# Hospital-Acquired Infections in New York State, 2023

## Part 2: Technical Report

NEW YORK STATE | Department of Health

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## Introduction

In accordance with public health law §2819, New York State (NYS) has been tracking hospital-acquired infections (HAIs) since 2007. This law was created to provide the public with fair, accurate, and reliable HAI data to compare hospital infection rates and to support quality improvement and infection prevention activities in hospitals. Table 1 summarizes the progression of NYS reporting requirements through 2023 and includes additional data available through the data use agreement (DUA).

**Table 1. HAIs reported by NYS hospitals, by year.**

| Type of Infection | 2007-2011 | 2012 | 2013 | 2014 | 2015-2018 | 2019 | Since 2020* |
|---|---|---|---|---|---|---|---|
| Central line-associated bloodstream infections in ICUs | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Colon surgical site infections | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Coronary artery bypass graft surgical site infections | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Hip replacement surgical site infections (since 2008) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Clostridioides difficile* infections (pilot Oct 2009) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Abdominal hysterectomy surgical site infections | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Carbapenem-resistant Enterobacterales infections | | | P[1] | ✓ | ✓ | ✓ | ✓ |
| Central line-associated bloodstream infections in medical/surgical/medical-surgical/step-down wards | | | DUA | DUA | ✓ | ✓ | ✓ |
| Spinal fusion surgical site infections | | | | | | ✓ | ✓ |
| Central line-associated bloodstream infections in oncology and mixed-acuity units | | | | | | ✓ | ✓ |
| Central line-associated bloodstream infections in telemetry units | | | | | | | ✓ |
| Catheter-associated urinary tract infections | | | DUA | DUA | DUA | DUA | DUA |
| Methicillin-resistant *Staphylococcus aureus* bacteremia | | | DUA | DUA | DUA | DUA | DUA |
| Antibiotic use and antimicrobial resistance | | | DUA | DUA | DUA | DUA | DUA |

✓= full reporting (hospital-specific rates published); P[1]= pilot reporting half year from June (hospital-specific rates not published); **DUA** = data use agreement; not required by NYS but reported for CMS programs and available through a DUA between CDC and NYS beginning May 2013. * Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

The NYS Department of Health (the Department) determines which HAI indicators must be reported annually with the help of a technical advisory workgroup (TAW), a panel of experts in the prevention and reporting of HAIs. In addition to reporting the HAI data mandated by NYS, hospitals enter data into the National Healthcare Safety Network (NHSN) for federal programs (e.g., Centers for Medicare and Medicaid Services [CMS]), regional collaboratives, and local surveillance. The Department can access data not mandated by NYS through a data use agreement (DUA) with the Centers for Disease Control and Prevention (CDC). The DUA specifies that the Department may only use this other data for surveillance or prevention purposes, not for public reporting of facility-specific data or for regulatory action. The Department does not audit this data. The data are only reported in aggregate. More information about the DUA is available on the CDC website at Data Use Agreements (DUA) with NHSN | NHSN | CDC.

This report focuses on HAI rates in 161 NYS hospitals in 2023. NYS does not require reporting by hospitals that do not have enough data to produce statistically meaningful rates. These are:

- critical access hospitals or hospitals with fewer than 26 acute care beds,
- hospitals that perform fewer than 20 reportable surgeries, have fewer than 50 central line days per year, and an average length of stay of less than 3 days, and
- hospitals that are exclusively research, psychiatric, addiction recovery (alcohol or drugs), or freestanding rehabilitation.

The detailed information in this report is primarily intended for use by hospital infection preventionists (IPs), but it may also be used by others who want more detailed information than is available in "Part 1: Summary for Consumers" of this two-part report.

Because of substantive changes to HAI surveillance definitions that occurred between 2007 and 2015, state and federal agencies designated 2015 as the "baseline" for assessment of trends. This baseline will be used until surveillance definitions change such that the comparisons are no longer valid or until policy changes require a new baseline (slated to be available in 2025). This report will assess trends between 2015 and 2023. For information on HAI rates before 2015, please visit our website:
(https://www.health.ny.gov/statistics/facilities/hospital/hospital_acquired_infections/)

## Surgical site infections (SSIs)

For each type of surgical site infection (SSI), the following pages present detailed information on the severity (depth) of infections, the circumstance of detection (initial hospitalization, readmission, etc.), the microorganisms involved, and time trends. In addition, detailed tables show each individual hospital's risk-adjusted infection rates compared to the state average.

SSIs are categorized into three groups depending on the severity of the infection:

- Superficial incisional SSI – This infection occurs around the skin where the surgical incision was made. The patient may have pus draining from the incision or laboratory-identified pathogens from cultures of the incision.
- Deep incisional SSI – This infection occurs beneath the incision in muscle tissue. Pus may drain from the incision, and patients may experience fever and pain. The incision may reopen on its own, or a surgeon may reopen the wound.
- Organ or space SSI – This type of infection occurs in body organs or the space between organs. Pus may collect in an abscess below the muscles, resulting in inflammation and pain.

Hospital infection preventionists (IPs) use a wide variety of surveillance methods to identify SSIs. Some routinely review all operative procedures for SSIs, while others review a subset of operative procedures that are flagged based on data mining systems, wound culture reports, readmission, return to surgery, and discharge coding. IPs review the selected procedures using many data sources, including laboratory reports, operative reports, physician dictated operative notes, progress notes, discharge notes, history and physical examination documentation, return to surgery, radiology reports, infectious disease consultations, intraoperative reports, outpatient/emergency room visits, vital sign documentation, antibiotic prescriptions, and coding summary sheets.

SSIs could be detected on the original hospital admission, readmission to the same hospital, readmission to a different hospital, or during an outpatient, post-discharge surveillance [PDS] visit that did not result in readmission (PDS infections). The ability to identify SSIs among patients seen by physicians in outpatient visits varies among hospitals. PDS infections are therefore excluded from hospital-specific comparisons in this report so as not to penalize facilities with the best surveillance systems.

If there is evidence of clinical infection or abscess at the time of a surgical procedure, any resulting SSI will be designated as "present at time of surgery" (PATOS). Because PATOS SSIs are more difficult to prevent, these SSIs and procedures are excluded from the final hospital risk-adjusted rates.

## Colon surgical site infections

In 2023, 150 hospitals reported a total of 1,223 colon SSIs out of 19,538 procedures, a crude rate of 6.26 infections per 100 procedures. The Department excludes some of these SSIs and procedures from SSI rates before evaluating time trends and comparing hospital performance, as described below.

Of the 1,223 infections, 388 (32%) were classified as PATOS. The PATOS SSIs were predominantly organ/space (88%) and at completion of the surgery, 84% were closed by primary intention. PATOS SSIs/procedures were excluded from the final SSI rate because these infections are more difficult to prevent. However, hospitals are encouraged to continue to identify and report these types of procedures to improve their infection prevention efforts.

Of the remaining 835 infections, 42% were superficial, 8% were deep, and 50% were organ/space (Table 2). Half of the SSIs (52%) were detected during the initial hospitalization; 30% were identified upon readmission to the same hospital; 5% were identified upon readmission to another hospital; and 13% were PDS infections. The majority of the PDS infections were superficial. Detection of SSIs in outpatient locations is labor intensive and is not standardized across hospitals; therefore, the Department did not include these 106 PDS infections in the final SSI rate so as not to penalize facilities with the best surveillance systems. The colon SSI rate in 2023 was 3.81 per 100 procedures (729/19,150).

**Table 2. Method of detection of colon SSI by depth of infection, New York State 2023**

| | When detected | | | | |
|---|---|---|---|---|---|
| **Depth of Infection (Row%) (Column%)** | **Initial hospitalization** | **Readmitted to the same hospital** | **Readmitted to another hospital** | **Outpatient PDS visit (not readmitted)** | **Total** |
| **Superficial Incisional** | 165<br>(46.5)<br>(37.8) | 81<br>(22.8)<br>(32.1) | 14<br>(3.9)<br>(35.0) | 95<br>(26.8)<br>(89.6) | 355<br>(42.5) |
| **Deep Incisional** | 32<br>(49.2)<br>(7.3) | 20<br>(30.8)<br>(8.0) | 6<br>(9.2)<br>(15.0) | 7<br>(10.8)<br>(6.6) | 65<br>(7.8) |
| **Organ/Space** | 240<br>(57.8)<br>(54.9) | 151<br>(36.4)<br>(59.9) | 20<br>(4.8)<br>(50.0) | 4<br>(1.0)<br>(3.8) | 415<br>(49.7) |
| **Total** | 437<br>(52.3) | 252<br>(30.0) | 40<br>(4.8) | 106<br>(12.7) | 835 |

PDS: Post discharge surveillance. NYS data reported as of June 16, 2024. Excludes infections present at time of surgery (PATOS).

### Risk adjustment for colon SSIs

The following risk factors were associated with these SSIs and included in the risk adjustment model:

- For each increase in American Society of Anesthesiologists (ASA) score (1, 2, 3/4/5), a measure of systemic disease, patients were 1.4 times more likely to develop an SSI.
- Procedures that used traditional surgical incisions were 2.1 times more likely to result in SSI than procedures performed entirely with a laparoscopic instrument.
- Patients with trauma were 1.6 times more likely to develop an SSI than patients without trauma at the time of surgery.
- For each additional hour of procedure duration, patients were 1.1 times more likely to develop an SSI.

**Microorganisms identified in colon SSIs**

Out of 1,223 infections (includes PDS infections), no microorganism was identified in 411 infections. The most common microorganisms associated with colon SSIs were Enterococci (26%) and *Escherichia coli* (23%) (Table 8).

Trends between 2015 and 2023 in SSI rates after excluding PATOS and PDS infections are shown in Figure 1-6, and hospital-specific SSI rates are provided in Table 9.

## Abdominal hysterectomy surgical site infections

In 2023, 141 hospitals reported a total of 198 abdominal hysterectomy (HYST) SSIs out of 12,945 procedures, a rate of 1.53 infections per 100 procedures. The Department excludes some of these SSIs and procedures from SSI rates before evaluating time trends and comparing hospital performance, as described below.

Of the 198 infections, 8 were classified as PATOS and excluded from the final SSI rate because these infections are more difficult to prevent. Of the remaining 190 infections, 43% were superficial, 10% were deep, and 47% were organ/space (Table 3). Most of the SSIs (53%) were detected upon readmission to the same hospital; 11% were identified during the initial hospitalization; 6% were detected upon readmission to another hospital; and 30% were PDS infections. Most (81%) of the PDS infections were superficial. Detection of SSIs in outpatient locations is labor intensive and is not standardized across hospitals; therefore, the Department did not include these 57 PDS infections in the final SSI rate so as not to penalize facilities with the best surveillance systems.

**Table 3. Method of detection of abdominal hysterectomy surgical site infection by depth of infection, NYS 2023**

| | When detected | | | | |
|---|---|---|---|---|---|
| **Depth of infection (Row%) (Column%)** | **Initial hospitalization** | **Readmitted to the same Hospital** | **Readmitted to another hospital** | **Outpatient PDS visit (not readmitted)** | **Total** |
| **Superficial incisional** | 8<br>(9.8)<br>(38.1) | 24<br>(29.6)<br>(23.8) | 3<br>(3.7)<br>(27.3) | 46<br>(56.8)<br>(80.7) | 81<br>(42.6%) |
| **Deep incisional** | 2<br>(10.5)<br>(9.5) | 12<br>(63.2)<br>(11.9) | 1<br>(5.3)<br>(9.1) | 4<br>(21.0)<br>(7.0) | 19<br>(10.0%) |
| **Organ/Space** | 11<br>(12.2)<br>(52.4) | 65<br>(72.2)<br>(64.4) | 7<br>(7.8)<br>(63.6) | 7<br>(7.8)<br>(12.3 | 90<br>(47.4%) |
| **Total** | **21 (11.0%)** | **101 (53.2%)** | **11 (5.8%)** | **57 (30.0%)** | **190** |

PDS: Post discharge surveillance. New York State data reported as of June 16. 2024. Excludes PATOS

**Risk adjustment for abdominal hysterectomy SSI**

Certain patient and procedure-specific factors increase the risk of developing an SSI following abdominal hysterectomy. In 2023, after excluding PDS infections and SSIs that were PATOS, the following risk factors were associated with SSIs. These variables were used to risk-adjust hospital-specific rates.

- Patients with an ASA score greater than 3 were 1.5 times more likely to get an SSI than patients with a lower ASA score.
- Patients with obesity (body mass index [BMI] greater than 30) were almost 2 times more likely to develop an SSI than patients with a BMI less than or equal to 30.

- Procedures with duration greater than three hours were 1.8 times more likely to result in SSI than procedures less than three hours.

**Microorganisms identified in HYST SSIs**

Out of 198 infections (includes PDS infections), no microorganism was identified in 89 infections. The most common microorganisms associated with HYST SSIs were *Escherichia coli* (17%) and Enterococci (14%) (Table 8).

Trends between 2015 and 2023 in SSI rates after excluding PATOS and PDS infections are shown in Figure 1-6, and hospital-specific SSI rates are provided in Table 9.

## Coronary artery bypass graft SSIs

Coronary artery bypass graft (CABG) surgery usually involves two surgical sites: a chest incision and a separate site to harvest "donor" vessels. Because infections can occur at either incision site, the SSI rates are presented separately.

### CABG chest site infections

In 2023, 35 hospitals reported a total of 141 CABG chest site SSIs out of 9,642 procedures, a rate of 1.46 infections per 100 procedures. Of the 141 infections, one was excluded because of PATOS.

Of the remaining 140 infections, 38.5% were superficial, 28.5% were deep, and 33% were organ/space (Table 4). Most of the SSIs (59%) were detected upon readmission to the same hospital; 19% were identified during the initial hospitalization; 6% were detected upon readmission to another hospital; and 16% were PDS infections. The majority (74%) of these outpatient-detected SSIs were superficial, 22% were deep and one (4%) was an organ space infection. Detection of SSIs in outpatient locations is labor intensive and is not standardized across hospitals; therefore, the Department did not include these 23 PDS infections in the final SSI rate so as not to penalize facilities with the best surveillance systems.

**Table 4. Method of detection of coronary artery bypass graft chest site SSIs by depth of infection, New York State 2023**

| | When detected | | | | |
|---|---|---|---|---|---|
| **Depth of infection (Row%) (Column%)** | **Initial hospitalization** | **Readmitted to the same hospital** | **Readmitted to another hospital** | **Outpatient PDS visit (not readmitted)** | **Total** |
| **Superficial Incisional** | 9<br>(16.7)<br>(34.6) | 23<br>(42.6)<br>(27.7) | 5<br>(9.3)<br>(62.5) | 17<br>(31.4)<br>(73.9) | 54<br>(38.6) |
| **Deep Incisional** | 5<br>(12.5)<br>(19.2) | 28<br>(70.0)<br>(33.7) | 2<br>(5.0)<br>(25.0) | 5<br>(12.5)<br>(21.7) | 40<br>(28.6) |
| **Organ/Space** | 12<br>(26.1)<br>(46.2) | 32<br>(69.5)<br>(38.6) | 1<br>(2.2)<br>(12.5) | 1<br>(2.2)<br>(4.4) | 46<br>(32.8) |
| **Total** | 26 (18.6) | 83 (59.3) | 8 (5.7) | 23 (16.4) | 140 |

PDS: Post discharge surveillance. New York State data reported as of June 16, 2024. Excludes PATOS.

### Risk adjustment for CABG chest SSIs

Certain patient and procedure-specific risk factors increased the risk of developing a chest SSI following CABG surgery. In 2023, the following risk factors were associated with SSIs and were included in the risk-adjustment:

- Patients with diabetes were 1.5 times more likely to develop an SSI than patients without diabetes.

- Patients with obesity (with body mass index [BMI] greater than or equal to 30) were 2.2 times more likely to develop an SSI than patients with a BMI less than 30.
- Females were 2.7 times more likely to develop an SSI than males.

**Microorganisms identified in CABG SSIs**

Out of 141 infections (includes PDS infections), no microorganism was identified in 50 infections. The most common microorganism associated with CABG SSIs was *Staphylococcus aureus* (19%), 8 of which were methicillin-resistant (see Table 8). Trends between 2015 and 2023 in SSI rates after excluding PATOS and PDS infections are shown in Figure 1-6, and hospital-specific SSI rates are provided in Table 9.

**CABG Donor site infections**

In 2023, 35 hospitals reported a total of 32 CABG donor site infections out of 8,719 procedures, a rate of 0.37 infections per 100 procedures. None of the infections were classified as PATOS. Of the 32 infections, 88% were superficial, and 12% were deep (Table 5). Over 31% of the SSIs were detected upon readmission to the same hospital; 16% were identified during the initial hospitalization; 3% were detected upon readmission to another hospital; and 50% were PDS infections. Detection of SSIs in outpatient locations is labor intensive and is not standardized across hospitals; therefore, the Department did not include these 16 PDS infections in the final SSI rate so as not to penalize facilities with the best surveillance systems.

**Table 5. Method of detection for CABG donor site infection by depth of infection, NYS 2023**

| | When detected | | | | |
|---|---|---|---|---|---|
| **Depth of infection (Row%) (Column%)** | **Initial hospitalization** | **Readmitted to the same hospital** | **Readmitted to another hospital** | **Outpatient PDS visit (not readmitted)** | **Total** |
| Superficial Incisional | 1<br>(25.0)<br>(20.0) | 0<br>(0.0)<br>(0.0) | 3<br>(75.0)<br>(30.0) | 0<br>(0.0)<br>(0.0) | 4 (12.5) |
| Deep Incisional | 4<br>(14.3)<br>(80.0) | 16<br>(57.1)<br>(100.0) | 7<br>(25.0)<br>(70.0) | 1<br>(3.6)<br>(100.0) | 28 (87.5) |
| Total | 5 (15.6) | 16 (50.0) | 10 (31.3) | 1 (3.1) | 32 |

PDS: Post discharge surveillance. New York State data reported as of June 16, 2024. Excludes PATOS.

**Risk adjustment for CABG donor site SSIs**

Certain patient and procedure-specific factors increased the risk of developing a donor site SSI following CABG surgery. In 2023, after excluding PDS infections, none of the variables investigated were statistically significantly associated with SSI. The adjusted rate was calculated using an intercept-only model.

In 2023, the number of donor site SSI following a CABG procedure was very low, and there were no significant risk factors identified. No hospitals were flagged for having a significantly high rate.

## Hip replacement/revision SSIs

In 2023, 150 hospitals reported a total of 332 hip replacement/revision (HPRO) SSIs out of 30,121 procedures, a rate of 1.1 infections per 100 procedures. Of the 332 infections, 16 were classified as PATOS and excluded from further analysis.

Of the remaining 316 infections, 30% were superficial, 24% were deep, and 46% were organ/space (Table 6). Most of the SSIs (67%) were detected upon readmission to the same hospital; 4% were identified during the initial hospitalization; 13% were detected upon readmission to another hospital; and 15% were PDS infections. The majority (75%) of the PDS infections were superficial. Detection of SSIs in outpatient locations is labor intensive and is not standardized across hospitals; therefore, the Department did not include these 48 PDS infections in the final SSI rate so as not to penalize facilities with the best surveillance systems.

**Table 6. Method of detection of hip surgical site infection by depth of infection, NYS 2023**

| | When detected | | | | |
|---|---|---|---|---|---|
| **Depth of infection (Row%) (Column%)** | **Initial hospitalization** | **Readmitted to the same hospital** | **Readmitted to another hospital** | **Outpatient PDS visit (not readmitted)** | **Total** |
| **Superficial Incisional** | 7<br>(7.4)<br>(53.8) | 46<br>(48.4)<br>(21.6) | 6<br>(6.3)<br>(14.3) | 36<br>(37.9)<br>(75.0) | 95<br>(30.1%) |
| **Deep Incisional** | 3<br>(4.0<br>(23.1) | 46<br>(61.3)<br>(21.6) | 15<br>(20.0)<br>(35.7) | 11<br>(14.7)<br>(22.9) | 75<br>(23.7%) |
| **Organ/Space** | 3<br>(2.0)<br>(23.1 | 121<br>(82.9)<br>(56.8) | 21<br>(14.4)<br>(50.0) | 1<br>(0.8)<br>(2.1) | 146<br>(46.2%) |
| **Total** | 13 (4.1%) | 213 (67.4%) | 42 (13.3%) | 48 (15.2%) | 316 |

PDS: Post discharge surveillance. NYS data reported as of June 16, 2024. Excludes PATOS

### Risk adjustment for hip SSIs

Certain patient and procedure-specific factors increased the risk of developing an SSI following hip surgery. In 2023, after excluding PDS investigations and SSIs that were PATOS, the following risk factors were associated with SSIs and used to risk-adjust hospital-specific rates:

- Patients with severe systemic disease (ASA score of 3, 4, or 5) were 1.9 times more likely to develop an SSI than healthier patients (ASA score of 1 or 2).
- The risk of SSI varied by type of hip procedure. Compared to total and resurfacing primary hip replacement procedures, partial primary procedures were 1.2 times more likely to result in an SSI, revisions with no prior infection at the joint were 3.3 times more likely to result in an SSI, and revisions with prior infection at the joint were 4.8 times more likely to result in an SSI.
- Patients with severe obesity (BMI greater than or equal to 40) were 2.9 times more likely to develop an SSI, and patients with obesity (BMI between 30 and 39) were 1.5 times more likely to develop an SSI than patients with BMI less than 30.

**Microorganisms identified in HPRO SSIs.**
Out of 332 infections (includes PDS infections), no microorganism was identified in 84 infections. The most common microorganisms associated with HPRO SSIs were *Staphylococcus aureus* (25%); 26 of which were methicillin-resistant (see Table 8).

Trends between 2015 and 2023 in SSI rates after excluding PATOS and PDS infections are shown in Figure 1-6, and hospital-specific SSI rates are provided in Table 9.

## Spinal fusion SSIs

In 2023, 111 hospitals reported a total of 447 spinal fusion (FUSN) SSIs out of 27,156 procedures, a rate of 1.6 infections per 100 procedures. Of the 447 infections, 16 were classified as PATOS and excluded from the final SSI rate.

Of the remaining 431 infections, 29% were superficial, 38% were deep, and 32% were organ/space (Table 7). Most of the SSIs (69%) were detected upon readmission to the same hospital; 10% were identified during the initial hospitalization; 11% were detected upon readmission to another hospital; and 10% were PDS infections. Most (76%) of the PDS infections were superficial. Detection of SSIs in outpatient locations is labor intensive and is not standardized across hospitals; therefore, the Department did not include these 41 PDS infections in the final SSI rate so as not to penalize facilities with the best surveillance systems.

**Table 7. Method of detection of spinal fusion surgical site infection by depth of infection, New York State 2023**

| | When detected | | | | |
|---|---|---|---|---|---|
| **Depth of infection (Row%) (Column%)** | **Initial hospitalization** | **Readmitted to the same hospital** | **Readmitted to another hospital** | **Outpatient PDS visit (not readmitted)** | **Total** |
| **Superficial Incisional** | 13<br>(10.3)<br>(30.2) | 68<br>(54.0)<br>(22.8) | 14<br>(11.1)<br>(28.6) | 31<br>(24.6)<br>(75.6) | 126<br>(29.2%) |
| **Deep Incisional** | 14<br>(8.4)<br>(32.6) | 124<br>(74.2)<br>(41.6) | 19<br>(11.4)<br>(38.8) | 10<br>(6.0)<br>(24.4) | 167<br>(38.8 %) |
| **Organ/Space** | 16<br>(11.6)<br>(37.2) | 106<br>(76.8)<br>(35.6) | 16<br>(11.6)<br>(32.6) | 0<br>(0.0)<br>(0.0) | 138<br>(32.0%) |
| **Total** | 43 (10.0%) | 298 (69.1%) | 49 (11.4%) | 41 (9.5%) | 431 |

PDS: Post discharge surveillance. New York State data reported as of June 16, 2024. Excludes infections present at time of surgery.

### Risk adjustment for spinal fusion SSIs

Certain patient and procedure-specific factors increase the risk of developing an SSI following spinal fusion procedures. In 2023, after excluding PDS infections and SSIs that were PATOS, the following risk factors were associated with spinal fusion SSIs. These variables were used to risk-adjust hospital-specific rates.

- For each unit increase in ASA score (1, 2, 3, 4/5), a measure of systemic disease, patients were 1.9 times more likely to develop an SSI.
- Patients with diabetes were 1.2 times more likely to develop an SSI than patients without diabetes.
- Patients with severe obesity (BMI greater than or equal to 40) were 2.0 times more likely to develop an SSI, and patients with obesity (BMI between 30 and 39) were 1.3 times more likely to develop an SSI than patients with BMI less than 30.

- For each additional hour of procedure (up to 10 hours), patients were 1.2 times more likely to develop an SSI.
- Procedures that involved a posterior or bidirectional approach were 2.3 times more likely to result in SSI than procedures performed entirely with an anterior approach.
- Procedures performed at the dorsal/dorsolumbar or cervical/dorsal/dorsolumbar levels were 1.6 times more likely to develop an SSI than procedures performed at the atlas-axis or cervical levels.

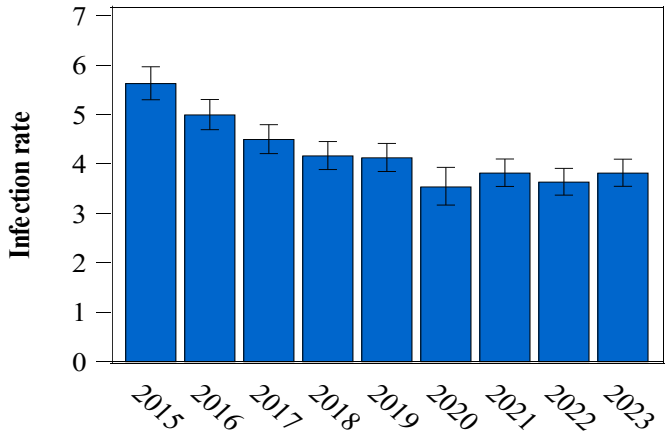
**Microorganisms identified in FUSN SSIs**

Out of 447 infections (includes post discharge surveillance), no microorganism was identified in 104 infections. The most common microorganisms associated with FUSN SSIs were *Staphylococcus aureus* (26%), 32 of which were methicillin-resistant (see Table 8).

Trends between 2015 and 2023 in SSI rates after excluding PATOS and PDS infections are shown in Figure 1-6, and hospital-specific SSI rates are provided in Table 9.

## Trends in SSIs

**Figure 1. Trend in colon SSI rates, New York State 2015-2023**

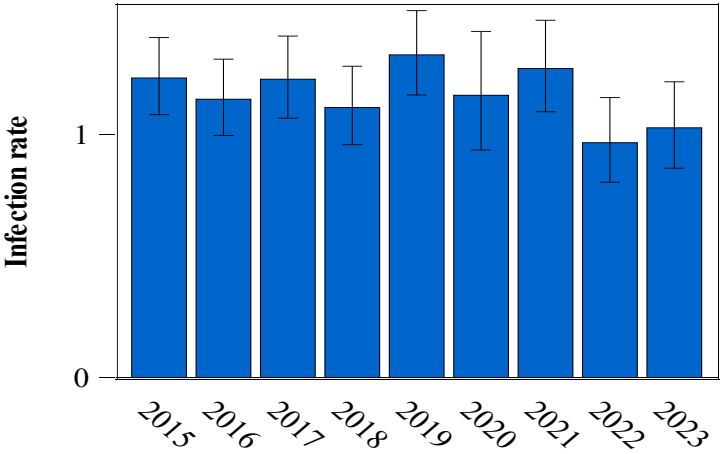



| Year | #Hospitals | #Infections | #Procedures | Infection rate (95% CI) |
|---|---|---|---|---|
| 2015 | 160 | 1,047 | 18,611 | 5.63 (5.30, 5.97) |
| 2016 | 161 | 994 | 19,910 | 4.99 (4.69, 5.30) |
| 2017 | 162 | 881 | 19,594 | 4.50 (4.21, 4.80) |
| 2018 | 160 | 810 | 19,472 | 4.16 (3.88, 4.45) |
| 2019 | 158 | 776 | 19,207 | 4.04 (3.77, 4.33) |
| 2020* | 154 | 328 | 9,277 | 3.53 (3.17-3.92) |
| 2021 | 152 | 713 | 18,684 | 3.82 (3.55-4.10) |
| 2022 | 153 | 682 | 18,770 | 3.63 (3.37, 3.91) |
| 2023 | 150 | 729 | 19,150 | 3.81 (3.55, 4.10) ⇧ |

*Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

Figure 1. Between 2015 and 2023, the colon SSI rate declined 32%, from 5.63 infections per 100 procedures in 2015 to 3.81 infections per 100 procedures in 2023. SSI rate increased (⇧) slightly (5%) between 2022 and 2023.

**Figure 2. Trend in abdominal hysterectomy SSI rates, New York State 2015-2023**




| Year | #Hospitals | #Infections | #Procedures | Infection rate (95% CI) |
|---|---|---|---|---|
| 2015 | 151 | 237 | 19,216 | 1.23 (1.08, 1.40) |
| 2016 | 148 | 210 | 18,326 | 1.15 (1.00, 1.31) |
| 2017 | 149 | 208 | 16,934 | 1.23 (1.07, 1.41) |
| 2018 | 149 | 187 | 16,824 | 1.11 (0.96, 1.28) |
| 2019 | 151 | 230 | 17,312 | 1.33 (1.16, 1.51) |
| 2020* | 138 | 91 | 7,830 | 1.16 (0.94, 1.42) |
| 2021 | 145 | 180 | 14,147 | 1.27 (1.09, 1.47) |
| 2022 | 146 | 123 | 12,721 | 0.97 (0.80, 1.15) |
| 2023 | 141 | 133 | 12,937 | 1.03 (0.86, 1.22) ⇧ |

*Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

Figure 2. Between 2015 and 2023, the total number of HYST SSIs declined 16%, with 1.23 infections per 100 procedures in 2015 and 1.03 infections per 100 procedures in 2023. There was a 6% (not significant) increase (⇧)observed from 2022 to 2023

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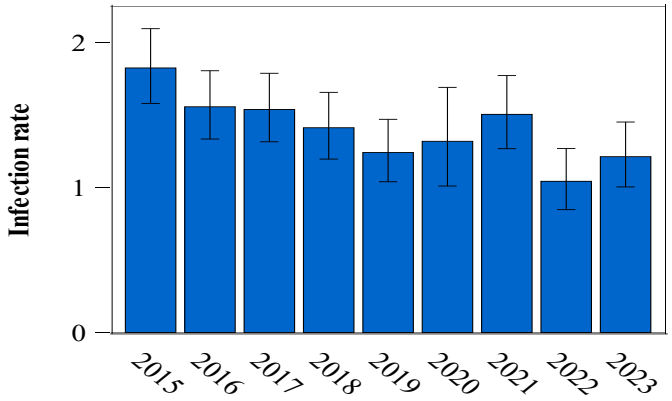
**Figure 3. Trend in coronary artery bypass graph chest site SSI rates, New York State 2015-2023**

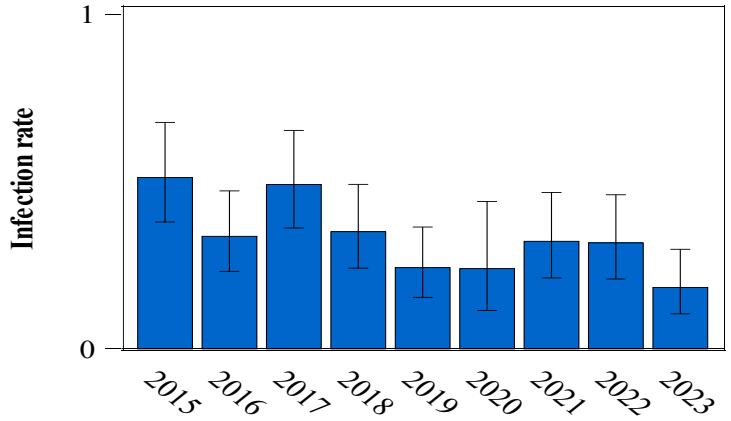



| Year | #Hospitals | #Infections | #Procedures | Infection rate (95% CI) |
|---|---|---|---|---|
| 2015 | 38 | 196 | 10,735 | 1.83 (1.58, 2.10) |
| 2016 | 37 | 172 | 11,040 | 1.56 (1.34, 1.81) |
| 2017 | 36 | 167 | 10,849 | 1.54 (1.32, 1.79) |
| 2018 | 37 | 149 | 10,542 | 1.41 (1.20, 1.66) |
| 2019 | 36 | 132 | 10,627 | 1.24 (1.04, 1.47) |
| 2020* | 35 | 61 | 4,623 | 1.32 (1.01, 1.69) |
| 2021 | 35 | 141 | 9,365 | 1.51 (1.27, 1.77) |
| 2022 | 35 | 98 | 9,392 | 1.04 (0.85, 1.27) |
| 2023 | 35 | 117 | 9,641 | 1.21 (1.00-1.45) ⇧ |

*Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

Trends in CABG chest SSI rates after excluding PATOS and PDS infections are shown in Figure 3. Between 2015 and 2023, the total number of CABG chest SSIs declined 34%, with 1.83 infections per 100 procedures in 2015 and 1.21 infections per 100 procedures in 2023. There was a 16% (not significant) increase (⇧) observed from 2022 to 2023.

**Figure 4. Trend in coronary artery bypass graph donor site SSI rates, New York State 2015-2023**

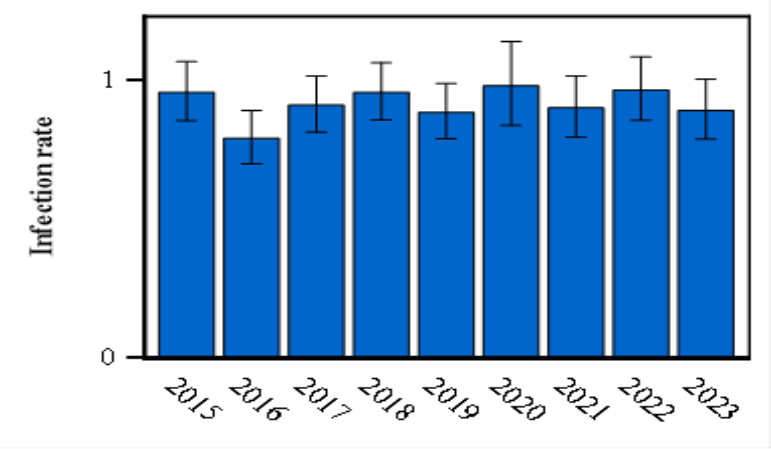



| Year | #Hospitals | #Infections | #Procedures | Infection rate (95% CI) |
|---|---|---|---|---|
| 2015 | 38 | 49 | 9,558 | 0.51 (0.38, 0.68) |
| 2016 | 37 | 33 | 9,801 | 0.34 (0.23, 0.47) |
| 2017 | 36 | 47 | 9,559 | 0.49 (0.36, 0.65) |
| 2018 | 36 | 33 | 9,413 | 0.35 (0.24, 0.49) |
| 2019 | 36 | 23 | 9,464 | 0.24 (0.15, 0.36) |
| 2020* | 35 | 10 | 4,168 | 0.24 (0.12, 0.44) |
| 2021 | 35 | 27 | 8,391 | 0.32 (0.21, 0.47) |
| 2022 | 35 | 27 | 8,516 | 0.32 (0.21, 0.46) |
| 2023 | 35 | 16 | 8,718 | 0.18 (0.10, 0.30) ⇩ |

*Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

Figure 4. Between 2015 and 2023, the CABG donor site SSI rate declined 65%, from 0.51 infections per 100 procedures in 2015 to 0.18 infections per 100 procedures in 2023. SSI rate decreased (⇩) 43% (not significant) between 2022 and 2023.

