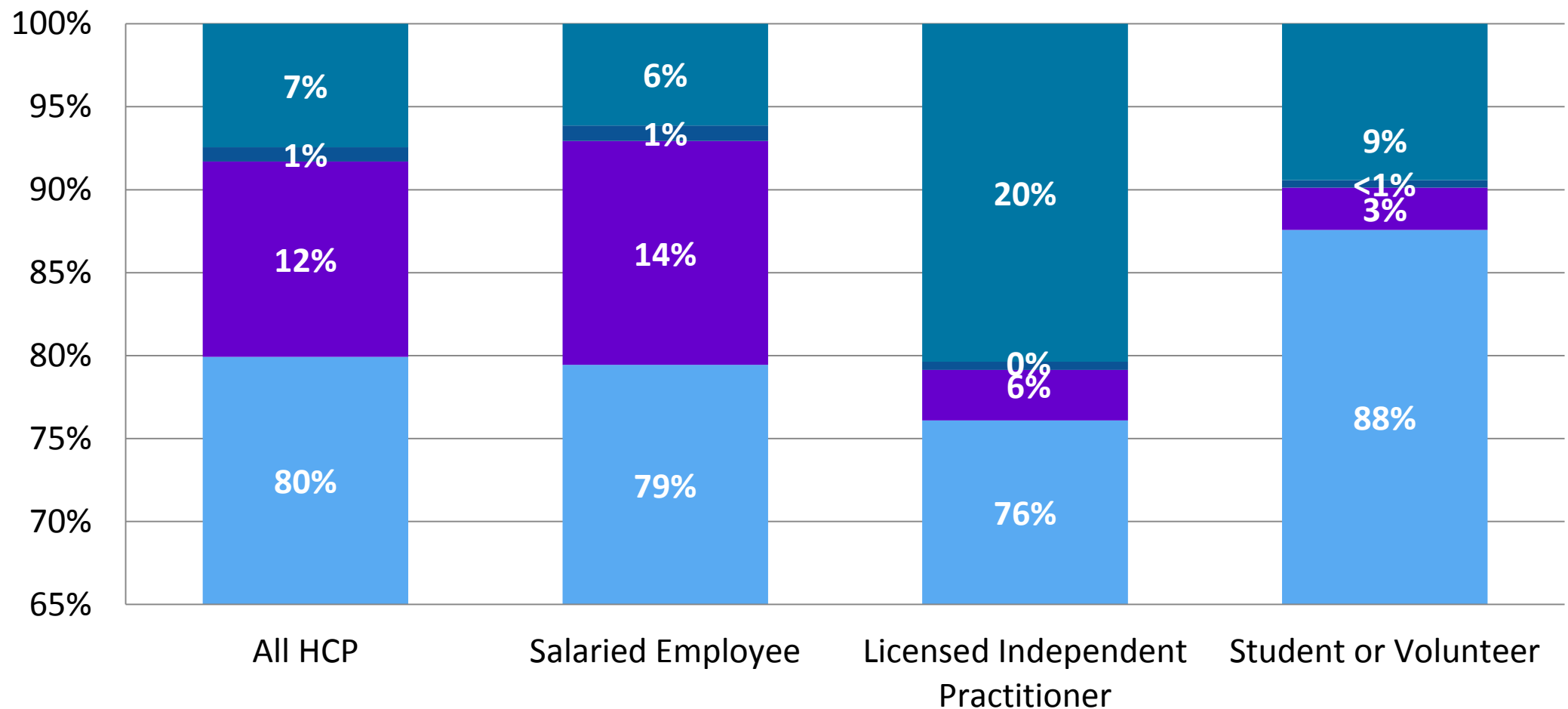


■ HCP Vaccinated
 ■ HCP Declined
 ■ HCP with Medical Contraindication
 ■ HCP with Status Unknown

Mean Percent of Non-Acute Care Hospital HCP Vaccinated against Influenza During the 2016-2017 Season

