



# Massachusetts Department of Public Health

## PUBLIC HEALTH COUNCIL

September 14, 2022

*Please standby – the meeting will begin shortly*

*Today's presentation is available on the [mass.gov/dph](https://mass.gov/dph) website under "Upcoming Events" by clicking on the September 14<sup>th</sup> Public Health Council listing*

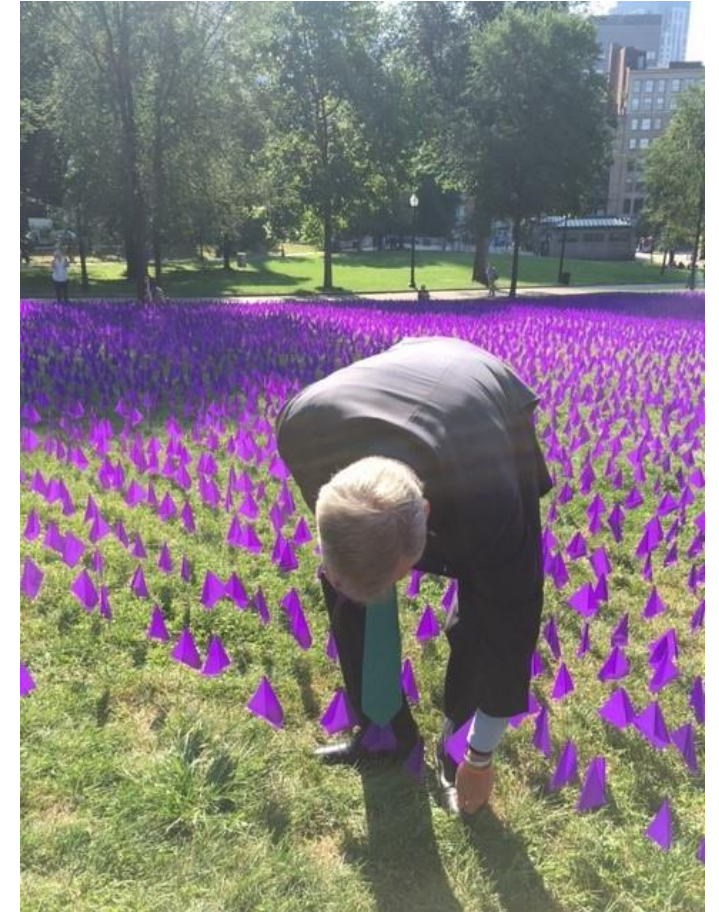


# Massachusetts Department of Public Health

## **PUBLIC HEALTH COUNCIL MEETING SEPTEMBER 14, 2022**

Margret R. Cooke, Commissioner

# August 31<sup>st</sup> – Overdose Awareness Day



[Mass.gov/Opioids](https://www.mass.gov/opioids)



# Public Health Lab Appreciation Month



[Mass.gov/state-public-health-laboratory-services](https://mass.gov/state-public-health-laboratory-services)

# Mosquitoes and Ticks



# Monkeypox Virus

## Monkeypox – Get the Facts



Learn more at [mass.gov/Monkeypox](https://mass.gov/Monkeypox)

## Monkeypox vaccination

What you need to know about monkeypox vaccine in Massachusetts.

### TABLE OF CONTENTS

- ✓ About the JYNNEOS vaccine
- ✓ Eligibility
- ✓ How to obtain vaccine
- ✓ Information for health care providers

[Mass.gov/MonkeypoxVaccine](https://mass.gov/MonkeypoxVaccine)

# COVID-19 Boosters



**[VaxFinder.Mass.Gov](https://vaxfinder.mass.gov)**

# Back to School Vaccine Clinics



A clinic in **Methuen**, co-hosted by Melita Farms, featured food, games, and a backpack giveaway.

251 vaccines have been administered at the farm since June, with two more events planned this fall.

[Mass.gov/KidsClinic](https://www.mass.gov/KidsClinic)



# My Vax Records

## Access Your COVID-19 Digital Vaccine Card Using My Vax Records



It works just like your  
paper CDC record card

Get one at [MyVaxRecords.mass.gov](https://MyVaxRecords.mass.gov)



# Suicide Prevention - 988



[Mass.gov/988](https://www.mass.gov/988)



# Massachusetts Department of Public Health

## **PUBLIC HEALTH COUNCIL MEETING SEPTEMBER 14, 2022**

Margret R. Cooke, Commissioner



# Massachusetts Department of Public Health

## Determination of Need:

*Request by New England Surgery Center, LLC for a Significant Change Amendment to a previously approved Determination of Need Project*





# Massachusetts Department of Public Health

## Request to Promulgate Revisions to 105 CMR 164.000:

*Licensure of Substance Use Disorder Treatment Programs*

Erica Weil, LICSW

Director of Quality Assurance & Licensing, Bureau of Substance Addiction Services

# Regulation Overview

105 CMR 164.000, Licensure of Substance Use Disorder Treatment Programs, **sets forth standards for the licensure or approval of substance use disorder treatment programs** operating as:

1. Standalone facilities;
2. Within settings licensed by other Agencies of the Commonwealth, or operated by Agencies of the Commonwealth; or
3. Within Penal Facilities

# Overview of Revisions

- Modernizing, Reorganization, Alignment with Federal Standards
- Implementation of the CARE Act
- Furthering EOHHS's Behavioral Health Redesign efforts
- Clarifying requirements for programs licensed by other Agencies of the Commonwealth
- Establishing requirements for programs operated by Agencies of the Commonwealth
- Creating a regulatory framework for Penal Facilities
- Special Projects License

# Public Comment Period

- Public hearings were held by the Department in March 2020, February 2021, and June 2022. The third public comment period concluded on June 15, 2022.
- Commenters stated general support for the various updates to terminology, alignments with current best practices, and operational feasibility.
- While minor changes were made as a result of a review of the comments, there were no substantive changes made to the proposed amendments which would necessitate an additional hearing.



# Next Steps

- The Department requests that the Public Health Council approve the proposed regulations for promulgation.
- Following Public Health Council approval, the Department will file the amended regulation with the Secretary of the Commonwealth for final enactment.



# Massachusetts Department of Public Health

**Thank you for the opportunity to present this information today.**

For more information regarding 105 CMR 164, please find the relevant statutory language and the full proposed regulation here:

**Proposed amendment:**

<http://mass.gov/dph/proposed-regulations>

**Massachusetts Law:**

<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111E>

**Chapter 208 of the Acts of 2018:**

<https://malegislature.gov/Laws/SessionLaws/Acts/2018/Chapter208>

**Please direct any questions to:**

Erica Weil, Bureau of Substance Addiction Services

[Erica.Weil@mass.gov](mailto:Erica.Weil@mass.gov)



# Massachusetts Department of Public Health

## Request to Promulgate Revisions to 105 CMR 153.000:

*Licensure Procedure and Suitability Requirements for Long-Term  
Care Facilities*

**Marita Callahan**

Director of Policy and Health Communications, Bureau of Healthcare Safety and Quality

# Summary of Regulation

105 CMR 153.000, *Licensure Procedure and Suitability Requirements for Long-Term Care Facilities*:

- Sets forth the licensure and suitability requirements for long-term care facilities, including nursing homes and rest homes, and
- Provides a legal structure that promotes industry standardization, promotes higher quality of care, and stronger consumer protection for residents in long-term care facilities.



# Overview of Revisions to Regulation

- As a reminder, the Department previously presented to the Public Health Council proposed revisions to 105 CMR 153 to codify in part the currently in effect “Order Of The Commissioner...Regarding Control Of Covid-19 In Long-Term Care Facilities.”
- This Public Health Order allows for an immediate limit on admissions if the Department determines there is a risk of uncontrolled transmission of COVID-19 within the facility.

# Overview of Revisions to Regulation *(continued)*

- To ensure the health and safety of long-term care residents and staff, DPH proposes amending the regulation to **expressly permit the Commissioner to order an immediate limit on new admissions** to the facility if the Commissioner determines that jeopardy exists at the facility.
- This regulation also states that an uncontrolled “**outbreak or cluster**” as defined in 105 CMR 300.020 constitutes jeopardy for these purposes.
- This regulation also clarifies that long-term care facilities can appeal the limit on new admissions.

# Public Comment Period

- The Department held a public hearing on August 1, 2022, with all written comments due to the Department on August 5, 2022.
- The Department received written comments from 2 stakeholders.
- The Department does not recommend any further revisions to the regulation, as the comments were either supportive of the proposed revisions or would limit the Department's ability to respond to the specific circumstances and needs of long-term care residents.

# Next Steps

- The Department requests the Public Health Council approve the proposed regulations for promulgation.
- Following Public Health Council approval, the Department will file the amended regulation with the Secretary of the Commonwealth for final enactment.





# Massachusetts Department of Public Health

**Thank you for the opportunity to present this information today.**

For more information regarding standards for long-term care facilities, please find the relevant statutory language and the full current regulation here:

**Current regulation:**

<https://www.mass.gov/doc/105-cmr-153-licensing-procedure-and-suitability-requirements-for-long-term-care-facilities/download>

**Proposed amendment:**

<http://mass.gov/dph/proposed-regulations>

**Massachusetts Law:**

<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111>



# Massachusetts Department of Public Health

## Request to Promulgate Revisions to 105 CMR 120.000:

*The Control of Radiation*

**Jack Priest**, Director, Radiation Control Program

**Joshua Daehler**, Radioactive Materials Unit Supervisor, Radiation Control Program

# Background

From 2018 through 2019, the **U.S. Nuclear Regulatory Commission (NRC)** notified the Massachusetts Department of Public Health's Radiation Control Program (DPH/RCP) about **five categories of amendments to federal regulations** that it had made; the RCP must promulgate compatible regulations.

# Public Comment Period

- Following the June presentation to the PHC, the Department held a public comment period, including a public hearing.
- The Department held a hearing on July 7, 2022, and accepted comments through July 8, 2022
- **No oral or written comments were received during the comment period on the proposed amendments.**

# Review of Proposed Amendments

## **Category 1—Licensing of Radioactive Materials:**

- Revised to amend specific terms and conditions of certain licenses to require reporting of an exceedance of permissible concentrations of breakthrough or contaminate solutions of specific materials.
- New requirement to report the results of any test that exceeds permissible concentrations of breakthrough or contaminant eluates of certain materials.

## **Category 2—Radiation Safety Requirements of Industrial Radiographic Operations:**

- Requires advanced notification of each location of radiographic operations, prior to exceeding 180 cumulative days radiographic operations in a calendar year, for any location not listed on the license.



# Review of Proposed Amendments *(continued)*

## **Category 3—Use of Radionuclides in the Healing Arts:**

- Permanent Implant Brachytherapy: Procedures for administrations requiring a written directive must now include a determination of whether a medical event has occurred and post-implantation information on source strength administration must be determined within 60 calendar days from the date of implant.
- Reports and notification requirements are also addressed.

# Review of Proposed Amendments *(continued)*

## **Category 4—Transportation of Radioactive Material:**

- Revised to reference existing regulations regarding deliberate misconduct.
- The licensee must contact the NRC in writing prior to first use of an NRC-approved package containing radioactive material.

## **Category 5—Miscellaneous Corrections and Organizational Amendments:**

- Amended to update the online address (URL) of RCP's website, oath and affirmation requirements, contact information regarding fingerprint checks, and general security program requirements.

# Next Steps

- **The Department requests the Public Health Council approve the proposed regulations for promulgation.**
- Following PHC approval, the Department will file the amended regulation with the Secretary of the Commonwealth for final enactment.



# Massachusetts Department of Public Health

**Thank you for the opportunity to present this information today.**

For more information regarding 105 CMR 120, please find the relevant statutory language and the full proposed regulation here:

**Proposed amendment posted when available:**

<http://mass.gov/dph/proposed-regulations>

**Massachusetts Law:**

<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section5n>

**Please direct any questions to:**

Jack Priest, Radiation Control Program

[jack.priest@mass.gov](mailto:jack.priest@mass.gov)



# Massachusetts Department of Public Health

## 2021 Health Care Associated Infections:

### *Acute Care Hospitals*

Christina Brandeburg, MPH, Epidemiologist

Katherine T. Fillo, PhD, MPH, RN-BC, Director of Clinical Quality Improvement

Jessica Leaf, MPH, Epidemiologist

Eileen McHale, RN, BSN, Healthcare Associated Infection Coordinator

# Introduction

**Healthcare-associated infections (HAIs) are infections that patients acquire during the course of receiving treatment for other conditions within a healthcare setting.**

- HAIs are among the leading causes of preventable death in the United States, affecting 1 in 17 hospitalized patients, accounting for an estimated 1.7 million infections and an associated 98,000 deaths.\*

**The Massachusetts Department of Public Health (DPH) developed this data update as a component of the Statewide Infection Prevention and Control Program created pursuant to [Chapter 58 of the Acts of 2006](#).**

- Massachusetts law provides DPH with the legal authority to conduct surveillance, and to investigate and control the spread of communicable and infectious diseases. ([MGL c. 111, sections 6 & 7](#))
- DPH implements this responsibility in hospitals through the hospital licensing regulation. ([105 CMR 130.000](#))
- Section 51H of chapter 111 of the Massachusetts General Laws authorizes the Department to collect HAI data and disseminate the information publicly to encourage quality improvement. (<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section51H>)

# Purpose

**This HAI presentation is the 13th annual Public Health Council update:**

- An important component of larger efforts to reduce preventable infections in health care settings
- Presents an analysis of progress on infection prevention within Massachusetts acute care hospitals
- Based upon work supported by state funds and the Centers for Disease Control and Prevention (CDC)
- Provides an overview of antibiotic resistance and stewardship activities
- Considers the impact of COVID-19 on Massachusetts acute care hospitals



# Methods

**This data summary includes the following statewide measures for the 2021 calendar year** (January 1, 2021 – December 31, 2021) as reported to the CDC's National Healthcare Safety Network (NHSN).

DPH required measures are consistent with the Centers for Medicare and Medicaid Services (CMS) quality reporting measures.