**Figure 5. Trend in hip replacement/ revision SSI rates, New York State 2015-2023**

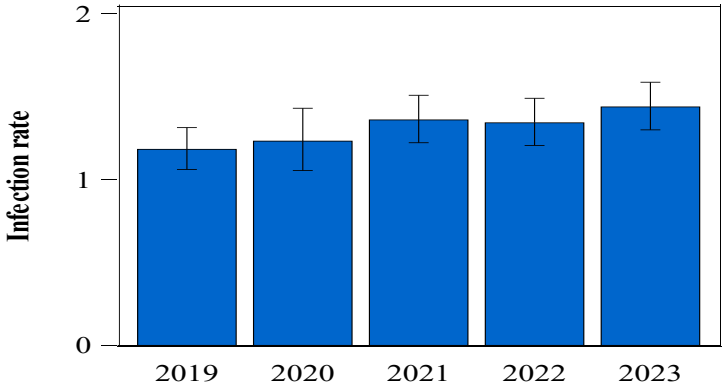



| Year | #Hospitals | #Infections | #Procedures | Infection rate (95% CI) |
|---|---|---|---|---|
| 2015 | 158 | 318 | 33,294 | 0.96 (0.85, 1.07) |
| 2016 | 157 | 267 | 33,812 | 0.79 (0.70, 0.89) |
| 2017 | 157 | 317 | 34,884 | 0.91 (0.81, 1.01) |
| 2018 | 154 | 337 | 35,290 | 0.96 (0.86, 1.06) |
| 2019 | 153 | 310 | 35,216 | 0.88 (0.78, 0.98) |
| 2020* | 153 | 166 | 16,971 | 0.98 (0.84, 1.14) |
| 2021 | 153 | 262 | 29,134 | 0.90 (0.79, 1.01) |
| 2022 | 153 | 281 | 29,154 | 0.96 (0.86, 1.08) |
| 2023 | 150 | 268 | 30,105 | 0.89 (0.79, 1.00) ⇩ |

*Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

Figure 5. Between 2015 and 2023, the hip SSI rate declined 7%, from 0.96 infections per 100 procedures in 2015 to 0.89 infections per 100 procedures in 2023. SSI rate decreased (⇩) slightly (7%) between 2022 and 2023.

**Figure 6. Trend in spinal fusion SSI rates, New York State 2015-2023**




| Year | # Hospitals | # Infections | # Procedures | Infection Rate (95% CI) |
|---|---|---|---|---|
| 2019 | 118 | 343 | 29,036 | 1.18 (1.06, 1.31) |
| 2020* | 109 | 170 | 13,812 | 1.23 (1.05, 1.43) |
| 2021 | 111 | 352 | 25,908 | 1.36 (1.22, 1.51) |
| 2022 | 110 | 347 | 25,870 | 1.34 (1.20, 1.49) |
| 2023 | 111 | 390 | 27,140 | 1.44 (1.30, 1.59) ⇧ |

*Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

Trends in spinal fusion SSI rates after excluding PATOS and PDS infections are shown in Figure 6. Between 2019 and 2023 the total number of spinal fusion SSIs increased 22%, from 1.18 infections per 100 procedures in 2019 to 1.44 infections per 100 procedures in 2023, a statistically significant increase. Between 2022 and 2023, SSI rate increased (⇧)from 1.34 to 1.44 (7%).

## Microorganisms identified in SSIs

### Table 8. Microorganisms identified in SSIs, 2023

| | Colon Surgery | | CABG Surgery | | HPRO Surgery | | HYST Surgery | | FUSN Surgery | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pathogen Groups** | **Number of isolates** | **%** | **Number of isolates** | **%** | **Number of isolates** | **%** | **Number of isolates** | **%** | **Number of isolates** | **%** |
| *Enterococci* | 319 | 26.1 | 7 | 5 | 21 | 6.3 | 27 | 13.6 | 22 | 4.9 |
| - VRE | (64) | (5.2) | (1) | (0.7) | (4) | (1.2) | (1) | (0.5) | (5) | (1.1) |
| *Escherichia coli* | 284 | 23.2 | 6 | 4.3 | 23 | | 34 | 17.2 | 41 | 9.2 |
| - CRE-Ecoli | (3) | (0.2) | | | | | | | | |
| Yeast | 133 | 10.9 | | | | | | | 10 | 2.2 |
| Pseudomonas spp. | 97 | 7.9 | 14 | 9.9 | 38 | 11.4 | | | 22 | 4.9 |
| Klebsiella spp. | 96 | 7.8 | 10 | 7.1 | 14 | 4.2 | 18 | 9.1 | 38 | 8.5 |
| - CRE-Klebsiella | (3) | (0.2) | | | | | | | | |
| Bacteroides spp. | 75 | 6.1 | | | | | | | | |
| *Streptococci* | 73 | 6 | | | 20 | 6 | 15 | 7.6 | 10 | 2.2 |
| Enterobacter spp. | 55 | 4.5 | 4 | 2.8 | 13 | 3.9 | 5 | 2.5 | 17 | 3.8 |
| - CRE-Enterobacter | (2) | (0.2) | | | | | | | (1) | (0.2) |
| *Staphylococcus aureus* | 53 | 4.3 | 27 | 19.1 | 84 | 25.3 | 9 | 4.5 | 132 | 29.5 |
| - methicillin-resistant *S. aureus*-MRSA | (20) | (1.6) | (8) | (5.7) | (26) | (7.8) | (2) | (1) | (32) | (7.2) |
| *Coagulase negative staphylococci* | 38 | 3.1 | 14 | 9.9 | 40 | 12 | 11 | 5.6 | 57 | 12.8 |
| Proteus spp. | 29 | 2.4 | | | 16 | 4.8 | 11 | 5.6 | 25 | 5.6 |
| Clostridium spp. | 24 | 2 | | | | | | | | |
| Citrobacter spp. | 22 | 1.8 | | | | | | | | |
| Lactobacillus spp. | 10 | 0.8 | | | | | | | | |
| Acinetobacter spp. | 2 | 0.2 | | | 4 | 1.2 | | | 5 | 1.1 |
| - MDRO-Acinetobacter | (1) | (0.1) | | | (2) | (0.6) | | | (1) | (0.2) |
| Serratia spp. | | | | | | | | | 12 | 2.7 |
| Cutibacterium spp. | | | | | | | | | 24 | 5.4 |
| Other | 91 | 7.4 | 35 | 24.8 | 37 | 11.1 | 50 | 25.3 | 34 | 7.6 |

New York State data reported as of June 16, 2024. VRE: vancomycin-resistant enterococci; CRE: carbapenem-resistant Enterobacterales; MRSA: methicillin-resistant *Staphylococcus aureus;* MDRO: multidrug resistant organism; spp: multiple species. Most common pathogens by procedure type.

# Hospital specific SSIs

## Table 9. Hospital specific SSIs, adjusted rate compared to state rate, 2023.

| | COLON SSI | | | Chest SSI | | | HPRO SSI | | | HYST SSI | | | FUSN SSI | | | No SSI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | Reported |
| AO Fox Memorial | NA | 3 | NA | | | | 1 | 34 | 3.5 ⇔ | | | | NA | 2 | NA | |
| Adirondack Medical | 2 | 33 | 8.6 ⇔ | | | | 3 | 195 | 1.8 ⇔ | 0 | 42 | 0.0 ⇔ | | | | |
| Albany Med Ctr | 27 | 448 | 5.7 ⇔ | 5 | 243 | 2.0 ⇔ | 3 | 283 | 0.7 ⇔ | 3 | 196 | 1.3 ⇔ | 9 | 613 | 1.4 ⇔ | |
| Alice Hyde Med Ctr | | | | | | | 0 | 20 | 0.0 ⇔ | NA | 2 | NA | | | | |
| Arnot Ogden Med Ctr | 2 | 39 | 5.4 ⇔ | | | | 4 | 181 | 1.9 ⇔ | 0 | 25 | 0.0 ⇔ | 0 | 68 | 0.0 ⇔ | |
| Auburn Memorial | 0 | 38 | 0.0 ⇔ | | | | 0 | 107 | 0.0 ⇔ | 0 | 28 | 0.0 ⇔ | NA | 5 | NA | |
| Bellevue Ellis | | | | | | | | | | 0 | 25 | 0.0 ⇔ | | | | ★ |
| Bellevue Hospital | 10 | 116 | 7.4 ⇔ | 0 | 81 | 0.0 ⇔ | 5 | 100 | 3.9 ↑ | 2 | 83 | 2.1 ⇔ | 2 | 39 | 3.3 ⇔ | |
| Bon Secours | NA | 12 | NA | | | | NA | 8 | NA | 0 | 22 | 0.0 ⇔ | | | | |
| Bronx-Lebanon | 2 | 62 | 3.6 ⇔ | | | | 1 | 89 | 1.2 ⇔ | 1 | 109 | 0.8 ⇔ | 1 | 72 | 1.7 ⇔ | |
| Brookdale Hospital | 1 | 92 | 0.9 ⇔ | | | | NA | 17 | NA | 0 | 32 | 0.0 ⇔ | 0 | 65 | 0.0 ⇔ | |
| Brooklyn Hosp Ctr | 1 | 63 | 1.5 ⇔ | | | | 0 | 94 | 0.0 ⇔ | 1 | 147 | 0.7 ⇔ | 0 | 65 | 0.0 ⇔ | |
| Brooks Memorial | NA | 16 | NA | | | | NA | 4 | NA | NA | 4 | NA | | | | |
| Buffalo General | 2 | 92 | 2.0 ⇔ | 11 | 575 | 2.0 ⇔ | 6 | 471 | 0.8 ⇔ | NA | 2 | NA | 26 | 1089 | 2.3 ↑ | |
| Canton-Potsdam | 3 | 34 | 7.2 ⇔ | | | | 0 | 79 | 0.0 ⇔ | NA | 17 | NA | | | | |
| Cayuga Medical Ctr | 3 | 64 | 4.6 ⇔ | | | | 0 | 237 | 0.0 ⇔ | NA | 13 | NA | 0 | 23 | 0.0 ⇔ | |
| Champlain Valley | 7 | 94 | 8.3 ⇔ | | | | 2 | 103 | 1.4 ⇔ | 1 | 75 | 1.6 ⇔ | NA | 8 | NA | |
| Claxton-Hepburn | NA | 5 | NA | | | | 0 | 44 | 0.0 ⇔ | NA | 14 | NA | NA | 3 | NA | |
| Clifton Springs | NA | 2 | NA | | | | 4 | 298 | 1.7 ⇔ | | | | | | | |
| Cohens Childrens | 3 | 49 | 6.3 ⇔ | | | | | | | | | | 4 | 125 | 2.8 ⇔ | |
| Columbia Memorial | 1 | 67 | 1.6 ⇔ | | | | 0 | 135 | 0.0 ⇔ | 2 | 93 | 2.2 ⇔ | | | | |
| Corning Hospital | 1 | 38 | 2.9 ⇔ | | | | 2 | 80 | 2.5 ⇔ | NA | 15 | NA | | | | |
| Cortland Reg Med | 4 | 34 | 11.4⇔ | | | | 1 | 38 | 2.6 ⇔ | NA | 2 | NA | | | | |
| Crouse Hospital | 15 | 292 | 5.2 ⇔ | | | | 4 | 431 | 0.8 ⇔ | 8 | 483 | 1.6 ⇔ | 7 | 505 | 1.5 ⇔ | |
| Ellis Hospital | 3 | 85 | 3.3 ⇔ | 0 | 124 | 0.0 ⇔ | 3 | 147 | 1.8 ⇔ | 1 | 60 | 1.7 ⇔ | 0 | 23 | 0.0 ⇔ | |
| Elmhurst Hospital | 3 | 92 | 2.5 ⇔ | | | | 1 | 85 | 1.2 ⇔ | 2 | 77 | 2.2 ⇔ | 0 | 34 | 0.0 ⇔ | |
| Erie County Med Ctr | 6 | 72 | 5.7 ⇔ | | | | 4 | 211 | 2.1 ⇔ | | | | 10 | 403 | 2.0 ⇔ | |

| | COLON SSI | | | Chest SSI | | | HPRO SSI | | | HYST SSI | | | FUSN SSI | | | No SSI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | Reported |
| FF Thompson | 4 | 115 | 4.1 ⇔ | | | | 2 | 114 | 2.3 ⇔ | NA | 13 | NA | 0 | 79 | 0.0 ⇔ | |
| Flushing Hospital | 4 | 53 | 8.2 ⇔ | | | | 0 | 32 | 0.0 ⇔ | 1 | 21 | 6.4 ⇔ | | | | |
| Garnet Catskills | 2 | 24 | 7.7 ⇔ | | | | NA | 13 | NA | NA | 6 | NA | | | | |
| Garnet Middletown | 9 | 194 | 4.6 ⇔ | 2 | 92 | 2.4 ⇔ | 4 | 360 | 1.1 ⇔ | 4 | 133 | 3.6 ⇔ | 1 | 33 | 3.8 ⇔ | |
| Geneva General | 0 | 46 | 0.0 ⇔ | | | | 0 | 58 | 0.0 ⇔ | | | | 0 | 50 | 0.0 ⇔ | ★ |
| Glen Cove Hospital | 0 | 26 | 0.0 ⇔ | | | | 1 | 20 | 5.5 ⇔ | NA | 7 | NA | | | | |
| Glens Falls Hospital | 6 | 168 | 4.5 ⇔ | | | | 1 | 160 | 0.6 ⇔ | NA | 12 | NA | NA | 1 | NA | |
| Good Samar. Suffern | 2 | 102 | 2.4 ⇔ | 0 | 78 | 0.0 ⇔ | 0 | 128 | 0.0 ⇔ | NA | 19 | NA | 0 | 23 | 0.0 ⇔ | |
| Good Samar. W Islip | 4 | 222 | 1.9 ⇔ | 0 | 250 | 0.0 ↓ | 2 | 195 | 0.9 ⇔ | 5 | 258 | 2.2 ⇔ | 1 | 569 | 0.2 ↓ | |
| Harlem Hospital | 3 | 49 | 4.7 ⇔ | | | | 0 | 23 | 0.0 ⇔ | NA | 7 | NA | 0 | 24 | 0.0 ⇔ | |
| HealthAlliance-MaryC | 0 | 45 | 0.0 ⇔ | | | | 3 | 140 | 2.0 ⇔ | NA | 4 | NA | | | | |
| Highland Hospital | 11 | 128 | 9.3 ↑ | | | | 9 | 1283 | 0.8 ⇔ | 2 | 310 | 0.7 ⇔ | 5 | 374 | 1.5 ⇔ | |
| Hosp for Spec Surg | | | | | | | 27 | 4538 | 0.8 ⇔ | | | | 28 | 2344 | 1.6 ⇔ | |
| Huntington Hospital | 8 | 283 | 3.5 ⇔ | | | | 1 | 280 | 0.4 ⇔ | 1 | 95 | 1.2 ⇔ | 3 | 238 | 1.0 ⇔ | |
| Interfaith Med Ctr | NA | 8 | NA | | | | 0 | 28 | 0.0 ⇔ | 0 | 29 | 0.0 ⇔ | | | | |
| JT Mather Hospital | 0 | 133 | 0.0 ↓ | | | | 2 | 171 | 1.0 ⇔ | 1 | 57 | 1.7 ⇔ | 2 | 301 | 0.6 ⇔ | |
| Jacobi Med Ctr | 16 | 63 | 18.4 ↑ | | | | 0 | 100 | 0.0 ⇔ | 1 | 72 | 1.2 ⇔ | 0 | 32 | 0.0 ⇔ | |
| Jamaica Hospital | 4 | 70 | 4.6 ⇔ | | | | 1 | 96 | 0.9 ⇔ | 0 | 33 | 0.0 ⇔ | 1 | 36 | 1.4 ⇔ | |
| Jones Memorial | NA | 7 | NA | | | | 3 | 45 | 4.6 ↑ | NA | 18 | NA | | | | |
| Kenmore Mercy | 11 | 166 | 6.8 ⇔ | | | | 2 | 360 | 0.5 ⇔ | | | | 7 | 668 | 1.7 ⇔ | |
| Kings County Hosp | 4 | 80 | 4.0 ⇔ | | | | 0 | 66 | 0.0 ⇔ | 4 | 85 | 3.4 ⇔ | 1 | 23 | 4.0 ⇔ | |
| LIJ at Forest Hills | 2 | 95 | 2.3 ⇔ | | | | 0 | 84 | 0.0 ⇔ | 0 | 74 | 0.0 ⇔ | 0 | 35 | 0.0 ⇔ | |
| LIJ at Valley Stream | 2 | 36 | 5.5 ⇔ | | | | 5 | 424 | 1.3 ⇔ | | | | 4 | 200 | 2.2 ⇔ | |
| Lenox Hill Hospital | 6 | 426 | 1.5 ↓ | 2 | 401 | 0.6 ⇔ | 3 | 313 | 1.3 ⇔ | 2 | 252 | 0.9 ⇔ | 9 | 638 | 1.4 ⇔ | |
| Lincoln Med Ctr | 3 | 74 | 2.9 ⇔ | | | | 0 | 35 | 0.0 ⇔ | 1 | 68 | 1.2 ⇔ | 0 | 42 | 0.0 ⇔ | |
| Long Isl Jewish(LIJ) | 5 | 385 | 1.2 ↓ | | | | 0 | 174 | 0.0 ⇔ | 5 | 451 | 0.9 ⇔ | 2 | 244 | 0.7 ⇔ | |
| Long Isl. Community | 12 | 101 | 10.5 ↑ | | | | 3 | 98 | 3.6 ⇔ | NA | 1 | NA | NA | 12 | NA | |
| Maimonides Med Ctr | 6 | 282 | 2.3 ⇔ | 6 | 180 | 3.4 ↑ | 1 | 92 | 1.0 ⇔ | 2 | 164 | 1.0 ⇔ | 1 | 192 | 0.5 ⇔ | |
| Mary Imogene Bassett | 8 | 208 | 3.1 ⇔ | 1 | 101 | 0.8 ⇔ | 1 | 147 | 0.6 ⇔ | 1 | 29 | 3.8 ⇔ | 2 | 92 | 1.7 ⇔ | |

| | COLON SSI | | | Chest SSI | | | HPRO SSI | | | HYST SSI | | | FUSN SSI | | | No SSI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | Reported |
| Memor SloanKettering | 60 | 1303 | 3.9 ⇔ | | | | 1 | 114 | 0.6 ⇔ | 8 | 1011 | 0.7 ⇔ | 7 | 170 | 2.6 ⇔ | |
| Mercy Hosp Buffalo | 10 | 188 | 5.3 ⇔ | 2 | 332 | 0.5 ⇔ | 0 | 68 | 0.0 ⇔ | 0 | 102 | 0.0 ⇔ | 16 | 732 | 2.3 ⇔ | |
| Mercy Med Ctr | 1 | 38 | 3.0 ⇔ | | | | 1 | 68 | 1.4 ⇔ | 0 | 31 | 0.0 ⇔ | 5 | 539 | 1.5 ⇔ | |
| Metropolitan Hosp | 0 | 51 | 0.0 ⇔ | | | | 1 | 41 | 2.2 ⇔ | 0 | 43 | 0.0 ⇔ | | | | |
| MidHudson Reg of WMC | 1 | 50 | 1.8 ⇔ | | | | 0 | 183 | 0.0 ⇔ | NA | 12 | NA | 1 | 43 | 2.1 ⇔ | |
| Millard Fill. Suburb | 16 | 450 | 3.8 ⇔ | | | | 1 | 247 | 0.4 ⇔ | 3 | 526 | 0.5 ⇔ | 1 | 110 | 0.9 ⇔ | |
| Montefiore-Einstein | 6 | 163 | 2.7 ⇔ | | | | | | | 3 | 213 | 1.0 ⇔ | | | | |
| Montefiore-Moses | 7 | 152 | 3.2 ⇔ | 19 | 331 | 5.5 ↑ | NA | 17 | NA | 0 | 51 | 0.0 ⇔ | 10 | 556 | 1.3 ⇔ | |
| Montefiore-Mt Vernon | NA | 11 | NA | | | | | | | NA | 6 | NA | | | | |
| Montefiore-NewRochl | NA | 14 | NA | | | | 0 | 104 | 0.0 ⇔ | 0 | 22 | 0.0 ⇔ | 0 | 55 | 0.0 ⇔ | |
| Montefiore-Nyack | 3 | 77 | 4.4 ⇔ | | | | 1 | 182 | 0.7 ⇔ | 0 | 33 | 0.0 ⇔ | NA | 4 | NA | |
| Montefiore-Wakefield | 2 | 49 | 3.3 ⇔ | | | | 4 | 667 | 0.6 ⇔ | | | | | | | |
| Mount St. Marys | 1 | 21 | 4.4 ⇔ | | | | 0 | 30 | 0.0 ⇔ | NA | 4 | NA | | | | |
| Mt Sinai | 26 | 674 | 4.2 ⇔ | 8 | 433 | 1.9 ⇔ | 4 | 334 | 1.1 ⇔ | 6 | 356 | 1.8 ⇔ | 13 | 967 | 1.2 ⇔ | |
| Mt Sinai Beth Israel | 1 | 36 | 2.9 ⇔ | | | | NA | 8 | NA | NA | 18 | NA | | | | |
| Mt Sinai Brooklyn | 1 | 70 | 1.5 ⇔ | | | | 1 | 33 | 4.2 ⇔ | NA | 10 | NA | | | | |
| Mt Sinai Queens | 0 | 66 | 0.0 ⇔ | | | | 0 | 98 | 0.0 ⇔ | 0 | 28 | 0.0 ⇔ | | | | ★ |
| Mt Sinai St Lukes | 0 | 36 | 0.0 ⇔ | 0 | 331 | 0.0 ↓ | 0 | 124 | 0.0 ⇔ | 0 | 21 | 0.0 ⇔ | 2 | 49 | 2.9 ⇔ | |
| Mt Sinai West | 7 | 179 | 4.2 ⇔ | | | | 1 | 304 | 0.3 ⇔ | 3 | 198 | 1.7 ⇔ | 4 | 315 | 1.0 ⇔ | |
| NY Community Hosp | NA | 5 | NA | | | | NA | 7 | NA | | | | | | | |
| NYP-Allen | NA | 10 | NA | | | | NA | 2 | NA | NA | 3 | NA | 6 | 764 | 0.6 ↓ | |
| NYP-Brklyn Methodist | 3 | 131 | 2.0 ⇔ | 2 | 82 | 1.9 ⇔ | 1 | 203 | 0.4 ⇔ | 1 | 268 | 0.3 ⇔ | 0 | 91 | 0.0 ⇔ | |
| NYP-Columbia | 23 | 389 | 6.2 ↑ | 9 | 476 | 1.9 ⇔ | 3 | 434 | 0.7 ⇔ | 1 | 299 | 0.3 ⇔ | NA | 13 | NA | |
| NYP-Hudson Valley | 2 | 61 | 3.8 ⇔ | | | | 1 | 132 | 0.8 ⇔ | NA | 2 | NA | NA | 13 | NA | |
| NYP-Lawrence | 0 | 65 | 0.0 ⇔ | | | | 0 | 134 | 0.0 ⇔ | 1 | 64 | 1.9 ⇔ | 4 | 146 | 2.3 ⇔ | |
| NYP-Lower Manhattan | 1 | 41 | 3.1 ⇔ | | | | 0 | 39 | 0.0 ⇔ | 0 | 39 | 0.0 ⇔ | 4 | 602 | 1.4 ⇔ | |
| NYP-Morgan Stanley | 0 | 34 | 0.0 ⇔ | | | | NA | 2 | NA | NA | 13 | NA | 4 | 208 | 1.4 ⇔ | |
| NYP-Queens | 2 | 224 | 1.0 ↓ | 0 | 114 | 0.0 ⇔ | 1 | 342 | 0.3 ⇔ | 1 | 100 | 1.3 ⇔ | 1 | 225 | 0.4 ⇔ | |
| NYP-Weill Cornell | 15 | 387 | 4.2 ⇔ | 5 | 254 | 2.2 ⇔ | 0 | 184 | 0.0 ⇔ | 3 | 192 | 1.5 ⇔ | 4 | 555 | 0.7 ⇔ | |
| NYU Langone Brooklyn | 4 | 156 | 2.5 ⇔ | | | | 5 | 241 | 1.9 ⇔ | 1 | 121 | 0.8 ⇔ | 2 | 235 | 1.0 ⇔ | |

| | COLON SSI | | | Chest SSI | | | HPRO SSI | | | HYST SSI | | | FUSN SSI | | | No SSI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | Reported |
| NYU Orthopedic Hosp | | | | | | | 6 | 1318 | 0.5 ⇔ | | | | | | | |
| NYU Tisch | 47 | 721 | 6.9 ↑ | 1 | 340 | 0.3 ⇔ | 0 | 56 | 0.0 ⇔ | 3 | 334 | 1.0 ⇔ | 15 | 1663 | 0.8 ↓ | |
| NYU Winthrop | 7 | 387 | 1.8 ↓ | 1 | 248 | 0.4 ⇔ | 2 | 290 | 0.7 ⇔ | 3 | 269 | 1.1 ⇔ | 8 | 624 | 1.4 ⇔ | |
| Nassau University | NA | 19 | NA | | | | 0 | 38 | 0.0 ⇔ | 1 | 76 | 1.4 ⇔ | 2 | 151 | 2.7 ⇔ | |
| Newark Wayne | 0 | 31 | 0.0 ⇔ | | | | 2 | 20 | 11.6 ↑ | 0 | 21 | 0.0 ⇔ | 1 | 82 | 1.1 ⇔ | |
| Niagara Falls | 2 | 41 | 4.2 ⇔ | | | | 0 | 41 | 0.0 ⇔ | NA | 9 | NA | 1 | 82 | 2.2 ⇔ | |
| North Central Bronx | NA | 10 | NA | | | | | | | NA | 17 | NA | | | | |
| North Shore | 4 | 450 | 0.9 ↓ | 3 | 534 | 0.6 ⇔ | 5 | 365 | 1.4 ⇔ | 1 | 136 | 0.7 ⇔ | 14 | 575 | 1.8 ⇔ | |
| Northern Dutchess | 3 | 24 | 11.4⇔ | | | | 2 | 240 | 0.9 ⇔ | 0 | 42 | 0.0 ⇔ | 1 | 70 | 2.0 ⇔ | |
| Northern Westchester | 1 | 172 | 0.7 ⇔ | | | | 1 | 227 | 0.4 ⇔ | 4 | 308 | 1.7 ⇔ | 2 | 220 | 1.2 ⇔ | |
| Noyes Memorial | 2 | 29 | 6.1 ⇔ | | | | 1 | 119 | 1.0 ⇔ | NA | 18 | NA | | | | |
| Oishei Childrens | 1 | 40 | 2.8 ⇔ | | | | | | | 3 | 45 | 6.6 ↑ | 1 | 25 | 3.4 ⇔ | |
| Olean General | 1 | 46 | 2.6 ⇔ | | | | 2 | 71 | 3.6 ⇔ | 3 | 51 | 8.5 ↑ | | | | |
| Oneida Healthcare | 6 | 153 | 4.0 ⇔ | | | | 1 | 25 | 3.8 ⇔ | 1 | 59 | 2.1 ⇔ | | | | |
| Oswego Hospital | NA | 16 | NA | | | | 0 | 22 | 0.0 ⇔ | 2 | 39 | 6.5 ⇔ | | | | |
| Our Lady of Lourdes | 3 | 84 | 4.0 ⇔ | | | | 6 | 306 | 1.7 ⇔ | NA | 15 | NA | 2 | 190 | 0.9 ⇔ | |
| Peconic Bay Medical | 0 | 89 | 0.0 ↓ | | | | 1 | 362 | 0.3 ⇔ | 1 | 32 | 3.0 ⇔ | | | | |
| Phelps Memorial | 1 | 106 | 1.1 ⇔ | | | | 0 | 84 | 0.0 ⇔ | 0 | 26 | 0.0 ⇔ | 1 | 111 | 0.9 ⇔ | |
| Plainview Hospital | 0 | 83 | 0.0 ⇔ | | | | 0 | 47 | 0.0 ⇔ | 0 | 28 | 0.0 ⇔ | 0 | 58 | 0.0 ⇔ | ★ |
| Putnam Hospital | NA | 17 | NA | | | | 1 | 122 | 0.8 ⇔ | NA | 5 | NA | 1 | 56 | 2.1 ⇔ | |
| Queens Hospital | 1 | 45 | 1.8 ⇔ | | | | NA | 4 | NA | 1 | 43 | 2.3 ⇔ | | | | |
| Richmond Univ MC | 0 | 54 | 0.0 ⇔ | | | | 1 | 54 | 2.0 ⇔ | 1 | 131 | 0.8 ⇔ | 2 | 36 | 6.3 ⇔ | |
| Rochester General | 17 | 353 | 5.4 ⇔ | 7 | 348 | 1.9 ⇔ | 9 | 477 | 1.9 ⇔ | 2 | 177 | 1.1 ⇔ | 19 | 559 | 2.9 ↑ | |
| Rome Memorial | 0 | 21 | 0.0 ⇔ | | | | NA | 18 | NA | NA | 5 | NA | 1 | 150 | 0.9 ⇔ | |
| Roswell Park | 14 | 311 | 5.5 ⇔ | | | | | | | 2 | 252 | 0.8 ⇔ | NA | 11 | NA | |
| SUNY Downstate MedCr | 4 | 56 | 6.0 ⇔ | | | | 1 | 44 | 2.2 ⇔ | 0 | 37 | 0.0 ⇔ | 2 | 47 | 3.8 ⇔ | |
| Samaritan- Troy | 2 | 102 | 1.9 ⇔ | | | | 0 | 79 | 0.0 ⇔ | 0 | 56 | 0.0 ⇔ | 1 | 174 | 0.7 ⇔ | |
| Samaritan- Watertown | 3 | 52 | 8.0 ⇔ | | | | 1 | 51 | 1.9 ⇔ | 0 | 53 | 0.0 ⇔ | NA | 5 | NA | |
| Saratoga Hospital | 1 | 176 | 0.7 ⇔ | | | | 5 | 447 | 1.0 ⇔ | NA | 12 | NA | 1 | 120 | 0.9 ⇔ | |
| Sisters of Charity | 5 | 102 | 4.9 ⇔ | | | | 1 | 83 | 0.8 ⇔ | 3 | 285 | 1.1 ⇔ | 3 | 276 | 1.3 ⇔ | |

| | COLON SSI | | | Chest SSI | | | HPRO SSI | | | HYST SSI | | | FUSN SSI | | | No SSI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | Reported |
| Sisters- St Joseph | | | | | | | 3 | 285 | 1.0 ⇔ | | | | | | | |
| South Brooklyn Health | 4 | 75 | 5.3 ⇔ | | | | 0 | 115 | 0.0 ⇔ | 0 | 51 | 0.0 ⇔ | 0 | 38 | 0.0 ⇔ | |
| South Nassau Comm. | 2 | 234 | 1.0 ↓ | | | | 4 | 199 | 1.5 ⇔ | 2 | 260 | 0.9 ⇔ | 3 | 472 | 0.9 ⇔ | |
| South Shore UHosp | 2 | 177 | 1.2 ⇔ | 1 | 273 | 0.4 ⇔ | 4 | 448 | 1.0 ⇔ | 1 | 321 | 0.3 ⇔ | 3 | 246 | 1.0 ⇔ | |
| St Anthony | NA | 5 | NA | | | | 0 | 78 | 0.0 ⇔ | 0 | 74 | 0.0 ⇔ | | | | |
| St Barnabas | 2 | 62 | 2.3 ⇔ | | | | 2 | 51 | 3.3 ⇔ | 0 | 24 | 0.0 ⇔ | 2 | 50 | 3.4 ⇔ | |
| St Catherine Siena | 3 | 94 | 3.8 ⇔ | | | | 1 | 81 | 1.1 ⇔ | 0 | 40 | 0.0 ⇔ | 5 | 203 | 2.6 ⇔ | |
| St Charles Hospital | 0 | 56 | 0.0 ⇔ | | | | 0 | 263 | 0.0 ⇔ | 0 | 54 | 0.0 ⇔ | 0 | 68 | 0.0 ⇔ | ★ |
| St Francis- Roslyn | 10 | 274 | 4.6 ⇔ | 1 | 534 | 0.2 ⇔ | 4 | 491 | 0.7 ⇔ | NA | 6 | NA | 8 | 493 | 1.6 ⇔ | |
| St Johns Dobbs Ferry | | | | | | | 1 | 62 | 1.8 ⇔ | | | | | | | |
| St Johns Episcopal | 1 | 32 | 2.3 ⇔ | | | | 1 | 26 | 4.0 ⇔ | NA | 7 | NA | | | | |
| St Johns Riverside | 2 | 46 | 4.9 ⇔ | | | | NA | 18 | NA | 2 | 77 | 3.6 ⇔ | 3 | 50 | 7.1 ↑ | |
| St Joseph- Bethpage | 2 | 42 | 4.9 ⇔ | | | | 0 | 77 | 0.0 ⇔ | | | | 0 | 20 | 0.0 ⇔ | |
| St Josephs- Syracuse | 8 | 194 | 4.4 ⇔ | 10 | 780 | 1.2 ⇔ | 7 | 602 | 0.9 ⇔ | 0 | 103 | 0.0 ⇔ | 2 | 381 | 0.6 ⇔ | |
| St Josephs- Yonkers | NA | 15 | NA | | | | NA | 9 | NA | NA | 2 | NA | | | | |
| St Lukes Cornwall | 1 | 55 | 1.8 ⇔ | | | | 0 | 133 | 0.0 ⇔ | NA | 13 | NA | 1 | 34 | 2.5 ⇔ | |
| St Marys Amsterdam | 0 | 62 | 0.0 ⇔ | | | | 0 | 44 | 0.0 ⇔ | NA | 7 | NA | 1 | 31 | 3.5 ⇔ | |
| St Peters Hospital | 13 | 381 | 3.7 ⇔ | 6 | 502 | 1.2 ⇔ | 2 | 670 | 0.2 ↓ | 3 | 240 | 1.3 ⇔ | 1 | 300 | 0.4 ⇔ | |
| Staten Island U N | 9 | 230 | 3.7 ⇔ | 0 | 190 | 0.0 ⇔ | 0 | 92 | 0.0 ⇔ | 1 | 119 | 0.7 ⇔ | 3 | 190 | 1.4 ⇔ | |
| Staten Island U S | NA | 7 | NA | | | | 1 | 272 | 0.4 ⇔ | NA | 7 | NA | | | | |
| Stony Brk Southamptn | NA | 15 | NA | | | | 0 | 77 | 0.0 ⇔ | 0 | 29 | 0.0 ⇔ | | | | |
| Stony Brook ELIH | | | | | | | NA | 2 | NA | | | | | | | |
| Strong Memorial | 32 | 496 | 6.2 ↑ | 5 | 311 | 1.6 ⇔ | 4 | 110 | 3.5 ↑ | 3 | 123 | 2.2 ⇔ | 14 | 517 | 1.9 ⇔ | |
| Syosset Hospital | NA | 13 | NA | | | | 4 | 429 | 1.1 ⇔ | | | | 0 | 50 | 0.0 ⇔ | |
| UHS Binghamton | NA | 1 | NA | | | | 4 | 226 | 1.7 ⇔ | NA | 5 | NA | | | | |
| UHS Chenango Memor | NA | 8 | NA | | | | 1 | 49 | 2.2 ⇔ | 0 | 33 | 0.0 ⇔ | 0 | 25 | 0.0 ⇔ | |
| UHS Wilson | 16 | 162 | 10.0 ↑ | 3 | 128 | 2.2 ⇔ | 2 | 57 | 3.2 ⇔ | 0 | 23 | 0.0 ⇔ | 6 | 480 | 1.5 ⇔ | |
| UPMC Chautauqua WCA | 1 | 53 | 1.7 ⇔ | | | | 1 | 80 | 1.7 ⇔ | 0 | 42 | 0.0 ⇔ | | | | |
| United Memorial | 1 | 27 | 3.1 ⇔ | | | | 1 | 84 | 1.3 ⇔ | NA | 19 | NA | | | | |
| Unity Hosp Rochester | 2 | 232 | 1.0 ↓ | | | | 7 | 816 | 0.9 ⇔ | 0 | 81 | 0.0 ⇔ | 3 | 427 | 0.8 ⇔ | |