	Mean % Vaccinated	Range
Total Vaccinated	79%	(35-98%)
Vaccination Declination Rate	12%	(0-52%)
HCP with Unknown Vaccination Status	8%	(0-43%)
HCP with a Medical Contraindication	1%	(0-4%)
Location Vaccinated		
At Place of Employment	56%	(23-77%)
Outside Place of Employment	24%	(3-45%)

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

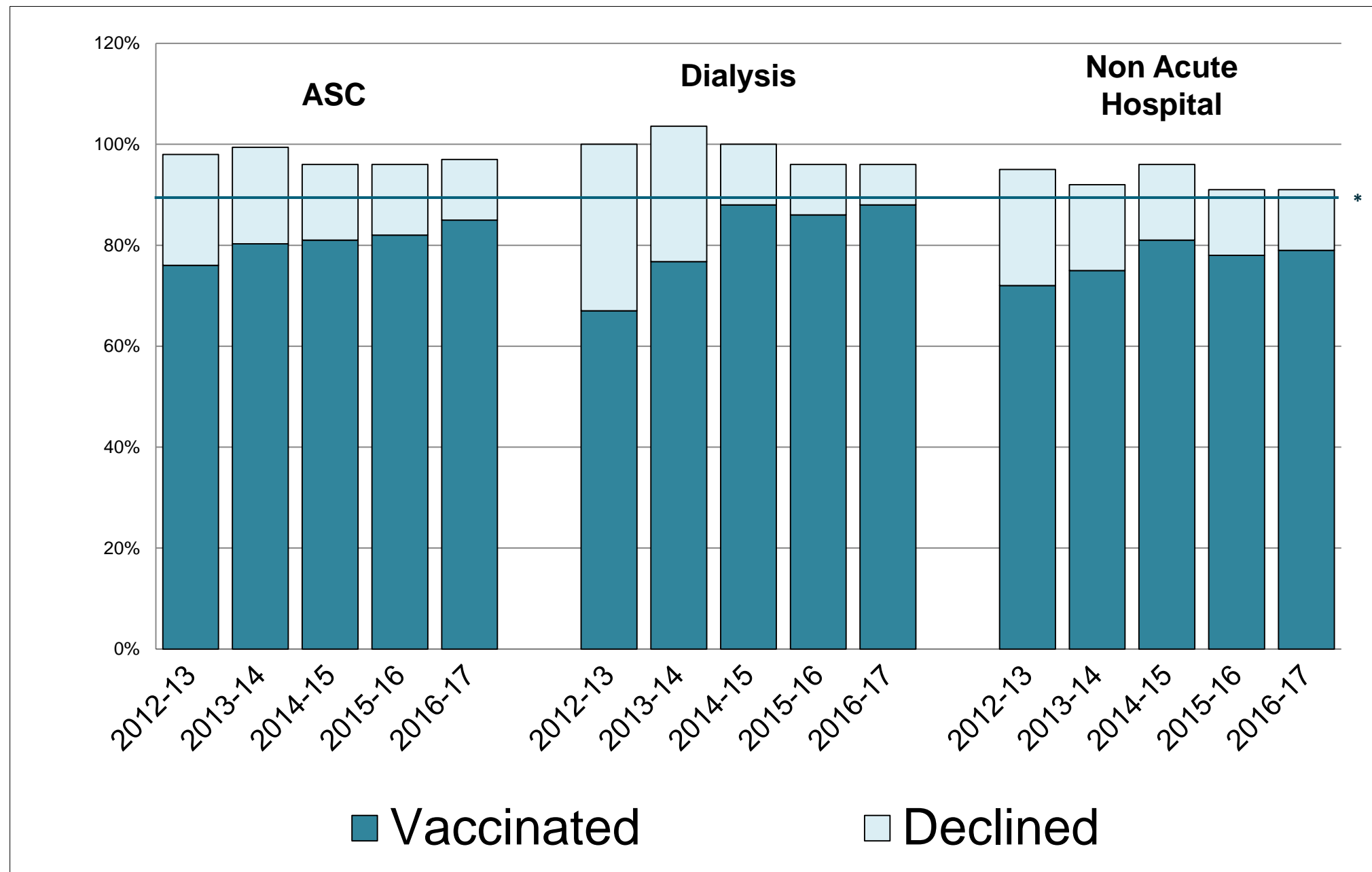


■ HCP Vaccinated
 ■ HCP Declined
 ■ HCP with Medical Contraindication
 ■ HCP with Status Unknown

N=39 Reporting Facilities

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: 2012-2017 Influenza Seasons**



Mean Percent of Clinic HCP Vaccinated against Influenza During the 2016-2017 Season

	Mean % Vaccinated	Range
Total Vaccinated	65%	(0-100%)
Total Exceptions*	27%	(0-100%)
Location Vaccinated		
At Place of Employment	29%	(0-100%)
Outside Place of Employment	36%	(0-100%)

N=164 Facilities Submitted Data

*Total exceptions may include declination, medical contraindications or religious exemption.

2016-2017 Results: Nursing Homes

Mean Percent of Nursing Home HCP Vaccinated Against Influenza During the 2016-2017 Season

	Mean % Vaccinated	Range
Total Vaccinated	75%	(15-100%)
Total Exceptions*	23%	(0-78%)
Location Vaccinated		
At Place of Employment	54%	(0-100%)
Outside Place of Employment	21%	(0-83%)

N=358 Facilities Submitted Data

*Total exceptions may include declination, medical contraindication or religious exemption.

2016-2017 Results: Rest Homes

Mean Percent of Rest Home HCP Vaccinated Against Influenza During the 2016-2017 Season

	Mean % Vaccinated	Range
Total Vaccinated	75%	(47-100%)
Total Exceptions*	30%	(0-70%)
Location Vaccinated		
At Place of Employment	35%	(0-76%)
Outside Place of Employment	40%	(6-87%)

N=20 Facilities Submitted Data

*Total exceptions may include declination, medical contraindication or religious exemption.