- Central line associated bloodstream infections (CLABSI) in intensive care units and wards
- Catheter associated urinary tract infections (CAUTI) in intensive care units and wards
- Specific surgical site infections (SSI)
- Specific facility wide laboratory identified events (LabID)

*National baseline data for each measure are based on a statistical risk model derived from 2015 national data*

*^ All data were extracted from NHSN on August 15, 2022*

# Measures

## Standardized Infection Ratio (SIR)

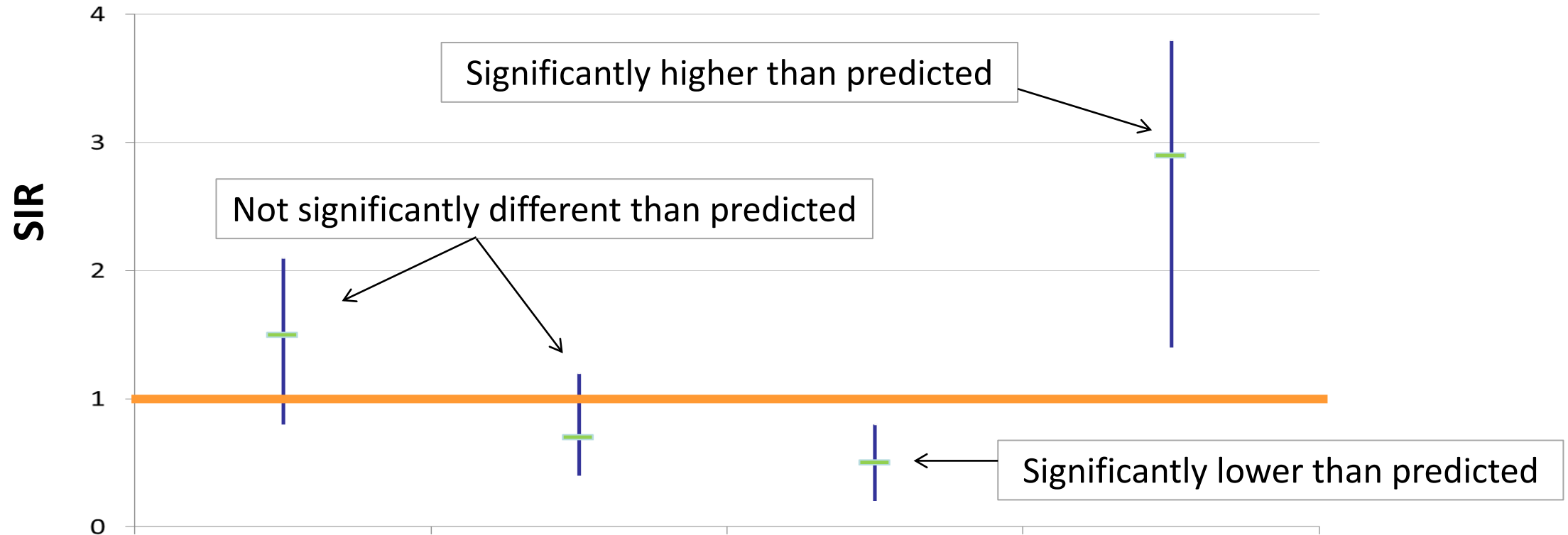
$$\text{Standardized Infection Ratio (SIR)} = \frac{\text{Actual Number of Infections}}{\text{Predicted Number of Infections}}$$

## Standard Utilization Ratio (SUR)

$$\text{Standard Utilization Ratio} = \frac{\text{Number of Device Days}}{\text{Predicted Number of Device Days}}$$

- If the SIR/SUR > 1.0, more infections/device days were reported than predicted
- If the SIR/SUR = 1.0, the number of infections/number of device days is equal to the predicted number
- If the SIR/SUR < 1.0, fewer infections/device days were reported than predicted

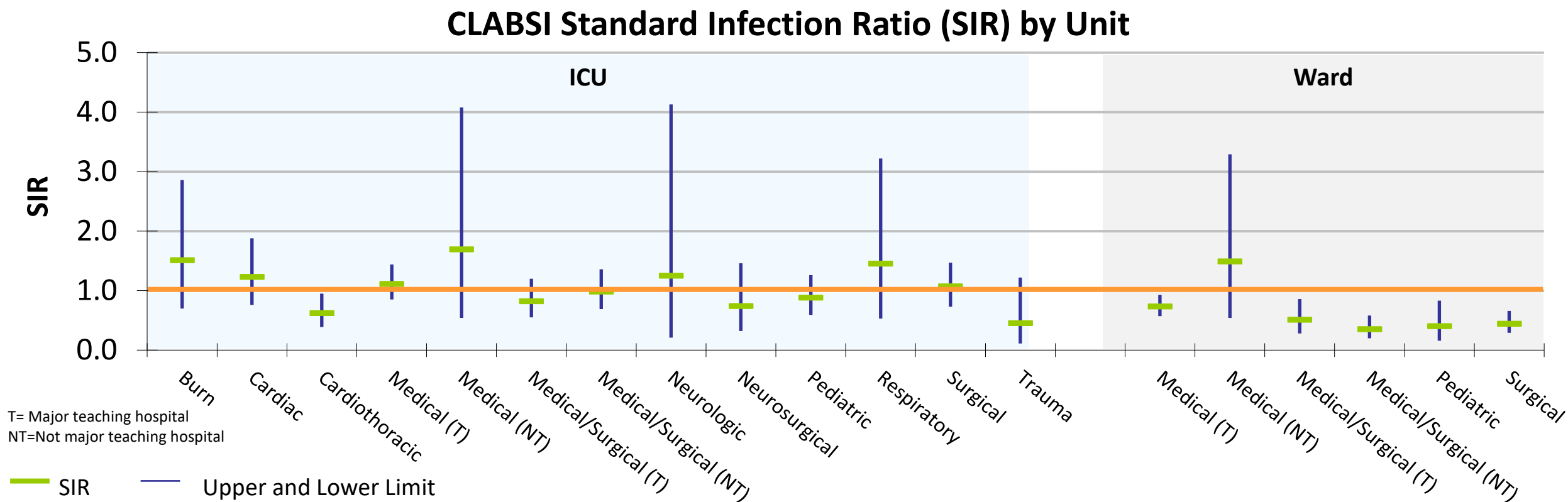
# How to Interpret SIRs and 95% Confidence Intervals (CIs)



The **green** horizontal bar represents the SIR, and the **blue** vertical bar represents the 95% confidence interval (CI). The 95% CI measures the probability that the true SIR falls between the two parameters.

- If the blue vertical bar crosses 1.0 (highlighted in **orange**), then the actual rate is not statistically significantly different from the predicted rate.
- If the blue vertical bar is completely above or below 1.0, then the actual is statistically significantly different from the predicted rate.

# Central Line-Associated Bloodstream Infections (CLABSI): Standard Infection Ratio in Adult and Pediatric ICUs and Wards



## Key Findings

Six unit types experienced a significantly lower number of infections than predicted, based on 2015 national aggregate data.

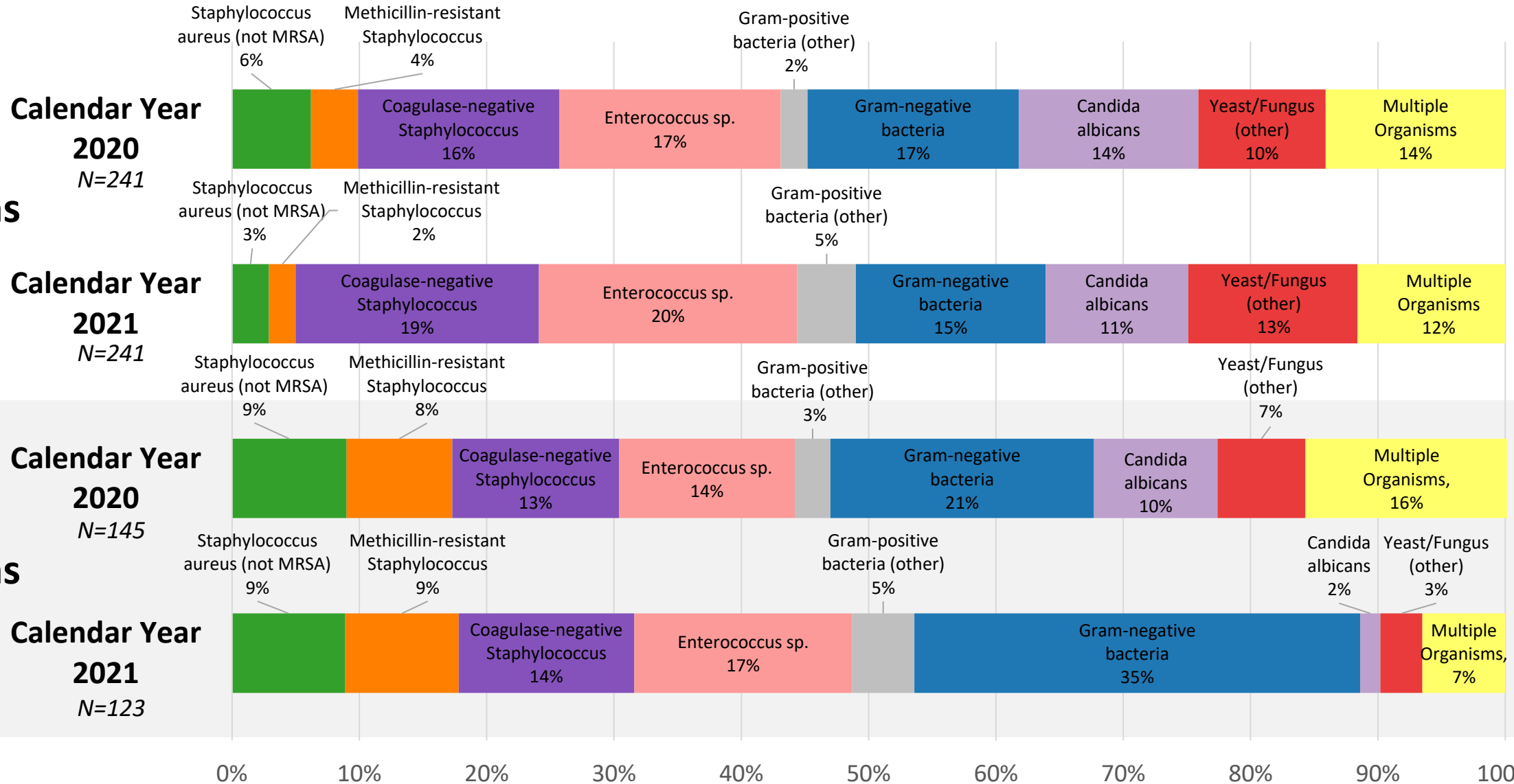
\*SIRs and CIs are currently not calculated when the number of predicted infections is less than 0.5.



Cardiothoracic ICU  
Medical (T) Ward  
Medical/Surgical (T & NT) Ward  
Pediatric Ward  
Surgical Ward

# CLABSI Adult & Pediatric Pathogens for 2020 and 2021

## ICU Pathogens

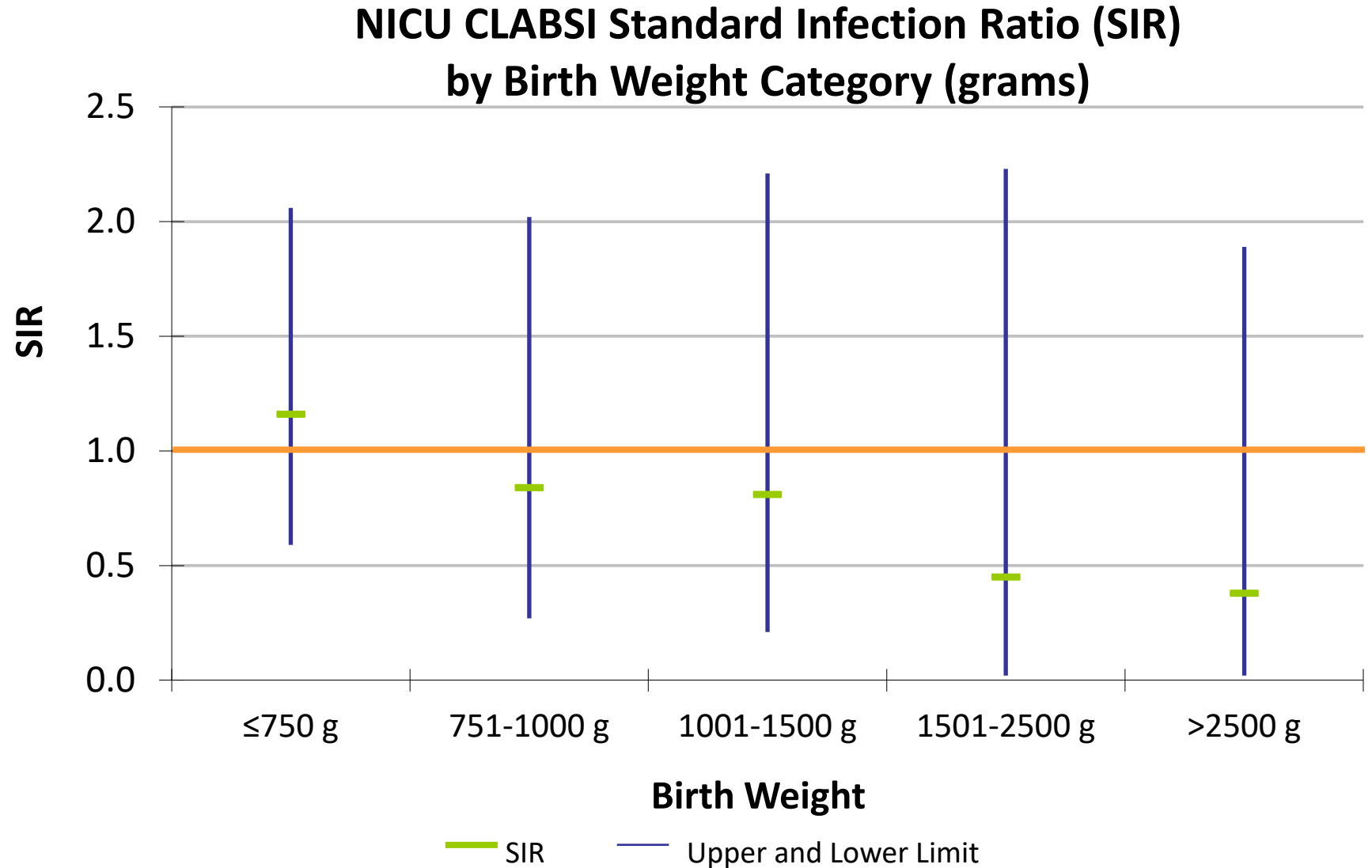


# Central Line-Associated Bloodstream Infections (CLABSI): Standard Infection Ratio in Neonatal ICUs

## Key Findings

There were no birthweight categories experiencing a significantly higher or lower number of infections than predicted, based on 2015 national aggregate data.