| | COLON SSI | | | Chest SSI | | | HPRO SSI | | | HYST SSI | | | FUSN SSI | | | No SSI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | SSI | Procedures | Compare | Reported |
| Univ Hosp SUNY Upst | 18 | 286 | 5.3 ⇔ | 1 | 110 | 0.8 ⇔ | 1 | 65 | 1.2 ⇔ | 0 | 39 | 0.0 ⇔ | 23 | 569 | 3.3 ↑ | |
| Univ Hosp StonyBrook | 12 | 236 | 4.6 ⇔ | 0 | 196 | 0.0 ⇔ | 7 | 440 | 1.4 ⇔ | 1 | 133 | 0.6 ⇔ | 6 | 343 | 1.4 ⇔ | |
| Upst. Community Gen | 0 | 75 | 0.0 ⇔ | | | | 6 | 352 | 1.4 ⇔ | 0 | 46 | 0.0 ⇔ | 0 | 20 | 0.0 ⇔ | |
| Vassar Brothers | 7 | 304 | 2.1 ⇔ | 3 | 196 | 1.6 ⇔ | 1 | 116 | 0.7 ⇔ | 1 | 164 | 0.7 ⇔ | 6 | 257 | 2.2 ⇔ | |
| Westchester Medical | 4 | 198 | 1.6 ⇔ | 0 | 211 | 0.0 ⇔ | 1 | 208 | 0.4 ⇔ | 2 | 196 | 0.8 ⇔ | 6 | 365 | 1.3 ⇔ | |
| White Plains Hosp | 6 | 281 | 2.8 ⇔ | 0 | 64 | 0.0 ⇔ | 3 | 348 | 1.0 ⇔ | 1 | 287 | 0.4 ⇔ | 2 | 353 | 0.6 ⇔ | |
| Woodhull Med Ctr | 2 | 34 | 5.4 ⇔ | | | | 0 | 20 | 0.0 ⇔ | 1 | 68 | 1.6 ⇔ | | | | |
| Wyckoff Heights | 3 | 56 | 5.5 ⇔ | | | | NA | 19 | NA | 0 | 41 | 0.0 ⇔ | 1 | 20 | 6.1 ⇔ | |
| Wynn Hospital MVHS | 16 | 138 | 10.5 ↑ | 3 | 198 | 1.3 ⇔ | 4 | 137 | 2.4 ⇔ | 0 | 26 | 0.0 ⇔ | 2 | 56 | 3.6 ⇔ | |
| Wyoming County Comm. | NA | 14 | NA | | | | NA | 15 | NA | NA | 9 | NA | | | | |

↑ Adjusted rate significantly higher than state average.

↓ Adjusted rate significantly lower than state average.

⇔ Not significantly different that state average.

★ No SSIs reported.

NA=Hospital performed less than 20 procedures; no adjusted rate calculated.

Hospital-specific SSI rates are provided in Table 9. Of the 127 hospitals that reported more than 20 colon procedures, 8 hospitals (6%) had colon SSI rates that were statistically higher than the state average. Nine (9) hospitals (7%) had rates that were statistically lower than the state average. Of the 99 hospitals that reported more than 20 abdominal hysterectomies in 2023, two hospitals (%) had SSI rates that were statistically higher than the state average. A total of 35 hospitals performed CABG surgeries. Four (11.4%) hospitals had either a CABG chest SSI rate that was statistically higher (2) or lower (2) than the state average. Of the 133 hospitals that reported more than 20 hip procedures in 2023, four hospitals (3%) had hip SSI rates that were statistically higher than the state average. One hospital had lower than the state average. Of the 99 hospitals that reported more than 20 spinal fusion procedures in 2023, 4 hospitals (4%) had a spinal fusion SSI rate that was statistically higher, and three (3) hospitals (3%) had a significantly lower SSI rate than the state average.

All 19 hospitals with one or more higher SSI rates are required to submit improvement plans following the Department's HAI Reporting Program policy for facilities with consecutive years of high HAI rates (http://www.health.ny.gov/statistics/facilities/hospital/hospital_acquired_infections/). Five (5) hospitals ( ★ ) had no SSIs reported in 2023.

## Central line associated bloodstream infections (CLABSIs)

In 2023, a total of 1,362 CLABSIs from 157 hospitals were associated with 1,544,956 central line days, for an overall rate of 0.88 infections per 1,000 central line days in the selected ICUs and wards (Table 10). In 2015, NHSN began excluding bloodstream infections (BSIs) occurring in patients with mucosal barrier injury (MBI). In 2018, BSIs involving ventricular assist devices (VAD) and/or extracorporeal membrane oxygenation (ECMO) were removed from CLABSI rates because patients with these devices are at increased risk of acquiring a BSI independent of the presence of a central line. Starting in 2019, observed or suspected patient injection into a vascular line (PATINJ), known or suspected factitious disorder imposed on another (FDIA), (formerly known as Munchausen syndrome by proxy), epidermolysis bullosa (EB), BSIs in patients with both a central line and another vascular access device where an organism identified from pus at the other access site matches an organism identified in the blood (IVPUS), and group B Streptococcus BSIs in infants during the first 6 days of life were excluded from infection rate calculations. In 2023, hospitals reported 334 MBI-BSIs, 27 ECMO-BSIs, 50 VAD-BSIs, six (6) PATINJ-BSI, two (2) MSbP-BSI, six (6) IVPUS-BIS and no (0) EB-BSI.

Table 10 summarizes the total number of CLABSIs reported in 2023 by unit. The CLABSI rate in adult and pediatric ICUs (0.92/1,000 central line days) was higher than the rate in wards (0.88/1,000 central line days).

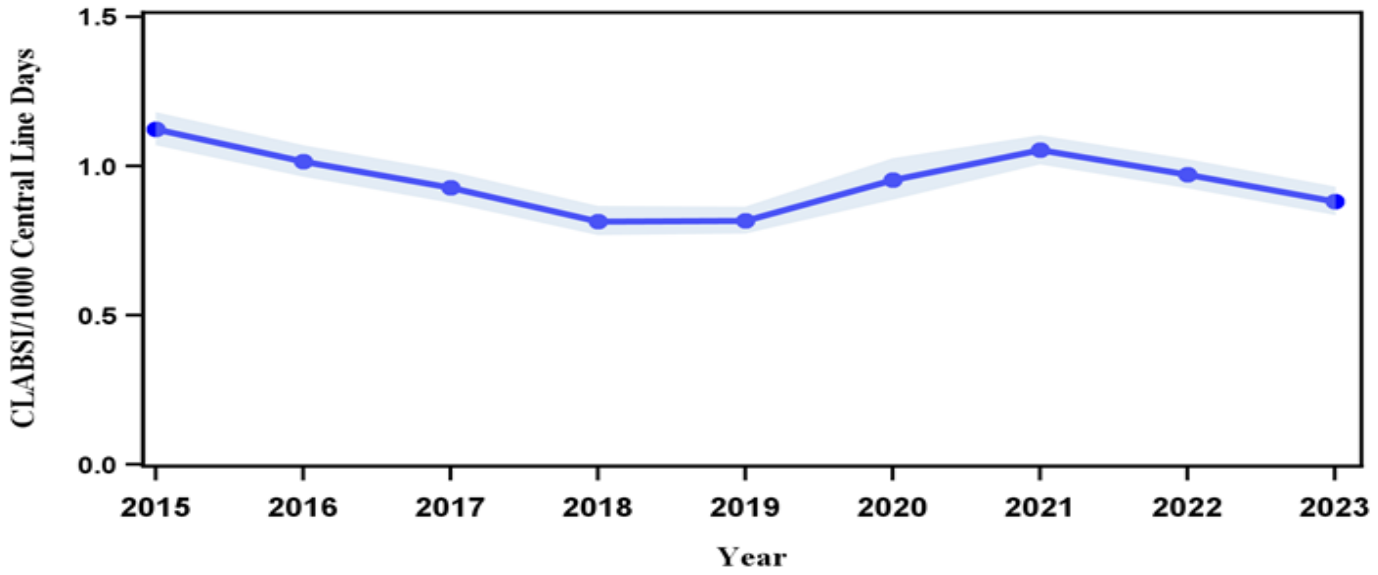
**Table 10. Central line-associated bloodstream infection (CLABSI) rates by unit, New York State 2023**

| Unit | # Hospitals | # Exclusion | # CLABSI* | # Central line days | CLABSI rate | # Patient days | Device utilization ratio |
|---|---|---|---|---|---|---|---|
| **Adult/pediatric Intensive Care Units (ICU)** | | | | | | | |
| Cardiothoracic ICU | 29 | 37 | 48 | 75,404 | 0.637 | 113,074 | 66.7 |
| Coronary ICU | 34 | 11 | 58 | 38,168 | 1.520 | 101,066 | 37.8 |
| Medical ICU | 64 | 18 | 132 | 124,296 | 1.062 | 299,223 | 41.5 |
| Medical Surgical ICU | 91 | 5 | 68 | 114,530 | 0.594 | 295,621 | 38.7 |
| Neurosurgical ICU | 18 | 3 | 18 | 19,832 | 0.908 | 77,094 | 25.7 |
| Pediatric ICU | 27 | 12 | 50 | 36,026 | 1.388 | 98,181 | 36.7 |
| Surgical ICU | 41 | 4 | 63 | 69,048 | 0.912 | 168,111 | 41.1 |
| **Subtotal Adult/Pediatric ICUs** | **151** | **90** | **437** | **477,304** | **0.916** | **1,152,370** | **41.4** |
| **Neonatal Intensive Care Units (NICU)** | | | | | | | |
| Neonatal ICU Level II/III | 14 | 0 | 2 | 2,853 | 0.701 | 29,530 | 9.7 |
| Neonatal ICU Level III | 25 | 0 | 6 | 12,038 | 0.498 | 91,139 | 13.2 |
| Neonatal ICU RPC | 17 | 2 | 40 | 59,644 | 0.671 | 249,325 | 23.9 |
| **Subtotal Neonatal ICUs** | **55** | **2** | **48** | **74,535** | **0.644** | **369,994** | **20.1** |
| **Adult/pediatric wards** | | | | | | | |
| Medical surgical ward | 125 | 16 | 165 | 251,632 | 0.656 | 2,547,307 | 9.9 |
| Medical ward | 85 | 31 | 269 | 278,522 | 0.966 | 2,684,648 | 10.4 |
| Pediatric ward | 45 | 23 | 32 | 37,272 | 0.859 | 290,885 | 12.8 |
| Surgical ward | 68 | 5 | 46 | 84,140 | 0.547 | 817,946 | 10.3 |
| Step down unit | 59 | 6 | 56 | 57,216 | 0.979 | 383,665 | 14.9 |
| Mixed acuity ward | 19 | 0 | 17 | 14,783 | 1.150 | 102,359 | 14.4 |
| Oncology ward | 25 | 247 | 271 | 244,385 | 1.109 | 480,425 | 50.9 |
| Telemetry ward | 29 | 0 | 21 | 25,167 | 0.834 | 378,295 | 6.7 |
| **Subtotal adult/pediatric wards** | **156** | **328** | **877** | **993,117** | **0.883** | **7,685,530** | **12.9** |
| **Total grand total** | **157** | **420** | **1,362** | **1,544,956** | **0.882** | **9,207,894** | **16.8** |

[1]Excluding MBI, VAD, ECMO, PATINJ, MSbP (FDIA), EB, IVPUS, and MSbP (FDIA). New York State data as of June 16, 2024. CLABSI rates are per 1,000 central line days. Device utilization = central line days per 100 patient days.

Figure 7 shows trends in CLABSI rates between 2015 and 2023. Between 2015 and 2023 the CLABSI rate decreased by 21% (statistically significantly) from 1.12 to 0.88 CLABSI per 1,000 central line days. CLABSI rates decreased 9% (statistically-significantly) between 2022 and 2023 from 0.97 in 2022. CLABSI rates increased in 2021 most likely due to longer hospital stays with severe co-morbidities requiring ICU admission with central lines during the COVID-19 pandemic, recovering to pre-pandemic levels in 2023.

**Figure 7. Trends in central line-associated bloodstream infection (CLABSI) rates, New York State 2015-2023**




| Year | # Hospitals | # CLABSI | # Central line days | CLABSI rate (95% CI) | # Patient days | Device utilization ratio |
|---|---|---|---|---|---|---|
| 2015 | 167 | 1,590 | 1,415,710 | 1.12 (1.07, 1.18 | 8,178,130 | 17.3 |
| 2016 | 169 | 1,398 | 1,376,060 | 1.02 (0.96, 1.07) | 8,122,132 | 16.9 |
| 2017 | 172 | 1,228 | 1,322,501 | 0.93 (0.88, 0.98) | 8,077,737 | 16.4 |
| 2018 | 170 | 1,110 | 1,295,018 | 0.86 (0.81, 0.91) | 8,248,580 | 15.7 |
| 2019 | 164 | 1,059 | 1,286,392 | 0.82 (0.77, 0.87) | 8,244,594 | 15.6 |
| 2020 | 160 | 721 | 756,749 | 0.95 (0.88, 1.02) | 4,171,360 | 18.1 |
| 2021 | 160 | 1731 | 1,645,469 | 1.05 (1.00, 1.10) | 9,179,052 | 17.9 |
| 2022 | 163 | 1531 | 1,572,621 | 0.97 (0.92, 1.02) | 9,140,661 | 17.2 |
| 2023 | 157 | 1,362 | 1,544,956 | 0.88 (0.84, 0.93) | 9,207,894 | 16.73 |

New York State data as of June 16, 2024. Rates are per 1,000 central line days. Device utilization = central line days per 100 patient days.

**Figure 8. Central line associated bloodstream infections in ICUs and wards, New York State, 2015-2023**

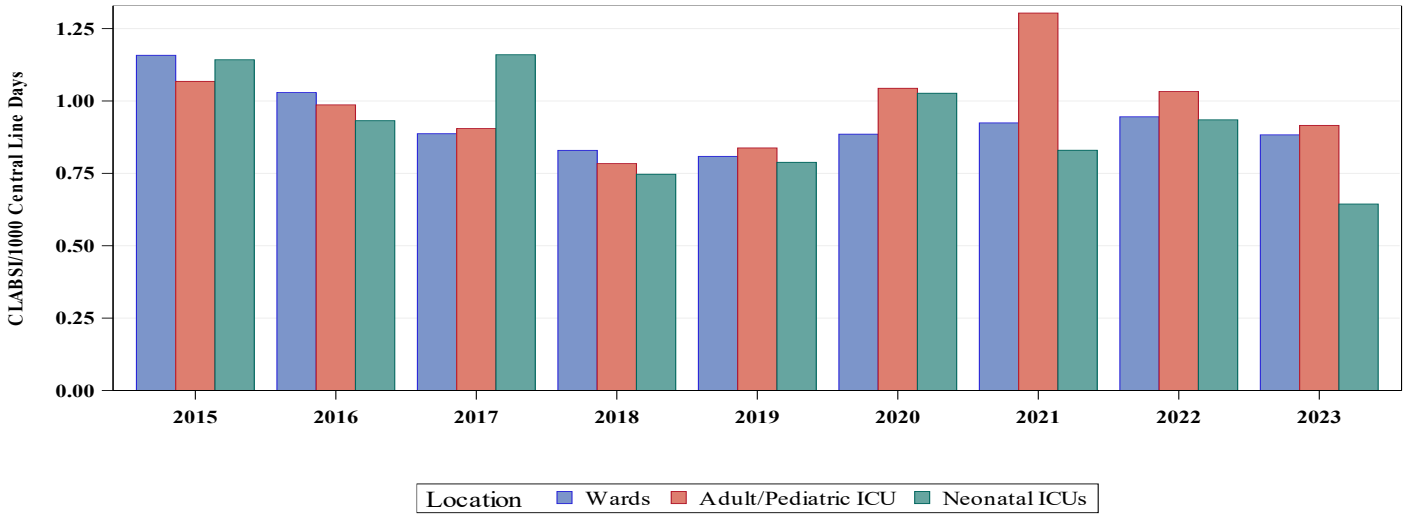
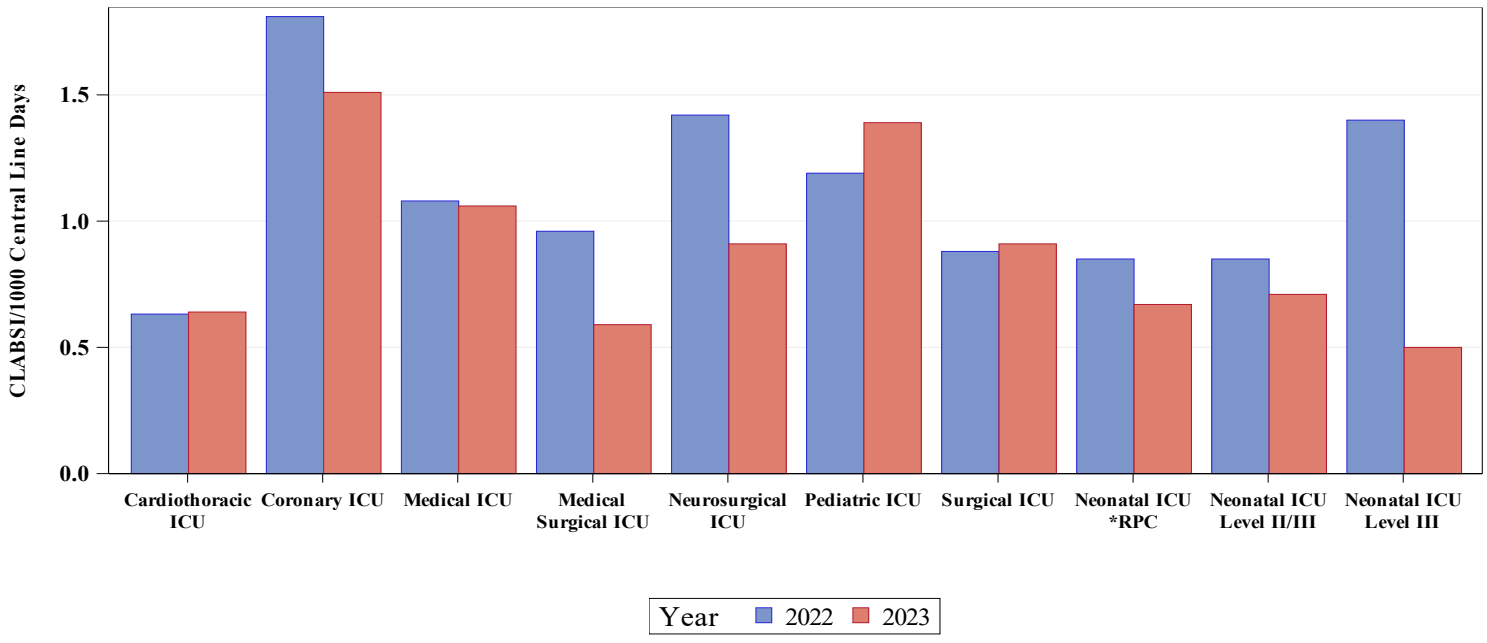



Figure 8 shows the trend of CLABSI rates between 2015 and 2023 by location type. From 2015 through 2019, CLABSI rates showed a decreasing trend. Rates increased during the pandemic and early post pandemic period; the highest rate was reported in ICUs in 2021. CLABSI rates showed a significant decrease in 2023 in all locations. The decreasing trend was more visible in critical care units (i.e., ICUs/NICUs).

**Figure 9. Central line associated bloodstream infections in ICUs, New York State, 2022-2023**




=*RPC=Regional perinatal center.

**Figure 10. Central line associated bloodstream infections in wards, New York State, 2022-2023**

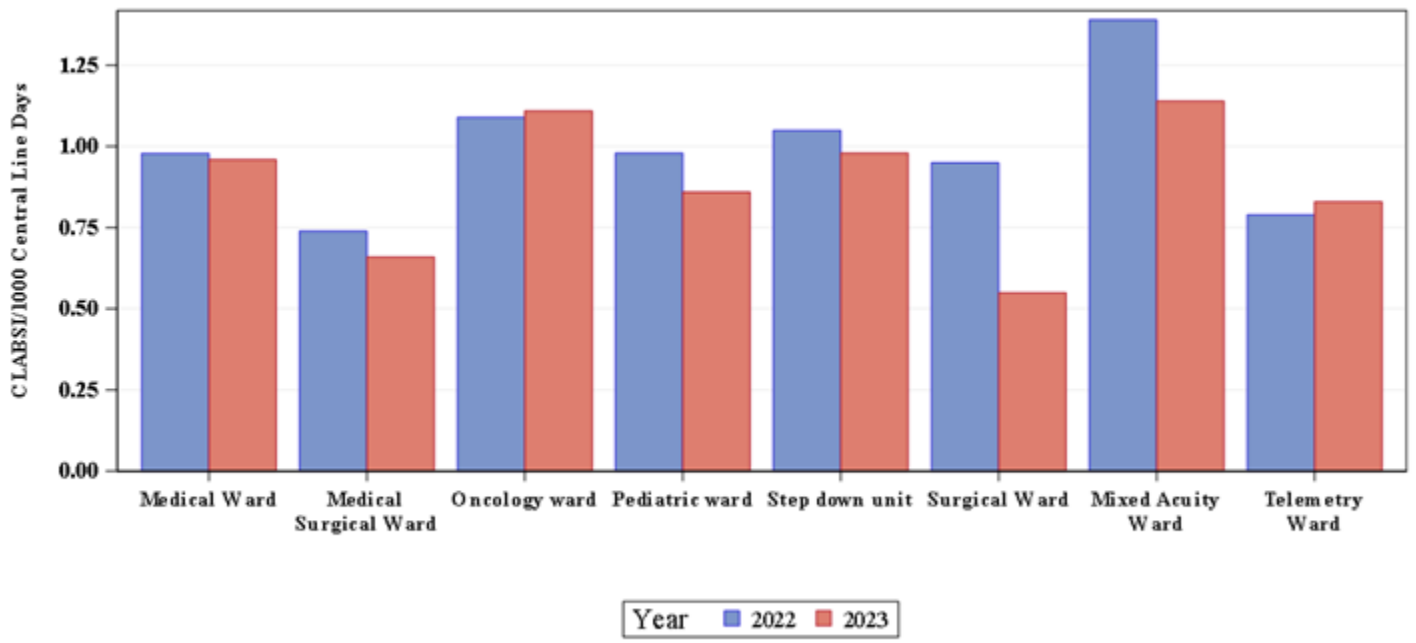



Figure 9-10 compared CLABSI rates between 2022 and 2023 by location type. Overall, from 2022 through 2023, CLABSI rates in ICUs/NICUs by unit type showed a decreasing trend. In 2023, the rate increased (not significantly) in pediatric ICUs from 1.19 to 1.39 per 10,000 patient days. Rates decreased or stayed approximately the same from 2022 to 2023 for most of the ward types. The rate decreased significantly in surgical wards (from 0.95 to 0.55 per 10,000 line days) and not significantly in mixed acuity units (1.39 to 1.15 per 10,000 line days). Among all locations, coronary ICUs and mixed acuity wards were among the wards that had the highest infection rates.

**Risk factors for CLABSIs**

Hospitals do not report patient-specific risk factors for CLABSIs; NHSN requires reporting of only the total number of patient days and total number of central line days per month within each hospital location. CLABSI rates are stratified by location type. For CLABSIs in neonatal intensive care units (NICUs), the data are collected by birth weight group because babies with lower birth weights are more susceptible to CLABSIs than babies with higher birth weights. No risk adjustment is performed by birth weight group in Level II/III facilities due to the small number of CLABSIs.

**Hospital specific, unit specific CLABSI rates**

Within NYS, hospital specific CLABSI rates were compared to the state average by hospital location type. The CLABSI rates in Table 12 (ICUs) and Table 13 (wards) help hospitals target their CLABSI reduction efforts to specific locations. Overall, 20 high-rate flags will be addressed in CLABSI improvement plans by 16 affected hospitals.

The distribution of microorganisms associated with CLABSIs is presented by location in Table 11. Enterococci and yeasts were the most common organisms identified in adult and pediatric ICUs and wards. Forty percent (40%) of Enterococci spp. were vancomycin resistant enterococci (VRE), eight percent (7.5%) of yeasts were *Candida auris*, and 41% of *Staphylococcus aureus* was methicillin-resistant *Staphylococcus aureus* (MRSA).

**Table 11. Microorganisms identified in CLABSIs, in ICUs/NICUs and wards, New York State 2023**

| Microorganism | Number of Isolates | Percent of Infections |
|---|---|---|
| Enterococci | 379 | 21.3 |
| - VRE | (152) | (8.5) |
| Yeast | 347 | 19.5 |
| - *Candida auris* | (26) | (1.5) |
| Coagulase negative staphylococci | 308 | 17.3 |
| *Staphylococcus aureus* | 185 | 10.4 |
| - MRSA | (76) | (4.3) |
| Klebsiella spp. | 178 | 10.0 |
| - CRE-Klebsiella | (11) | (0.6) |
| *Escherichia coli* | 174 | 9.8 |
| - CRE-E. coli | (3) | (0.2) |
| Pseudomonas spp. | 85 | 4.8 |
| *Streptococci* | 76 | 4.3 |
| Enterobacter spp. | 63 | 3.5 |
| - CRE-Enterobacter | (13) | (0.7) |
| Serratia spp. | 34 | 1.9 |
| Acinetobacter spp. | 27 | 1.5 |
| - MDRO-Acinetobacter | (10) | (0.6) |
| Proteus spp. | 19 | 1.1 |
| Bacteroides spp. | 16 | 0.9 |
| Citrobacter spp. | 15 | 0.8 |
| Clostridium spp. | 12 | 0.7 |
| Stenotrophomonas spp. | 12 | 0.7 |
| Other | 114 | 6.4 |

The distribution of microorganisms associated with CLABSIs is presented by location in Table 11. Enterococci and yeasts were the most common organisms identified in adult and pediatric ICUs and wards. Forty percent (40%) of Enterococci spp. were vancomycin resistant enterococci (VRE), nearly eight percent (7.5%) of yeasts were *Candida auris*, and 41% of *Staphylococcus aureus* was methicillin-resistant *Staphylococcus aureus* (MRSA).

## Table 12. Central line-associated bloodstream infection rates by intensive care unit type, New York State 2023

| | Coronary ICU | | Cardiothoracic ICU | | Medical ICU | | Medical Surgical ICU | | Surgical ICU | | Neurosurgical ICU | | Pediatric ICU | | Neonatal ICU | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hospital** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **NICU level** | **CLABSI/ CLDays** | **Adj rate** |
| **State Average Rate** | **1.51** | | **0.66** | | **1.06** | | **0.59** | | **0.91** | | **0.91** | | **1.39** | | **RPC=0.72, L3=0.67, L2/3=0.50** | | |
| Adirondack Medical | | | | | | | 0/580 | 0.0 | | | | | | | | | |
| Albany Med Ctr | 0/2078 | * 0.0 | 4/2991 | 1.3 | 3/4178 | 0.7 | 0/1976 | 0.0 | 8/6454 | 1.2 | | | 5/1692 | 3.0 | RPC | 0/3397 | 0.0 |
| Arnot Ogden Med Ctr | | | | | | | 3/1585 | 1.9 | | | | | | | Lev 3 | 1/567 | 2.2 |
| Auburn Memorial | | | | | | | 2/1006 | 2.0 | | | | | | | | | |
| Bellevue Hospital | 6/2772 | 2.2 | 0/718 | 0.0 | 3/1584 | 1.9 | | | 4/1164 | ^ 3.4 | 1/471 | 2.1 | 1/265 | 3.8 | RPC | 2/2232 | 0.7 |
| Bon Secours | | | | | | | 0/185 | 0.0 | | | | | | | | | |
| Bronx-Lebanon | 1/679 | 1.5 | | | 5/2390 | 2.1 | | | | | | | NA | NA | Lev 3 | 0/339 | 0.0 |
| Brookdale Hospital | 2/554 | 3.6 | | | 2/1669 | 1.2 | | | 4/1687 | 2.4 | 0/456 | 0.0 | NA | NA | Lev 3 | 1/365 | 2.7 |
| Brooklyn Hosp Ctr | 2/383 | 5.2 | | | 0/813 | 0.0 | | | | | | | NA | NA | Lev 3 | 1/631 | 1.6 |
| Brooks Memorial | | | | | | | 0/391 | 0.0 | | | | | | | | | |
| Buffalo General | | | 0/3599 | 0.0 | 7/6195 | 1.1 | | | 1/2218 | 0.5 | 3/2465 | 1.2 | | | | | |
| Canton-Potsdam | | | | | | | 0/538 | 0.0 | | | | | | | | | |
| Cayuga Medical Ctr | | | | | | | 0/1012 | 0.0 | | | | | | | | | |
| Champlain Valley | | | | | | | 0/1452 | 0.0 | | | | | | | | | |
| Claxton-Hepburn | | | | | | | 0/721 | 0.0 | | | | | | | | | |
| Clifton Springs | | | | | 0/345 | 0.0 | | | | | | | | | | | |
| Cohens Childrens | | | | | | | | | | | | | 2/3162 | 0.6 | RPC | 2/5236 | 0.3 |
| Columbia Memorial | | | | | | | 1/841 | 1.2 | | | | | | | | | |
| Corning Hospital | | | | | | | 0/323 | 0.0 | | | | | | | | | |
| Cortland Reg Med | | | | | 0/328 | 0.0 | | | | | | | | | | | |
| Crouse Hospital | | | | | | | 0/3362 | 0.0 | | | | | | | RPC | 6/4325 | 1.3 |
| Ellis Hospital | | | | | 3/2014 | 1.5 | | | 0/2434 | 0.0 | | | | | | | |
| Elmhurst Hospital | 0/308 | 0.0 | | | 0/1063 | 0.0 | | | 0/726 | 0.0 | | | | | Lev 2/3 | 0/450 | 0.0 |
| Erie County Med Ctr | | | | | 4/2771 | 1.4 | | | | | | | | | | | |
| FF Thompson | | | | | 2/1064 | 1.9 | | | | | | | | | | | |
| Flushing Hospital | | | | | 0/959 | 0.0 | 0/59 | 0.0 | | | | | | | Lev 3 | 0/356 | 0.0 |
| Garnet Catskills | | | | | | | 0/342 | 0.0 | | | | | | | | | |
| Garnet Middletown | | | | | | | 0/2799 | 0.0 | | | | | | | | | |
| Geneva General | | | | | | | 0/674 | 0.0 | | | | | | | | | |
| Glen Cove Hospital | | | | | | | 0/475 | 0.0 | | | | | | | | | |
| Glens Falls Hospital | | | | | | | 0/1383 | 0.0 | | | | | | | | | |