2016-2017 Results: Adult Day Health Programs

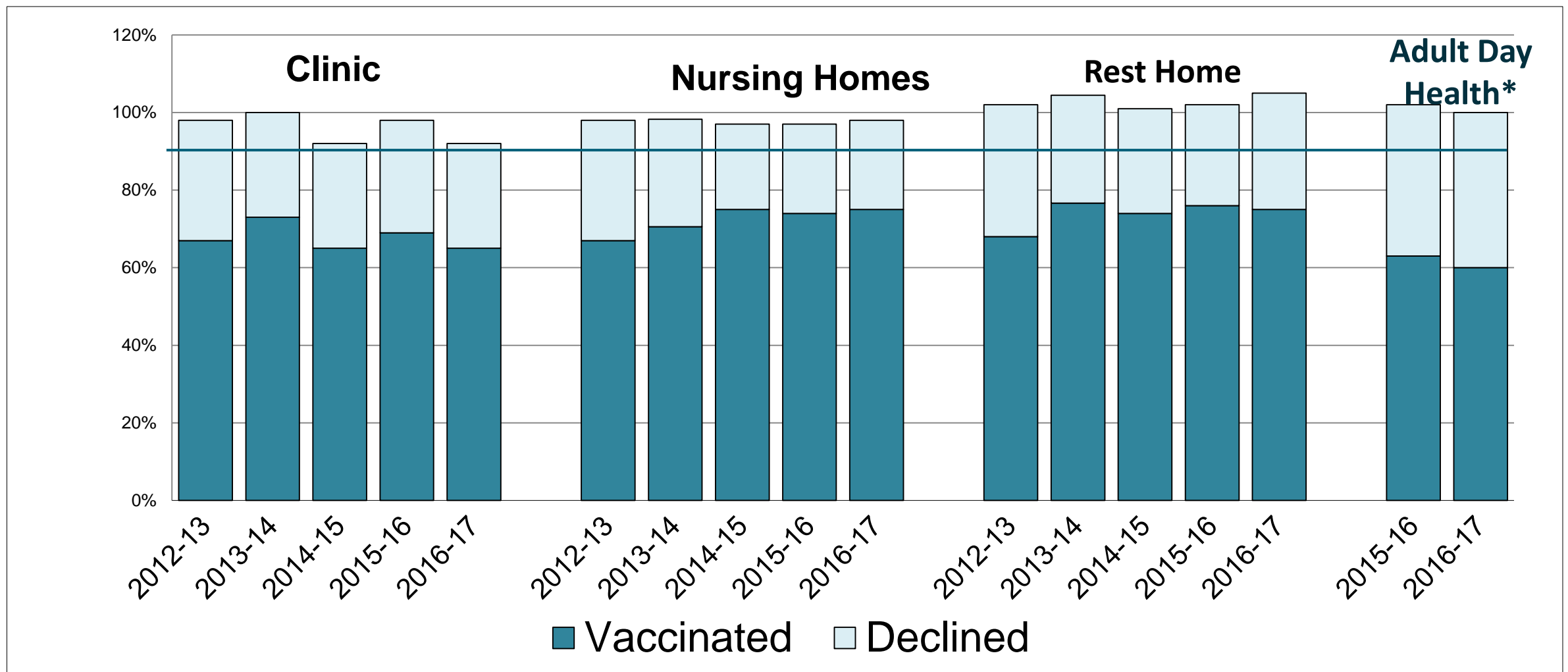
Mean Percent of Adult Day Health HCP Vaccinated against Influenza During the 2016-2017 Season

	Mean % Vaccinated	Range
Total Vaccinated	60%	(0-100%)
Total Exceptions*	40%	(0-100%)
Location Vaccinated		
At Place of Employment	32%	(0-100%)
Outside Place of Employment	28%	(0-100%)

N=132 Facilities Reported Data

*Total exceptions may include declination, medical contraindication or religious exemption.

Mean Percent of HCP Influenza Vaccinations and Declinations as Reported by Massachusetts Clinics, Nursing Homes, Rest Homes and Adult Day Health Programs: 2012-2017 Seasons



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

Conclusions

- All facility types (except Clinics) have reported higher vaccination rates in 2016-2017 when compared to 2012-2013 season.
- Overall acute care hospital vaccine coverage exceeds the DPH and Healthy People 2020 benchmark for the third consecutive year.
- No other facility type reached the established overall performance goal.
- The range of vaccine coverage continues to vary widely.

- DPH is planning a two part webinar series targeting Adult Day Health Centers, Clinics, Nursing Homes and Rest Homes. Program content will include: Influenza disease burden, key facts about the current season; surveillance and reporting; and strategies for increasing HCP coverage.
- DPH will continue to reinforce the reporting requirement and statewide performance goal during dialysis trainings, and on-site Infection Control Assessment and Response (ICAR) visits in nursing homes.
- DPH will continue to monitor trends and report annual compliance with the HCP influenza vaccination requirements.
- DPH will promote continuous quality improvement, and recommend licensed facilities share vaccination rates with all staff, including administrators, boards of directors, practice managers, ombudsperson and patient/family councils.
- DPH will continue to encourage facilities to evaluate their current influenza vaccination program and policies and develop an action plan to maximize influenza vaccination coverage of HCP to achieve the Healthy People 2020 and DPH target of 90% vaccination
- DPH will collaborate with public health partners to intensify efforts to improve immunization rates among HCP, especially among low outliers.

Next Steps

- DPH will disseminate this update to all licensed 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:

www.mass.gov/dph/dhcq

- Please direct any questions to:

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