There were 19 CLABSIs reported in Neonatal ICUs in 2021.

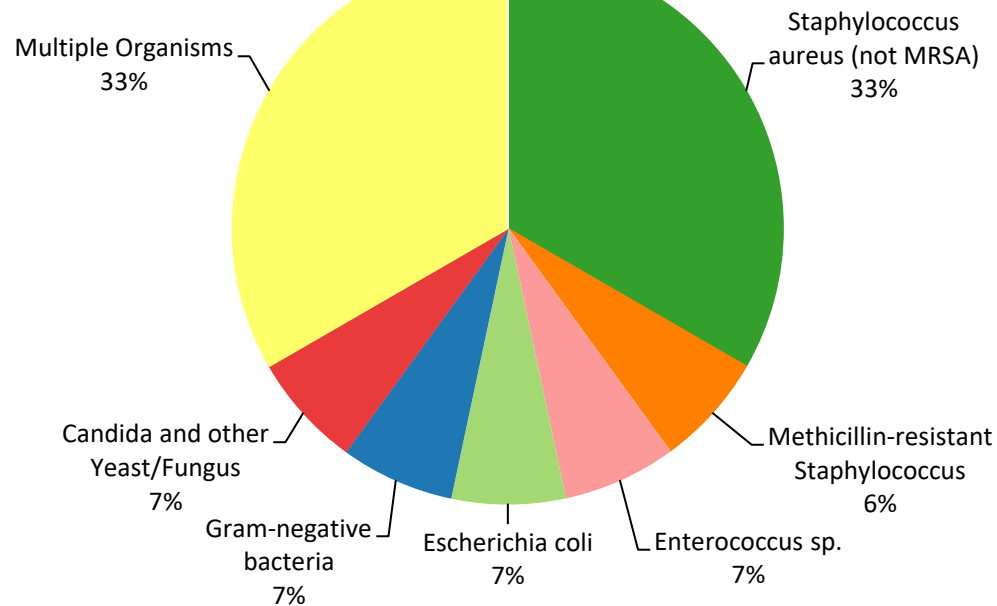


# CLABSI NICU Pathogens for 2020 and 2021

## Calendar Year 2020

January 1, 2020 – December 31, 2020

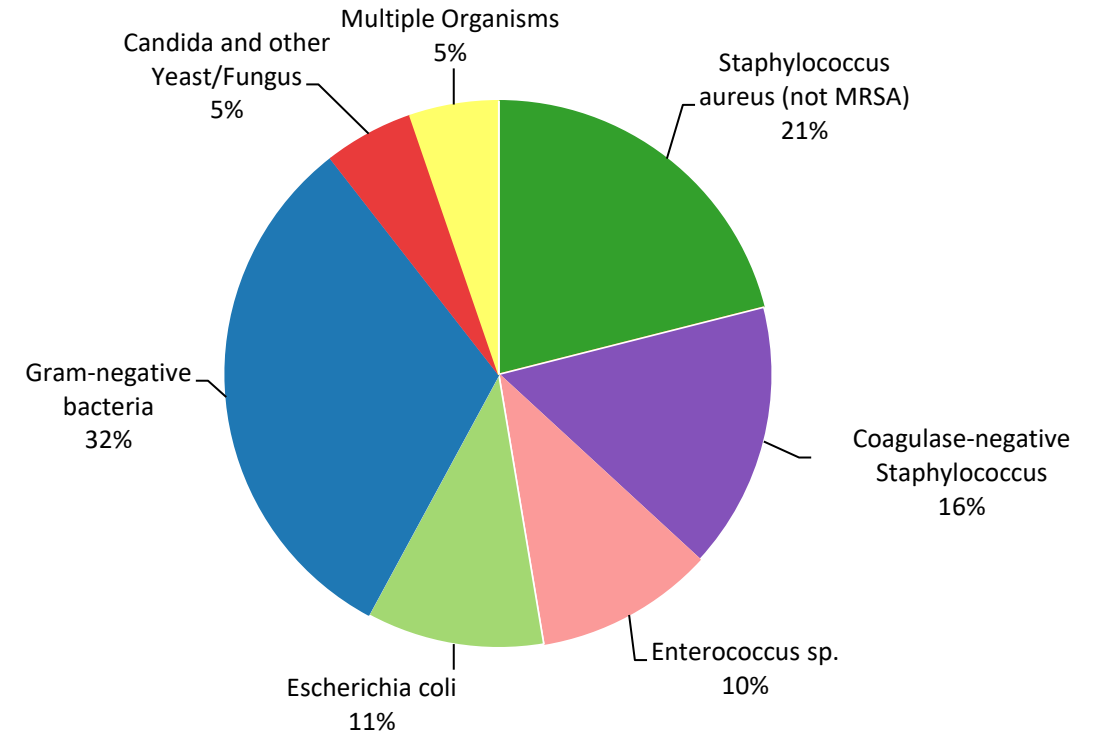
N=15



## Calendar Year 2021

January 1, 2021 – December 31, 2021

N=19



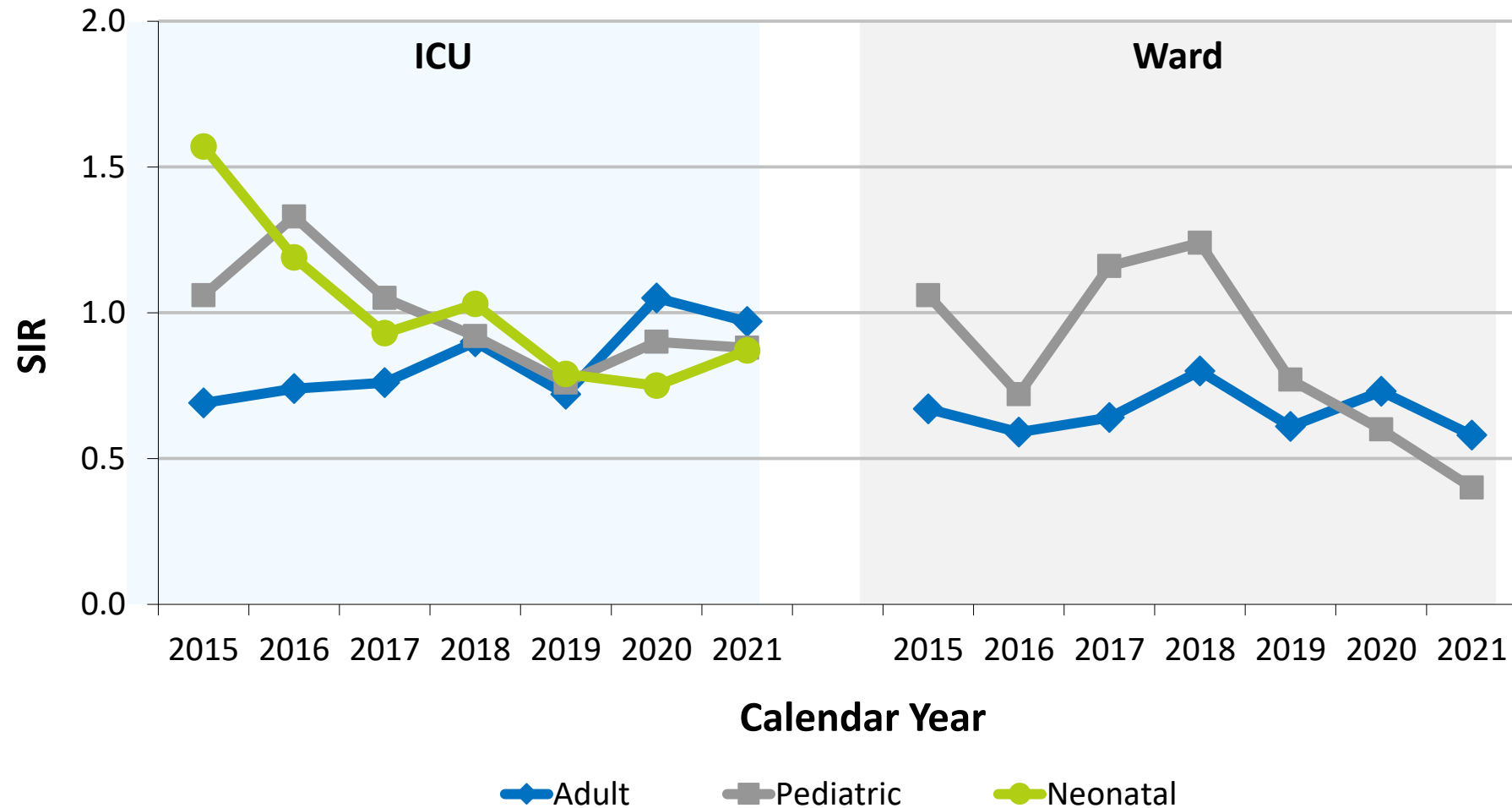


# State CLABSI SIR in ICU and Wards

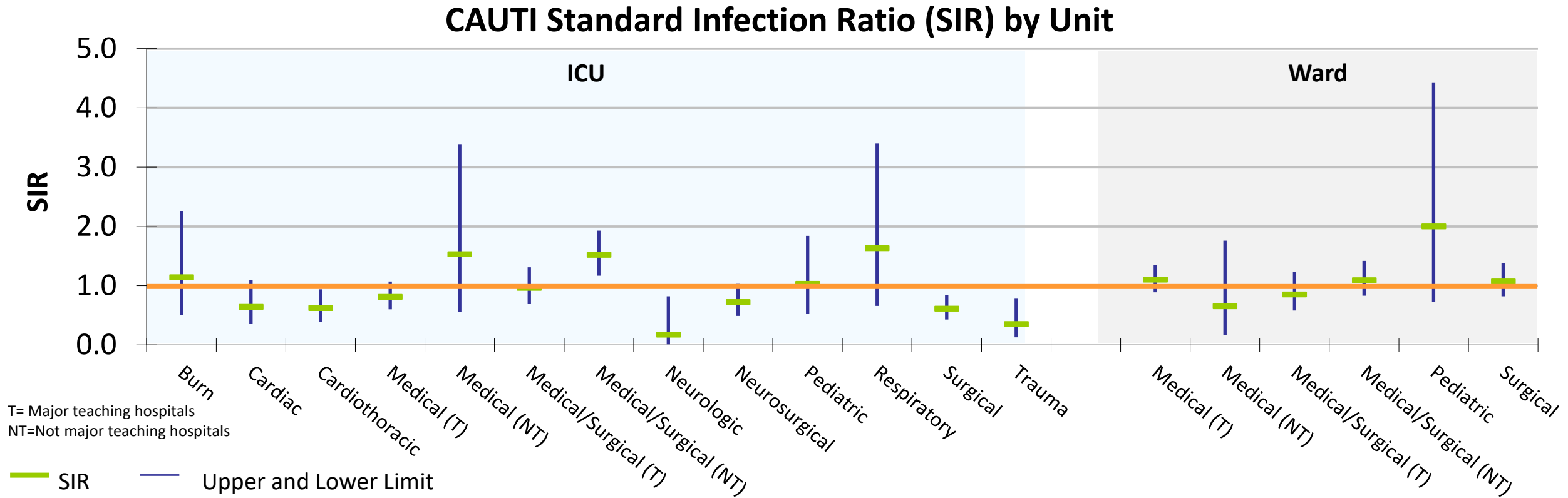
## Key Findings

In 2021, adult, pediatric, and Neonatal ICUs experienced the same number of infections than predicted, based on 2015 national aggregate data.

Between 2015-2021, adult Wards experienced a significantly lower number of infections than predicted, based on 2015 national aggregate data.



# Catheter-Associated Urinary Tract Infections (CAUTI): Standard Infection Ratio in Adult and Pediatric ICUs and Wards



## Key Findings

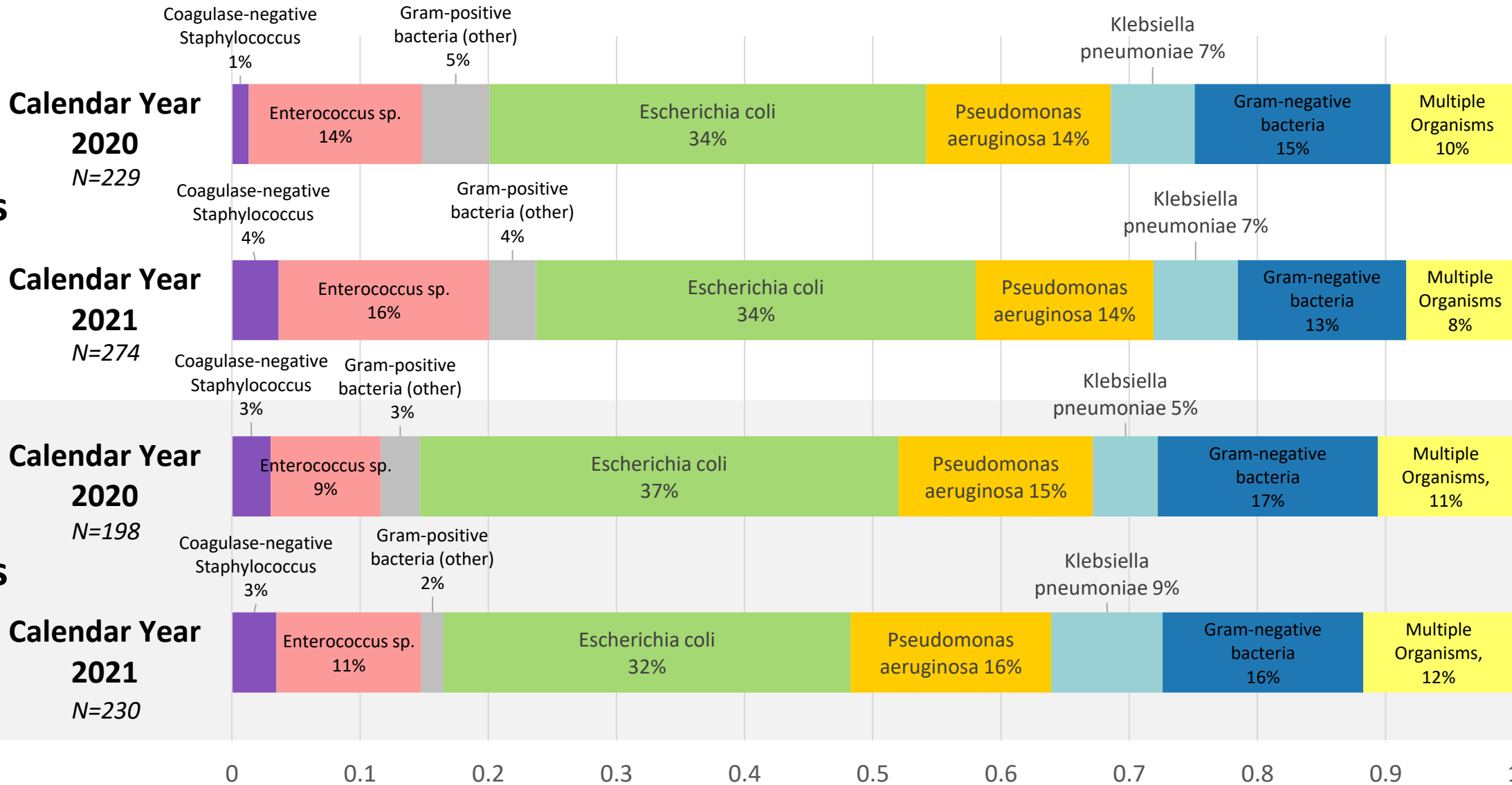
Four unit types experienced a significantly lower number of infections than predicted, based on 2015 national aggregate data.