## Table 12. Central line-associated bloodstream infection rates by intensive care unit type, New York State 2023

| | Coronary ICU | | Cardiothoracic ICU | | Medical ICU | | Medical Surgical ICU | | Surgical ICU | | Neurosurgical ICU | | Pediatric ICU | | Neonatal ICU | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hospital** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **NICU level** | **CLABSI/ CLDays** | **Adj rate** |
| **State Average Rate** | **1.51** | | **0.66** | | **1.06** | | **0.59** | | **0.91** | | **0.91** | | **1.39** | | **RPC=0.72, L3=0.67, L2/3=0.50** | | |
| Good Samar. Suffern | | | 0/553 | 0.0 | 1/1289 | 0.8 | | | 1/606 | 1.7 | | | | | | | |
| Good Samar. W Islip | 0/286 | 0.0 | 0/967 | 0.0 | 1/2760 | 0.4 | | | 0/2084 | 0.0 | 0/525 | 0.0 | 0/92 | 0.0 | Lev 3 | 0/1369 | 0.0 |
| Harlem Hospital | 0/417 | 0.0 | | | 0/174 | 0.0 | 1/1282 | 0.8 | | | | | 0/189 | 0.0 | Lev 3 | 0/339 | 0.0 |
| HealthAlliance-MaryC | | | | | | | 0/901 | 0.0 | | | | | | | | | |
| Highland Hospital | | | | | 3/712 | 4.2 | 2/957 | 2.1 | | | | | | | | | |
| Hosp for Spec Surg | | | | | | | 0/109 | 0.0 | | | | | | | | | |
| Huntington Hospital | 0/644 | 0.0 | | | | | 0/980 | 0.0 | | | | | | | | | |
| Interfaith Med Ctr | | | | | | | 2/1259 | 1.6 | | | | | | | | | |
| JT Mather Hospital | | | | | | | 1/1531 | 0.7 | | | | | | | | | |
| Jacobi Med Ctr | 1/825 | 1.2 | | | 2/1374 | 1.5 | | | 0/1147 | 0.0 | | | 1/62 | 16.1 | Lev 3 | 1/1010 | 0.8 |
| Jamaica Hospital | | | | | 1/1918 | 0.5 | | | 0/814 | 0.0 | | | | | Lev 3 | 0/681 | 0.0 |
| Jones Memorial | | | | | | | 0/128 | 0.0 | | | | | | | | | |
| Kenmore Mercy | | | | | | | 0/1469 | 0.0 | | | | | | | | | |
| Kings County Hosp | | | | | 2/2164 | 0.9 | | | 2/1472 | 1.4 | | | 0/52 | 0.0 | Lev 2/3 | 0/473 | 0.0 |
| LIJ at Forest Hills | | | | | 0/953 | 0.0 | | | | | | | | | | | |
| LIJ at Valley Stream | | | | | | | 1/964 | 1.0 | | | | | | | | | |
| Lenox Hill Hospital | 3/1287 | 2.3 | 1/2396 | 0.4 | 1/1105 | 0.9 | | | | | 2/339 | 5.9 | | | Lev 2/3 | 1/518 | 1.9 |
| Lincoln Med Ctr | | | | | 2/2797 | 0.7 | | | 0/1203 | 0.0 | | | | | Lev 3 | 0/288 | 0.0 |
| Long Isl Jewish(LIJ) | 0/682 | 0.0 | | | 2/2402 | 0.8 | 0/579 | 0.0 | 0/1097 | 0.0 | | | | | | | |
| Long Isl. Community | 0/629 | 0.0 | | | 1/737 | 1.4 | | | 0/476 | 0.0 | | | | | | | |
| Maimonides Med Ctr | 2/915 | 2.2 | 4/2228 | 1.8 | 1/1036 | 1.0 | | | 0/892 | 0.0 | | | 0/266 | 0.0 | RPC | 2/1374 | 1.3 |
| Mary Imogene Bassett | | | | | | | 4/3209 | 1.2 | | | | | | | | | |
| Memor SloanKettering | | | | | | | 3/4548 | 0.7 | | | | | 1/905 | 1.1 | | | |
| Mercy Hosp Buffalo | | | 0/1572 | 0.0 | | | 0/2399 | 0.0 | | | | | | | | | |
| Mercy Med Ctr | | | | | | | 0/983 | 0.0 | | | | | | | Lev 3 | 0/60 | 0.0 |
| Metropolitan Hosp | | | | | | | 0/971 | 0.0 | | | | | | | Lev 2/3 | 0/245 | 0.0 |
| MidHudson Reg of | | | | | | | 2/1230 | 1.6 | | | | | | | | | |
| Millard Fill. Suburb | | | | | | | 1/2727 | 0.4 | | | | | | | | | |
| Montefiore-Einstein | | | 1/348 | 2.9 | 5/2429 | 2.1 | | | 0/879 | 0.0 | | | | | RPC | 3/3710 | 0.6 |
| Montefiore-Moses | 5/1634 | 3.1 | 5/2798 | 1.8 | 3/1183 | 2.5 | | | 1/937 | 1.1 | | | 5/2142 | 2.3 | | | |
| Montefiore-Mt Vernon | | | | | | | 0/112 | 0.0 | | | | | | | | | |

## Table 12. Central line-associated bloodstream infection rates by intensive care unit type, New York State 2023

| | Coronary ICU | | Cardiothoracic ICU | | Medical ICU | | Medical Surgical ICU | | Surgical ICU | | Neurosurgical ICU | | Pediatric ICU | | Neonatal ICU | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hospital** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **NICU level** | **CLABSI/ CLDays** | **Adj rate** |
| **State Average Rate** | **1.51** | | **0.66** | | **1.06** | | **0.59** | | **0.91** | | **0.91** | | **1.39** | | **RPC=0.72, L3=0.67, L2/3=0.50** | | |
| Montefiore-NewRochl | | | | | | | 1/1213 | 0.8 | | | | | | | | | |
| Montefiore-Nyack | | | | | 0/1059 | 0.0 | | | 1/766 | 1.3 | | | | | | | |
| Montefiore-Wakefield | | | | | 1/933 | 1.1 | | | | | | | | | Lev 2/3 | 0/156 | 0.0 |
| Mount St. Marys | | | | | 1/719 | 1.4 | | | | | | | | | | | |
| Mt Sinai | 0/1639 | 0.0 | 3/4807 | 0.6 | 0/1933 | 0.0 | | | 3/2245 | 1.3 | 1/1153 | 0.9 | 2/2727 | 0.7 | RPC | 3/3236 | 1.1 |
| Mt Sinai Beth Israel | 0/218 | 0.0 | | | | | 0/1253 | 0.0 | | | | | | | | | |
| Mt Sinai Brooklyn | | | | | | | 1/963 | 1.0 | | | | | | | | | |
| Mt Sinai Queens | | | | | | | 0/645 | 0.0 | | | | | | | | | |
| Mt Sinai St Lukes | 0/782 | 0.0 | 0/889 | 0.0 | 2/1088 | 1.8 | | | 0/461 | 0.0 | | | | | | | |
| Mt Sinai West | | | | | 0/409 | 0.0 | 2/974 | 2.1 | | | 0/269 | 0.0 | | | Lev 3 | 0/980 | 0.0 |
| NY Community Hosp | | | | | | | 1/624 | 1.6 | | | | | | | | | |
| NYP-Allen | | | | | | | 1/1111 | 0.9 | | | | | | | | | |
| NYP-Brklyn | 2/568 | 3.5 | 1/918 | 1.1 | | | 0/2614 | 0.0 | | | | | NA | NA | Lev 3 | 0/1370 | 0.0 |
| NYP-Columbia | 10/5424 | 1.8 | 5/7766 | 0.6 | 11/4729 | ^ 2.3 | | | 2/2970 | 0.7 | 2/1545 | 1.3 | | | | | |
| NYP-Hudson Valley | | | | | | | 0/649 | 0.0 | | | | | | | Lev 2/3 | NA | NA |
| NYP-Lawrence | | | | | 0/1558 | 0.0 | | | | | | | | | Lev 2/3 | NA | NA |
| NYP-Lower | | | | | | | 5/1040 | ^ 4.8 | | | | | | | | | |
| NYP-Morgan Stanley | | | | | | | | | | | | | 9/6851 | 1.3 | RPC | 9/7915 | 1.3 |
| NYP-Queens | 0/191 | 0.0 | 0/964 | 0.0 | 0/2039 | 0.0 | 0/882 | 0.0 | | | 0/89 | 0.0 | | | Lev 3 | 0/311 | 0.0 |
| NYP-Weill Cornell | 8/3586 | 2.2 | 4/4824 | 0.8 | 4/3823 | 1.0 | | | 2/2375 | 0.8 | 0/872 | 0.0 | 2/1695 | 1.2 | RPC | 3/3463 | 1.1 |
| NYU Langone | | | | | 0/1016 | 0.0 | | | 0/541 | 0.0 | 2/481 | 4.2 | | | Lev 2/3 | 0/63 | 0.0 |
| NYU Orthopedic Hosp | | | | | | | | | 0/62 | 0.0 | | | | | | | |
| NYU Tisch | 3/1860 | 1.6 | | | 3/4386 | 0.7 | | | 3/5711 | 0.5 | 0/1030 | 0.0 | 2/5139 | 0.4 | RPC | 2/3365 | 0.6 |
| NYU Winthrop | | | | | 2/1890 | 1.1 | | | 0/2364 | 0.0 | 1/656 | 1.5 | 0/438 | 0.0 | RPC | 1/1001 | 1.2 |
| Nassau University | 0/752 | 0.0 | | | 0/1116 | 0.0 | | | 3/856 | 3.5 | | | | | Lev 3 | 0/154 | 0.0 |
| Nathan Littauer | | | | | | | 0/481 | 0.0 | | | | | | | | | |
| Newark Wayne | | | | | 0/919 | 0.0 | | | | | | | | | | | |
| Niagara Falls | | | | | | | 2/1147 | 1.7 | | | | | | | | | |
| North Central Bronx | | | | | | | 0/862 | 0.0 | | | | | | | | | |
| North Shore | 6/2262 | 2.7 | 4/5226 | 0.8 | 4/1766 | 2.3 | | | 5/2272 | 2.2 | 1/1237 | 0.8 | | | RPC | 0/1147 | 0.0 |
| Northern Dutchess | | | | | | | 0/521 | 0.0 | | | | | | | | | |

## Table 12. Central line-associated bloodstream infection rates by intensive care unit type, New York State 2023

| | Coronary ICU | | Cardiothoracic ICU | | Medical ICU | | Medical Surgical ICU | | Surgical ICU | | Neurosurgical ICU | | Pediatric ICU | | Neonatal ICU | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hospital** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **NICU level** | **CLABSI/ CLDays** | **Adj rate** |
| **State Average Rate** | **1.51** | | **0.66** | | **1.06** | | **0.59** | | **0.91** | | **0.91** | | **1.39** | | **RPC=0.72, L3=0.67, L2/3=0.50** | | |
| Northern Westchester | | | | | | | 0/461 | 0.0 | | | | | | | Lev 3 | 0/66 | 0.0 |
| Noyes Memorial | | | | | | | 0/594 | 0.0 | | | | | | | | | |
| Oishei Childrens | | | | | | | | | | | | | 3/1713 | 1.8 | RPC | 3/5510 | 0.5 |
| Olean General | | | | | | | 0/1262 | 0.0 | | | | | | | | | |
| Oneida Healthcare | | | | | | | 0/616 | 0.0 | | | | | | | | | |
| Oswego Hospital | | | | | 0/374 | 0.0 | | | | | | | | | | | |
| Our Lady of Lourdes | | | | | | | 1/1170 | 0.9 | | | | | | | | | |
| Peconic Bay Medical | | | | | | | 0/573 | 0.0 | | | | | | | | | |
| Phelps Memorial | | | | | | | 0/659 | 0.0 | | | | | | | | | |
| Plainview Hospital | | | | | | | 0/1082 | 0.0 | | | | | | | | | |
| Queens Hospital | | | | | 0/2004 | 0.0 | | | | | | | | | Lev 3 | 0/342 | 0.0 |
| Richmond Univ MC | 1/402 | 2.5 | | | 5/2234 | 2.2 | | | 2/1203 | 1.7 | | | NA | NA | Lev 3 | 1/269 | 4.2 |
| Rochester General | 3/1874 | 1.6 | 1/3553 | 0.3 | 3/3727 | 0.8 | | | 0/1653 | 0.0 | | | | | | | |
| Rome Memorial | | | | | | | 0/403 | 0.0 | | | | | | | | | |
| Roswell Park | | | | | | | 7/2408 | ^ 2.9 | | | | | | | | | |
| SUNY Downstate | 0/469 | 0.0 | | | 0/887 | 0.0 | | | NA | NA | | | NA | NA | RPC | 0/644 | 0.0 |
| Samaritan- Troy | | | | | | | 3/2126 | 1.4 | | | | | | | | | |
| Samaritan- Watertown | | | | | | | 0/765 | 0.0 | | | | | | | | | |
| Saratoga Hospital | | | | | 0/1526 | 0.0 | | | | | | | | | | | |
| Sisters of Charity | | | | | | | 0/1450 | 0.0 | | | | | | | Lev 3 | 1/1242 | 0.7 |
| South Brooklyn Healt | 1/594 | 1.7 | | | 4/2065 | 1.9 | | | 0/1419 | 0.0 | | | | | Lev 2/3 | NA | NA |
| South Nassau Comm. | | | | | | | 1/2376 | 0.4 | | | | | | | | | |
| South Shore UHosp | | | 0/1216 | 0.0 | | | 0/2179 | 0.0 | | | 0/277 | 0.0 | | | | | |
| St Anthony | | | | | | | 0/239 | 0.0 | | | | | | | | | |
| St Barnabas | | | | | 1/1580 | 0.6 | | | 0/618 | 0.0 | | | | | Lev 2/3 | 1/175 | 5.7 |
| St Catherine Siena | 0/635 | 0.0 | | | | | 0/676 | 0.0 | | | | | | | | | |
| St Charles Hospital | | | | | 0/774 | 0.0 | | | | | | | | | | | |
| St Francis- Roslyn | | | 3/3815 | 0.8 | 0/1433 | 0.0 | | | 1/1534 | 0.7 | | | | | | | |
| St Johns Episcopal | 1/621 | 1.6 | | | 2/650 | 3.1 | | | | | | | | | | | |
| St Johns Riverside | | | | | | | 1/1727 | 0.6 | | | | | | | | | |
| St Joseph- Bethpage | | | | | | | 1/1708 | 0.6 | | | | | | | | | |

## Table 12. Central line-associated bloodstream infection rates by intensive care unit type, New York State 2023

| | Coronary ICU | | Cardiothoracic ICU | | Medical ICU | | Medical Surgical ICU | | Surgical ICU | | Neurosurgical ICU | | Pediatric ICU | | Neonatal ICU | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hospital** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **NICU level** | **CLABSI/ CLDays** | **Adj rate** |
| **State Average Rate** | **1.51** | | **0.66** | | **1.06** | | **0.59** | | **0.91** | | **0.91** | | **1.39** | | **RPC=0.72, L3=0.67, L2/3=0.50** | | |
| St Josephs- Syracuse | | | 1/2722 | 0.4 | 0/2315 | 0.0 | 3/1653 | 1.8 | 1/2699 | 0.4 | | | | | Lev 3 | 0/107 | 0.0 |
| St Josephs- Yonkers | | | | | | | 0/805 | 0.0 | | | | | | | | | |
| St Lukes Cornwall | | | | | | | 0/1849 | 0.0 | | | | | | | | | |
| St Marys Amsterdam | | | | | | | 0/594 | 0.0 | | | | | | | | | |
| St Peters Hospital | | | 1/2063 | 0.5 | 4/2926 | 1.4 | | | | | | | | | Lev 3 | 0/351 | 0.0 |
| Staten Island U N | | | 0/1622 | 0.0 | | | 3/4136 | 0.7 | 1/1051 | 1.0 | | | 0/53 | 0.0 | Lev 3 | 0/417 | 0.0 |
| Staten Island U S | | | | | | | 0/994 | 0.0 | | | | | | | | | |
| Stony Brk Southamptn | NA | NA | | | 0/573 | 0.0 | | | | | | | | | | | |
| Stony Brook ELIH | | | | | | | NA | NA | | | | | | | | | |
| Strong Memorial | | | 4/5237 | 0.8 | 18/8145 | ^ 2.2 | | | 14/5279 | ^ 2.7 | | | 11/5506 | 2.0 | RPC | 2/5662 | 0.4 |
| Syosset Hospital | | | | | | | 1/502 | 2.0 | | | | | | | | | |
| UHS Binghamton | | | | | | | 0/211 | 0.0 | | | | | | | | | |
| UHS Chenango | | | | | | | 0/194 | 0.0 | | | | | | | | | |
| UHS Wilson | | | 1/2246 | 0.4 | | | 1/2228 | 0.4 | | | | | | | Lev 2/3 | 0/108 | 0.0 |
| UPMC Chautauqua | | | | | 1/1128 | 0.9 | | | | | | | | | | | |
| United Memorial | | | | | | | 1/734 | 1.4 | | | | | | | | | |
| Unity Hosp Rochester | | | | | | | 3/4358 | 0.7 | | | | | | | | | |
| Univ Hosp SUNY | | | 2/2983 | 0.7 | 5/7770 | 0.6 | | | 2/2436 | 0.8 | 2/5623 | 0.4 | 3/981 | 3.1 | | | |
| Univ Hosp | 0/865 | 0.0 | 2/1575 | 1.3 | 5/2113 | 2.4 | | | 0/2021 | 0.0 | 0/520 | 0.0 | 0/583 | 0.0 | RPC | 1/3507 | 0.4 |
| Upst. Community Gen | | | | | | | 1/1834 | 0.5 | | | | | | | | | |
| Vassar Brothers | | | | | | | 4/3872 | 1.0 | | | | | | | Lev 2/3 | 0/401 | 0.0 |
| Westchester Medical | 1/1317 | 0.8 | 1/3333 | 0.3 | 1/2859 | 0.3 | | | 2/1493 | 1.3 | 3/1824 | 1.6 | 3/1416 | 2.1 | RPC | 1/3920 | 0.3 |
| White Plains Hosp | | | | | | | 0/1470 | 0.0 | | | | | | | Lev 3 | 0/114 | 0.0 |
| Woodhull Med Ctr | | | | | | | 1/1160 | 0.9 | | | | | | | Lev 2/3 | 0/189 | 0.0 |
| Wyckoff Heights | | | | | 1/1424 | 0.7 | | | | | | | | | Lev 3 | 0/372 | 0.0 |
| Wynn Hospital MVHS | | | 0/1475 | 0.0 | | | 0/4360 | 0.0 | 0/697 | 0.0 | | | | | | | |
| Wyoming County | | | | | | | 0/81 | 0.0 | | | | | | | | | |

New York State data reported as of June 16, 2024. Significantly higher than state average. Significantly lower than state average. Same as state average.
Rates are per 1000 central line days (CLDays). Excludes mucosal barrier injury (MBI)-CLABSIs and bloodstream infections associated with use of extracorporeal membrane oxygenation (ECMO) and ventricular assist devices (VADs), observed or suspected patient injection into a vascular line, known or suspected factitious disorder imposed on another (FDIA; formerly MSBP), epidermolysis bullosa (EB), pus at another vascular access device site matches an organism identified in the blood, and group B *Streptococcus* BSIs in infants during the first 6 days of life.

## Table 13. Central line-associated bloodstream infection rates by ward type, New York State 2023

| | Medical Wards | | Medical Surgical Wards | | Surgical Wards | | Step Down Units | | Pediatric Wards | | Oncology Wards | | Mixed Acuity Wards | | Telemetry Wards | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hospital** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** | **CLABSI/ CLDays** | **Rate** |
| **State Average Rate** | **0.97** | | **0.66** | | **0.55** | | **0.98** | | **0.86** | | **1.11** | | **1.15** | | **0.83** | |
| AO Fox Memorial | 1/355 | 2.8 | | | NA | NA | | | | | | | | | | |
| Adirondack Medical | | | 0/672 | 0.0 | | | | | | | | | | | | |
| Albany Med Ctr | 13/15394 | 0.8 | 1/2157 | 0.5 | 3/6944 | 0.4 | | | 2/2857 | 0.7 | | | | | | |
| Alice Hyde Med Ctr | | | 0/216 | 0.0 | | | | | | | | | NA | NA | | |
| Arnot Ogden Med Ctr | | | 1/2216 | 0.5 | | | | | | | | | | | | |
| Auburn Memorial | | | 0/867 | 0.0 | 0/690 | 0.0 | | | | | | | | | | |
| Bellevue Hospital | 9/5445 | 1.7 | 1/601 | 1.7 | 3/1436 | 2.1 | 1/1000 | 1.0 | 0/339 | 0.0 | | | | | | |
| Blythedale Childrens | | | | | | | | | 4/1356 | 2.9 | | | | | | |
| Bon Secours | | | 0/209 | 0.0 | NA | NA | | | | | | | | | | |
| Bronx-Lebanon | 6/3043 | 2.0 | 2/1755 | 1.1 | | | 0/154 | 0.0 | NA | NA | | | | | 1/377 | 2.7 |
| Brookdale Hospital | 1/2994 | 0.3 | | | 1/993 | 1.0 | 0/233 | 0.0 | NA | NA | | | | | | |
| Brooklyn Hosp Ctr | 1/1193 | 0.8 | 1/389 | 2.6 | | | 0/887 | 0.0 | NA | NA | | | | | 3/397 | ^ 7.6 |
| Brooks Memorial | | | 0/301 | 0.0 | | | | | | | | | | | | |
| Buffalo General | 15/11976 | 1.3 | 3/1579 | 1.9 | 3/2486 | 1.2 | 10/4644 | ^ 2.2 | | | | | | | 2/2064 | 1.0 |
| Canton-Potsdam | | | 3/1106 | 2.7 | | | | | | | | | | | | |
| Cayuga Medical Ctr | | | 0/1676 | 0.0 | | | | | NA | NA | | | | | | |
| Champlain Valley | | | 0/4129 | 0.0 | | | 1/1946 | 0.5 | | | | | | | | |
| Claxton-Hepburn | | | 2/1528 | 1.3 | | | | | | | | | | | | |
| Clifton Springs | 1/632 | 1.6 | | | 0/174 | 0.0 | | | | | | | | | | |
| Cohens Childrens | | | | | | | | | 0/1824 | 0.0 | 3/4816 | 0.6 | | | | |
| Columbia Memorial | 0/283 | 0.0 | 1/1892 | 0.5 | | | | | | | | | | | | |
| Corning Hospital | 0/638 | 0.0 | | | 0/531 | 0.0 | | | | | | | | | | |
| Cortland Reg Med | 0/370 | 0.0 | 0/386 | 0.0 | | | | | | | | | | | | |
| Crouse Hospital | | | 5/8283 | 0.6 | | | | | | | | | | | | |
| Ellis Hospital | 2/3192 | 0.6 | | | 0/765 | 0.0 | | | | | | | | | | |
| Elmhurst Hospital | 0/3428 | * 0.0 | NA | NA | 0/918 | 0.0 | | | NA | NA | | | 1/1255 | 0.8 | | |
| Erie County Med Ctr | | | 8/11022 | 0.7 | | | 2/2398 | 0.8 | | | | | | | | |
| FF Thompson | 6/2605 | 2.3 | | | | | | | | | | | | | | |
| Flushing Hospital | | | 3/1997 | 1.5 | | | | | NA | NA | | | | | 0/337 | 0.0 |
| Garnet Catskills | | | 0/181 | 0.0 | | | | | | | | | | | | |
| Garnet Middletown | 3/4448 | 0.7 | 0/711 | 0.0 | | | | | | | | | | | 0/991 | 0.0 |
| Geneva General | 1/808 | 1.2 | 0/492 | 0.0 | | | | | | | | | | | | |
| Glen Cove Hospital | | | 0/370 | 0.0 | 0/125 | 0.0 | | | | | | | | | | |

## Table 13. Central line-associated bloodstream infection rates by ward type, New York State 2023

| | Medical Wards | | Medical Surgical Wards | | Surgical Wards | | Step Down Units | | Pediatric Wards | | Oncology Wards | | Mixed Acuity Wards | | Telemetry Wards | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate |
| **State Average Rate** | **0.97** | | **0.66** | | **0.55** | | **0.98** | | **0.86** | | **1.11** | | **1.15** | | **0.83** | |
| Glens Falls Hospital | 0/2381 | 0.0 | NA | NA | 1/894 | 1.1 | | | | | 2/1570 | 1.3 | | | | |
| Good Samar. Suffern | | | 0/2808 | 0.0 | | | | | | | | | | | | |
| Good Samar. W Islip | 1/2009 | 0.5 | 0/1402 | 0.0 | 0/398 | 0.0 | 0/84 | 0.0 | NA | NA | 0/1173 | 0.0 | | | 1/1089 | 0.9 |
| Harlem Hospital | 1/1232 | 0.8 | 1/1417 | 0.7 | | | | | NA | NA | | | | | | |
| HealthAlliance-MaryC | | | 3/1575 | 1.9 | | | | | | | | | | | | |
| Highland Hospital | 15/5578 | ^ 2.7 | 3/2252 | 1.3 | 1/2047 | 0.5 | | | | | 1/1297 | 0.8 | 10/2050 | ^ 4.9 | | |
| Hosp for Spec Surg | | | 0/1786 | 0.0 | | | 0/133 | 0.0 | NA | NA | | | | | | |
| Huntington Hospital | 0/575 | 0.0 | 2/925 | 2.2 | 0/260 | 0.0 | | | NA | NA | 0/788 | 0.0 | | | 0/139 | 0.0 |
| Interfaith Med Ctr | | | 2/2694 | 0.7 | | | | | | | | | | | | |
| JT Mather Hospital | | | 0/1831 | 0.0 | 0/360 | 0.0 | 0/698 | 0.0 | | | | | | | | |
| Jacobi Med Ctr | 1/2039 | 0.5 | 0/2150 | 0.0 | 0/469 | 0.0 | 1/1122 | 0.9 | NA | NA | | | | | | |
| Jamaica Hospital | | | 2/2918 | 0.7 | 0/716 | 0.0 | | | | | | | 2/1133 | 1.8 | | |
| Jones Memorial | | | 0/378 | 0.0 | | | | | | | | | | | | |
| Kenmore Mercy | | | 0/3109 | 0.0 | NA | NA | | | | | | | | | | |
| Kings County Hosp | 0/3503 | * 0.0 | 1/2985 | 0.3 | 0/1104 | 0.0 | | | NA | NA | | | | | | |
| LIJ at Forest Hills | 2/1603 | 1.2 | NA | NA | 0/138 | 0.0 | | | | | | | | | 0/170 | 0.0 |
| LIJ at Valley Stream | | | 3/1585 | 1.9 | | | NA | NA | | | | | | | 0/264 | 0.0 |
| Lenox Hill Hospital | 1/1989 | 0.5 | 0/454 | 0.0 | 1/1163 | 0.9 | 1/1008 | 1.0 | | | | | | | | |
| Lincoln Med Ctr | 0/2069 | 0.0 | | | 0/1539 | 0.0 | 7/1583 | ^ 4.4 | NA | NA | | | NA | NA | | |
| Long Isl Jewish(LIJ) | 4/5259 | 0.8 | 0/1995 | 0.0 | 0/1337 | 0.0 | NA | NA | | | | | | | 4/3974 | 1.0 |
| Long Isl. Community | 2/1105 | 1.8 | 0/573 | 0.0 | | | 0/96 | 0.0 | | | | | 0/367 | 0.0 | | |
| Maimonides Med Ctr | 10/4435 | ^ 2.3 | 1/652 | 1.5 | | | 9/1289 | ^ 7.0 | 0/214 | 0.0 | | | | | 0/988 | 0.0 |
| Mary Imogene Bassett | 2/1502 | 1.3 | 0/1166 | 0.0 | 1/1813 | 0.6 | 1/1501 | 0.7 | | | | | NA | NA | | |
| Memor SloanKettering | | | | | | | | | | | **/86392 | 1.3 | | | | |
| Mercy Hosp Buffalo | 2/2194 | 0.9 | 0/455 | 0.0 | 0/1429 | 0.0 | 1/1082 | 0.9 | | | | | | | | |
| Mercy Med Ctr | 0/647 | 0.0 | 0/124 | 0.0 | NA | NA | 1/488 | 2.0 | | | 0/737 | 0.0 | | | 1/848 | 1.2 |
| Metropolitan Hosp | 0/1387 | 0.0 | | | 0/561 | 0.0 | | | NA | NA | | | | | | |
| MidHudson Reg of [redacted] | | | 0/1018 | 0.0 | | | 1/503 | 2.0 | NA | NA | | | | | | |
| Millard Fill. Suburb | | | 5/7307 | 0.7 | | | | | | | | | | | | |
| Montefiore-Einstein | 7/4517 | 1.5 | | | 2/1901 | 1.1 | | | | | 4/1856 | 2.2 | | | 0/1581 | 0.0 |
| Montefiore-Moses | 16/12071 | 1.3 | 0/1051 | 0.0 | 5/2935 | ^ 1.7 | | | 4/4315 | 0.9 | 6/4017 | 1.5 | | | | |
| Montefiore-Mt Vernon | | | 0/115 | 0.0 | | | 0/130 | 0.0 | | | | | | | | |
| Montefiore-NewRochl | | | 1/417 | 2.4 | 1/446 | 2.2 | 0/578 | 0.0 | | | | | | | | |

## Table 13. Central line-associated bloodstream infection rates by ward type, New York State 2023

| | Medical Wards | | Medical Surgical Wards | | Surgical Wards | | Step Down Units | | Pediatric Wards | | Oncology Wards | | Mixed Acuity Wards | | Telemetry Wards | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate |
| **State Average Rate** | **0.97** | | **0.66** | | **0.55** | | **0.98** | | **0.86** | | **1.11** | | **1.15** | | **0.83** | |
| Montefiore-Nyack | | | 1/1916 | 0.5 | | | 0/633 | 0.0 | 1/437 | 2.3 | | | | | | |
| Montefiore-Wakefield | 1/2681 | 0.4 | 0/434 | 0.0 | | | | | | | | | | | 0/392 | 0.0 |
| Mount St. Marys | | | 0/861 | 0.0 | | | | | | | | | | | | |
| Mt Sinai | 10/5234 | 1.9 | 4/4682 | 0.9 | 3/2921 | 1.0 | 2/1859 | 1.1 | 1/918 | 1.1 | 20/15456 | 1.3 | | | 0/478 | 0.0 |
| Mt Sinai Beth Israel | 0/1748 | 0.0 | 0/63 | 0.0 | 0/391 | 0.0 | | | | | | | | | 0/341 | 0.0 |
| Mt Sinai Brooklyn | 1/2252 | 0.4 | | | 0/471 | 0.0 | 1/214 | 4.7 | | | | | | | | |
| Mt Sinai Queens | 1/1423 | 0.7 | 1/662 | 1.5 | | | 1/270 | 3.7 | | | | | | | | |
| Mt Sinai St Lukes | 3/2815 | 1.1 | 0/693 | 0.0 | 0/1197 | 0.0 | | | | | | | | | | |
| Mt Sinai West | 3/2020 | 1.5 | 2/1823 | 1.1 | 0/585 | 0.0 | 0/67 | 0.0 | | | | | | | | |
| NY Community Hosp | | | 0/121 | 0.0 | | | 0/526 | 0.0 | | | | | | | | |
| NYP-Allen | 0/1943 | 0.0 | 0/398 | 0.0 | | | | | | | | | | | | |
| NYP-Brklyn | 1/3355 | 0.3 | 6/4531 | 1.3 | 0/882 | 0.0 | 0/197 | 0.0 | 0/76 | 0.0 | | | | | | |
| NYP-Columbia | 16/11674 | 1.4 | 4/8547 | 0.5 | 2/4885 | 0.4 | | | | | 9/12197 | 0.7 | | | | |
| NYP-Hudson Valley | | | 0/1802 | 0.0 | | | 0/654 | 0.0 | | | | | | | | |
| NYP-Lawrence | | | 5/3495 | 1.4 | | | | | NA | NA | | | | | | |
| NYP-Lower | | | 0/1070 | 0.0 | | | | | | | | | | | | |
| NYP-Morgan Stanley | | | | | | | | | 9/8982 | 1.0 | | | | | | |
| NYP-Queens | 1/6415 | * 0.2 | 0/61 | 0.0 | 0/1350 | 0.0 | NA | NA | | | | | | | | |
| NYP-Weill Cornell | 18/9991 | ^ 1.8 | 6/4828 | 1.2 | 3/3369 | 0.9 | 1/598 | 1.7 | 1/1146 | 0.9 | 23/12620 | ^ 1.8 | | | | |
| NYU Langone | 0/3284 | * 0.0 | | | 0/574 | 0.0 | 0/421 | 0.0 | NA | NA | | | | | | |
| NYU Orthopedic Hosp | 0/297 | 0.0 | | | | | | | | | | | | | | |
| NYU Tisch | 3/7692 | 0.4 | | | 1/6244 | 0.2 | | | 1/2863 | 0.3 | 5/5912 | 0.8 | | | | |
| NYU Winthrop | 6/8414 | 0.7 | 0/892 | 0.0 | 0/2132 | 0.0 | | | 0/448 | 0.0 | | | | | | |
| Nassau University | 0/3043 | 0.0 | 0/401 | 0.0 | 0/54 | 0.0 | | | NA | NA | | | | | | |
| Nathan Littauer | | | 0/454 | 0.0 | | | | | | | | | | | | |
| Newark Wayne | 1/952 | 1.1 | | | | | | | | | | | | | 0/257 | 0.0 |
| Niagara Falls | | | | | 4/726 | ^ 5.5 | 1/829 | 1.2 | | | | | | | | |
| North Central Bronx | 2/547 | 3.7 | | | | | | | | | | | | | | |
| North Shore | 6/4728 | 1.3 | 3/2294 | 1.3 | 4/3953 | 1.0 | NA | NA | | | 4/9546 | * 0.4 | 0/333 | 0.0 | 4/889 | ^ 4.5 |
| Northern Dutchess | 0/100 | 0.0 | 0/958 | 0.0 | | | | | | | | | | | | |
| Northern Westchester | 0/1525 | 0.0 | | | 0/442 | 0.0 | | | NA | NA | | | | | | |
| Noyes Memorial | 1/1025 | 1.0 | NA | NA | | | | | | | | | | | | |
| Oishei Childrens | | | | | | | | | 1/1437 | 0.7 | 0/2243 | 0.0 | | | | |