Cardiothoracic ICU  
Neurologic ICU  
Surgical ICU  
Trauma ICU

# CAUTI Adult & Pediatric Pathogens for 2020 and 2021

## ICU Pathogens



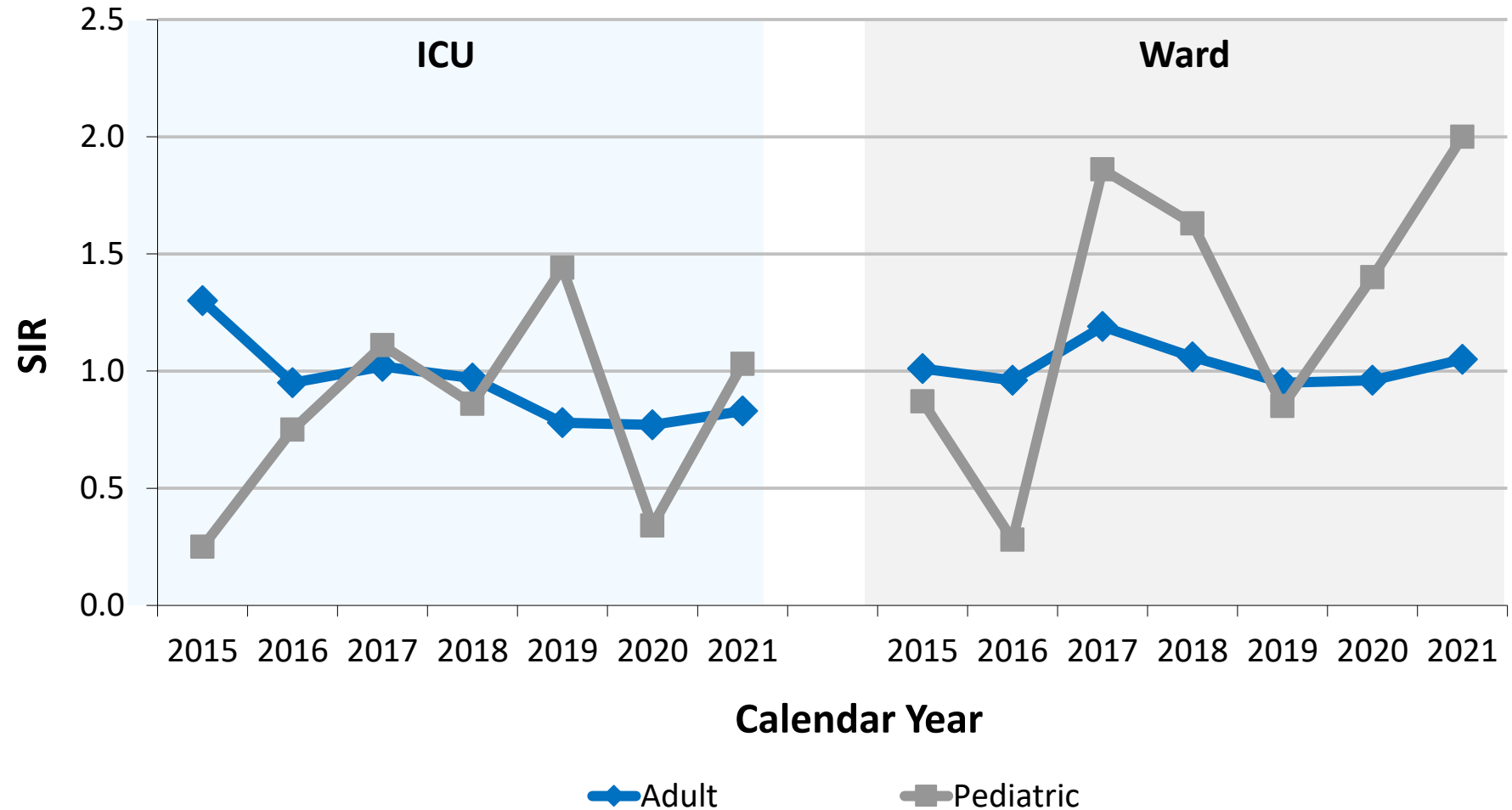
## Ward Pathogens

# State CAUTI SIR in ICU and Wards

## Key Findings

In 2021, adult ICUs experienced a significantly lower number of infections than predicted, based on 2015 national aggregate data.

In 2021, adult and pediatric wards experienced the same number of infections than predicted, based on 2015 national aggregate data.



# Surgical Site Infections (SSI)

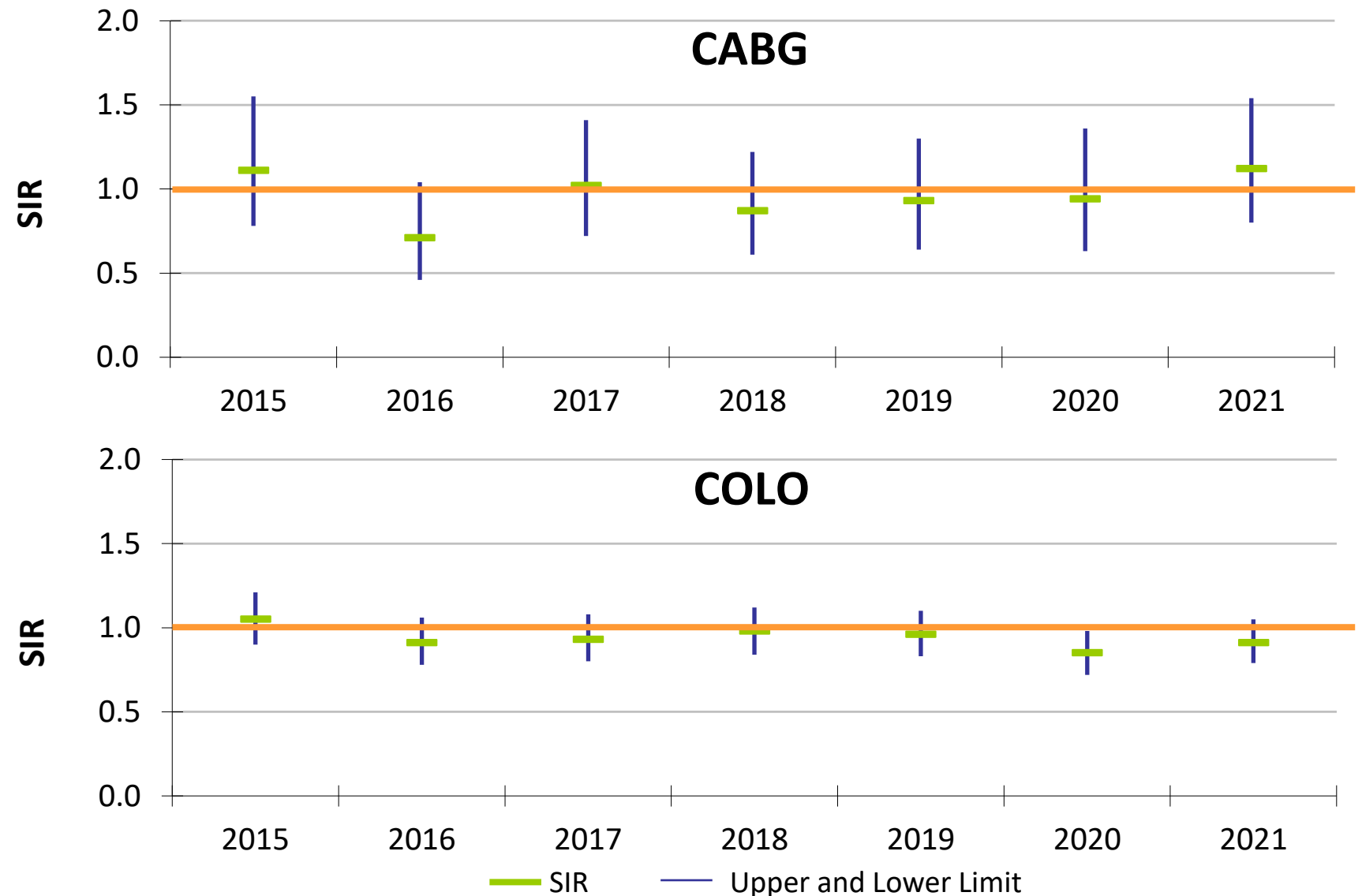
## Coronary Artery Bypass Graft (CABG) SIR and Colon Procedure (COLO) SIR

### Key Findings

In 2021, MA acute care hospitals performing coronary artery bypass graft (CABG) and colon (COLO) surgeries experienced the same number of infections as predicted, based on 2015 national aggregate data.

There were 36 CABG SSIs reported in 2021.

There were 193 COLO SSIs reported in 2021.



# Surgical Site Infections (SSI)

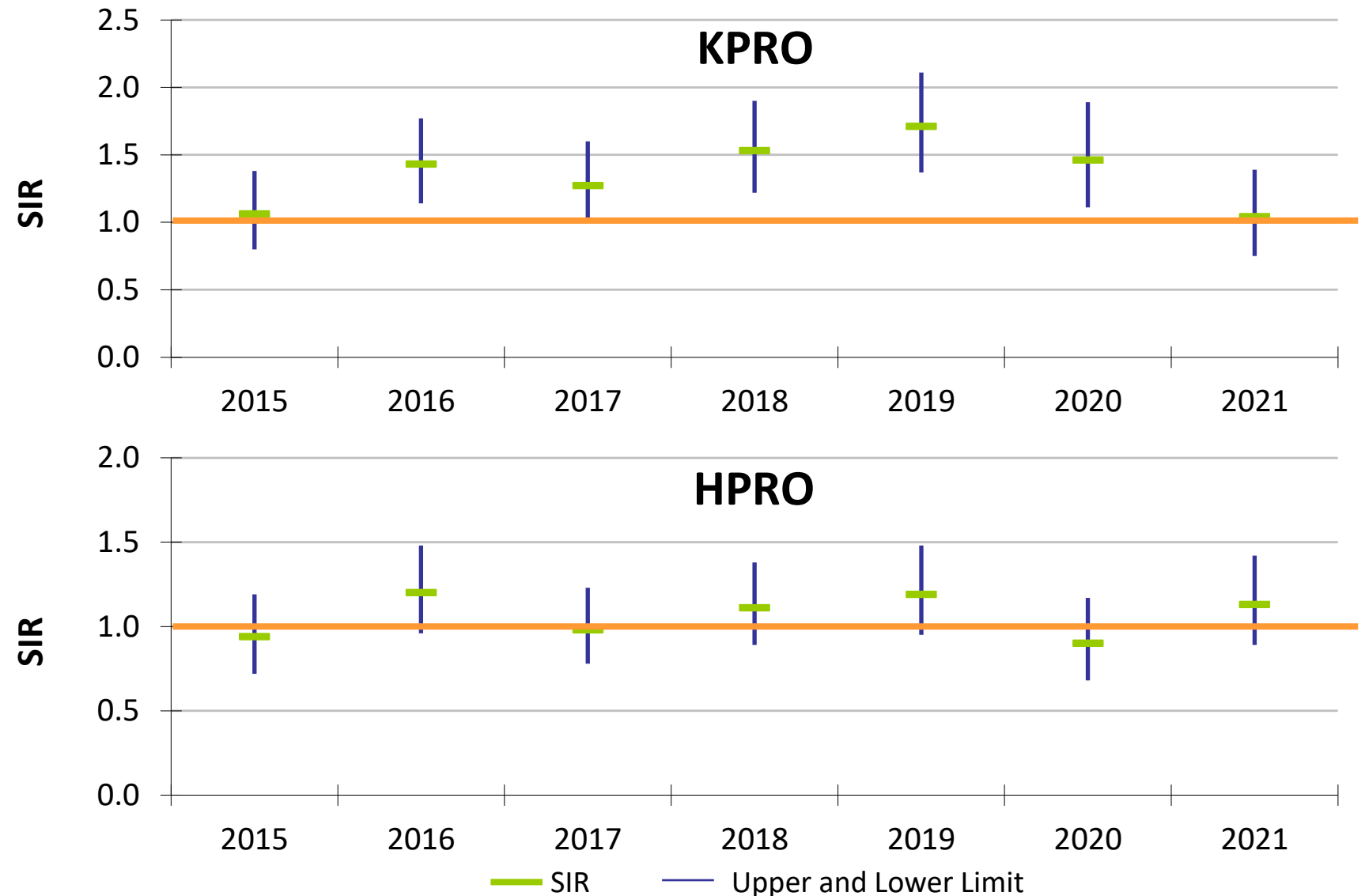
## *Knee Prosthesis (KPRO) SIR and Hip Prosthesis (HPRO) SIR*

### Key Findings

In 2021, MA acute care hospitals performing knee (KPRO) and hip (HPRO) prosthesis procedures experienced the same number of infections as predicted, based on 2015 national aggregate data.

There were 41 KPRO SSIs reported in 2021, with one facility accounting for 20% of the reported events.

There were 71 HPRO SSIs reported in 2021.



# Surgical Site Infections (SSI)

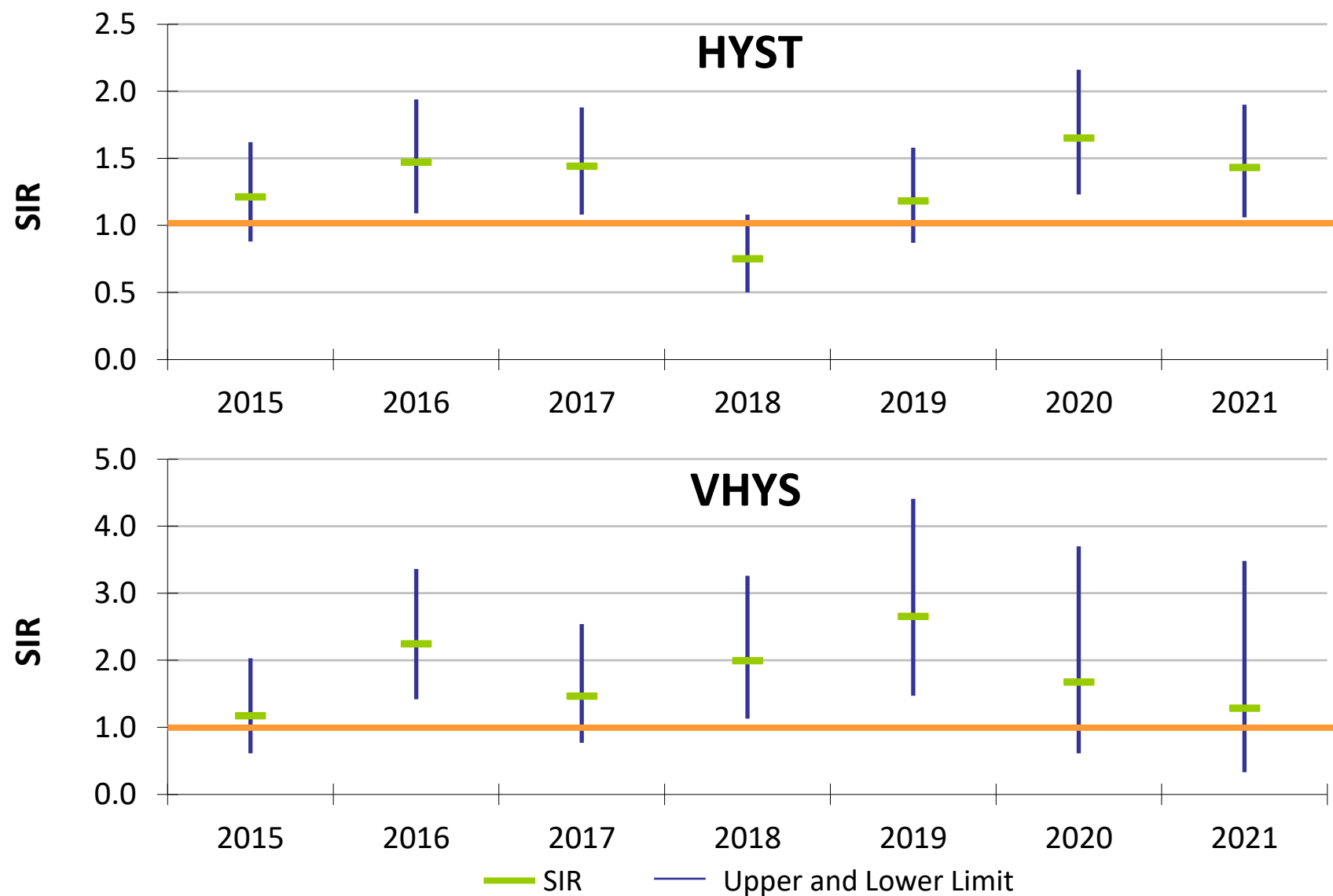
## Abdominal Hysterectomy (HYST) SIR and Vaginal Hysterectomy (VHYS) SIR

### Key Findings

In 2021, Massachusetts acute care hospitals performing abdominal hysterectomy (HYST) procedures experienced significantly higher number of infections than predicted, based on 2015 national aggregate data.

There were 45 HYST SSIs reported in 2021.

There were 3 VHYS SSIs reported in 2021.





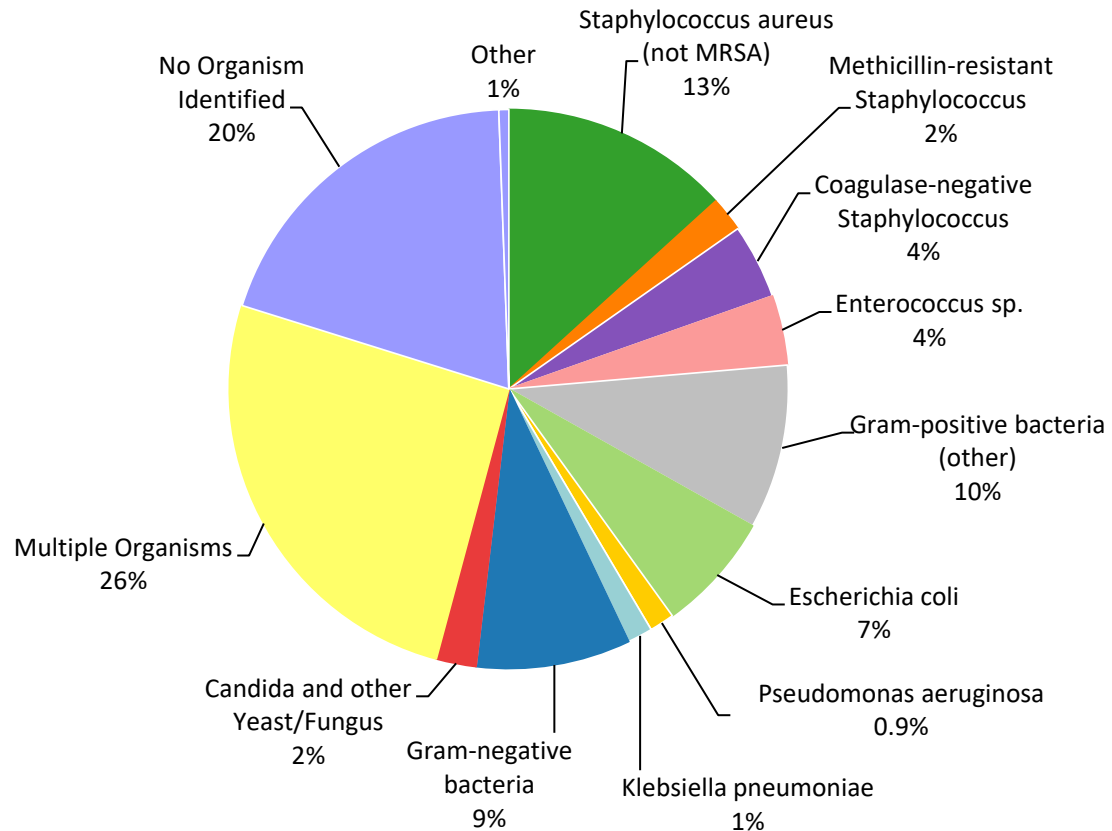
# SSI Pathogens for 2020-2021

CABG, KPRO, HPRO, HYST, VHYS, COLO

## Calendar Year 2020

January 1, 2020 – December 31, 2020

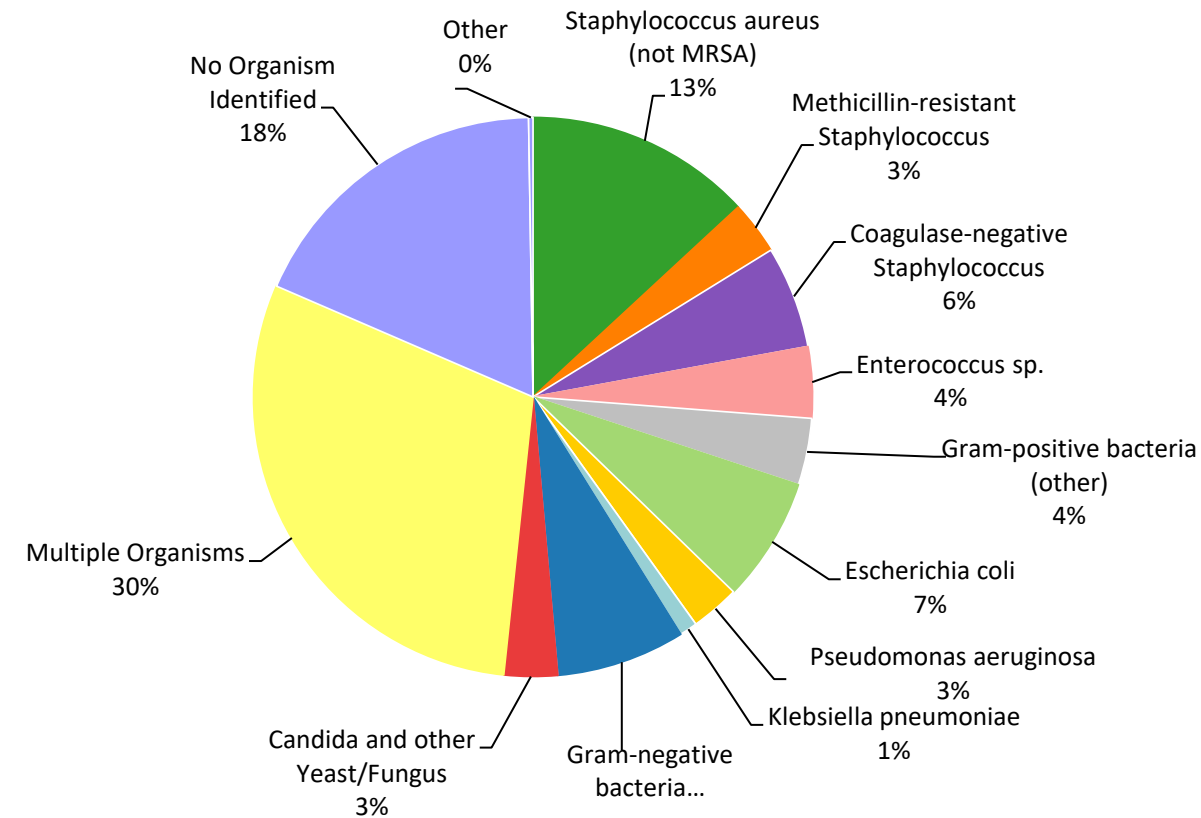
N=347



## Calendar Year 2021

January 1, 2021 – December 31, 2021

N=389



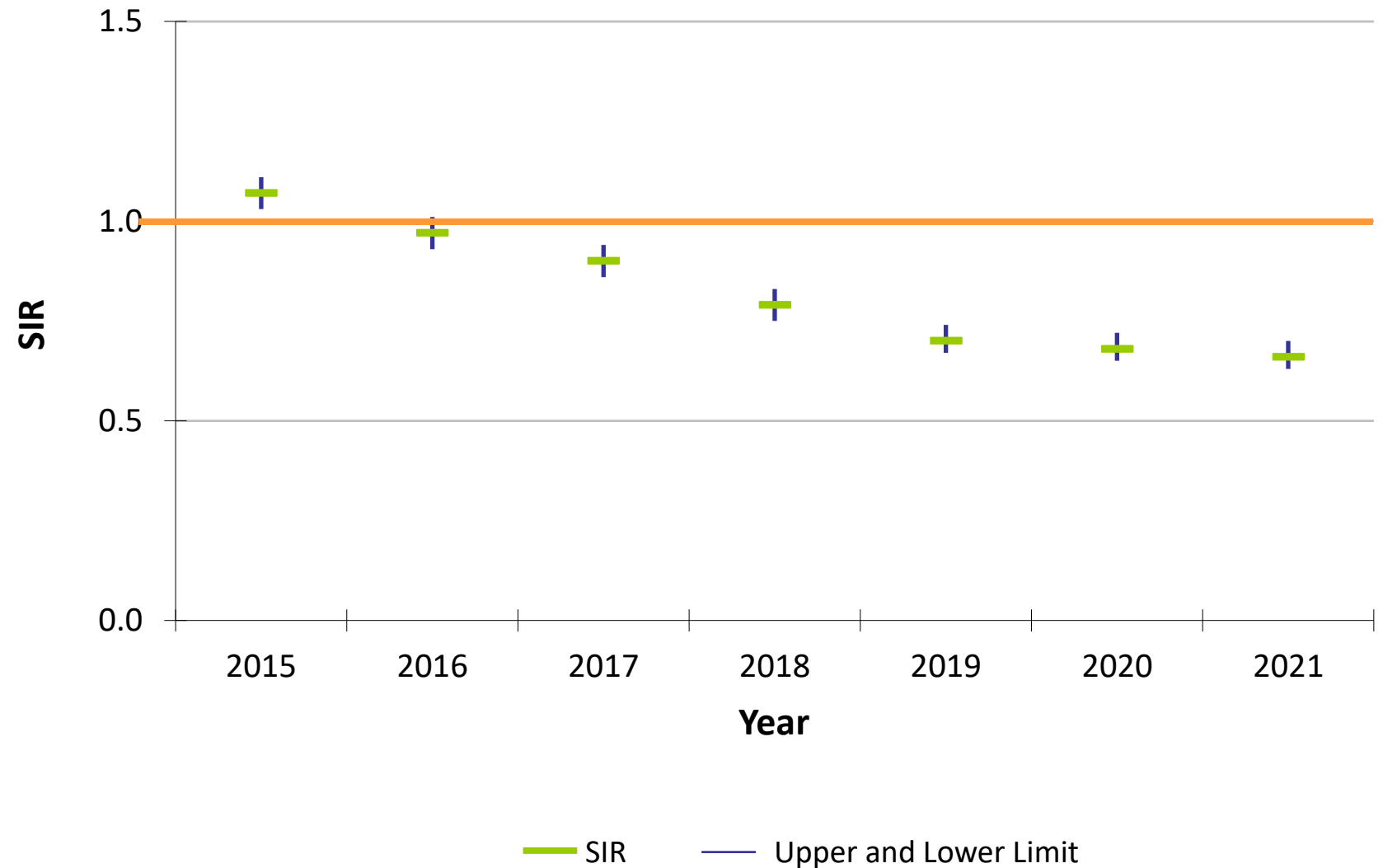
# Laboratory Identified Events (LabID)

## *Clostridioides difficile* (CDI) SIR

### Key Findings

For the past five years, Massachusetts hospitals reporting CDI events experienced significantly lower number of infections than predicted, based on 2015 national aggregate data.