## Table 13. Central line-associated bloodstream infection rates by ward type, New York State 2023

| | Medical Wards | | Medical Surgical Wards | | Surgical Wards | | Step Down Units | | Pediatric Wards | | Oncology Wards | | Mixed Acuity Wards | | Telemetry Wards | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate |
| **State Average Rate** | **0.97** | | **0.66** | | **0.55** | | **0.98** | | **0.86** | | **1.11** | | **1.15** | | **0.83** | |
| Olean General | 1/2147 | 0.5 | | | 0/451 | 0.0 | | | | | | | | | | |
| Oneida Healthcare | | | 0/824 | 0.0 | | | | | | | | | | | | |
| Oswego Hospital | | | 0/339 | 0.0 | | | | | | | | | | | | |
| Our Lady of Lourdes | 7/3558 | 2.0 | 0/707 | 0.0 | 1/1514 | 0.7 | | | | | | | | | | |
| Peconic Bay Medical | | | 2/2224 | 0.9 | | | 0/188 | 0.0 | | | | | | | | |
| Phelps Memorial | 0/610 | 0.0 | 0/601 | 0.0 | | | | | | | | | 0/90 | 0.0 | | |
| Plainview Hospital | 0/1278 | 0.0 | 0/535 | 0.0 | | | NA | NA | | | | | | | 0/732 | 0.0 |
| Putnam Hospital | | | 0/1166 | 0.0 | | | | | | | | | 0/689 | 0.0 | | |
| Queens Hospital | 1/2890 | 0.3 | 1/1685 | 0.6 | 0/527 | 0.0 | 0/403 | 0.0 | | | | | | | | |
| Richmond Univ MC | 3/1784 | 1.7 | | | 0/361 | 0.0 | | | NA | NA | | | 2/839 | 2.4 | | |
| Rochester General | 10/6993 | 1.4 | 5/5397 | 0.9 | 4/3146 | 1.3 | 1/2421 | 0.4 | | | 4/5763 | 0.7 | 0/151 | 0.0 | 3/2485 | 1.2 |
| Rome Memorial | NA | NA | 2/506 | 4.0 | | | | | | | | | | | | |
| Roswell Park | | | | | | | | | | | 34/27381 | 1.2 | | | | |
| SUNY Downstate | 3/2660 | 1.1 | | | 0/610 | 0.0 | 1/857 | 1.2 | NA | NA | | | | | | |
| Samaritan- Troy | | | 5/3590 | 1.4 | | | 0/1196 | 0.0 | | | | | | | | |
| Samaritan- Watertown | NA | NA | 1/2706 | 0.4 | | | | | | | | | NA | NA | | |
| Saratoga Hospital | 1/3247 | 0.3 | | | NA | NA | | | | | | | | | | |
| Sisters of Charity | 1/2240 | 0.4 | 1/2190 | 0.5 | 0/1204 | 0.0 | | | | | | | | | | |
| Sisters- St Joseph | | | | | NA | NA | | | | | | | | | | |
| South Brooklyn Healt | 2/2901 | 0.7 | 0/1503 | 0.0 | 0/488 | 0.0 | 0/295 | 0.0 | | | | | | | | |
| South Nassau Comm. | | | 0/227 | 0.0 | | | 0/676 | 0.0 | | | | | | | | |
| South Shore UHosp | 0/422 | 0.0 | 1/3012 | 0.3 | | | 0/1026 | 0.0 | NA | NA | | | | | NA | NA |
| St Anthony | | | 0/126 | 0.0 | | | | | | | | | | | | |
| St Barnabas | 0/553 | 0.0 | 2/1774 | 1.1 | 0/186 | 0.0 | 0/513 | 0.0 | | | | | | | | |
| St Catherine Siena | 0/1785 | 0.0 | | | 0/378 | 0.0 | | | | | | | | | | |
| St Charles Hospital | | | 0/597 | 0.0 | | | | | | | | | | | | |
| St Francis- Roslyn | | | 0/6078 | * 0.0 | | | 0/962 | 0.0 | | | | | | | | |
| St Johns Dobbs Ferry | | | NA | NA | | | | | | | | | | | | |
| St Johns Episcopal | | | 6/2630 | ^ 2.3 | | | | | | | | | | | | |
| St Johns Riverside | 1/1747 | 0.6 | 1/1164 | 0.9 | | | | | | | | | | | 0/756 | 0.0 |
| St Joseph- Bethpage | | | 1/959 | 1.0 | | | 0/175 | 0.0 | | | | | NA | NA | 0/330 | 0.0 |
| St Josephs- Syracuse | | | 3/7845 | 0.4 | | | 0/948 | 0.0 | | | 0/1751 | 0.0 | | | 0/885 | 0.0 |
| St Josephs- Yonkers | | | 1/1019 | 1.0 | | | | | | | | | | | | |

## Table 13. Central line-associated bloodstream infection rates by ward type, New York State 2023

| | Medical Wards | | Medical Surgical Wards | | Surgical Wards | | Step Down Units | | Pediatric Wards | | Oncology Wards | | Mixed Acuity Wards | | Telemetry Wards | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate | CLABSI/ CLDays | Rate |
| **State Average Rate** | **0.97** | | **0.66** | | **0.55** | | **0.98** | | **0.86** | | **1.11** | | **1.15** | | **0.83** | |
| St Lukes Cornwall | | | 1/3662 | 0.3 | | | | | | | | | NA | NA | | |
| St Marys Amsterdam | | | 0/706 | 0.0 | NA | NA | | | | | | | | | | |
| St Peters Hospital | 2/6635 | 0.3 | 2/3725 | 0.5 | | | 0/2747 | 0.0 | | | 4/3042 | 1.3 | 1/1615 | 0.6 | | |
| Staten Island U N | | | 7/3561 | ^ 2.0 | 0/516 | 0.0 | NA | NA | 0/154 | 0.0 | | | | | 0/490 | 0.0 |
| Staten Island U S | | | 0/221 | 0.0 | | | | | | | | | | | 0/156 | 0.0 |
| Stony Brk Southamptn | | | 0/1130 | 0.0 | | | | | | | | | | | | |
| Stony Brook ELIH | | | 0/50 | 0.0 | | | | | | | | | | | | |
| Strong Memorial | 26/19576 | 1.3 | 8/4452 | ^ 1.8 | 2/4663 | 0.4 | | | 3/4086 | 0.7 | 21/16925 | 1.2 | | | | |
| Sunnyview Rehab | | | 0/136 | 0.0 | | | | | | | | | | | | |
| Syosset Hospital | 0/198 | 0.0 | | | NA | NA | | | | | | | | | | |
| UHS Binghamton | | | 1/1007 | 1.0 | | | | | | | | | | | | |
| UHS Chenango | | | 0/289 | 0.0 | | | | | | | | | | | | |
| UHS Wilson | | | 3/3510 | 0.9 | | | 1/627 | 1.6 | | | 0/391 | 0.0 | 0/979 | 0.0 | 2/2469 | 0.8 |
| UPMC Chautauqua | 1/1074 | 0.9 | 3/1820 | 1.6 | | | | | | | | | | | | |
| United Memorial | 0/875 | 0.0 | | | 0/712 | 0.0 | | | | | | | | | | |
| Unity Hosp Rochester | | | 5/16556 | 0.3 | | | | | | | | | | | | |
| Univ Hosp SUNY | 6/7015 | 0.9 | 4/5867 | 0.7 | | | 0/1730 | 0.0 | 1/1211 | 0.8 | 12/10264 | 1.2 | | | | |
| Univ Hosp | 2/4775 | 0.4 | 0/501 | 0.0 | 0/2894 | 0.0 | 0/1559 | 0.0 | 1/878 | 1.1 | 3/6352 | 0.5 | 1/1934 | 0.5 | | |
| Upst. Community Gen | 2/2019 | 1.0 | 0/1271 | 0.0 | | | | | | | | | | | | |
| Vassar Brothers | | | 5/6262 | 0.8 | | | | | NA | NA | | | 0/3244 | * 0.0 | | |
| Westchester Medical | 1/4986 | 0.2 | 2/5684 | 0.4 | | | 9/6785 | 1.3 | 3/3346 | 0.9 | 4/10621 | * 0.4 | | | | |
| White Plains Hosp | | | 0/4137 | 0.0 | | | 0/2507 | 0.0 | | | | | | | | |
| Woodhull Med Ctr | | | 0/1664 | 0.0 | 0/316 | 0.0 | 2/542 | 3.7 | NA | NA | | | | | | |
| Wyckoff Heights | | | 4/1861 | 2.1 | | | 0/187 | 0.0 | NA | NA | | | | | 0/833 | 0.0 |
| Wynn Hospital MVHS | 1/445 | 2.2 | 1/3345 | 0.3 | 0/1303 | 0.0 | 0/2972 | 0.0 | 0/74 | 0.0 | 0/1275 | 0.0 | | | 0/455 | 0.0 |

New York State data reported as of June 16, 2024. ▬ Significantly higher than state average. ▬Significantly lower than state average. ▬Same as state average.
Rates are per 1000 central line days (CLDays). Excludes mucosal barrier injury (MBI)-CLABSIs and bloodstream infections associated with use of extracorporeal membrane oxygenation (ECMO) and ventricular assist devices (VADs), observed or suspected patient injection into a vascular line, known or suspected factitious disorder imposed on another (FDIA; formerly MSBP), epidermolysis bullosa (EB), pus at another vascular access device site matches an organism identified in the blood, and group B *Streptococcus* BSIs in infants during the first 6 days of life.

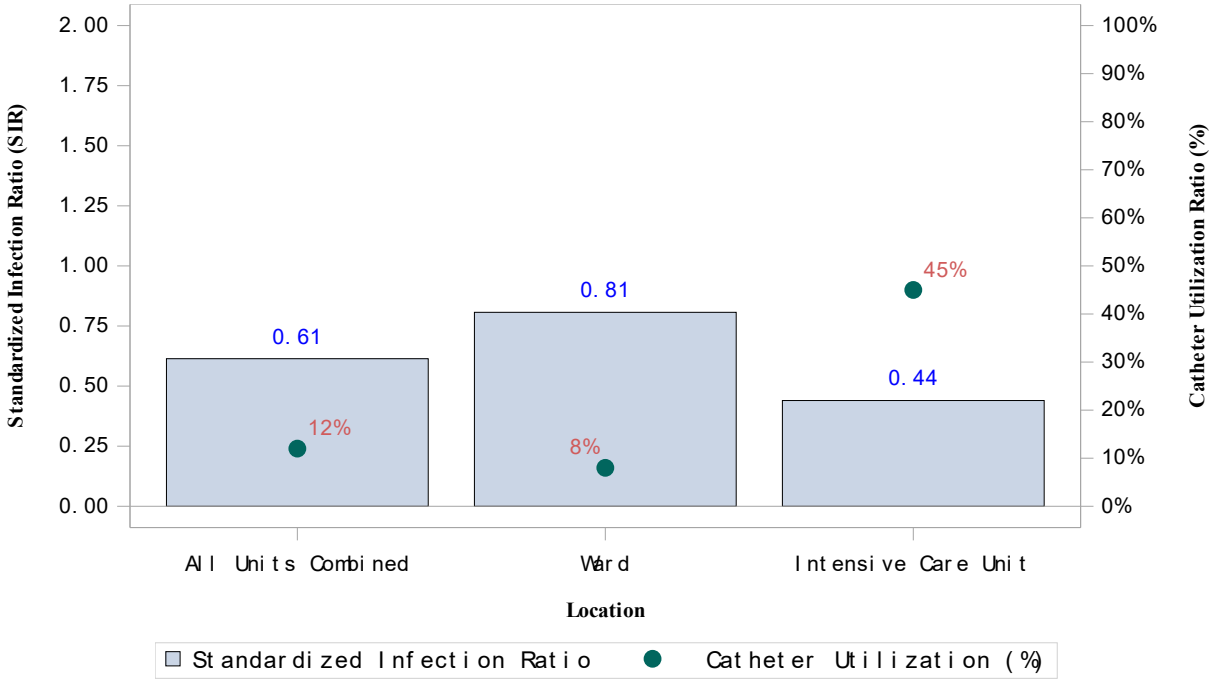
## Catheter associated urinary tract infections (CAUTIs)

Catheter associated urinary tract infections (CAUTIs) occur when germs enter the urinary tract through a urinary catheter and cause infection. They are one of the most common, yet preventable types of HAIs. To determine if a patient has a healthcare associated CAUTI, the CDC developed surveillance definitions based on urinary catheter usage, symptoms, and laboratory results. These definitions are used by all facilities entering data into NHSN. Hospitals track the number of CAUTIs, the number of urinary catheter days, and the number of patient days per month. While CAUTI reporting is not required by the Department, these data are available via a CDC and NYS data use agreement (DUA). This DUA prohibits the Department from publishing hospital-specific rates. The Department does not audit this data.

CAUTI is one of the HAI measurements Centers for Medicare and Medicaid Services (CMS) uses for quality control. NHSN calculates a standardized infection ratio (SIR) of hospital acquired CAUTIs among patients in intensive care units (ICUs excluding NICUs) and other locations separately. SIR is a ratio calculated by comparing the actual number of CAUTIs to the predicted number of CAUTIs, based on 2015 national data adjusting for several risk factors. A SIR greater than 1.0 indicates more CAUTIs observed than predicted, whereas an SIR less than 1.0 indicates fewer CAUTIs occurred compared to 2015 national data.

In 2023, NYS hospital reported 1,195,870 catheter days in 9,821,816 patient days. Overall device utilization was 12%. There is a difference by locations. ICUs reported 45% catheter use whereas other (non-ICU) locations reported a catheter use of 8%. A total of 934 CLABSIs were reported, and with a predicted number of 1,521 infections the overall SIR was 0.61. The SIR in wards was almost two times higher than that in ICUs (0.81 versus 0.44). (Figure 11). New York State SIRs are lower (better) than the national level based on 2015 data (SIR=1.0).

**Figure 11. Catheter associated urinary tract infections, standardized infection ratio and device utilization ratio, New York State 2023**



| Location / Unit | # Infection | # Predicted infection | Standardized infection ratio[1] | # Catheter days | # Patient days | Catheter utilization[2] (%) |
|---|---|---|---|---|---|---|
| All Units Combined | 934 | 1521 | 0.61 | 1,195,870 | 9,821,816 | 12% |
| Ward | 580 | 719 | 0.81 | 662,675 | 8,638,134 | 8% |
| Intensive Care Unit | 354 | 802 | 0.44 | 533,195 | 1,183,682 | 45% |

[1] SIR =Observed/Predicted number of infections based on 2015 national data.
[2] Device utilization is the number of urinary catheter days divided by the number of patient days.
Data reported as of June 16, 2024.

**Figure 12 Standardized infection ratio (SIR) in catheter associated urinary tract infections by unit type, New York, 2022-2023**

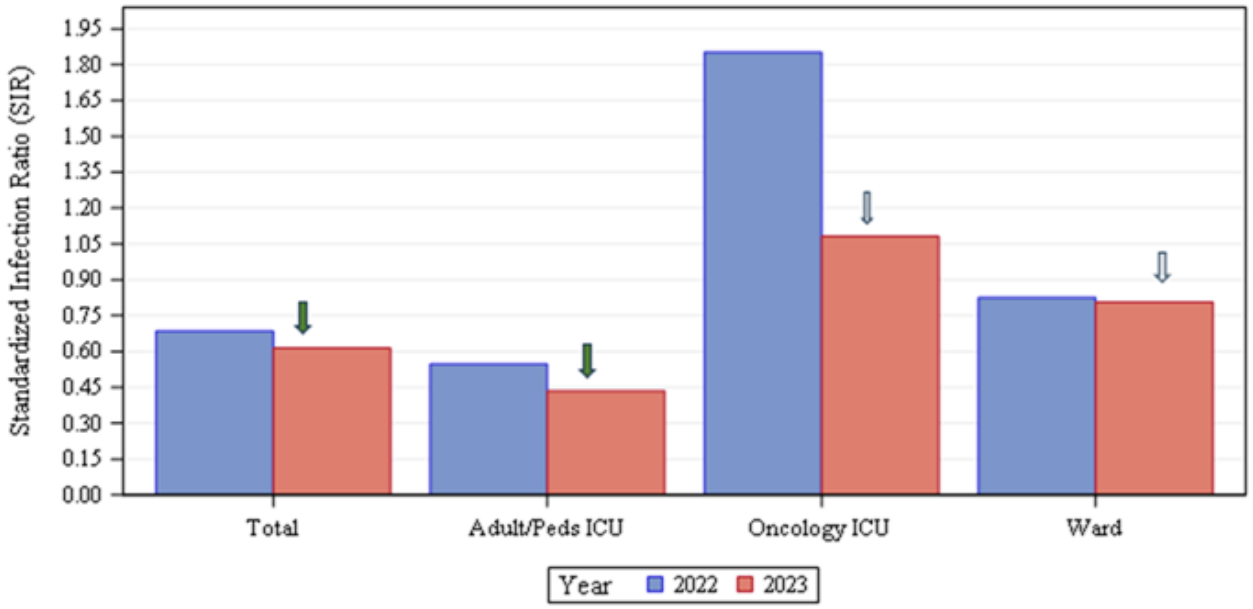



Figure 12 showed 2023 CAUTI SIR compared to 2022 SIR by unit type. CAUTI incidences decreased across unit types. In 2023, facility wide overall CAUTI SIR was 0.614 and compared 2022 (0.685) SIR, there was a statistically significant 10% decrease (⬇). A significant decrease (20%) was observed in Adult and Pediatric ICUs (⬇). SIR decreased in wards and in Oncology ICUs, but it did not reach statistical significance (⇩)

The most common microorganism identified in CAUTIs in intensive care units and medical surgical wards was *E. coli.* (Table 14).

**Table 14. Microorganisms identified in CAUTIs, New York State 2023**

| Microorganism | Number of Isolates | Percent of Infections |
|---|---|---|
| *Escherichia coli* | 295 | 23.6 |
| - CRE-E. coli | (1) | (0.1) |
| Klebsiella spp. | 217 | 17.3 |
| - CRE-Klebsiella | (12) | (1.0) |
| *Enterococci* | 166 | 13.3 |
| - VRE | (58) | (4.6) |
| Pseudomonas spp. | 150 | 12.0 |
| Proteus spp. | 75 | 6.0 |
| Enterobacter spp. | 39 | 3.1 |
| - CRE-Enterobacter | (2) | (0.2) |
| Coagulase negative staphylococci | 18 | 1.4 |
| *Staphylococcus aureus* | 18 | 1.4 |
| - MRSA | (9) | (0.7) |
| Citrobacter spp. | 16 | 1.3 |
| Morganella morganii | 12 | 1.0 |
| Serratia spp. | 10 | 0.8 |
| Acinetobacter spp. | 9 | 0.7 |
| - MDRO-Acinetobacter | (7) | (0.6) |
| Other | 23 | 1.8 |

New York State data reported as of June 16, 2024
Out of 1252 infections, no microorganisms identified for 315 infections.
CRE: carbapenem-resistant Enterobacterales
MDR: multidrug resistant; MRSA: methicillin-resistant *Staphylococcus aureus*
VRE: vancomycin-resistant Enterococci; spp: multiple species

## Infections from *Clostridioides difficile* and multidrug resistant organisms (MDROs)

NYS requires hospitals to track C*lostridioides difficile* infections (CDIs) and carbapenem-resistant Enterobacterales (CRE) infections. CMS programs require hospitals to report methicillin-resistant S*taphylococcus aureus* (MRSA). *Candida auris* is an emerging healthcare-associated fungal pathogen. CDI, CRE, and MRSA are reported following NHSN's laboratory-identified (LabID) Event reporting protocol (http://www.cdc.gov/nhsn/pdfs/pscmanual/12pscmdro_cdadcurrent.pdf). The LabID surveillance method is a simple approach where cases are identified based on laboratory testing and hospital admission and discharge data, rather than by clinical chart review. Only specimens collected for clinical purposes are included (i.e., results from active surveillance testing on asymptomatic patients are excluded).

LabID numerator data (events detected at admission or three or more days after admission) and denominator data (i.e., number of outpatient encounters, inpatient admissions, and patient days) are reported based on the location where the specimen was collected. Because CMS reporting programs are specific to certain location types, hospitals' inpatient areas are split for NHSN reporting purposes when they have specific CMS certification numbers. The NHSN reporting areas are:

- Outpatient (OP)
    - Emergency department (ED)
    - Observation units (OBS) – Location used to evaluate whether patients require an inpatient stay. Decision is typically made within 24 hours.
- Inpatient rehabilitation facilities or units (IRF) - These units care for patients following traumatic physical injuries (e.g., joint replacement surgery), neurological problems (e.g., stroke, traumatic brain injury, and spinal cord injury), and cardiopulmonary illness (e.g., ventilator weaning).
- Inpatient psychiatric facilities or units (IPF) - These units cover multiple behavioral health issues including mental illness and alcohol/drug addiction. If the units do not have a separate CMS certification number from the hospital, they are reported as FWI.
- Facility-wide inpatient (FWI) – all inpatient areas excluding IRF and IPFs. For CDI reporting, well baby nurseries and neonatal ICUs are also excluded from surveillance because babies may carry *Clostridioides difficile* naturally.

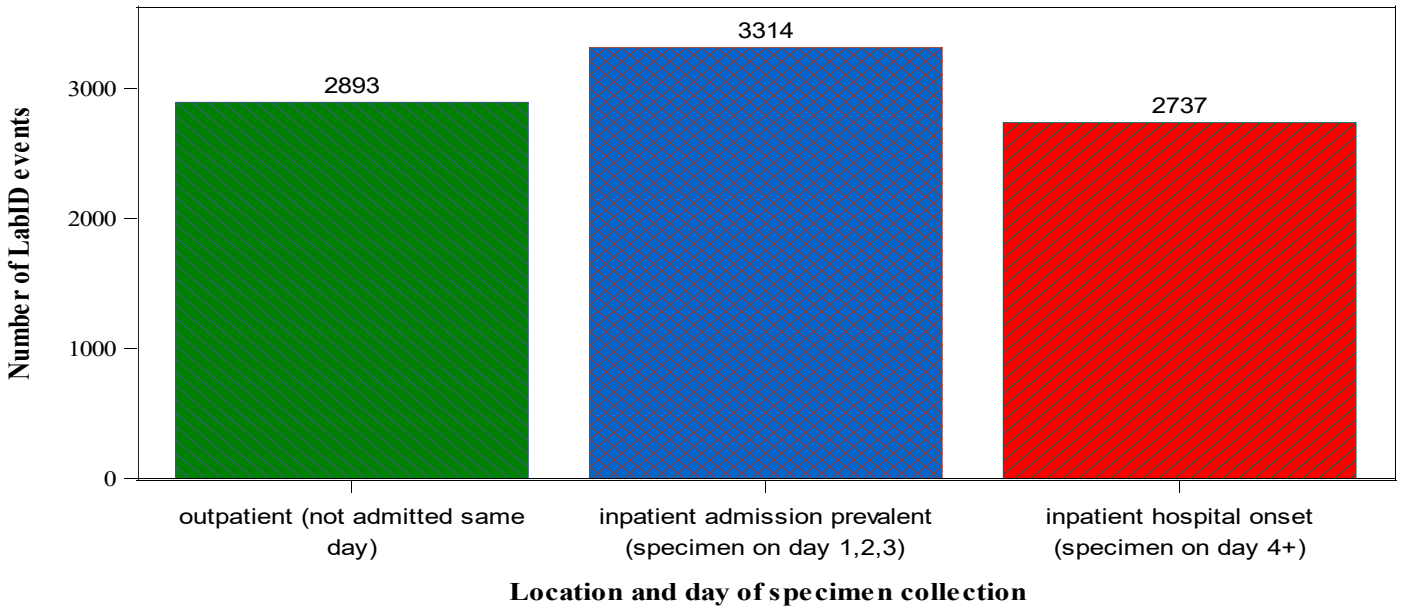
## *Clostridioides difficile* infections (CDIs)

In NHSN, CDI cases are identified as a positive laboratory test in a facility (known as a LabID event). CDI cases are categorized based on when the specimen is collected in relation to the admission date. In this report:

- "Outpatient" are cases where the positive stool sample was obtained in the emergency department (ED) or observation unit (OBS).
- "Admission prevalent" are cases where the positive stool sample was obtained during the first three days of the patient's inpatient stay.
- "Community onset" (CO) cases are LabID events identified within the first 3 days of admission where the patient was not discharged from the same hospital within the previous 4 weeks.
- "Community-onset healthcare facility-associated" (CO-HCFA) cases are LabID events identified within the first 3 days of admission in a person with a documented overnight stay in a healthcare facility in the previous 12 weeks.
- "Hospital-onset (HO)" cases are where the positive stool sample was obtained on day 4 or later of the hospital stay.

CDI cases are also classified based on whether the patient recently had another positive CDI test. Cases occurring more than 8 weeks after a previous positive test in the same patient at the same hospital are considered "incident" (i.e., new), as are cases when the positive test is the first for that patient. Cases occurring more than 2 weeks and less than or equal to 8 weeks after a previous positive test are considered "recurrent". Cases occurring less than or equal to 2 weeks after a previous positive are considered duplicates. In 2023, 8,944 CDI LabID events were reported by acute care hospitals in NYS: 32% were identified in ED/OBS units (outpatient), 37% were identified in the facility wide inpatient (FWI) areas during the first 3 days of hospitalization, and 31% were identified in the FWI areas after the first 3 days of inpatient stay (Figure 13).

**Figure 13. *Clostridioides difficile* infections, New York State, 2023**




Data reported as of June 16, 2024. Includes recurrent cases. Excludes inpatient rehabilitation and inpatient psychiatric facilities.

### Laboratory Testing for CDI

Several CDI laboratory testing methods are available. The methods vary in sensitivity (ability to detect a true positive), specificity (ability to detect a true negative), timeliness, and cost. Testing methods can have an

impact on observed CDI rates, with an increased number of cases detected with a change to a more sensitive test method such as nucleic acid amplification tests (NAAT). Starting in 2018, CDI test methods include:

- Enzyme immunoassay (EIA) for toxin
- Glutamate dehydrogenase (GDH) antigen plus EIA for toxin (2-step algorithm)
- Nucleic acid amplification test (NAAT) plus EIA, if NAAT-positive (2-step algorithm)
- GDH plus EIA for toxin, followed by NAAT for discrepant results
- GDH plus NAAT (2-step algorithm)
- NAAT

Table 15 summarizes the testing methods reported by NYS hospitals in December 2023.

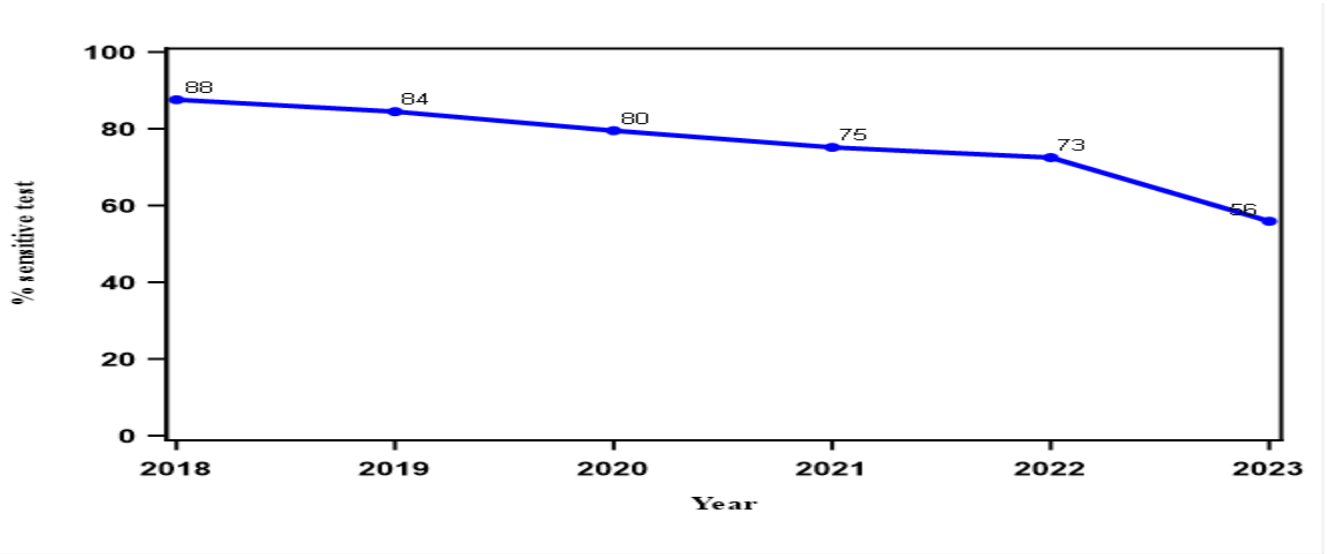
**Table 15. *C. difficile* test method, New York State Hospitals, December 2023**

| Test method | Sensitive or less sensitive | 2022 | 2023 |
|---|---|---|---|
| Enzyme immunoassay (EIA) for toxin | Less sensitive | 5 (3%) | 9 (6%) |
| Glutamate dehydrogenase antigen plus EIA for toxin (2-step algorithm, GDH) | Less sensitive | 9 (5%) | 6 (4%) |
| Nucleic acid amplification test plus EIA, if NAAT-positive (2-step algorithm, NAAT+EIA) | Less sensitive* | 30 (19%) | 56 (34%) |
| GDH plus EIA for toxin, followed by NAAT for discrepant results (GDH+EIA+NAAT) | Sensitive | 45 (28%) | 28 (17%) |
| GDH plus NAAT (2-step algorithm, GDH+NAAT) | Sensitive | 1 (1%) | 1 (1%) |
| Nucleic acid amplification test (NAAT) | Sensitive | 71 (44%) | 61 (38%) |

*Considered as less sensitive since 2018.

The percentage of hospitals using more sensitive tests decreased over time, and the 17% decrease between 2022 and 2023 was significant (Figure 14).

**Figure 14. Percent of sensitive laboratory test method usage for *C. difficile* in the summary data, New York State 2018-2023**



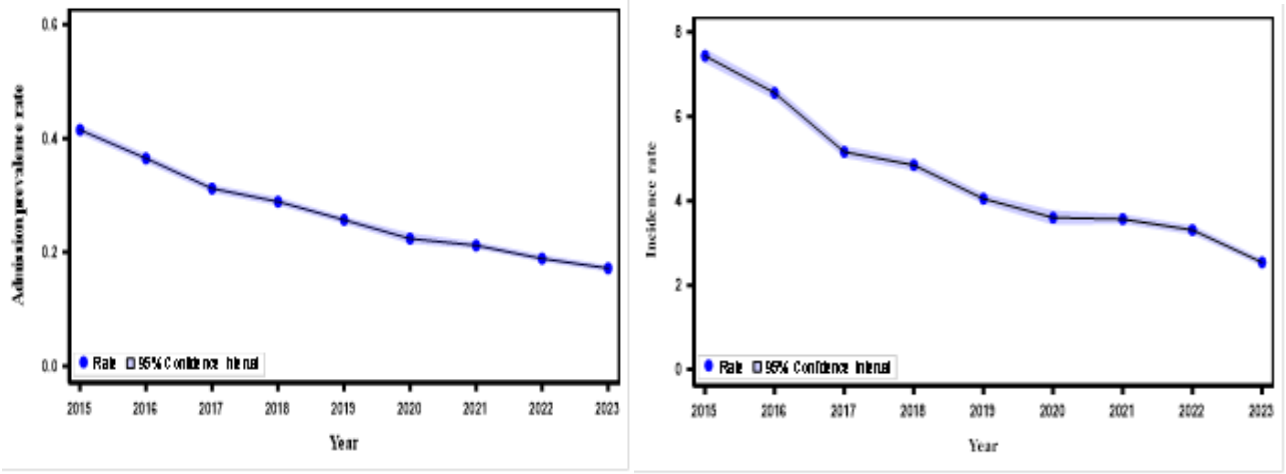

Data reported as of June 16, 2024.

**Admission prevalence and hospital onset (HO) incidence CDI rates**

The admission prevalence rate describes the percentage of patients admitted to hospitals with CDI. In 2023, there were 3,308 CDIs out of 1,920,216 admissions, for a rate of 0.17% (Figure 16). This was a decrease of 10% compared to 2022.

The HO rate is defined as the number of incident events identified more than 3 days after hospital admission, per 10,000 patient-days, where an incident event is the first event for that patient in the same hospital or one that has been obtained more than 8 weeks after the most recent event for that patient in the same hospital. The HO rate was 2.54 per 10,000 patient-days in 2023 (Figure 15), a decrease of 23% compared to 2022.

**Figure 15. Trend in CDI admission prevalence and hospital onset incidence, New York State 2015-2023**




| Year | # Hospitals | Admission prevalence | | | Hospital onset | | |
|---|---|---|---|---|---|---|---|
| | | Infection | Admissions | Prevalence rate | Infections | Patient days | Hospital onset rate |
| 2015 | 175 | 8,746 | 2,106,161 | 0.42 | 7,870 | 10,590,347 | 7.43 |
| 2016 | 178 | 7,698 | 2,111,418 | 0.36 | 6,932 | 10,525,449 | 6.59 |
| 2017 | 177 | 6,756 | 2,167,024 | 0.31 | 5,449 | 10,470,731 | 5.20 |
| 2018 | 175 | 6,237 | 2,157,554 | 0.29 | 5,058 | 10,450,692 | 4.84 |
| 2019 | 167 | 5,476 | 2,133,298 | 0.26 | 4,241 | 10,412,350 | 4.07 |
| 2020* | 165 | 2,139 | 952,832 | 0.22 | 1,708 | 4,717,353 | 3.62 |
| 2021 | 165 | 4,157 | 1,960,606 | 0.21 | 3,708 | 10,342,872 | 3.59 |
| 2022 | 164 | 3,585 | 1,892,705 | 0.19 | 3,402 | 10,297,945 | 3.30 |
| 2023 | 161 | 3,308 | 1,920,216 | 0.17 | 2,627 | 10,343,815 | 2.54 |

Data reported as of June 16, 2024. Excludes cases identified in the emergency room, inpatient rehabilitation facilities, and inpatient psychiatric facilities. Rate is number of nonduplicate CDI events per patient per month identified ≤3 days after admission to the facility per 100 admissions. HO Rate is number of incident CDI events identified >3 days after admission to the facility per 10,000 patient days. *Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

## Risk adjustment

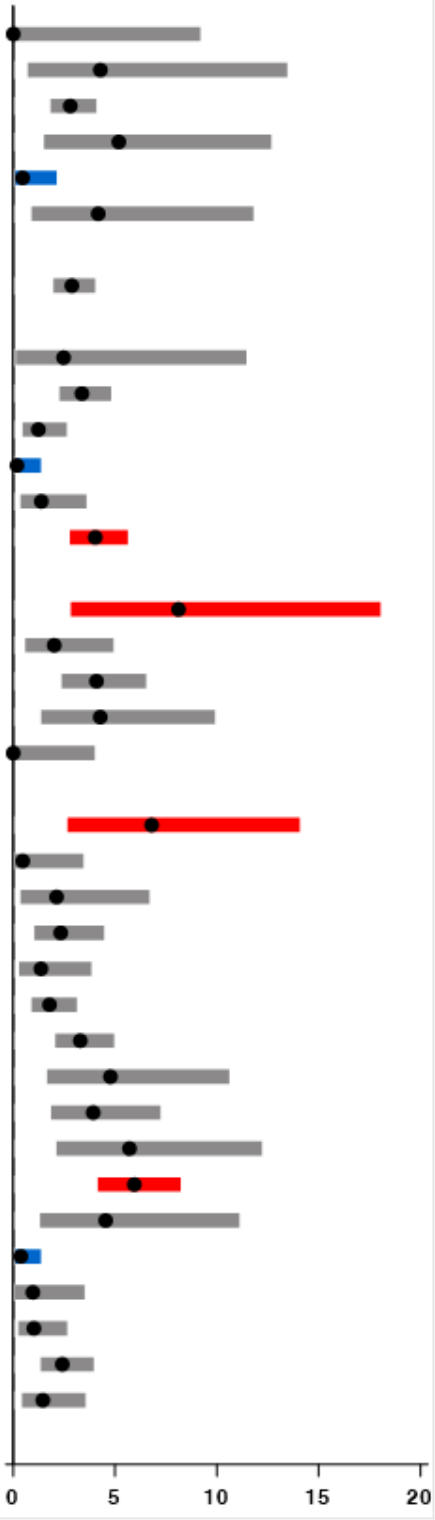
Risk factors were identified by developing logistic regression models, and factors that were found to be statistically significantly associated with CDI incidence rates were used to calculate a risk-adjusted incidence rate. These facility-level rates were compared to the state incidence rate. The latest model included CDI test type, medical facility bed size, facility CO prevalence rate, and percent of patient days in adult ICUs, calculated by dividing the number of adult ICU patient days (from the CLABSI summary data) by the number of CDI patient days (from the MDRO summary data) in each facility as risk adjustment variables.