There were 1,444 CDI events reported in 2021.



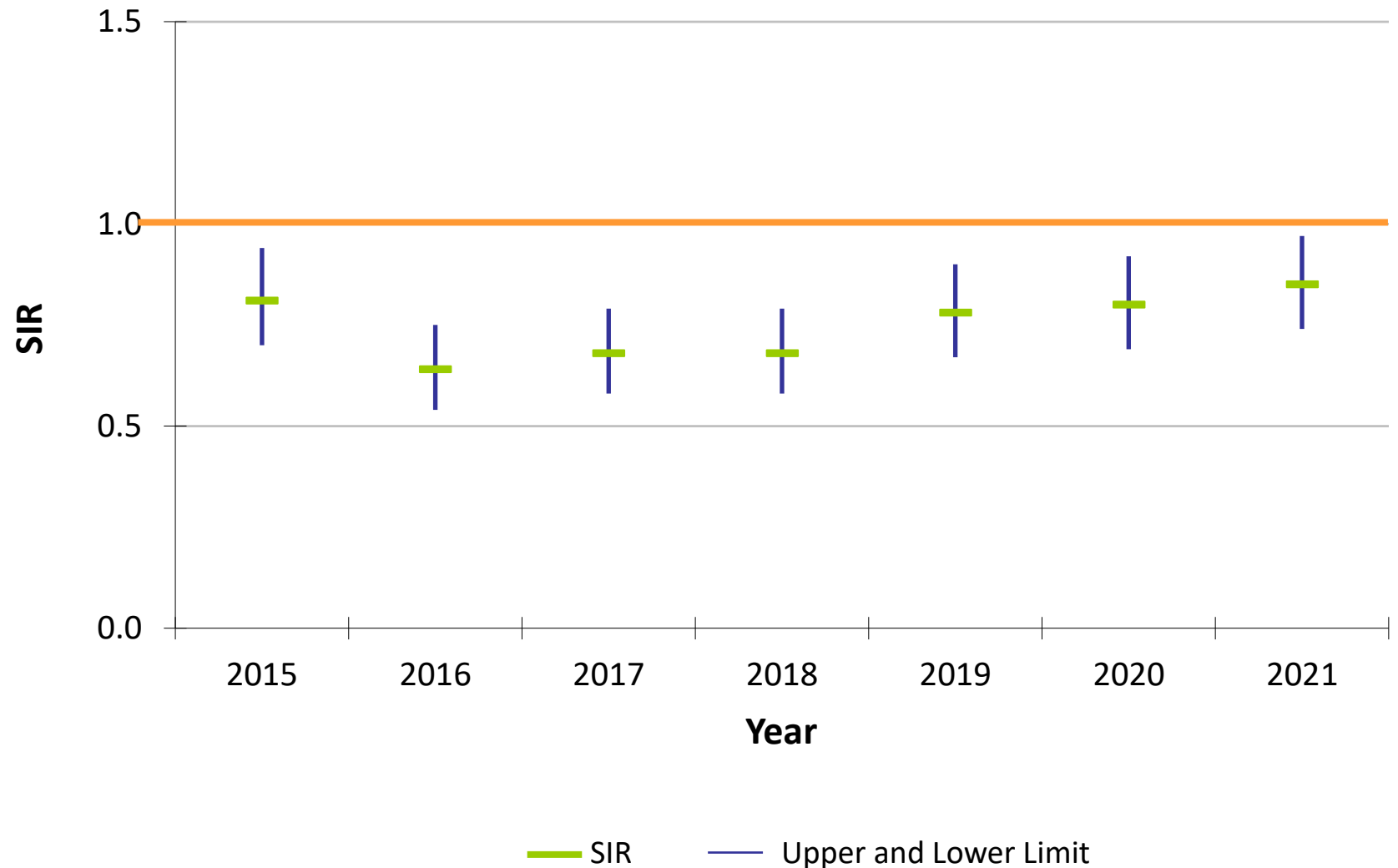
# Laboratory Identified Events (LabID)

## *Methicillin-resistant Staphylococcus aureus (MRSA) SIR*

### Key Findings

For the past seven years, Massachusetts acute care hospitals reporting MRSA events experienced significantly lower number of infections than predicted, based on 2015 national aggregate data.

There were 220 MRSA events reported in 2021.



# DPH HAI COVID-19 Activities

- In 2021, DPH Epidemiologists were assigned to each long-term care facility (LTCF) with a COVID-positive resident and/or staff to effectively manage outbreak responses and control measures. Other high risk patient settings including hospitals, assisted living residences (ALR), dialysis centers, inpatient psychiatric units, substance use disorder facilities, prisons, jails and homeless shelters also had assigned epidemiologists.
- Comprehensive on-site Infection Control Assessment and Response (ICAR) visits are conducted at licensed nursing homes, ALRs, rest homes and other healthcare facilities. During these visits an epidemiologist and public health nurse:
  - Discuss facility infection prevention and control policies and practices;
  - Observe screening areas, hand hygiene, PPE use, environmental cleaning and disinfection, testing, vaccine storage, etc. and provide feedback and coaching to the facility staff.
- Daily statewide LTCF and weekly facility-level case counts continued to be published on the COVID-19 Interactive Data Dashboard.
- Weekly analysis of nursing home data submitted to the LTCF COVID-19 Module in NHSN to monitor trends over time and to identify facilities with outbreaks, staffing or PPE shortages and those with lower resident and/or staff vaccination rates.
- Promote CDC's National Training Collaborative, Project Firstline, and developed MA-specific infection control training content and learning programs for frontline healthcare workers in partnership with the Population Health Exchange (PHX) at Boston University.

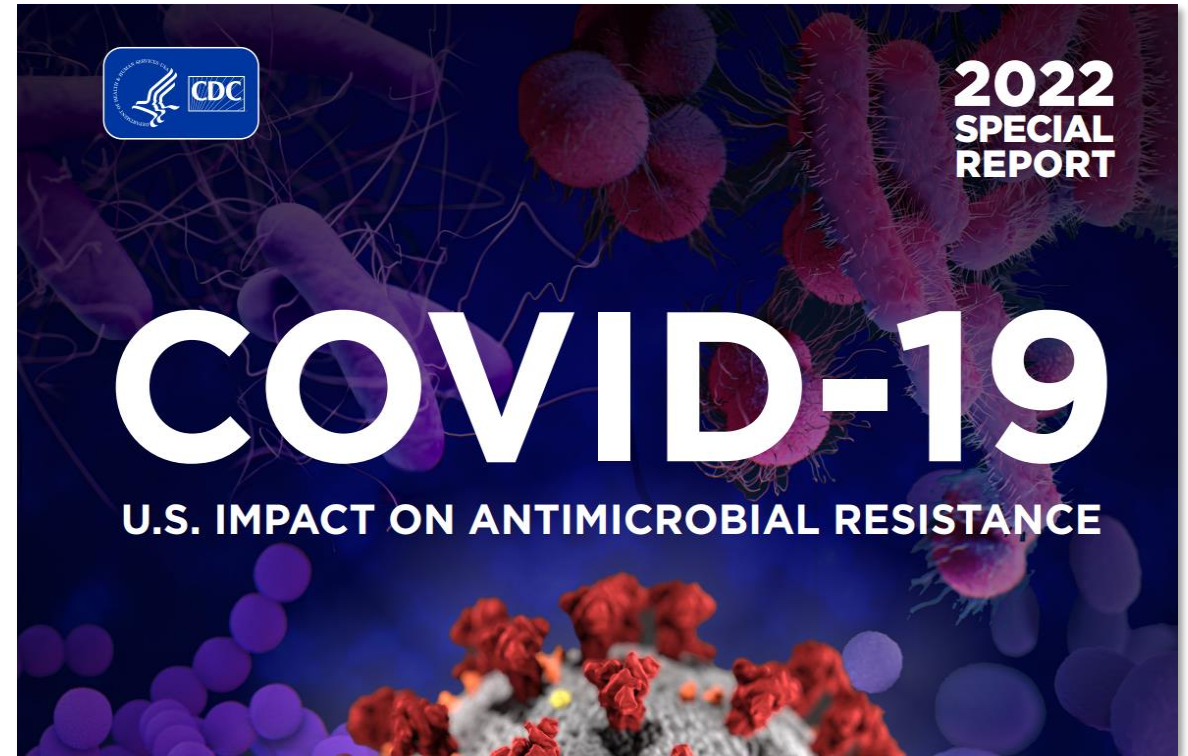
# New Activities

- Collaboration with Boston University Public Health Exchange (BU PHX) to promote infection prevention and control (IPC) training and education for all healthcare personnel (<https://maininfectioncontrol.populationhealthexchange.org/>)
  - Promote CDC's Project Firstline: <https://www.cdc.gov/infectioncontrol/projectfirstline/index.html>
  - Provide additional IPC education and training
    - Cleaning and disinfection in healthcare settings
    - Ventilation tips and strategies
    - Developing resilience in challenging times
    - Water management including sinks and drains
  - Promote antimicrobial stewardship/combat antibiotic resistance
- Developing data cleaning reports to share summary statistics with dialysis providers and non-acute hospitals on a quarterly basis before the end of 2022



# U.S. Impact on Antibiotic Resistance: CDC 2022 Special Report

- In July 2022, CDC released a [new report](#) finding that much of the progress made in the United States in previous years combating antimicrobial resistance (AR) was lost, in large part, due to the effects of the COVID-19 pandemic.
- [COVID-19: U.S. Impact on Antimicrobial Resistance, Special Report 2022](#), concludes that the threat of antimicrobial-resistant infections has worsened—with resistant hospital-onset infections and deaths both increasing at least 15% during the first year of the pandemic.



# U.S. Impact on Antibiotic Resistance: CDC 2022 Special Report



Available data show an alarming increase in resistant infections starting during hospitalization, growing at least 15% from 2019 to 2020.

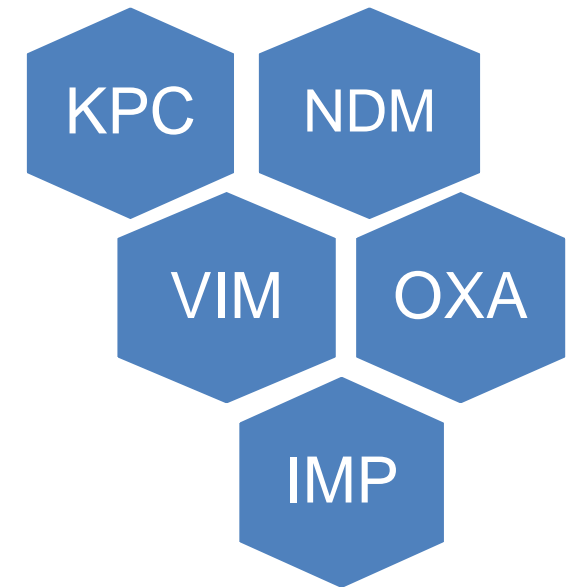
- |   |   |
|---|---|
| ▪ Carbapenem-resistant <i>Acinetobacter</i> (↑78%)  | ▪ ESBL-producing Enterobacterales (↑32%)                    |
| ▪ Antifungal-resistant <i>Candida auris</i> (↑60%)* | ▪ Vancomycin-resistant Enterococcus (↑14%)                  |
| ▪ Carbapenem-resistant Enterobacterales (↑35%)      | ▪ Multidrug-resistant <i>P. aeruginosa</i> (↑32%)           |
| ▪ Antifungal-resistant <i>Candida</i> (↑26%)        | ▪ Methicillin-resistant <i>Staphylococcus aureus</i> (↑13%) |

- Resistant hospital-onset infections and deaths both increased at least 15% during the first year of the pandemic. In a 2021 analysis, CDC also reported that, after years of steady reductions in healthcare-associated infections (HAIs), U.S. hospitals saw significantly higher rates for four out of six types of HAIs in 2020. Many of these HAIs are resistant to antibiotics or antifungals.
- There were more and sicker patients during the pandemic who required more frequent and longer use of catheters and ventilators. This may have increased risk of HAIs and spread of pathogens, especially when combined with personal protective equipment and lab supply challenges, reduced staff, and longer lengths of stay.
- Acute care hospitals also saw more *Candida auris* cases, including in COVID-19 units. *C. auris* has previously been a threat in post-acute care facilities (e.g., long-term care). The increased spread in hospitals could be a result of staffing and supply shortages and changes in infection prevention and control practices.

# Antibiotic Resistance:

## *Targeting Carbapenemase-producing Organisms (CPO) in MA*

- **Carbapenems are a class of antibiotics often considered a “last resort” to treat infections caused by Enterobacterales, Pseudomonas and Acinetobacter**
- One way these organisms are resistant to carbapenems is by producing carbapenemases
- A carbapenemase is an enzyme that can break down (and thus resist) many classes of antibiotics, including carbapenems, making infections with these organisms harder to treat
- Genes that program the organism to produce a carbapenemase can be shared between bacteria
- **Carbapenemase gene targets:** KPC, NDM, VIM, OXA and IMP





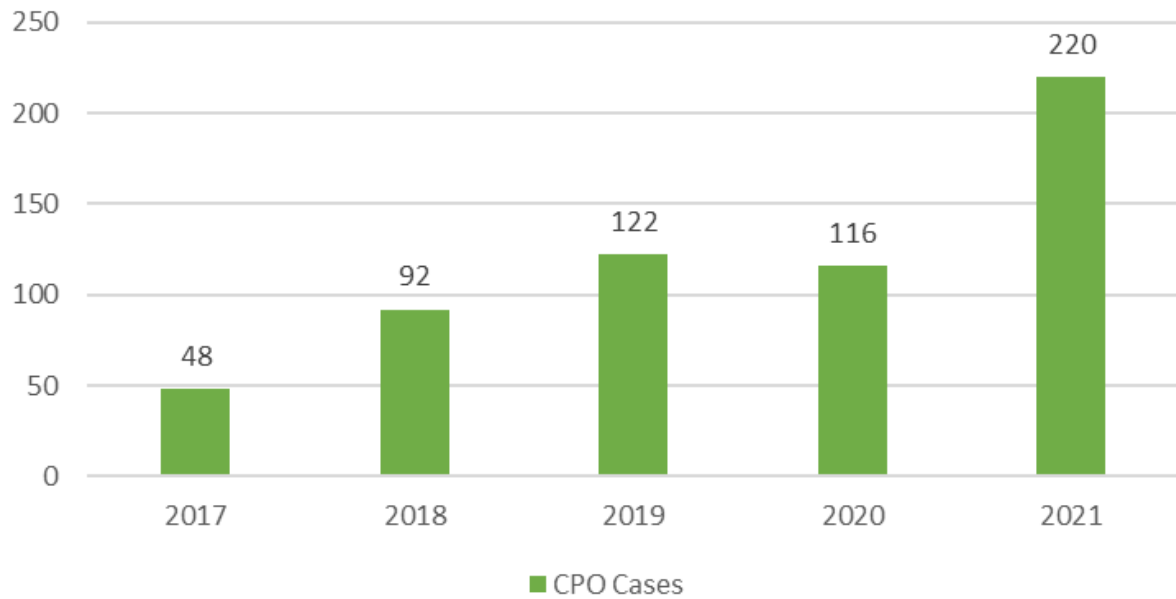
# Antibiotic Resistance Surveillance:

## *Reporting and Laboratory Testing Methods*

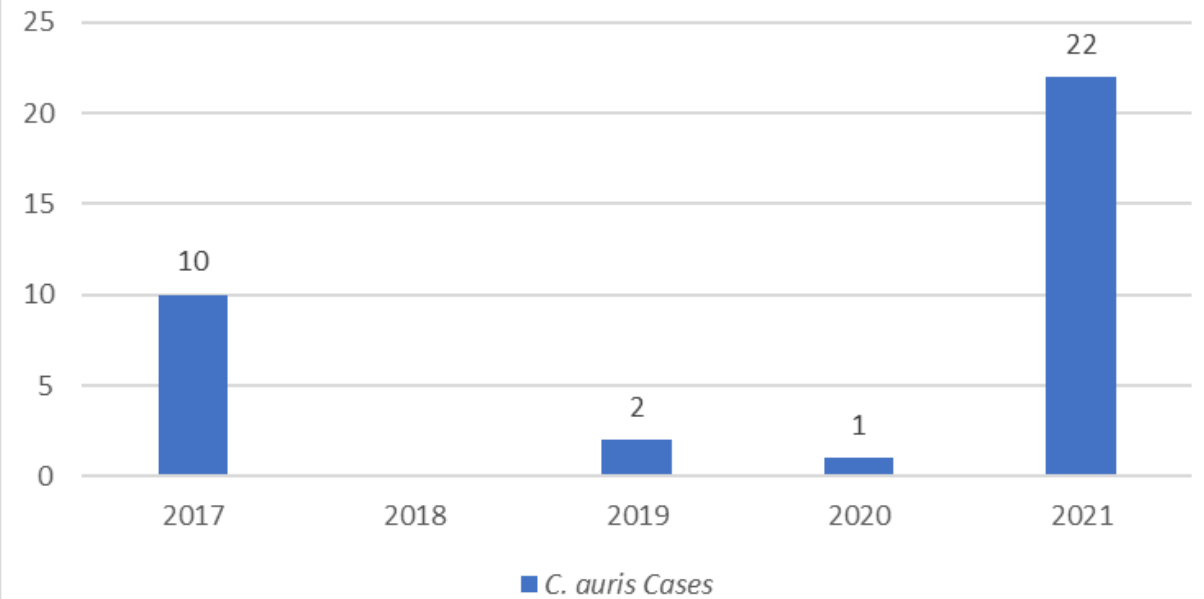
- Electronic laboratory reporting (ELR) of mandatory MDROs of concern into the Massachusetts Virtual Epidemiologic Network (MAVEN)
- Mandatory submission of selected MDRO isolates to the Massachusetts State Public Health Laboratory (MA SPHL) for advanced testing at MA SPHL and at our regional Antimicrobial Resistant Laboratory Network (ARLN), the Wadsworth Center in New York:
  - Identify novel resistance mechanisms such as genes that code for carbapenemase production or colistin resistance
  - Identify *Candida auris*
  - Test swabs to identify colonization with target organisms to detect transmission within a healthcare facility
  - Conduct whole-genome sequencing to determine relatedness of organisms to identify transmission pathways within and across healthcare facilities

# Antibiotic Resistance Surveillance: *Increasing Candida auris* and Carbapenemase-producing Organism (CPO) Cases in MA

CPO cases in Massachusetts



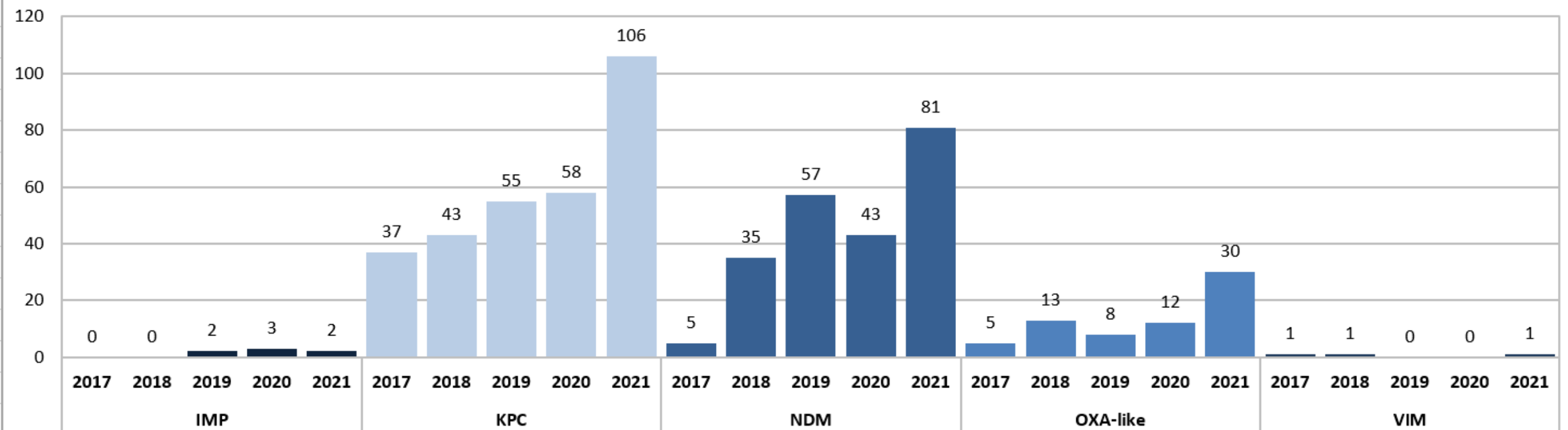
*C. auris* cases in Massachusetts



# Antibiotic Resistance Surveillance:

## *Carbapenemase-producing Organisms (CPOs) in MA*

**Carbapenemase Gene Targets Identified in Massachusetts 2017-2021**

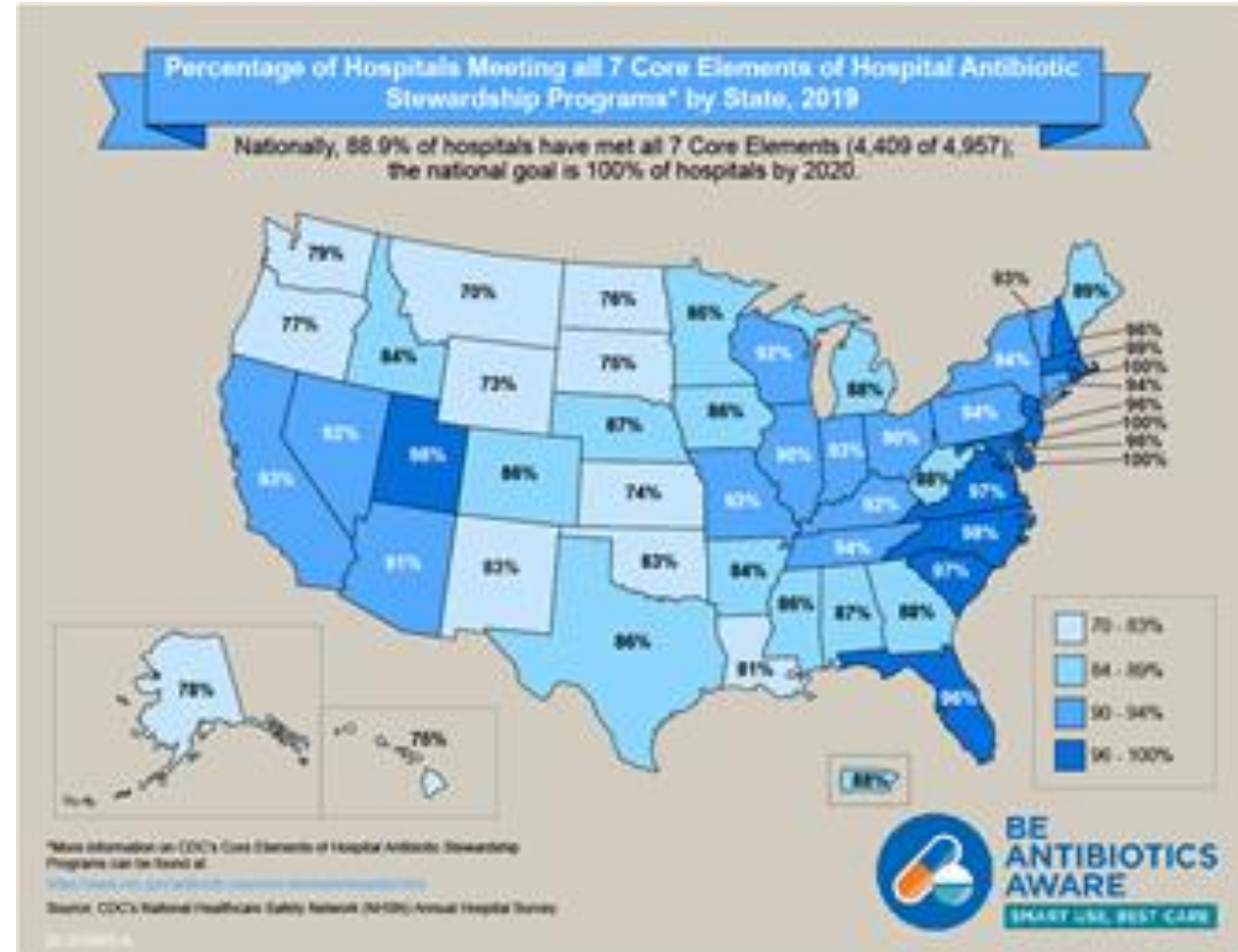


\*Data are current as of 8/15/22 and are subject to change

# Antibiotic Stewardship

- Studies indicate that between 30-50% of antibiotics prescribed in hospitals and between 40-75% of antibiotics prescribed in nursing homes are unnecessary\*
- Improved prescribing practices can help reduce rates of *Clostridioides difficile* and antibiotic resistance
- Appropriate antibiotic prescribing can improve patient outcomes and reduce healthcare costs

<https://www.cdc.gov/antibiotic-use/healthcare/>  
<https://www.cdc.gov/longtermcare/prevention/antibiotic-stewardship.html>



# Antibiotic Stewardship: Prevention and Educational Activities

- Collection, monitoring, and benchmarking of facility-level antibiotic use data in long-term care facilities (86 facilities reported at least one month of data in 2021, averaging of 46 participating facilities each month) with continued expansion of this program
- Ongoing collaboration with antibiotic stewardship (AS) experts from Tufts Medical Center to enhance AS support and activities in our long-term care facilities including monthly office hours for long term care facilities (LTCF) and a new AS Honor Roll to highlight facilities with consistent participation:  
<https://maininfectioncontrol.populationhealthexchange.org/ltnf-as/antibiotic-stewardship-honor-roll/>
- Collaboration with CDC and several mid-Atlantic states on a six-part webinar series (CEUs offered) covering prevention and control of MDROs, Enhanced Barrier Precautions, cleaning and disinfection, hand hygiene, and water management including sink hygiene. Several hundred MA healthcare providers have participated in this series.
- Thirty-four acute care hospitals currently participate in the NHSN antibiotic use (AU) module to better understand trends in antibiotic use and to monitor stewardship activities- we continue to leverage this data and engage remaining acute care hospitals in reporting to have a comprehensive, statewide picture of antibiotic use in the acute care setting.



# Massachusetts Department of Public Health

**Thank you for the opportunity to present this information today.**

**Please direct any questions to:**

**Eileen McHale, RN, BSN**

Healthcare Associated Infection Coordinator

Bureau of Health Care Safety and Quality

[eileen.mchale@state.ma.us](mailto:eileen.mchale@state.ma.us)



# Massachusetts Department of Public Health

## Massachusetts Healthcare Personnel Influenza Vaccination in Health Care Facilities:

*Seasons 2019 -2022*

Katherine T. Fillo, Ph.D, MPH, RN-BC, Director of Clinical Quality Improvement

Fareesa Hasan, MPH, Epidemiologist

Eileen McHale, RN, BSN, Healthcare Associated Infection Coordinator

# 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)



# 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.

The Advisory Committee on Immunization Practices (ACIP) recommends that HCP receive an annual influenza vaccination to reduce influenza related morbidity and mortality among HCP and their patients as well as reduce absenteeism among 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 three ways:

1. **National Healthcare Safety Network (NHSN) at the Centers for Disease Control and Prevention (CDC):** Acute care hospitals, ambulatory surgical centers, dialysis centers and non-acute hospitals
2. **Health Care Facility Reporting System (HCFRS):** Nursing homes, rest homes, and adult day health programs
3. **Online survey:** Clinics

# Reporting Requirements

All facilities were required to submit the following data elements, for the period October 1 to March 31 of each flu season:

- Total number of HCP who worked at least one day in the reporting period
- 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

Facilities that reported data to NHSN were required to stratify this data by HCP type.