Hospitals were flagged as having adjusted rates significantly higher or lower than the state average if the 99% confidence interval excluded the state average HO rate. In 2023, 12 out of 149 hospitals (8%) were flagged with adjusted rates significantly higher than the state average; these hospitals are required to submit improvement plans following the Department's HAI Reporting Program Policy for Facilities with Consecutive Years of High HAI Rates (http://www.health.ny.gov/statistics/facilities/hospital/hospital_acquired_infections/). Twenty hospitals (13%) were flagged significantly lower than average.

Hospital specific data is presented in Figure 16. The NHSN standardized infection ratio (SIR), which will be the measurement for HO CDI starting in 2024, is in the first column, and Community Onset (CO), Hospital Onset (HO) and risk adjusted rates with 99% CI are presented in the other columns.

**Figure 16. Hospital onset CDI rates, New York State, 2023 (Page 1 of 4)**

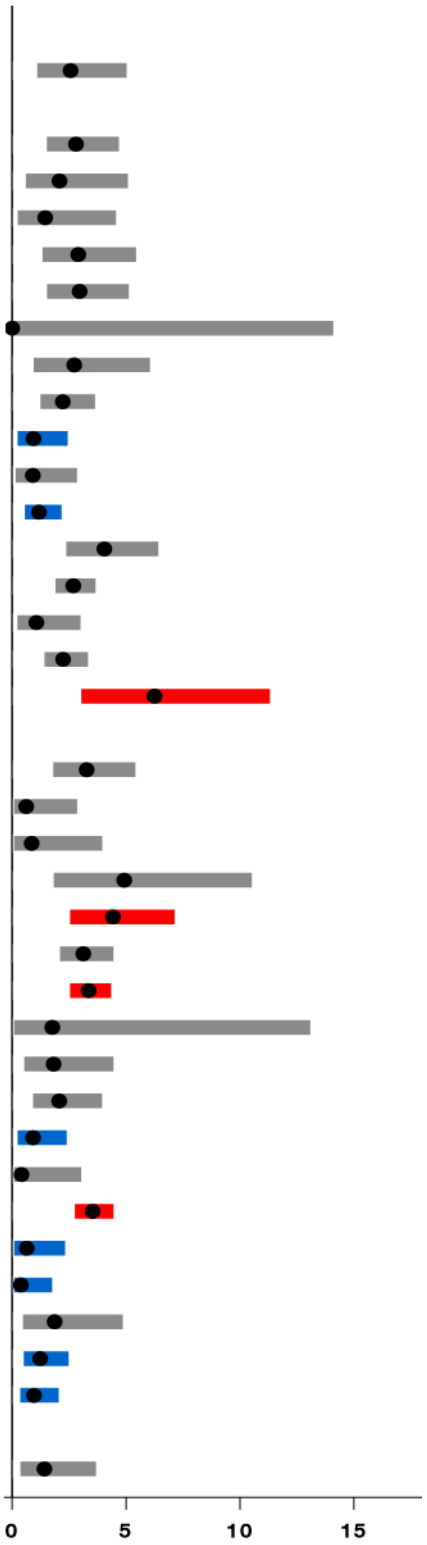
| HOSPITAL | NHSN SIR | # CO | CO Rate | # HO | Patient Days | Raw Rate | ADJ. Adj. Rate and 99.5% CI Rate Compd. to State Rate of 2.5 |
|---|---|---|---|---|---|---|---|
| AO Fox Memorial | NA | 5 | 0.28 | 0 | 7,296 | 0.0 | 0.0 |
| Adirondack Medical | 1.1 | 5 | 0.27 | 4 | 7,665 | 5.2 | 4.3 |
| Albany Med Ctr | 0.416 | 15 | 0.04 | 44 | 204,370 | 2.2 | 2.8 |
| Alice Hyde Med Ctr | 2.202 | 13 | 0.93 | 7 | 5,794 | 12.1 | 5.2 |
| Arnot Ogden Med Ctr* | 0.086 | 18 | 0.26 | 2 | 35,635 | 0.6 | 0.5 |
| Auburn Memorial | 0.696 | 4 | 0.11 | 5 | 18,358 | 2.7 | 4.2 |
| Bellevue Ellis | NA | 0 | 0 | NA | 3,600 | NA | NA |
| Bellevue Hospital | 0.492 | 23 | 0.11 | 55 | 152,315 | 3.6 | 2.9 |
| Blythedale Childrens | 0.644 | 0 | 0 | NA | 29,544 | NA | NA |
| Bon Secours | 0.471 | 3 | 0.15 | 2 | 7,643 | 2.6 | 2.5 |
| Bronx-Lebanon | 0.605 | 37 | 0.19 | 50 | 128,524 | 3.9 | 3.4 |
| Brookdale Hospital | 0.212 | 3 | 0.04 | 10 | 86,147 | 1.2 | 1.2 |
| Brooklyn Hosp Ctr* | 0.026 | 8 | 0.07 | 1 | 63,055 | 0.2 | 0.2 |
| Brooks Memorial | 0.601 | 27 | 1.72 | 6 | 5,670 | 10.6 | 1.4 |
| Buffalo General^ | 0.694 | 20 | 0.09 | 56 | 148,839 | 3.8 | 4.0 |
| Calvary Hospital | 0.15 | 0 | 0 | NA | 75,256 | NA | NA |
| Canton-Potsdam^ | 1.486 | 2 | 0.03 | 9 | 19,878 | 4.5 | 8.1 |
| Cayuga Medical Ctr | 0.429 | 21 | 0.39 | 7 | 25,369 | 2.8 | 2.0 |
| Champlain Valley | 0.848 | 35 | 0.52 | 28 | 45,827 | 6.1 | 4.1 |
| Claxton-Hepburn | 1.045 | 14 | 0.6 | 8 | 9,422 | 8.5 | 4.3 |
| Clifton Springs | NA | 3 | 0.09 | 0 | 18,913 | 0.0 | 0.0 |
| Cohens Childrens | 0.592 | 35 | 0.28 | NA | 46,087 | NA | NA |
| Columbia Memorial^ | 1.308 | 3 | 0.09 | 11 | 24,924 | 4.4 | 6.8 |
| Corning Hospital | 0.108 | 12 | 0.22 | 1 | 19,830 | 0.5 | 0.5 |
| Cortland Reg Med | 0.407 | 7 | 0.16 | 4 | 18,315 | 2.2 | 2.1 |
| Crouse Hospital | 0.361 | 7 | 0.04 | 14 | 85,646 | 1.6 | 2.3 |
| Ellis Hospital | 0.197 | 6 | 0.06 | 5 | 58,598 | 0.9 | 1.4 |
| Elmhurst Hospital | 0.285 | 10 | 0.05 | 19 | 98,645 | 1.9 | 1.8 |
| Erie County Med Ctr | 0.615 | 8 | 0.07 | 37 | 95,672 | 3.9 | 3.3 |
| FF Thompson | 0.762 | 5 | 0.07 | 9 | 31,244 | 2.9 | 4.8 |
| Flushing Hospital | 0.617 | 16 | 0.18 | 16 | 40,916 | 3.9 | 3.9 |
| Garnet Catskills | 1.138 | 13 | 0.46 | 10 | 11,416 | 8.8 | 5.7 |
| Garnet Middletown^ | 0.903 | 48 | 0.26 | 60 | 92,780 | 6.5 | 5.9 |
| Geneva General | 1.01 | 6 | 0.24 | 7 | 13,053 | 5.4 | 4.5 |
| Glen Cove Hospital* | 0.268 | 7 | 1.36 | 3 | 17,342 | 1.7 | 0.4 |
| Glens Falls Hospital | 0.142 | 9 | 0.09 | 3 | 53,002 | 0.6 | 1.0 |
| Good Samar. Suffern | 0.162 | 15 | 0.12 | 6 | 58,237 | 1.0 | 1.0 |
| Good Samar. W Islip | 0.417 | 18 | 0.07 | 25 | 107,714 | 2.3 | 2.4 |
| Harlem Hospital | 0.226 | 7 | 0.08 | 7 | 52,680 | 1.3 | 1.4 |
| HealthAlliance-MaryC | 0.488 | . | . | | . | | NA |




┆State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area. ▬^^Significantly higher than state average. HO: hospital onset, rate is per 10,000 patient days, CO: community onset, rate is per 100 admissions
Specialty hospitals not risk adjusted. SIR: Standardized infection ratio is not calculated (NA) if 0 events or predicted events less than 1. Data reported as of June 16, 2024.

**Figure 18. Hospital Onset *C. difficile* Rates, New York State, 2023 (Page 2 of 4)**

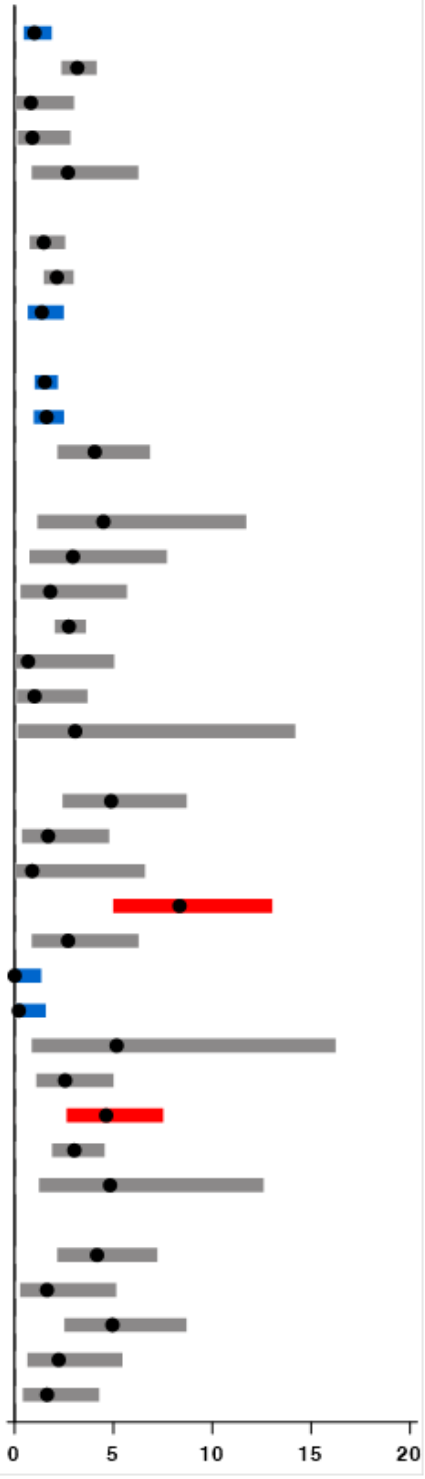
| HOSPITAL | NHSN SIR | # CO | CO Rate | # HO | Patient Days | Raw Rate | ADJ. Adj. Rate and 99.5% CI Rate Compd. to State Rate of 2.5 |
|---|---|---|---|---|---|---|---|
| Henry J. Carter | 0.162 | 0 | 0 | NA | 48,263 | NA | NA |
| Highland Hospital | 0.354 | 8 | 0.04 | 13 | 94,366 | 1.4 | 2.6 |
| Hosp for Spec Surg | 0.308 | 0 | 0 | NA | 36,971 | NA | NA |
| Huntington Hospital | 0.456 | 40 | 0.22 | 23 | 76,757 | 3.0 | 2.8 |
| Interfaith Med Ctr | 0.298 | 1 | 0.02 | 7 | 63,055 | 1.1 | 2.1 |
| JT Mather Hospital | 0.207 | 10 | 0.11 | 4 | 43,314 | 0.9 | 1.4 |
| Jacobi Med Ctr | 0.375 | 9 | 0.06 | 15 | 85,518 | 1.8 | 2.9 |
| Jamaica Hospital | 0.459 | 15 | 0.12 | 20 | 67,589 | 3.0 | 3.0 |
| Jones Memorial | NA | 1 | 0.04 | 0 | 5,652 | 0.0 | 0.0 |
| Kenmore Mercy | 0.509 | 19 | 0.32 | 9 | 33,731 | 2.7 | 2.7 |
| Kings County Hosp | 0.364 | 9 | 0.07 | 25 | 98,229 | 2.5 | 2.2 |
| LIJ at Forest Hills* | 0.151 | 29 | 0.22 | 6 | 62,286 | 1.0 | 0.9 |
| LIJ at Valley Stream | 0.155 | 9 | 0.09 | 4 | 49,129 | 0.8 | 0.9 |
| Lenox Hill Hospital* | 0.217 | 37 | 0.13 | 16 | 107,765 | 1.5 | 1.2 |
| Lincoln Med Ctr | 0.615 | 9 | 0.06 | 29 | 76,530 | 3.8 | 4.0 |
| Long Isl Jewish(LIJ) | 0.451 | 52 | 0.13 | 65 | 203,568 | 3.2 | 2.7 |
| Long Isl. Community | 0.19 | 18 | 0.21 | 5 | 42,095 | 1.2 | 1.1 |
| Maimonides Med Ctr | 0.372 | 15 | 0.05 | 39 | 159,079 | 2.5 | 2.2 |
| Mary Imogene Bassett^ | 0.983 | 4 | 0.05 | 17 | 45,512 | 3.7 | 6.2 |
| Memor SloanKettering | 0.419 | 34 | 0.13 | NA | 168,695 | NA | NA |
| Mercy Hosp Buffalo | 0.452 | 27 | 0.15 | 24 | 91,143 | 2.6 | 3.3 |
| Mercy Med Ctr | 0.087 | 9 | 0.09 | 2 | 44,632 | 0.4 | 0.6 |
| Metropolitan Hosp | 0.134 | 4 | 0.06 | 2 | 25,756 | 0.8 | 0.9 |
| MidHudson Reg of WMC | 0.788 | 10 | 0.15 | 10 | 30,196 | 3.3 | 4.9 |
| Millard Fill. Suburb^ | 0.642 | 49 | 0.33 | 27 | 67,649 | 4.0 | 4.4 |
| Montefiore-Einstein | 0.566 | 29 | 0.11 | 50 | 135,211 | 3.7 | 3.1 |
| Montefiore-Moses^ | 0.521 | 40 | 0.11 | 96 | 249,576 | 3.8 | 3.4 |
| Montefiore-Mt Vernon | 0.386 | 3 | 0.19 | 1 | 5,605 | 1.8 | 1.8 |
| Montefiore-NewRochl | 0.478 | 24 | 0.46 | 7 | 26,971 | 2.6 | 1.8 |
| Montefiore-Nyack | 0.33 | 23 | 0.21 | 14 | 64,839 | 2.2 | 2.1 |
| Montefiore-Wakefield* | 0.14 | 25 | 0.16 | 6 | 67,687 | 0.9 | 0.9 |
| Mount St. Marys | 0.125 | 5 | 0.15 | 1 | 32,484 | 0.3 | 0.4 |
| Mt Sinai^ | 0.548 | 55 | 0.12 | 120 | 278,647 | 4.3 | 3.5 |
| Mt Sinai Beth Israel* | 0.095 | 2 | 0.02 | 3 | 56,325 | 0.5 | 0.6 |
| Mt Sinai Brooklyn* | 0.032 | 8 | 0.08 | 2 | 60,832 | 0.3 | 0.4 |
| Mt Sinai Queens | 0.461 | 15 | 0.35 | 6 | 25,493 | 2.4 | 1.9 |
| Mt Sinai St Lukes* | 0.224 | 7 | 0.05 | 12 | 86,226 | 1.4 | 1.2 |
| Mt Sinai West* | 0.16 | 7 | 0.04 | 10 | 99,344 | 1.0 | 1.0 |
| NY Community Hosp | 1.088 | . | . | | . | | NA |
| NYP-Allen | 0.216 | 16 | 0.16 | 6 | 48,391 | 1.2 | 1.4 |




┆State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area. ▬^^Significantly higher than state average. HO: hospital onset, rate is per 10,000 patient days, CO: community onset, rate is per 100 admissions
Specialty hospitals not risk adjusted. SIR: Standardized infection ratio is not calculated (NA) if 0 events or predicted events less than 1. Data reported as of June 16, 2024.

**Figure 16. Hospital onset *c. difficile* rates, New York State, 2023 (Page 3 of 4)**

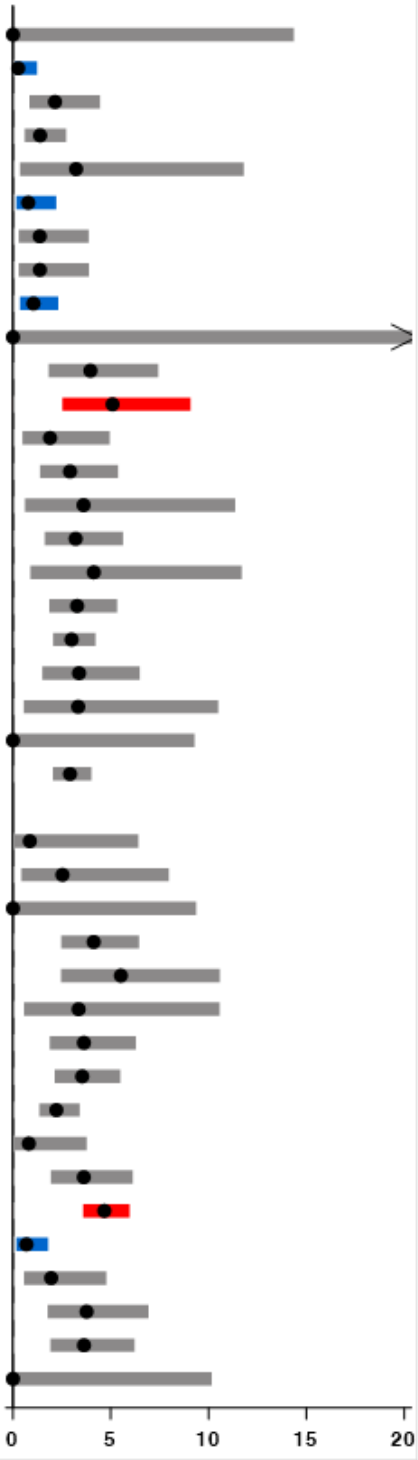
| HOSPITAL | NHSN SIR | # CO | CO Rate | # HO | Patient Days | Raw Rate | ADJ. Adj. Rate and 99.5% CI Rate Compd. to State Rate of 2.5 |
|---|---|---|---|---|---|---|---|
| NYP-Brklyn Methodist* | 0.162 | 16 | 0.07 | 15 | 137,882 | 1.1 | 1.0 |
| NYP-Columbia | 0.542 | 39 | 0.14 | 87 | 227,704 | 3.8 | 3.2 |
| NYP-Hudson Valley | 0.155 | 20 | 0.26 | 3 | 32,852 | 0.9 | 0.8 |
| NYP-Lawrence | 0.145 | 11 | 0.1 | 4 | 53,396 | 0.7 | 0.9 |
| NYP-Lower Manhattan | 0.412 | 7 | 0.08 | 8 | 35,523 | 2.3 | 2.7 |
| NYP-Morgan Stanley | 0.295 | 2 | 0.02 | NA | 60,124 | NA | NA |
| NYP-Queens | 0.242 | 36 | 0.14 | 20 | 137,800 | 1.5 | 1.5 |
| NYP-Weill Cornell | 0.31 | 31 | 0.08 | 56 | 242,593 | 2.3 | 2.1 |
| NYU Langone Brooklyn* | 0.255 | 34 | 0.14 | 17 | 102,202 | 1.7 | 1.4 |
| NYU Orthopedic Hosp | 0.447 | 1 | 0.02 | NA | 13,879 | NA | NA |
| NYU Tisch* | 0.276 | 92 | 0.22 | 48 | 214,775 | 2.2 | 1.5 |
| NYU Winthrop* | 0.287 | 70 | 0.2 | 32 | 150,046 | 2.1 | 1.6 |
| Nassau University | 0.662 | 9 | 0.07 | 22 | 70,204 | 3.1 | 4.1 |
| Nathan Littauer | NA | . | . | | . | | NA |
| Newark Wayne | 0.884 | 3 | 0.03 | 6 | 22,852 | 2.6 | 4.5 |
| Niagara Falls | 0.502 | 0 | 0 | 6 | 24,729 | 2.4 | 3.0 |
| North Central Bronx | 0.341 | 6 | 0.11 | 4 | 29,317 | 1.4 | 1.8 |
| North Shore | 0.419 | 38 | 0.08 | 83 | 264,737 | 3.1 | 2.7 |
| Northern Dutchess | 0.134 | 10 | 0.16 | 1 | 22,335 | 0.4 | 0.7 |
| Northern Westchester | 0.166 | 17 | 0.24 | 3 | 27,438 | 1.1 | 1.0 |
| Noyes Memorial | 0.628 | 1 | 0.04 | 2 | 10,821 | 1.8 | 3.1 |
| Oishei Childrens | 0.356 | 4 | 0.04 | NA | 34,240 | NA | NA |
| Olean General | 0.965 | 20 | 0.35 | 18 | 29,239 | 6.2 | 4.9 |
| Oneida Healthcare | 0.624 | 23 | 1.08 | 5 | 8,506 | 5.9 | 1.7 |
| Oswego Hospital | 0.196 | 3 | 0.1 | 1 | 12,459 | 0.8 | 0.9 |
| Our Lady of Lourdes^ | 1.504 | 10 | 0.13 | 31 | 49,009 | 6.3 | 8.3 |
| Peconic Bay Medical | 0.496 | 14 | 0.14 | 8 | 47,543 | 1.7 | 2.7 |
| Phelps Memorial* | NA | 9 | 0.14 | 0 | 35,910 | 0.0 | 0.0 |
| Plainview Hospital* | 0.042 | 26 | 0.32 | 1 | 39,209 | 0.3 | 0.2 |
| Putnam Hospital | 0.739 | 5 | 0.13 | 4 | 13,636 | 2.9 | 5.2 |
| Queens Hospital | 0.395 | 12 | 0.12 | 13 | 54,717 | 2.4 | 2.6 |
| Richmond Univ MC^ | 0.784 | 21 | 0.18 | 26 | 51,258 | 5.1 | 4.6 |
| Rochester General | 0.441 | 13 | 0.04 | 37 | 172,331 | 2.1 | 3.0 |
| Rome Memorial | 0.948 | 4 | 0.15 | 6 | 11,846 | 5.1 | 4.8 |
| Roswell Park | 0.552 | 33 | 0.71 | NA | 44,178 | NA | NA |
| SUNY Downstate MedCr | 0.621 | 16 | 0.21 | 20 | 50,278 | 4.0 | 4.2 |
| Samaritan- Troy | 0.246 | 11 | 0.11 | 4 | 40,120 | 1.0 | 1.6 |
| Samaritan- Watertown | 0.867 | 34 | 0.28 | 19 | 34,297 | 5.5 | 4.9 |
| Saratoga Hospital | 0.35 | 11 | 0.09 | 7 | 50,922 | 1.4 | 2.2 |
| Sisters of Charity | 0.222 | 12 | 0.12 | 6 | 49,195 | 1.2 | 1.6 |




State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area. ^^Significantly higher than state average. HO: hospital onset, rate is per 10,000 patient days, CO: community onset, rate is per 100 admissions. Specialty hospitals not risk adjusted. SIR: Standardized infection ratio is not calculated (NA) if 0 events or predicted events less than 1. Data reported as of June 16, 2024.

**Figure 16. Hospital onset *c. difficile* rates, New York State, 2023 (Page 4 of 4)**

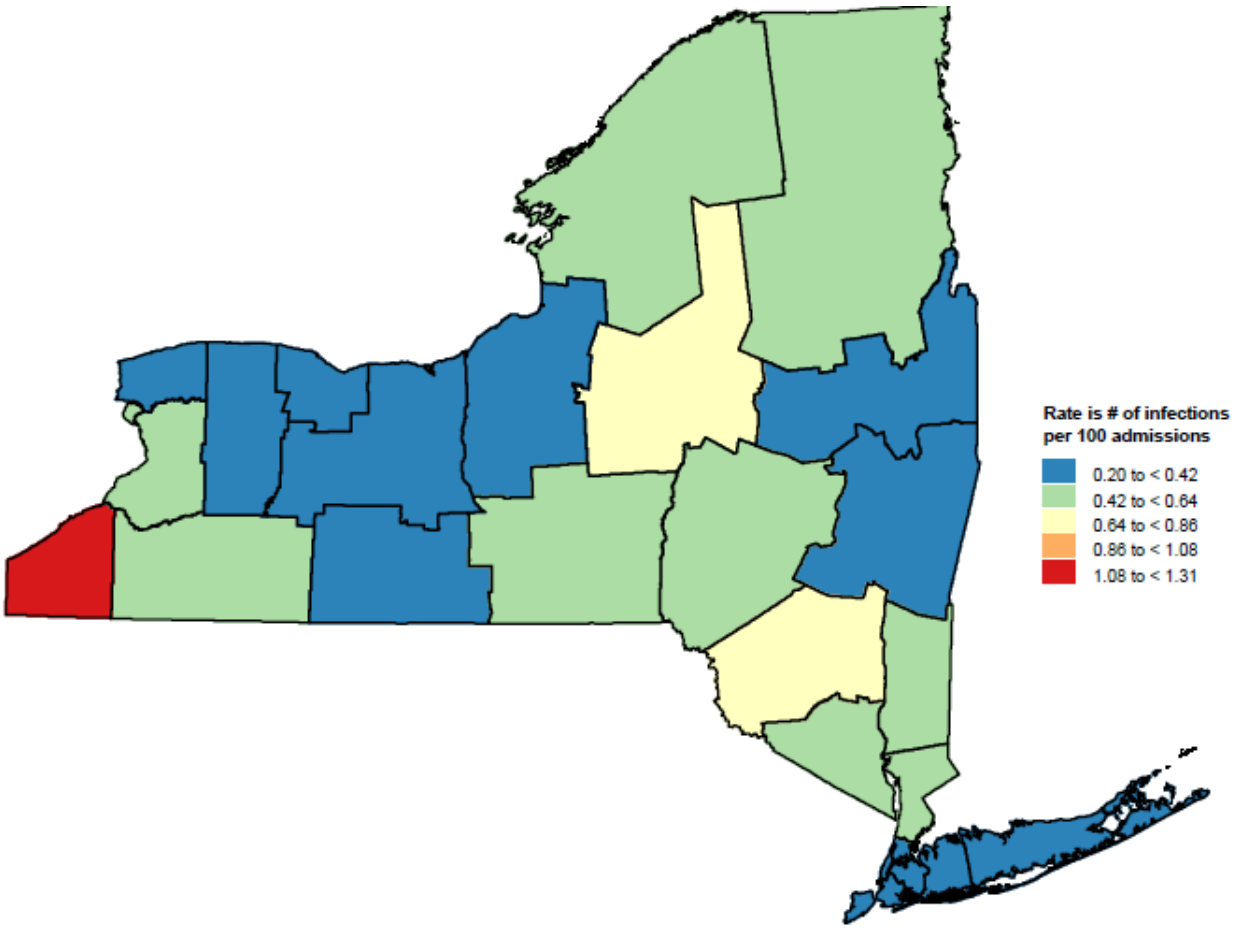
| HOSPITAL | NHSN SIR | # CO | CO Rate | # HO | Patient Days | Raw Rate | ADJ. Adj. Rate and 99.5% CI Rate Compd. to State Rate of 2.5 |
|---|---|---|---|---|---|---|---|
| Sisters- St Joseph | NA | 0 | 0 | 0 | 5,411 | 0.0 | 0.0 |
| South Brooklyn Health* | 0.042 | 11 | 0.1 | 2 | 77,923 | 0.3 | 0.3 |
| South Nassau Comm. | 0.283 | 16 | 0.09 | 11 | 85,396 | 1.3 | 2.2 |
| South Shore UHosp | 0.209 | 23 | 0.1 | 13 | 107,096 | 1.2 | 1.4 |
| St Anthony | 0.828 | 5 | 0.22 | 3 | 7,953 | 3.8 | 3.2 |
| St Barnabas* | 0.11 | 12 | 0.1 | 5 | 71,519 | 0.7 | 0.8 |
| St Catherine Siena | 0.203 | 13 | 0.1 | 5 | 46,907 | 1.1 | 1.4 |
| St Charles Hospital | 0.201 | 12 | 0.15 | 5 | 45,752 | 1.1 | 1.4 |
| St Francis- Roslyn* | 0.164 | 27 | 0.14 | 9 | 97,164 | 0.9 | 1.0 |
| St Johns Dobbs Ferry | NA | 0 | 0 | 0 | 1,724 | 0.0 | 0.0 |
| St Johns Episcopal | 0.676 | 3 | 0.05 | 15 | 42,218 | 3.6 | 4.0 |
| St Johns Riverside^ | 0.829 | 23 | 0.22 | 18 | 45,932 | 3.9 | 5.1 |
| St Joseph- Bethpage | 0.343 | 19 | 0.3 | 6 | 32,226 | 1.9 | 1.9 |
| St Josephs- Syracuse | 0.399 | 15 | 0.08 | 16 | 85,499 | 1.9 | 2.9 |
| St Josephs- Yonkers | 0.724 | 4 | 0.16 | 4 | 16,162 | 2.5 | 3.6 |
| St Lukes Cornwall | 0.647 | 32 | 0.4 | 19 | 44,264 | 4.3 | 3.2 |
| St Marys Amsterdam | 0.893 | 9 | 0.21 | 5 | 16,508 | 3.0 | 4.1 |
| St Peters Hospital | 0.497 | 23 | 0.09 | 26 | 108,931 | 2.4 | 3.3 |
| Staten Island U N | 0.589 | 40 | 0.14 | 54 | 136,091 | 4.0 | 3.0 |
| Staten Island U S | 0.742 | 25 | 0.35 | 14 | 29,954 | 4.7 | 3.4 |
| Stony Brk Southamptn | 0.552 | 5 | 0.12 | 4 | 18,401 | 2.2 | 3.3 |
| Stony Brook ELIH | NA | 0 | 0 | 0 | 10,180 | 0.0 | 0.0 |
| Strong Memorial | 0.407 | 14 | 0.04 | 61 | 278,041 | 2.2 | 2.9 |
| Sunnyview Rehab Hosp | NA | 0 | 0 | NA | 3,625 | NA | NA |
| Syosset Hospital | 0.202 | 1 | 0.02 | 1 | 12,163 | 0.8 | 0.9 |
| UHS Binghamton | 0.537 | 5 | 0.17 | 4 | 15,729 | 2.5 | 2.5 |
| UHS Chenango Memor | NA | 2 | 0.14 | 0 | 4,652 | 0.0 | 0.0 |
| UHS Wilson | 0.681 | 19 | 0.13 | 31 | 74,799 | 4.1 | 4.1 |
| UPMC Chautauqua WCA | 1 | 11 | 0.34 | 14 | 21,695 | 6.5 | 5.5 |
| United Memorial | 0.527 | 6 | 0.09 | 4 | 19,581 | 2.0 | 3.4 |
| Unity Hosp Rochester | 0.452 | 6 | 0.03 | 20 | 101,634 | 2.0 | 3.6 |
| Univ Hosp SUNY Upst | 0.543 | 14 | 0.07 | 32 | 125,774 | 2.5 | 3.5 |
| Univ Hosp StonyBrook | 0.357 | 43 | 0.16 | 33 | 170,995 | 1.9 | 2.2 |
| Upst. Community Gen | 0.128 | 9 | 0.11 | 2 | 38,943 | 0.5 | 0.8 |
| Vassar Brothers | 0.465 | 19 | 0.09 | 22 | 101,272 | 2.2 | 3.6 |
| Westchester Medical^ | 0.911 | 42 | 0.2 | 107 | 158,086 | 6.8 | 4.7 |
| White Plains Hosp* | 0.098 | 23 | 0.11 | 6 | 98,468 | 0.6 | 0.7 |
| Woodhull Med Ctr | 0.317 | 6 | 0.08 | 7 | 41,009 | 1.7 | 2.0 |
| Wyckoff Heights | 0.572 | 7 | 0.06 | 16 | 49,453 | 3.2 | 3.8 |
| Wynn Hospital MVHS | 0.559 | 11 | 0.06 | 21 | 94,733 | 2.2 | 3.6 |
| Wyoming County Comm. | NA | 0 | 0 | 0 | 5,869 | 0.0 | 0.0 |




State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area. —^^Significantly higher than state average. HO: hospital onset, rate is per 10,000 patient days, CO: community onset, rate is per 100 admissions. Specialty hospitals not risk adjusted. SIR: Standardized infection ratio is not calculated (NA) if 0 events or predicted events less than 1. Data reported as of June 16, 2024.

Figure 17 shows the FWI CDI overall patient prevalence rate by county (or merged county for those with few or no hospitals). The prevalence of CDI is low in New York City (NYC) and varies in the rest of the state.

**Figure 17. Facility-wide inpatient CDI prevalence rate, New York State 2023**




Data reported as of June 16, 2024. Excludes specialty hospitals, inpatient rehabilitation facilities, and inpatient psychiatric facilities. Specimens identified in the outpatient setting are not included. The number of cases reported in hospitals performing less sensitive tests was multiplied by 1.5 to approximate the number of cases expected if a more sensitive test was used.

## Carbapenem resistant Enterobacterales (CRE) infections

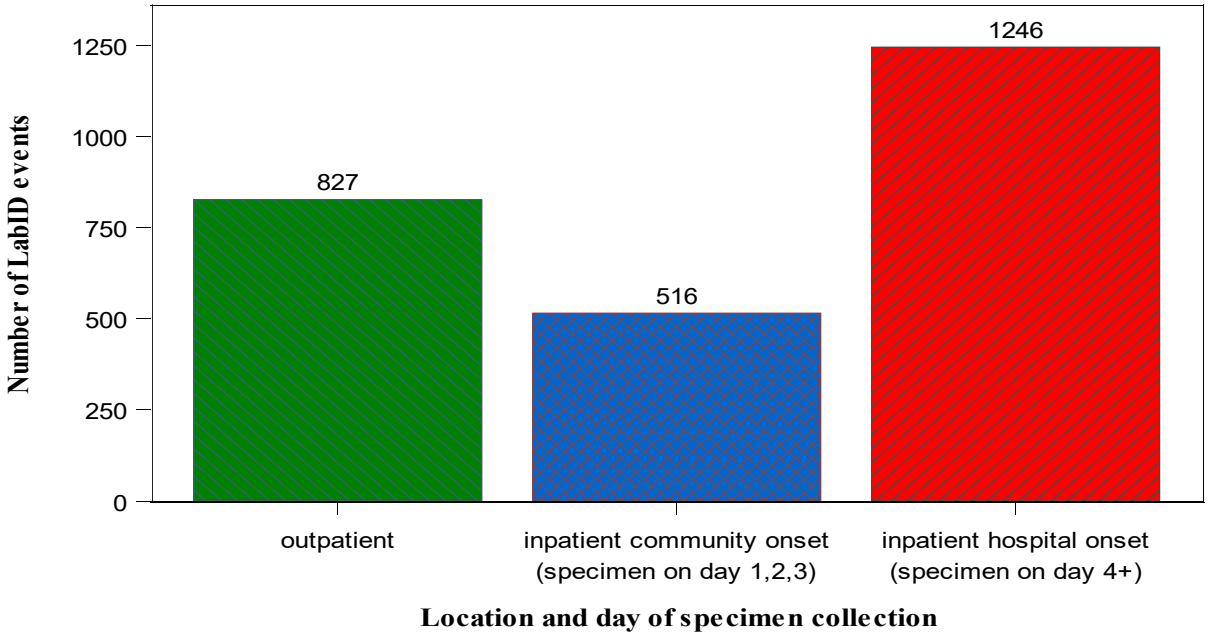
The NHSN LabID CRE surveillance definition is:

> Any *Escherichia coli, Klebsiella oxytoca, Klebsiella pneumoniae, Klebsiella aerogenes* or Enterobacter spp. testing resistant to imipenem, meropenem, doripenem, ertapenem, meropenem/vaborbactam, or imipenem/relebactam by standard susceptibility testing methods (specifically, minimum inhibitory concentrations of ≥4 mcg/ml for doripenem, imipenem, meropenem, meropenem/vaborbactam, and imipenem/relebactam or ≥2 mcg/mL for ertapenem) or by production of a carbapenemase (specifically, KPC, NDM, VIM, IMP, OXA-48) demonstrated using a recognized test (examples: polymerase chain reaction, metallo-β-lactamase test, modified Hodge test, Carba-NP).

CRE surveillance requires facilities perform surveillance for all three organisms: CRE-*E. coli*, CRE-*Enterobacter*, and CRE-*Klebsiella* (including *Klebsiella oxytoca*, *Klebsiella aerogenes* and *Klebsiella pneumoniae*).

In 2023, 2,589 CRE events were reported: 32% were identified in ED/OBS units, 20% were identified in the inpatient area during the first 3 days of hospitalization, and 48% were identified in the inpatient area after the first 3 days of inpatient stay (Figure 18).

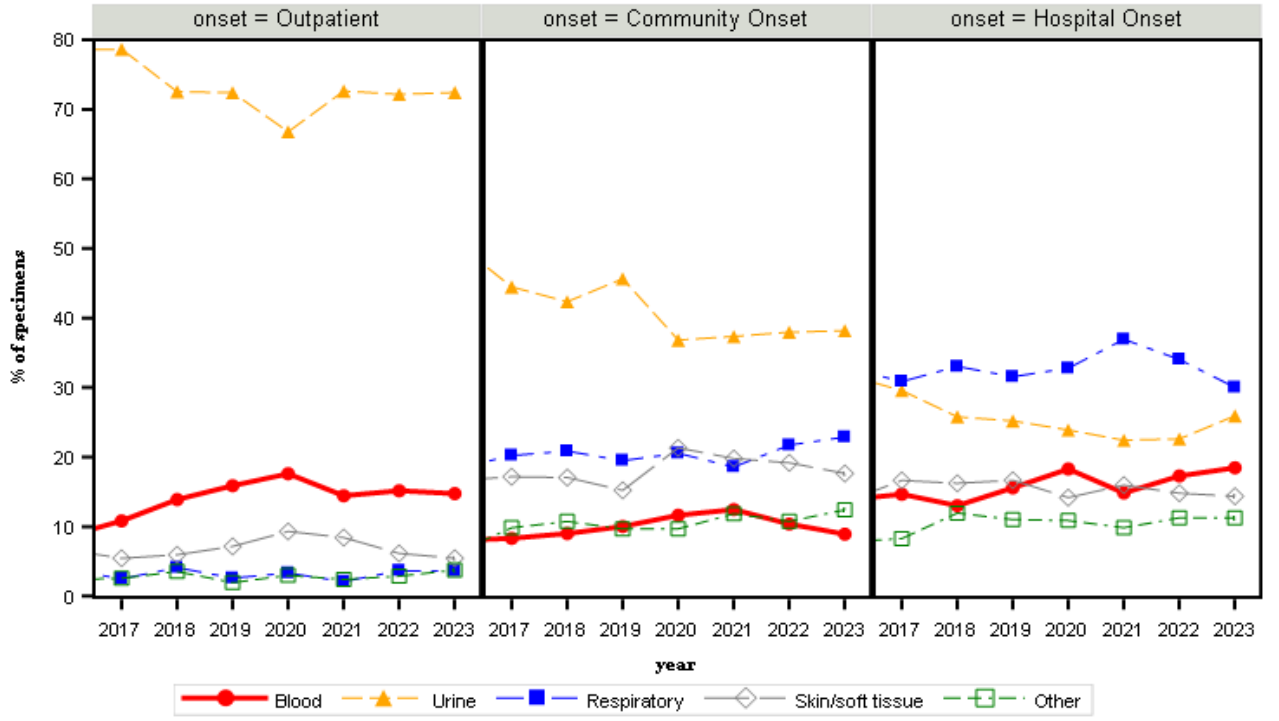
**Figure 18. CRE detection location and time of collection, NYS 2023**




Data reported as of June 16, 2024. Excludes events identified in inpatient rehabilitation facilities and inpatient psychiatric facilities. Specimens identified in the outpatient setting and admitted the next day are counted as outpatient.

In OP and CO events, the most common specimen site was by far the urinary tract; among HO events, respiratory specimens were most common (Figure 19).

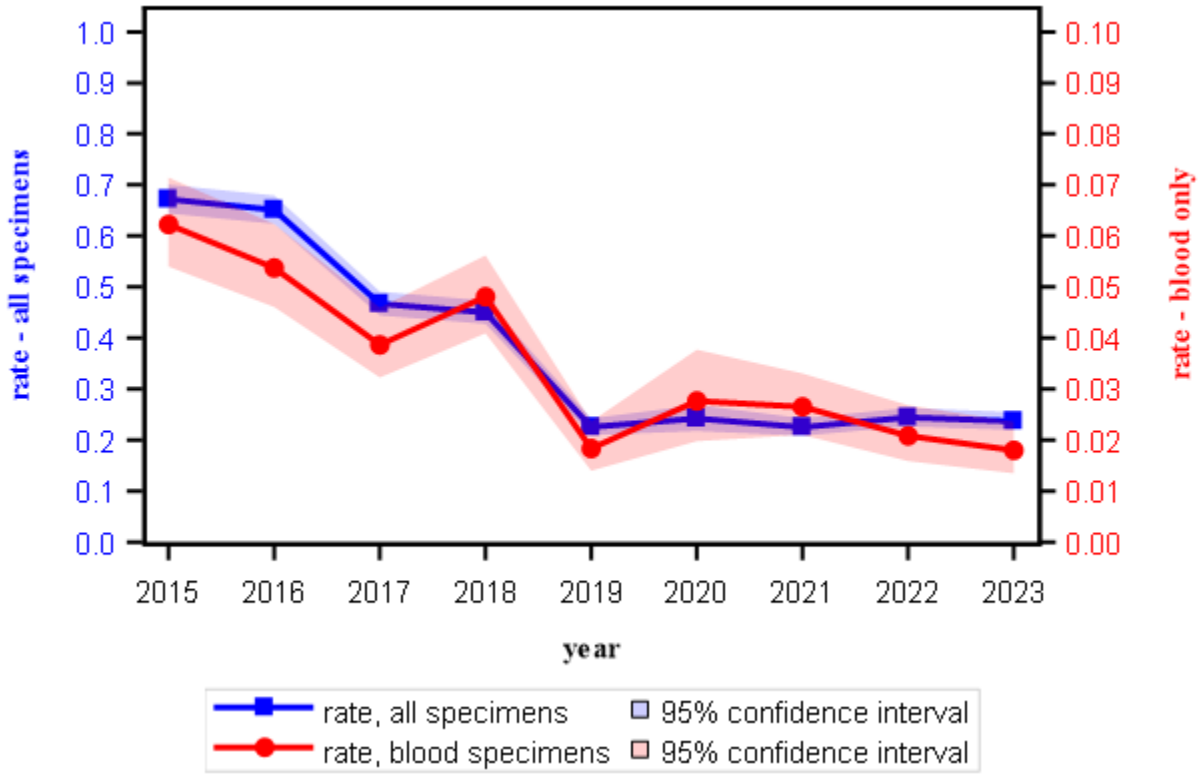
**Figure 19. CRE by specimen site, NYS 2015-2023**




Data reported as of June 16, 2024.

The admission prevalence rate describes the percentage of patients admitted to hospitals with CRE events. In 2023, there were 500 of these events among 2,111,161 admissions, for a rate of 0.24 events per 1,000 admissions. The overall admission prevalence rate decreased 64% between 2015 and 2023, but the rate has been relatively the same since 2019. The BSI rate decreased 70% over the same timeframe, but there was a decrease of 23% between 2022 and 2023. (Figure 20).

**Figure 20. Facility-wide inpatient CRE admission prevalence rates, NYS 2015-2023**

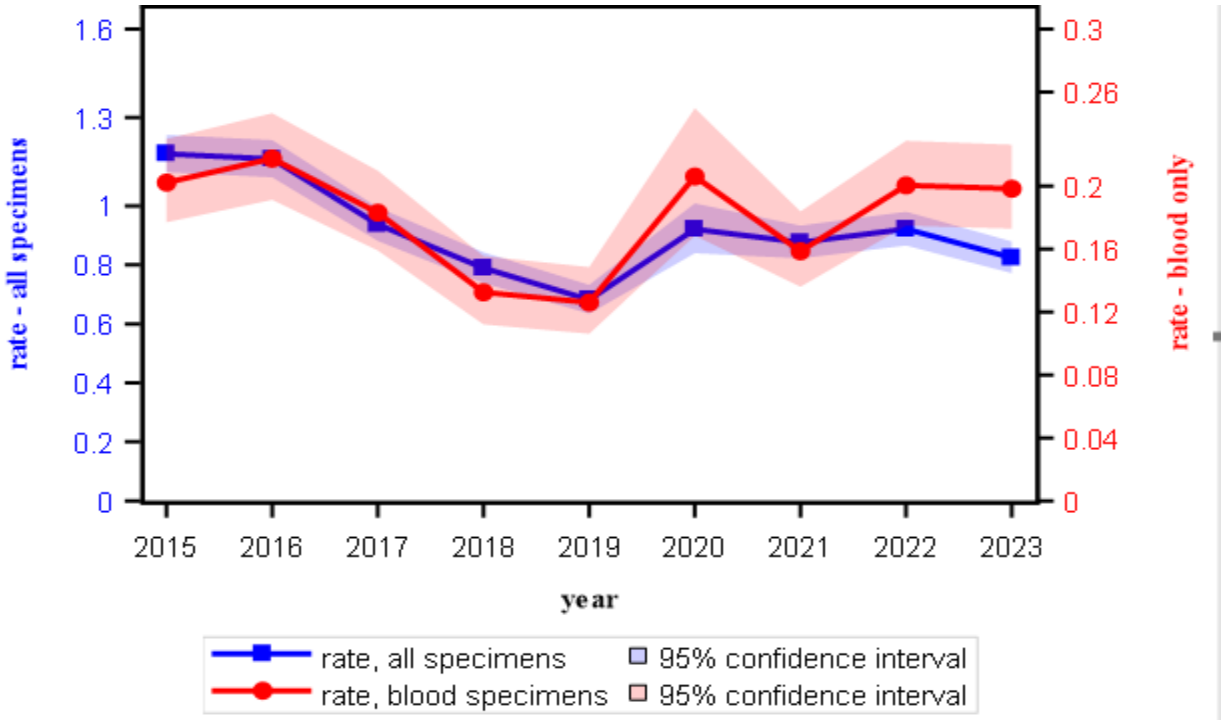



| Year | # Admissions | Total LabID events | | Bloodstream LabID events | |
|---|---|---|---|---|---|
| | | # Events | Rate | # Events | Rate |
| 2015 | 2,329,051 | 1,565 | 0.672 | 145 | 0.062 |
| 2016 | 2,326,264 | 1,515 | 0.651 | 125 | 0.054 |
| 2017 | 2,379,863 | 1,112 | 0.467 | 92 | 0.039 |
| 2018 | 2,375,584 | 1,069 | 0.450 | 113 | 0.048 |
| 2019 | 2,347,976 | 530 | 0.226 | 44 | 0.019 |
| 2020* | 1,048,540 | 254 | 0.242 | 29 | 0.028 |
| 2021 | 2,149,402 | 484 | 0.225 | 57 | 0.026 |
| 2022 | 2,066,051 | 505 | 0.244 | 43 | 0.021 |
| 2023 | 2,111,161 | 500 | 0.237 | 38 | 0.018 |

Data reported as of June 16, 2024. Bloodstream infection admission prevalence rate = number of unique (no others in previous 14 days) blood source isolations per patient per month identified ≤ 3 days after admission to the hospital / number of patient admissions to the hospital x 1000. All specimen admission prevalence rate = number of first events per patient per month identified ≤ 3 days after admission to the hospital / number of patient admissions to the hospital x 1000. Excludes inpatient rehabilitation and inpatient psychiatric locations and cases identified in the emergency room if admitted the same day. *Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

The longer a person stays in the hospital, the higher their cumulative risk of acquiring an infection, so the incidence rates are reported using a denominator of patient days. All specimen incidence decreased significantly from 0.92 to 0.82 (11%) between 2022 to 2023 whereas BSI incidence did not show any difference. (Figure 21).

**Figure 21. Facility-wide inpatient CRE LabID event incidence rates, New York State 2015-2023**

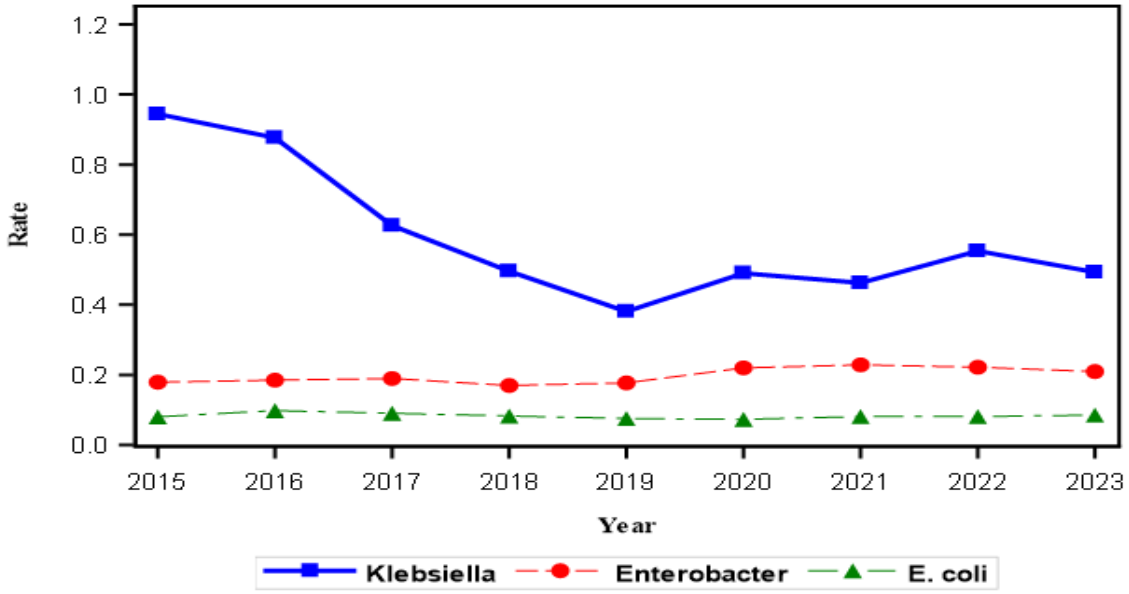



| Year | # Patient days | Total LabID events | | Bloodstream LabID events | |
|---|---|---|---|---|---|
| | | # Events | Rate | # Events | Rate |
| 2015 | 11,466,593 | 1,349 | 1.176 | 232 | 0.202 |
| 2016 | 11,397,102 | 1,321 | 1.159 | 248 | 0.218 |
| 2017 | 11,355,485 | 1,064 | 0.937 | 208 | 0.183 |
| 2018 | 11,328,988 | 892 | 0.787 | 150 | 0.132 |
| 2019 | 11,262,506 | 767 | 0.681 | 142 | 0.126 |
| 2020* | 5,091,653 | 469 | 0.921 | 105 | 0.206 |
| 2021 | 11,089,397 | 972 | 0.877 | 176 | 0.159 |
| 2022 | 10,967,475 | 1011 | 0.922 | 220 | 0.200 |
| 2023 | 11,087,436 | 914 | 0.824 | 220 | 0.198 |

Data reported as of June 16, 2024. Bloodstream event incidence rate = Number of all unique (no others in previous 14 days) blood source events per patient per month identified > 3 days after admission to the hospital / number of patient days x 10,000. All specimen isolation incidence rate = Number of first events per patient among those with no event with this specific organism type reported in a previous month at this hospital and identified > 3 days after admission to the hospital / number of patient days x 10,000. Excludes inpatient rehabilitation and inpatient psychiatric locations. *Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

CRE surveillance requires facilities to perform surveillance for all three organisms: CRE-*E. coli*, CRE-*Enterobacter*, and CRE-*Klebsiella* (*Klebsiella oxytoca, Klebsiella aerogenes* and *Klebsiella pneumoniae*). Overall patient prevalence rates by year and species are summarized in Figure 22. Between 2015 and 2023, the prevalence of CRE-*Klebsiella* decreased 48%, the prevalence of CRE-*Enterobacter* spp. increased 15%, and the prevalence of CRE-*E. coli* increased 6% in 2023. In 2023, CRE-*Klebsiella spp.* and CRE-*Enterobacter spp.* incidence decreased compared to 2022.

**Figure 22. Trends in overall patient prevalence CRE LabID event rates by species, NYS 2015-2023**

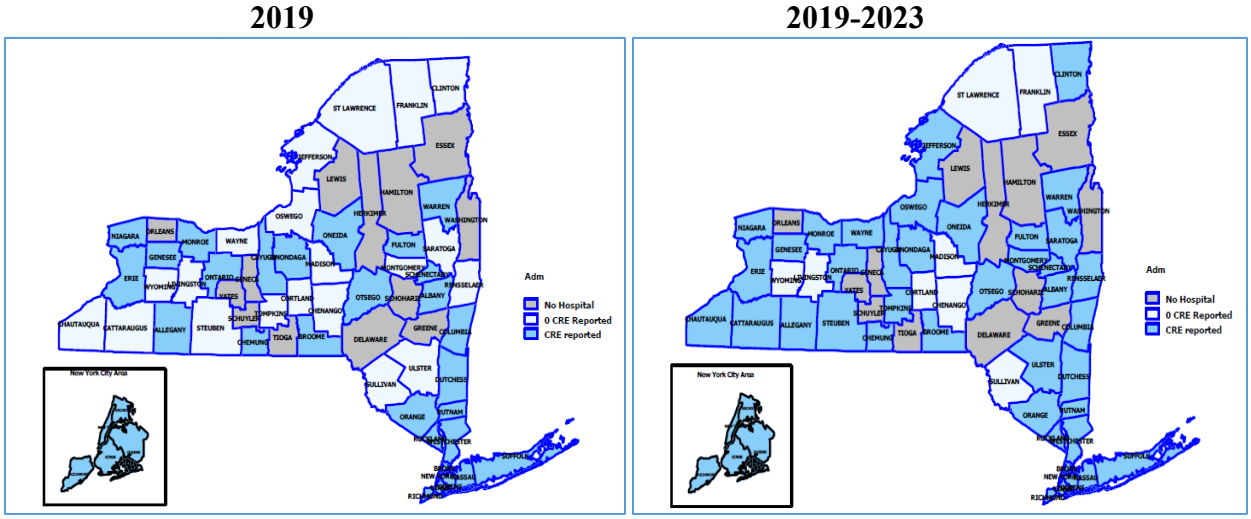



| Year | *Klebsiella spp.* | *Enterobacter* spp. | *E. coli* | Total |
|---|---|---|---|---|
| 2015 | 0.944 | 0.179 | 0.081 | 1.204 |
| 2016 | 0.877 | 0.185 | 0.098 | 1.160 |
| 2017 | 0.626 | 0.190 | 0.091 | 0.907 |
| 2018 | 0.495 | 0.170 | 0.083 | 0.748 |
| 2019 | 0.380 | 0.176 | 0.076 | 0.632 |
| 2020* | 0.490 | 0.220 | 0.073 | 0.784 |
| 2021 | 0.463 | 0.229 | 0.081 | 0.773 |
| 2022 | 0.554 | 0.222 | 0.081 | 0.857 |
| 2023 | 0.493 | 0.210 | 0.086 | 0.789 |

Data reported as of June 16, 2024. Inpatient rehab and psychiatric facility data excluded. Overall patient prevalence rate is the number of first LabID events per patient per month (e.g., admission prevalent or hospital onset) / number of patient admissions to the hospital x 1000. Does not include cases identified in the emergency room if admitted the same day. *Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

Figure 23 shows any CRE LabID event reporting since 2019. Counties shaded in blue have hospitals where at least one event has been reported since 2019. Counties shaded in gray have no hospitals that are mandated to report to NYS via NHSN. The remaining counties, shown in white, are mandated to report via NHSN but had zero reported events between 2019 and 2023. As indicated, in 2019, 20 counties' hospitals did not report any CRE; by 2023, only eight counties continue to have reported zero events in that time period.

**Figure 23. CRE LabID events reported (cumulative) by diagnosing hospital counties, in 2019-2023.**



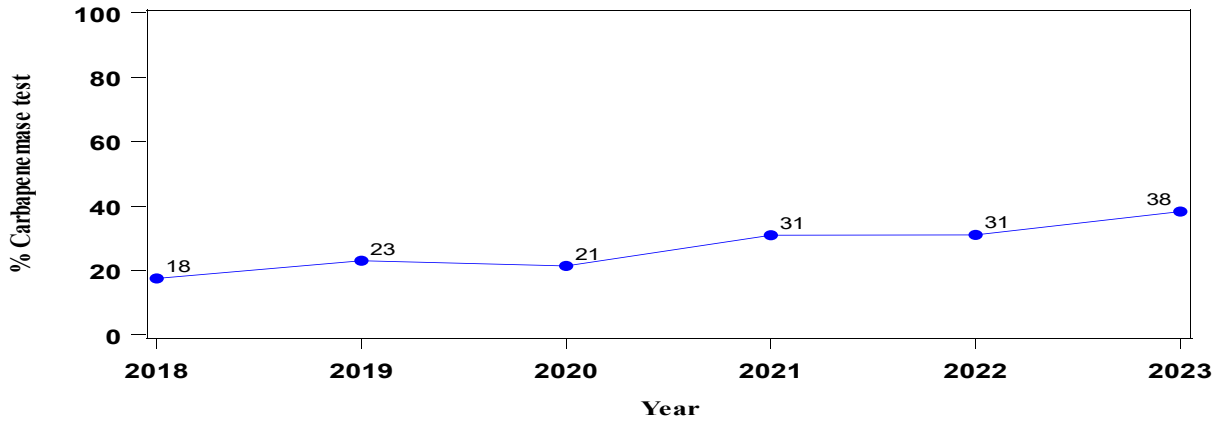

**Laboratory testing methods**

On the 2023 NHSN hospital surveys, 55% of hospitals reported that their labs perform a special test for carbapenemase production. However, based on the data of 2023 CRE events reported to NHSN, approximately 38% of specimens were tested for the presence of a carbapenemase. Among those tested, 73% of specimens were identified as carbapenemase producers (Figure 24).

| Year | # CRE reported | # Carbapenemase tested | % Tested | # Positive | % Positive |
|---|---|---|---|---|---|
| 2018 | 2,668 | 467 | 18 | 317 | 68 |
| 2019 | 2,330 | 536 | 23 | 376 | 70 |
| 2020* | 1,800 | 385 | 21 | 230 | 60 |
| 2021 | 2,406 | 744 | 31 | 503 | 68 |
| 2022 | 2,627 | 815 | 31 | 616 | 76 |
| 2023 | 2,613 | 1,000 | 38 | 729 | 73 |

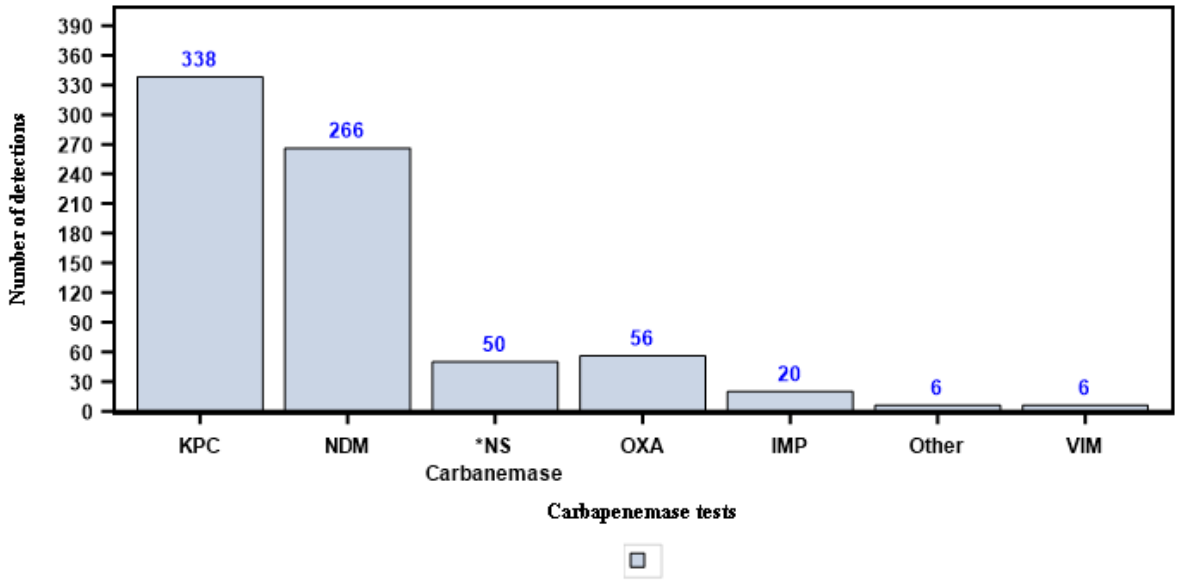
*Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

**Figure 24. Percent of specimens tested for carbapenemase, 2023**




Among healthcare facilities that report genotypic carbapenemase testing, the most common(N carbapenemase was *Klebsiella pneumoniae* carbapenemase (KPC) followed by New Delhi metallo-ß-lactamase (NDM) (Figure 25). Other gene-specific testing identified: oxacillinase-48 like (OXA) - 56 positive, imipenemase (IMP) - 20 positive, Verona integron-encoded metallo-ß-lactamase (VIM) - 6 positive. Phenotypic testing includes the modified Hodge test (MHT) or CarbaNP (confirmatory test for carbapenemase production in *Enterobacterales* or CNP) as non-specific carbapenemase production (NSCARBA) and identified 50 positive specimens. Gene-specific testing identified 6 specimens positive for other, not specified genes.

**Figure 25. Number of samples positive for carbapenemase(s) by type, 2023**




=*Non specific carbapenemase

Laboratory identification of CRE can be achieved through several methods, and there is no standardization for which method should be used in individual healthcare facility laboratories. Testing differences might reduce the inter-facility comparability of CRE rates. Facilities using different breakpoints or not testing for carbapenemases using genotypic or phenotypic tests might be undercounting CRE or carbapenemase-producing CRE. Therefore, hospital specific CRE rates, particularly in non-blood specimens, may vary based on testing methods.

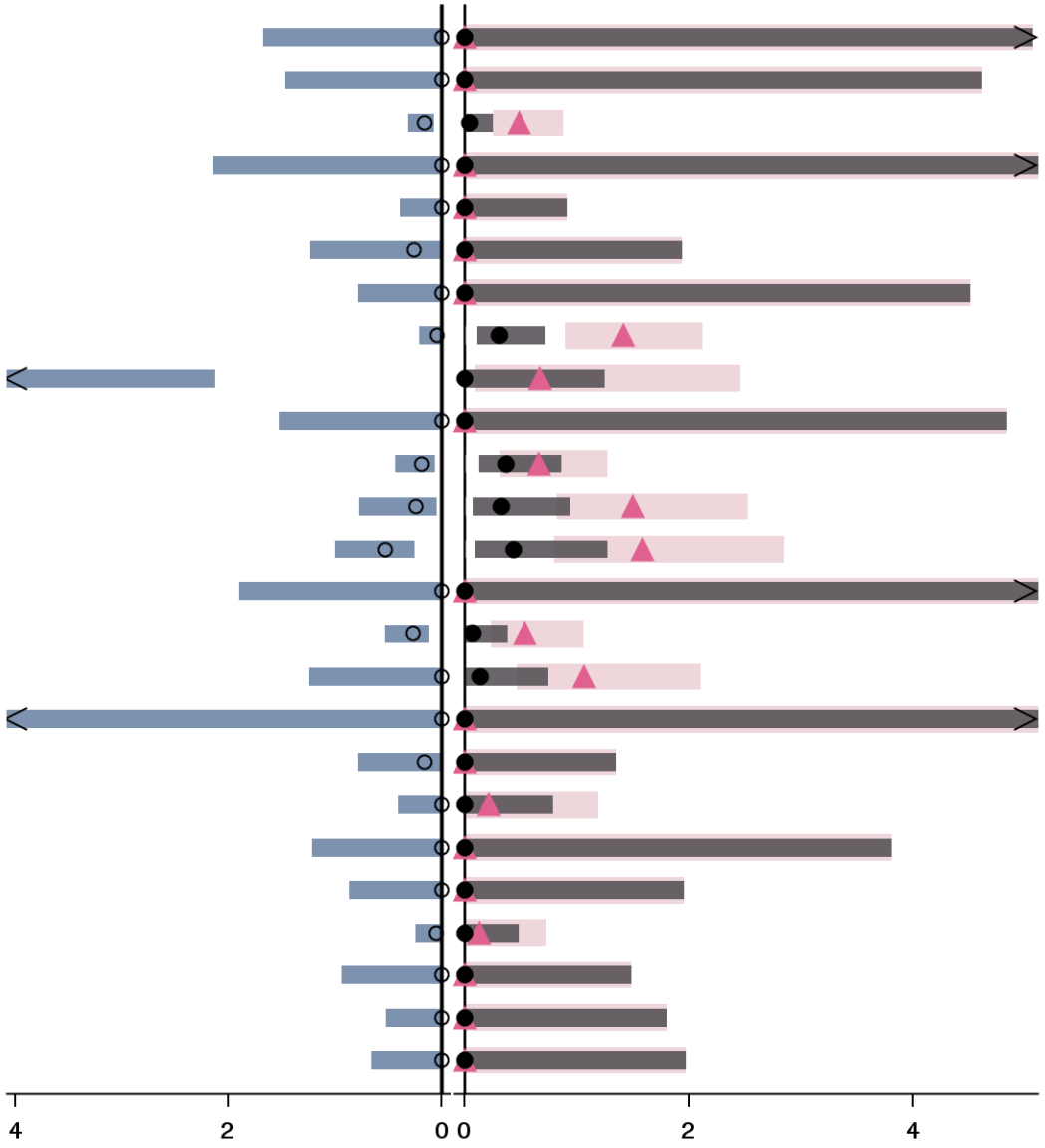
**Hospital specific CRE rates**

The primary HAI indicator of interest for evaluating hospital performance for CRE LabID events is the HO BSI rate because 1) blood specimens are more consistently tested by laboratories; and 2) BSIs are very serious and more likely to reflect clinical disease than CRE detected from nonsterile body sites such as wounds[1]. The prevalence of CRE among patients newly admitted to facilities is also reported because this burden of admission prevalent cases is related to the risk of spread within the facility.

Hospitals should review their HO BSI rates in relation to their admission prevalence rates as shown in Figure 26. Hospitals with high HO rates and low admission prevalence rates should examine whether they are testing patients promptly (days 1-3) and review for possible clustering of cases. The hospital- and region-specific admission prevalence rate, bed size, and percent intensive care unit patient-days do not predict the HO BSI rate strongly; therefore, risk adjusted rates are not presented. More research is needed on CRE risk adjustment to balance the importance of accuracy and fairly comparing rates with the need for having a measure to identify hospitals with higher than predicted rates for public health assistance and quality improvement programs.