# Measures and Calculations

## Percentage HCP vaccinated in each season

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

## Percentage HCP in facility that declined vaccine in each season

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

## Percentage HCP in facility with a medical contraindication to vaccine in each season

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

## Percentage HCP in facility with unknown influenza vaccine status in each season

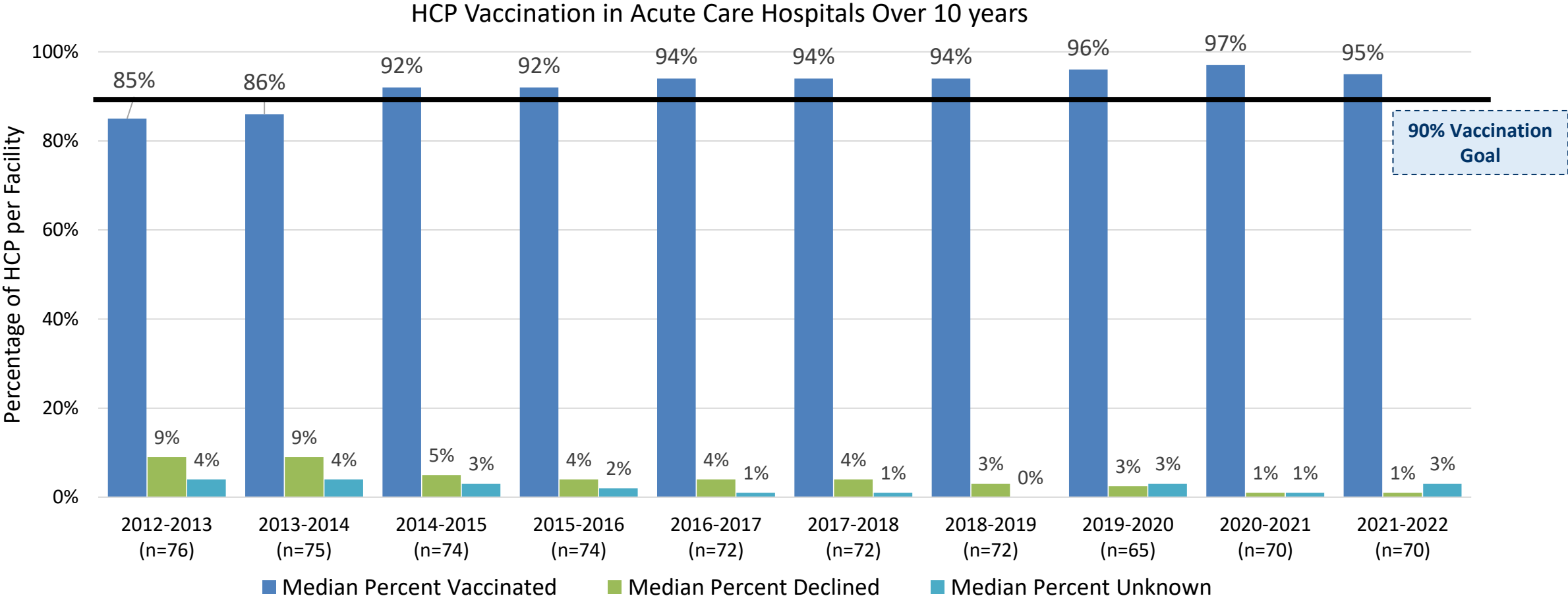
$$\text{Unknown Vaccine Status} = \frac{\text{\# HCP with Unknown Vaccine Status}}{\text{Total \# HCP at Facility}}$$

# 2021-2022 Results Reported Through NHSN

## Mean percentage of HCP Influenza During 2021-2022 Season

	Acute Care Hospitals	Ambulatory Surgical Centers	Dialysis Centers	Non-Acute Care Hospitals
<b>Reporting Facilities</b>	69	25	45	29
<b>Mean HCP Vaccinated</b>	94%	90%	59%	77%
Vaccinated at Facility	57%	55%	66%	58%
Vaccinated Elsewhere	36%	45%	34%	42%
<b>Mean HCP Declined Vaccination</b>	1%	7%	3%	6%
<b>Mean HCP with a Medical Contraindication</b>	1%	1%	1%	1%
<b>Mean HCP with Unknown Vaccination Status</b>	5%	3%	37%	16%

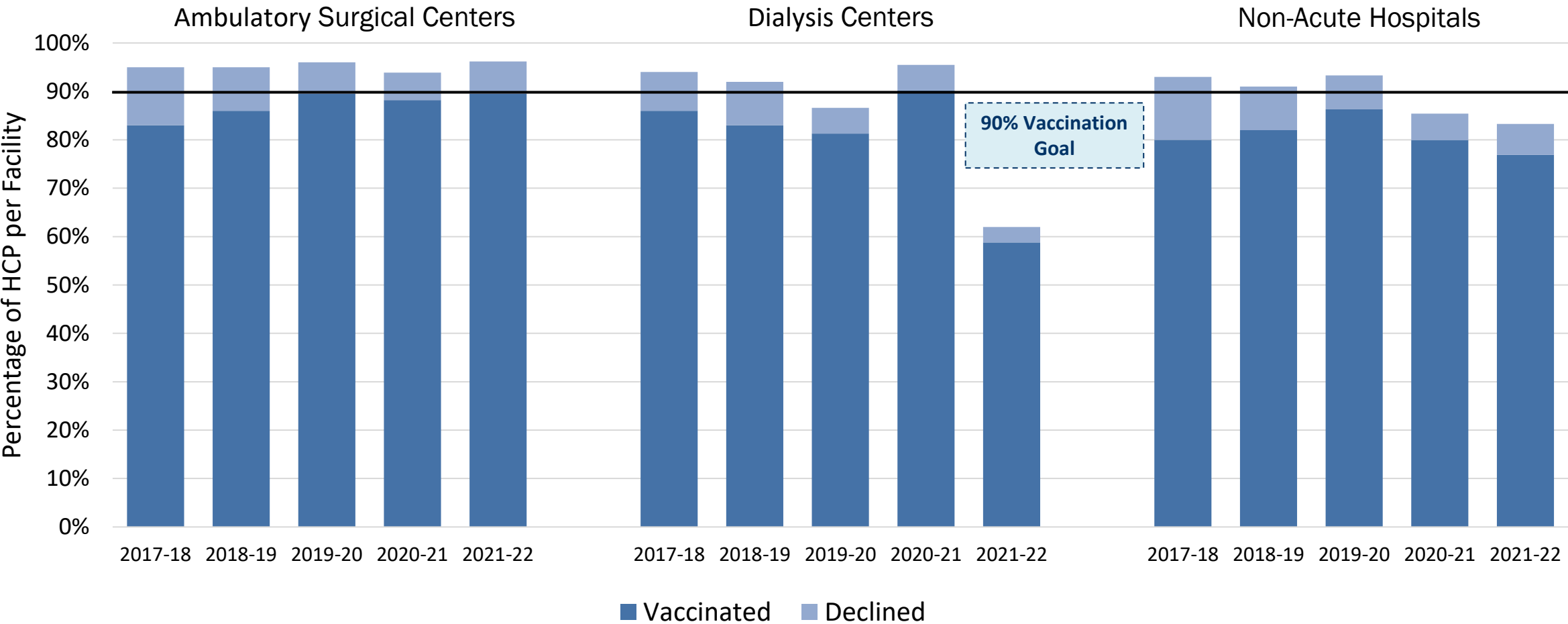
# State-wide Flu Vaccination Trends Over Time: Acute Care Hospitals



Median HCP vaccine coverage remained constant in 2019-22 and exceeded the Healthy People 2020 benchmark of 90%.

# 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: 2017-2022 Influenza Seasons



# 2021-2022 Results Reported to DPH

## Mean percentage of HCP Influenza During 2021-2022 Season

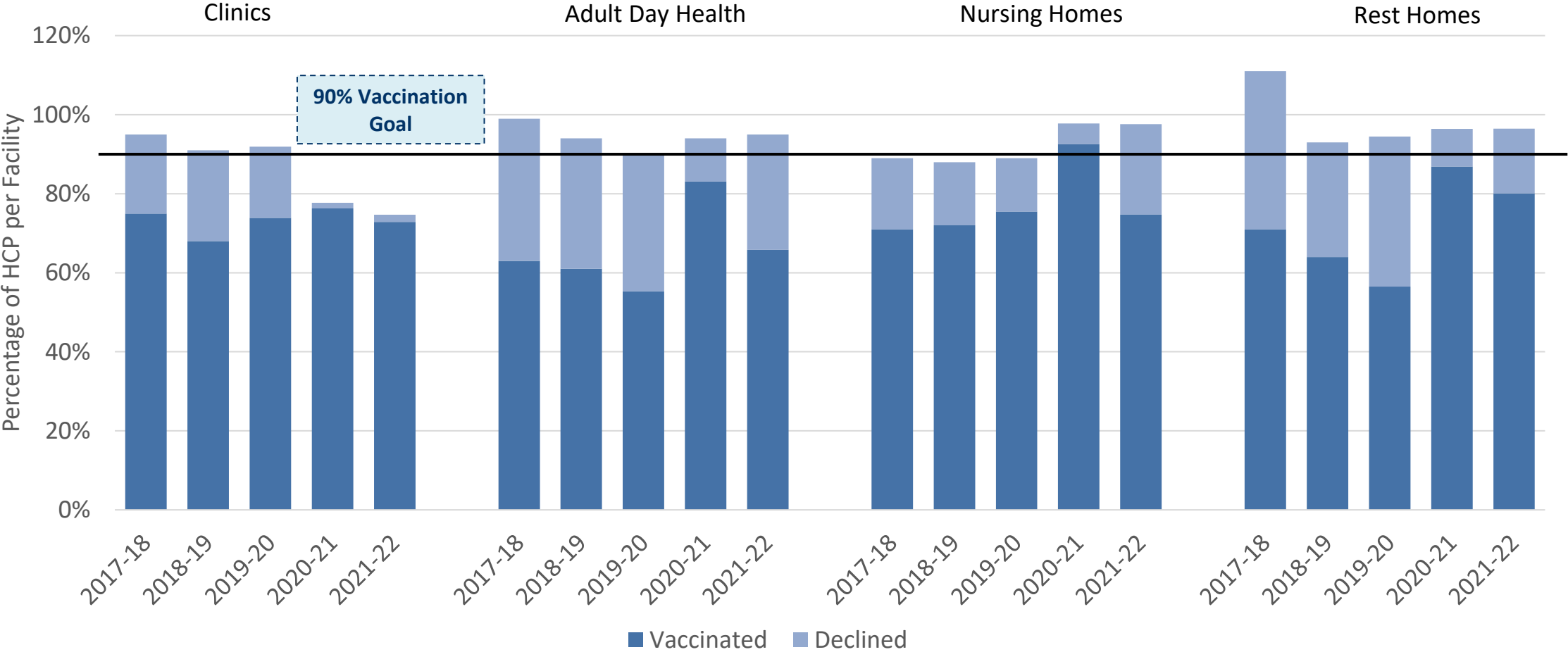
	Clinics	Adult Day Health	Nursing Homes	Rest Homes
<b>Reporting Facilities</b>	223	118	317	44
<b>Mean HCP Vaccinated</b>	73%	66%	75%	80%
Vaccinated at Facility	39%	26%	67%	53%
Vaccinated Elsewhere	61%	74%	33%	47%
<b>Mean HCP Declined Vaccination</b>	2%	29%	23%	16%
<b>Mean HCP with a Medical Contraindication</b>	0%	0%	1%	0%
<b>Mean HCP with Unknown Vaccination Status*</b>	24%	-	-	-

*\*The HCFRS form did not include Unknown as an option for influenza season 2021-2022*



# 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: 2017-2022 Seasons



# Conclusions

- Overall acute care hospital vaccine coverage exceeds the DPH and Healthy People 2020 benchmark >90% for the three consecutive influenza seasons
- Ambulatory Surgical Centers reached the established overall performance goal in 2021-2022 season
- Four facility types reported higher vaccination rates in 2019-2020 when compared to prior seasons: Acute Care Hospitals, Ambulatory Surgical Centers, Non-Acute Hospitals, and Clinics

# DPH Public Health Actions

## **DPH continues to take the following action steps:**

- 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, ombudspersons and patient/family councils
- Distribution of job aids to assist clinics, adult day health centers, nursing homes and rest homes in tracking and monitoring HCP influenza vaccination progress.
- Resume hosting webinars to provide updated information for each influenza season.
  - Topics will include: National and Massachusetts flu activity; best practices to promote HCP influenza vaccination; and guidance on data submission

# 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
- During the ongoing COVID-19 pandemic with the potential for concurrent COVID-19 and influenza outbreaks, DPH will continue to promote the safe co- administration of flu and COVID-19 vaccination
- Building on the success of LTCFs reporting COVID-19 data in NHSN, DPH will investigate the feasibility of transitioning LTCF HCP influenza reporting to the national application beginning with the 2022-2023 influenza season
- DPH will continue to provide useful resources educational materials, strategies and interventions to promote increasing vaccination coverage among HCP
- DPH will conduct focused outreach to facilities where opportunities for improvement have been identified to provide technical assistance on best practices to promote HCP influenza vaccination

# 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/info-details/flu-vaccination-reports-for-healthcare-personnel>



# Massachusetts Department of Public Health

**Thank you for the opportunity to present this information today.**

**Please direct any questions to:**

**Katherine T. Fillo, PhD, MPH RN-BC**

Director of Clinical Quality Improvement  
Bureau of Health Care Safety and Quality

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# Massachusetts Department of Public Health

*Next Meeting:*  
**October 12, 2022**