## Figure 26. Carbapenem-resistant Enterobacterales rates, New York State, 2023 (Page 1 of 6)

| Hospital Name | # All AdmPrev | # Adms | AdmPrev Rate | HO-All Rate | HO-BSI Rate | # Patdays | # All | # BSI |
|---|---|---|---|---|---|---|---|---|
| AO Fox Memorial | 0 | 1791 | 0.0 | 0.0 | 0.0 | 7296 | 0 | 0 |
| Adirondack Medical | 0 | 2037 | 0.0 | 0.0 | 0.0 | 8006 | 0 | 0 |
| Albany Med Ctr | 6 | 37431 | 0.2 | 0.5 | 0.0 | 224461 | 11 | 1 |
| Alice Hyde Med Ctr | 0 | 1398 | 0.0 | 0.0 | 0.0 | 5794 | 0 | 0 |
| Arnot Ogden Med Ctr | 0 | 7690 | 0.0 | 0.0 | 0.0 | 40459 | 0 | 0 |
| Auburn Memorial | 1 | 3852 | 0.3 | 0.0 | 0.0 | 19042 | 0 | 0 |
| Bellevue Ellis | 0 | 3831 | 0.0 | 0.0 | 0.0 | 8190 | 0 | 0 |
| Bellevue Hospital | 1 | 22594 | 0.0 | 1.4 | 0.3 | 162895 | 23 | 5 |
| Blythedale Childrens | 3 | 386 | 7.8 | 0.7 | 0.0 | 29544 | 2 | 0 |
| Bon Secours | 0 | 1964 | 0.0 | 0.0 | 0.0 | 7643 | 0 | 0 |
| Bronx-Lebanon | 4 | 21361 | 0.2 | 0.7 | 0.4 | 134887 | 9 | 5 |
| Brookdale Hospital | 2 | 8125 | 0.2 | 1.5 | 0.3 | 93505 | 14 | 3 |
| Brooklyn Hosp Ctr | 7 | 13154 | 0.5 | 1.6 | 0.4 | 69235 | 11 | 3 |
| Brooks Memorial | 0 | 1574 | 0.0 | 0.0 | 0.0 | 5673 | 0 | 0 |
| Buffalo General | 6 | 22289 | 0.3 | 0.5 | 0.1 | 148839 | 8 | 1 |
| Calvary Hospital | 0 | 2409 | 0.0 | 1.1 | 0.1 | 75256 | 8 | 1 |
| Canton-Potsdam | 0 | 718 | 0.0 | 0.0 | 0.0 | 1654 | 0 | 0 |
| Cayuga Medical Ctr | 1 | 6043 | 0.2 | 0.0 | 0.0 | 27353 | 0 | 0 |
| Champlain Valley | 0 | 7423 | 0.0 | 0.2 | 0.0 | 46880 | 1 | 0 |
| Claxton-Hepburn | 0 | 2463 | 0.0 | 0.0 | 0.0 | 9708 | 0 | 0 |
| Clifton Springs | 0 | 3459 | 0.0 | 0.0 | 0.0 | 18913 | 0 | 0 |
| Cohens Childrens | 1 | 19830 | 0.1 | 0.1 | 0.0 | 76773 | 1 | 0 |
| Columbia Memorial | 0 | 3210 | 0.0 | 0.0 | 0.0 | 24924 | 0 | 0 |
| Corning Hospital | 0 | 5784 | 0.0 | 0.0 | 0.0 | 20540 | 0 | 0 |
| Cortland Reg Med | 0 | 4564 | 0.0 | 0.0 | 0.0 | 18703 | 0 | 0 |




Data reported as of June 16, 2024. Facility-wide inpatient only, rehab and behavioral health units excluded.

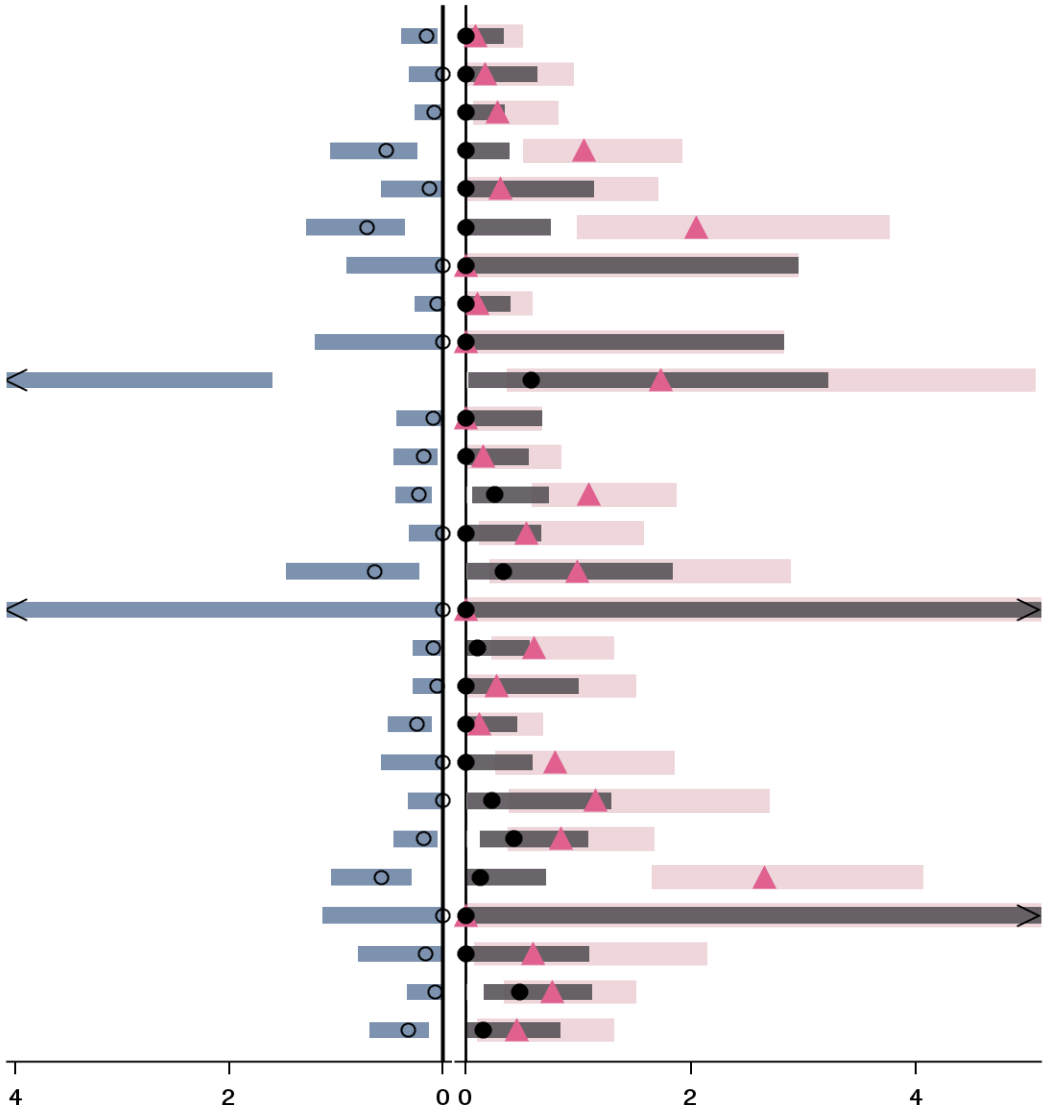
HO-All: hospital onset CRE incidence rate all sites per 10,000 patient days and 95% confidence interval (state average = 0.82)

HO-BSI: hospital onset CRE blood incidence rate per 10,000 patient days and 95% confidence interval (state average = 0.20)

All-Admprev: all body site CRE admissions prevalence rate per 1,000 admissions and 95% confidence interval (state average = 0.24)

**Figure 26. Carbapenem-resistant *Enterobacterales* rates, New York State, 2023 (Page 2 of 6)**

| Hospital Name | # All AdmPrev | # Adms | AdmPrev Rate | HO-All Rate | HO-BSI Rate | # Patdays | # All | # BSI |
|---|---|---|---|---|---|---|---|---|
| Crouse Hospital | 3 | 19998 | 0.2 | 0.1 | 0.0 | 111668 | 1 | 0 |
| Ellis Hospital | 0 | 9408 | 0.0 | 0.2 | 0.0 | 58598 | 1 | 0 |
| Elmhurst Hospital | 2 | 24133 | 0.1 | 0.3 | 0.0 | 106886 | 3 | 0 |
| Erie County Med Ctr | 6 | 11241 | 0.5 | 1.0 | 0.0 | 95672 | 10 | 0 |
| FF Thompson | 1 | 8197 | 0.1 | 0.3 | 0.0 | 32611 | 1 | 0 |
| Flushing Hospital | 8 | 11255 | 0.7 | 2.0 | 0.0 | 48890 | 10 | 0 |
| Garnet Catskills | 0 | 3327 | 0.0 | 0.0 | 0.0 | 12496 | 0 | 0 |
| Garnet Middletown | 1 | 18326 | 0.1 | 0.1 | 0.0 | 94574 | 1 | 0 |
| Geneva General | 0 | 2495 | 0.0 | 0.0 | 0.0 | 13053 | 0 | 0 |
| Glen Cove Hospital | 3 | 513 | 5.8 | 1.7 | 0.6 | 17342 | 3 | 1 |
| Glens Falls Hospital | 1 | 10965 | 0.1 | 0.0 | 0.0 | 54981 | 0 | 0 |
| Good Samar. Suffern | 3 | 16842 | 0.2 | 0.2 | 0.0 | 66101 | 1 | 0 |
| Good Samar. W Islip | 6 | 26586 | 0.2 | 1.1 | 0.3 | 118955 | 13 | 3 |
| Harlem Hospital | 0 | 9544 | 0.0 | 0.5 | 0.0 | 55694 | 3 | 0 |
| HealthAlliance-MaryC | 4 | 6246 | 0.6 | 1.0 | 0.3 | 30382 | 3 | 1 |
| Henry J. Carter | 0 | 182 | 0.0 | 0.0 | 0.0 | 4114 | 0 | 0 |
| Highland Hospital | 2 | 22626 | 0.1 | 0.6 | 0.1 | 99358 | 6 | 1 |
| Hosp for Spec Surg | 1 | 17129 | 0.1 | 0.3 | 0.0 | 36971 | 1 | 0 |
| Huntington Hospital | 5 | 20545 | 0.2 | 0.1 | 0.0 | 81484 | 1 | 0 |
| Interfaith Med Ctr | 0 | 5169 | 0.0 | 0.8 | 0.0 | 63055 | 5 | 0 |
| JT Mather Hospital | 0 | 9123 | 0.0 | 1.2 | 0.2 | 43314 | 5 | 1 |
| Jacobi Med Ctr | 3 | 16956 | 0.2 | 0.8 | 0.4 | 94429 | 8 | 4 |
| Jamaica Hospital | 8 | 13816 | 0.6 | 2.7 | 0.1 | 79076 | 21 | 1 |
| Jones Memorial | 0 | 2668 | 0.0 | 0.0 | 0.0 | 6283 | 0 | 0 |
| Kenmore Mercy | 1 | 6006 | 0.2 | 0.6 | 0.0 | 33731 | 2 | 0 |
| Kings County Hosp | 1 | 14153 | 0.1 | 0.8 | 0.5 | 104497 | 8 | 5 |
| LIJ at Forest Hills | 5 | 15411 | 0.3 | 0.4 | 0.1 | 66783 | 3 | 1 |




Data reported as of June 16, 2024. Facility-wide inpatient only, rehab and behavioral health units excluded.

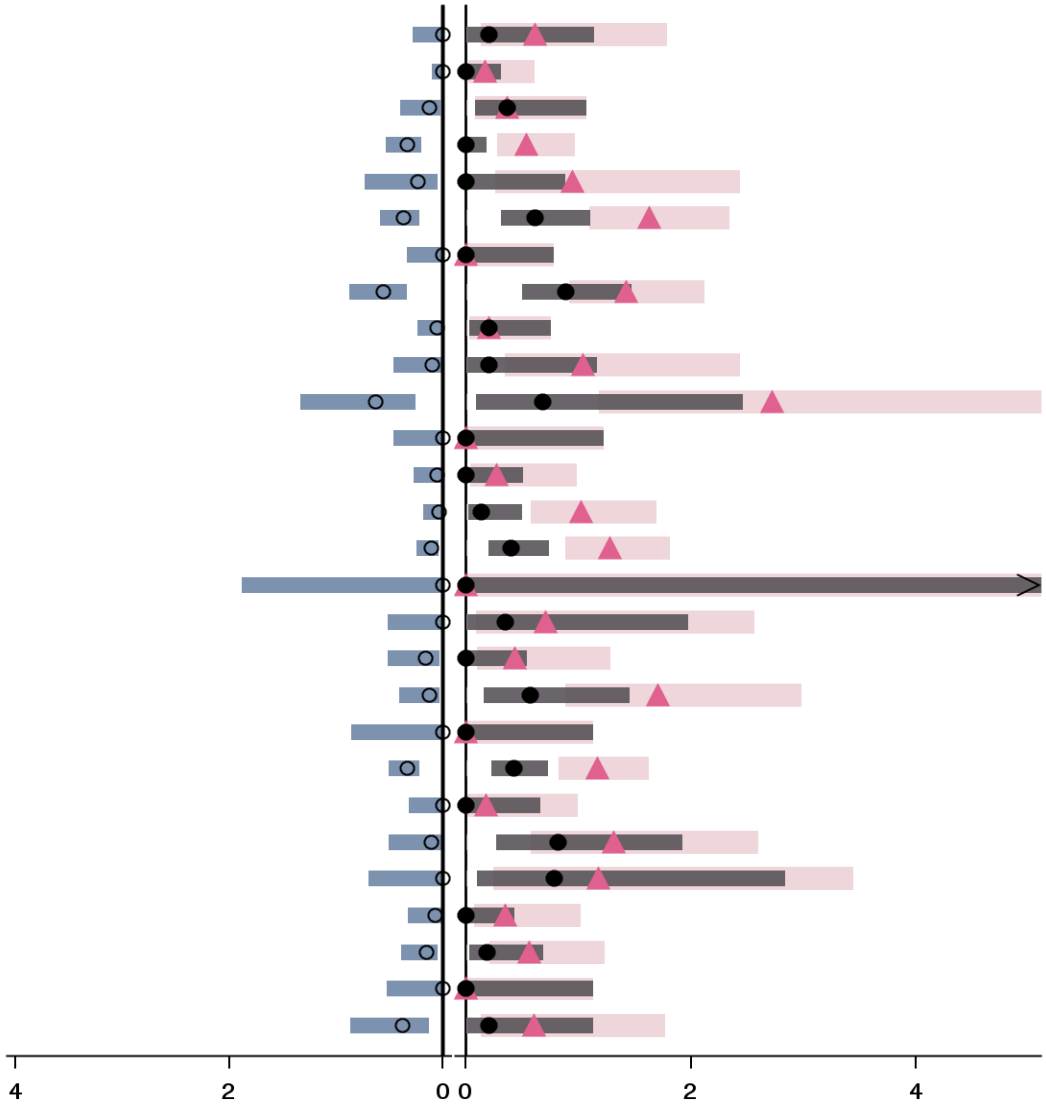
HO-All: hospital onset CRE incidence rate all sites per 10,000 patient days and 95% confidence interval (state average = 0.82)

HO-BSI: hospital onset CRE blood incidence rate per 10,000 patient days and 95% confidence interval (state average = 0.20)

All-Admprev: all body site CRE admissions prevalence rate per 1,000 admissions and 95% confidence interval (state average = 0.24)

**Figure 26. Carbapenem-resistant *Enterobacterales* rates, New York State, 2023 (Page 3 of 6)**

| Hospital Name | # All AdmPrev | # Adms | AdmPrev Rate | HO-All Rate | HO-BSI Rate | # Patdays | # All | # BSI |
|---|---|---|---|---|---|---|---|---|
| LIJ at Valley Stream | 0 | 10577 | 0.0 | 0.6 | 0.2 | 49129 | 3 | 1 |
| Lenox Hill Hospital | 0 | 31669 | 0.0 | 0.2 | 0.0 | 118638 | 2 | 0 |
| Lincoln Med Ctr | 2 | 15960 | 0.1 | 0.4 | 0.4 | 81991 | 3 | 3 |
| Long Isl Jewish(LIJ) | 13 | 39200 | 0.3 | 0.5 | 0.0 | 203568 | 11 | 0 |
| Long Isl. Community | 2 | 8613 | 0.2 | 1.0 | 0.0 | 42095 | 4 | 0 |
| Maimonides Med Ctr | 13 | 35343 | 0.4 | 1.6 | 0.6 | 178390 | 29 | 11 |
| Mary Imogene Bassett | 0 | 8934 | 0.0 | 0.0 | 0.0 | 47370 | 0 | 0 |
| Memor SloanKettering | 14 | 25198 | 0.6 | 1.4 | 0.9 | 168695 | 24 | 15 |
| Mercy Hosp Buffalo | 1 | 19934 | 0.1 | 0.2 | 0.2 | 96123 | 2 | 2 |
| Mercy Med Ctr | 1 | 10397 | 0.1 | 1.0 | 0.2 | 48016 | 5 | 1 |
| Metropolitan Hosp | 5 | 7917 | 0.6 | 2.7 | 0.7 | 29387 | 8 | 2 |
| MidHudson Reg of WMC | 0 | 6586 | 0.0 | 0.0 | 0.0 | 30196 | 0 | 0 |
| Millard Fill. Suburb | 1 | 17338 | 0.1 | 0.3 | 0.0 | 73618 | 2 | 0 |
| Montefiore-Einstein | 1 | 26413 | 0.0 | 1.0 | 0.1 | 146321 | 15 | 2 |
| Montefiore-Moses | 4 | 37065 | 0.1 | 1.3 | 0.4 | 249576 | 32 | 10 |
| Montefiore-Mt Vernon | 0 | 1588 | 0.0 | 0.0 | 0.0 | 5605 | 0 | 0 |
| Montefiore-NewRochl | 0 | 5810 | 0.0 | 0.7 | 0.4 | 28271 | 2 | 1 |
| Montefiore-Nyack | 2 | 12212 | 0.2 | 0.4 | 0.0 | 68521 | 3 | 0 |
| Montefiore-Wakefield | 2 | 15445 | 0.1 | 1.7 | 0.6 | 70459 | 12 | 4 |
| Mount St. Marys | 0 | 3516 | 0.0 | 0.0 | 0.0 | 32735 | 0 | 0 |
| Mt Sinai | 17 | 50740 | 0.3 | 1.2 | 0.4 | 307641 | 36 | 13 |
| Mt Sinai Beth Israel | 0 | 9606 | 0.0 | 0.2 | 0.0 | 56325 | 1 | 0 |
| Mt Sinai Brooklyn | 1 | 9443 | 0.1 | 1.3 | 0.8 | 60832 | 8 | 5 |
| Mt Sinai Queens | 0 | 4341 | 0.0 | 1.2 | 0.8 | 25493 | 3 | 2 |
| Mt Sinai St Lukes | 1 | 14750 | 0.1 | 0.3 | 0.0 | 86226 | 3 | 0 |
| Mt Sinai West | 3 | 19999 | 0.2 | 0.6 | 0.2 | 106390 | 6 | 2 |
| NY Community Hosp | 0 | 5710 | 0.0 | 0.0 | 0.0 | 32886 | 0 | 0 |
| NYP-Allen | 4 | 10638 | 0.4 | 0.6 | 0.2 | 49647 | 3 | 1 |




Data reported as of June 16, 2024. Facility-wide inpatient only, rehab and behavioral health units excluded.

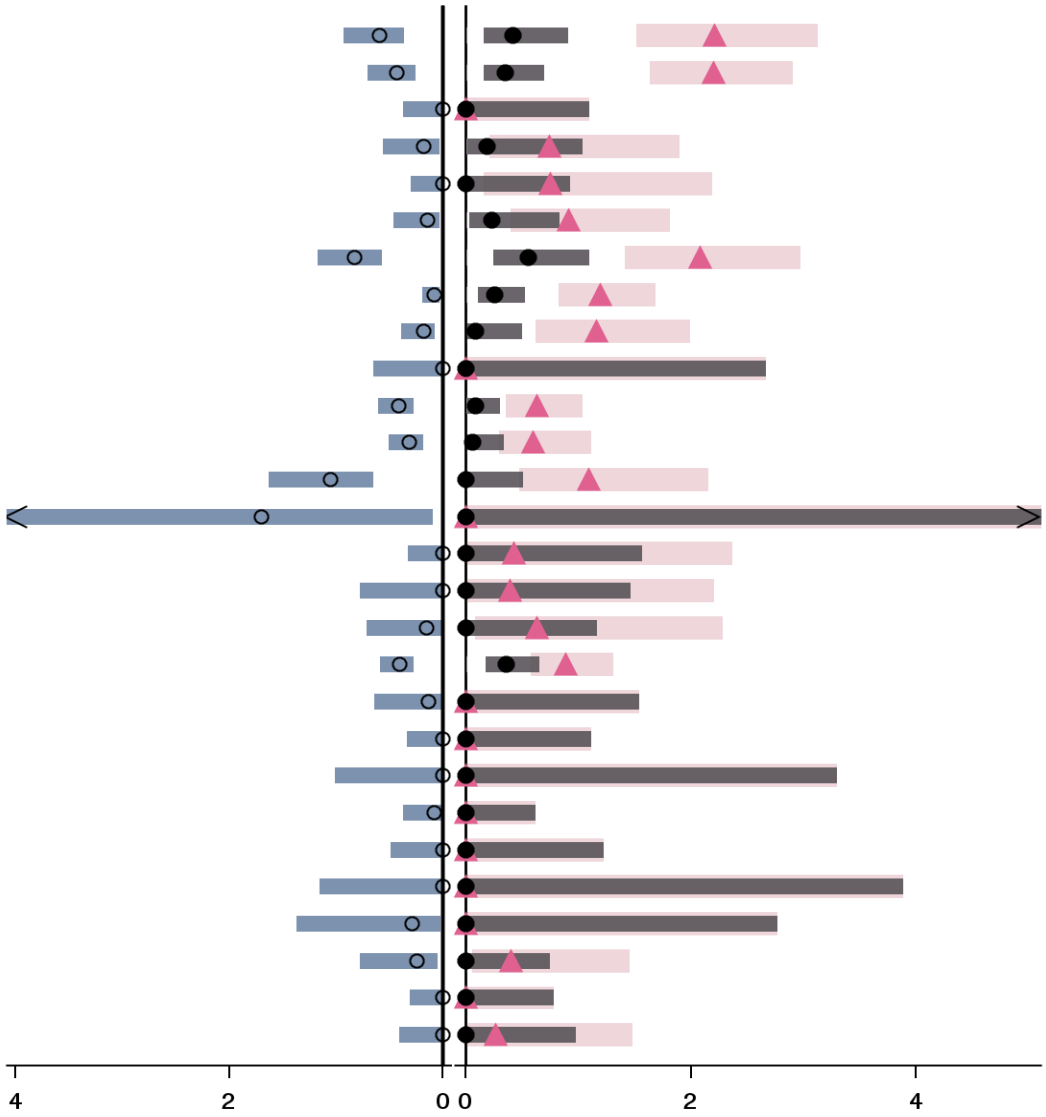
HO-All: hospital onset CRE incidence rate all sites per 10,000 patient days and 95% confidence interval (state average = 0.82)

HO-BSI: hospital onset CRE blood incidence rate per 10,000 patient days and 95% confidence interval (state average = 0.20)

All-Admprev: all body site CRE admissions prevalence rate per 1,000 admissions and 95% confidence interval (state average = 0.24)

**Figure 26. Carbapenem-resistant *Enterobacterales* rates, New York State, 2023 (Page 4 of 6)**

| Hospital Name | # All AdmPrev | # Adms | AdmPrev Rate | HO-All Rate | HO-BSI Rate | # Patdays | # All | # BSI |
|---|---|---|---|---|---|---|---|---|
| NYP-Brklyn Methodist | 14 | 23668 | 0.6 | 2.2 | 0.4 | 144638 | 32 | 6 |
| NYP-Columbia | 12 | 27735 | 0.4 | 2.2 | 0.4 | 227704 | 50 | 8 |
| NYP-Hudson Valley | 0 | 8037 | 0.0 | 0.0 | 0.0 | 33918 | 0 | 0 |
| NYP-Lawrence | 2 | 11358 | 0.2 | 0.7 | 0.2 | 54019 | 4 | 1 |
| NYP-Lower Manhattan | 0 | 10080 | 0.0 | 0.7 | 0.0 | 40163 | 3 | 0 |
| NYP-Morgan Stanley | 2 | 13807 | 0.1 | 0.9 | 0.2 | 87340 | 8 | 2 |
| NYP-Queens | 23 | 27749 | 0.8 | 2.1 | 0.6 | 144147 | 30 | 8 |
| NYP-Weill Cornell | 4 | 47654 | 0.1 | 1.2 | 0.3 | 276587 | 33 | 7 |
| NYU Langone Brooklyn | 5 | 27257 | 0.2 | 1.2 | 0.1 | 112009 | 13 | 1 |
| NYU Orthopedic Hosp | 0 | 4624 | 0.0 | 0.0 | 0.0 | 13879 | 0 | 0 |
| NYU Tisch | 19 | 46277 | 0.4 | 0.6 | 0.1 | 238940 | 15 | 2 |
| NYU Winthrop | 12 | 38617 | 0.3 | 0.6 | 0.1 | 166507 | 10 | 1 |
| Nassau University | 15 | 14210 | 1.1 | 1.1 | 0.0 | 73340 | 8 | 0 |
| Nathan Littauer | 1 | 589 | 1.7 | 0.0 | 0.0 | 2142 | 0 | 0 |
| Newark Wayne | 0 | 9315 | 0.0 | 0.4 | 0.0 | 23624 | 1 | 0 |
| Niagara Falls | 0 | 3888 | 0.0 | 0.4 | 0.0 | 25320 | 1 | 0 |
| North Central Bronx | 1 | 6686 | 0.1 | 0.6 | 0.0 | 31749 | 2 | 0 |
| North Shore | 20 | 49867 | 0.4 | 0.9 | 0.4 | 282237 | 25 | 10 |
| Northern Dutchess | 1 | 7387 | 0.1 | 0.0 | 0.0 | 23978 | 0 | 0 |
| Northern Westchester | 0 | 9038 | 0.0 | 0.0 | 0.0 | 33284 | 0 | 0 |
| Noyes Memorial | 0 | 2981 | 0.0 | 0.0 | 0.0 | 11211 | 0 | 0 |
| Oishei Childrens | 1 | 12976 | 0.1 | 0.0 | 0.0 | 59731 | 0 | 0 |
| Olean General | 0 | 6153 | 0.0 | 0.0 | 0.0 | 30271 | 0 | 0 |
| Oneida Healthcare | 0 | 2608 | 0.0 | 0.0 | 0.0 | 9507 | 0 | 0 |
| Oswego Hospital | 1 | 3475 | 0.3 | 0.0 | 0.0 | 13348 | 0 | 0 |
| Our Lady of Lourdes | 2 | 8117 | 0.2 | 0.4 | 0.0 | 49711 | 2 | 0 |
| Peconic Bay Medical | 0 | 9671 | 0.0 | 0.0 | 0.0 | 47543 | 0 | 0 |
| Phelps Memorial | 0 | 7341 | 0.0 | 0.3 | 0.0 | 37833 | 1 | 0 |




Data reported as of June 16, 2024. Facility-wide inpatient only, rehab and behavioral health units excluded.

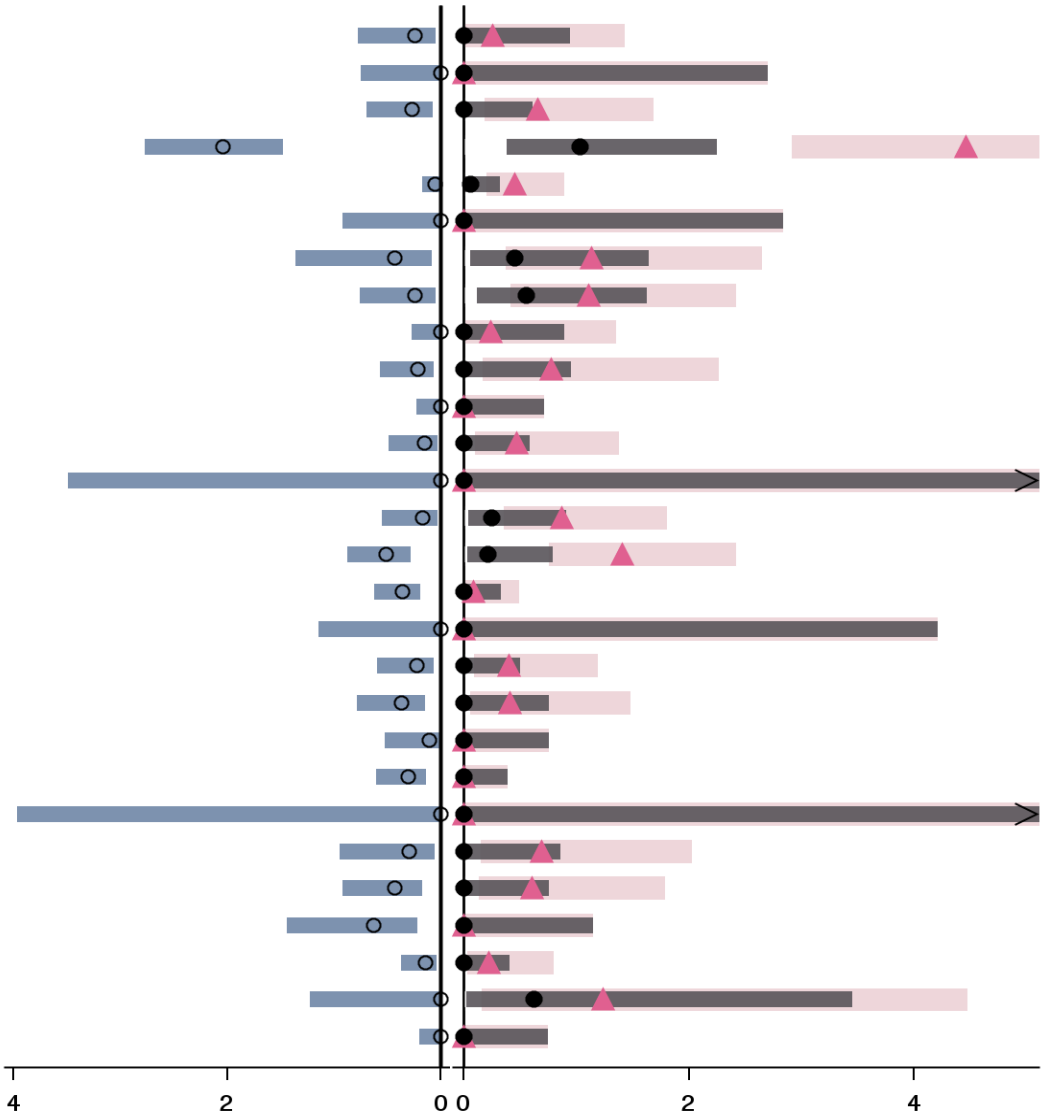
HO-All: hospital onset CRE incidence rate all sites per 10,000 patient days and 95% confidence interval (state average = 0.82)

HO-BSI: hospital onset CRE blood incidence rate per 10,000 patient days and 95% confidence interval (state average = 0.20)

All-Admprev: all body site CRE admissions prevalence rate per 1,000 admissions and 95% confidence interval (state average = 0.24)

**Figure 26. Carbapenem-resistant *Enterobacterales* rates, New York State, 2023 (Page 5 of 6)**

| Hospital Name | # All AdmPrev | # Adms | AdmPrev Rate | HO-All Rate | HO-BSI Rate | # Patdays | # All | # BSI |
|---|---|---|---|---|---|---|---|---|
| Plainview Hospital | 2 | 8168 | 0.2 | 0.3 | 0.0 | 39209 | 1 | 0 |
| Putnam Hospital | 0 | 4017 | 0.0 | 0.0 | 0.0 | 13689 | 0 | 0 |
| Queens Hospital | 3 | 11179 | 0.3 | 0.7 | 0.0 | 60951 | 4 | 0 |
| Richmond Univ MC | 30 | 14681 | 2.0 | 4.5 | 1.0 | 58347 | 26 | 6 |
| Rochester General | 2 | 37245 | 0.1 | 0.4 | 0.1 | 178365 | 8 | 1 |
| Rome Memorial | 0 | 3276 | 0.0 | 0.0 | 0.0 | 13015 | 0 | 0 |
| Roswell Park | 2 | 4626 | 0.4 | 1.1 | 0.5 | 44188 | 5 | 2 |
| SUNY Downstate MedCr | 2 | 8334 | 0.2 | 1.1 | 0.6 | 54192 | 6 | 3 |
| Samaritan- Troy | 0 | 11102 | 0.0 | 0.2 | 0.0 | 41428 | 1 | 0 |
| Samaritan- Watertown | 3 | 13661 | 0.2 | 0.8 | 0.0 | 38869 | 3 | 0 |
| Saratoga Hospital | 0 | 13072 | 0.0 | 0.0 | 0.0 | 52317 | 0 | 0 |
| Sisters of Charity | 2 | 13065 | 0.2 | 0.5 | 0.0 | 63724 | 3 | 0 |
| Sisters- St Joseph | 0 | 856 | 0.0 | 0.0 | 0.0 | 5411 | 0 | 0 |
| South Brooklyn Health | 2 | 11526 | 0.2 | 0.9 | 0.2 | 80230 | 7 | 2 |
| South Nassau Comm. | 10 | 19340 | 0.5 | 1.4 | 0.2 | 92274 | 13 | 2 |
| South Shore UHosp | 9 | 25195 | 0.4 | 0.1 | 0.0 | 113869 | 1 | 0 |
| St Anthony | 0 | 2622 | 0.0 | 0.0 | 0.0 | 8778 | 0 | 0 |
| St Barnabas | 3 | 13129 | 0.2 | 0.4 | 0.0 | 74075 | 3 | 0 |
| St Catherine Siena | 5 | 13458 | 0.4 | 0.4 | 0.0 | 49036 | 2 | 0 |
| St Charles Hospital | 1 | 9119 | 0.1 | 0.0 | 0.0 | 49019 | 0 | 0 |
| St Francis- Roslyn | 6 | 19769 | 0.3 | 0.0 | 0.0 | 97164 | 0 | 0 |
| St Johns Dobbs Ferry | 0 | 753 | 0.0 | 0.0 | 0.0 | 1724 | 0 | 0 |
| St Johns Episcopal | 2 | 6689 | 0.3 | 0.7 | 0.0 | 43473 | 3 | 0 |
| St Johns Riverside | 5 | 11504 | 0.4 | 0.6 | 0.0 | 49308 | 3 | 0 |
| St Joseph- Bethpage | 4 | 6345 | 0.6 | 0.0 | 0.0 | 32226 | 0 | 0 |
| St Josephs- Syracuse | 3 | 20825 | 0.1 | 0.2 | 0.0 | 91426 | 2 | 0 |
| St Josephs- Yonkers | 0 | 2442 | 0.0 | 1.2 | 0.6 | 16162 | 2 | 1 |
| St Lukes Cornwall | 0 | 15053 | 0.0 | 0.0 | 0.0 | 49448 | 0 | 0 |




Data reported as of June 16, 2024, Facility-wide inpatient only, rehab and behavioral health units excluded.

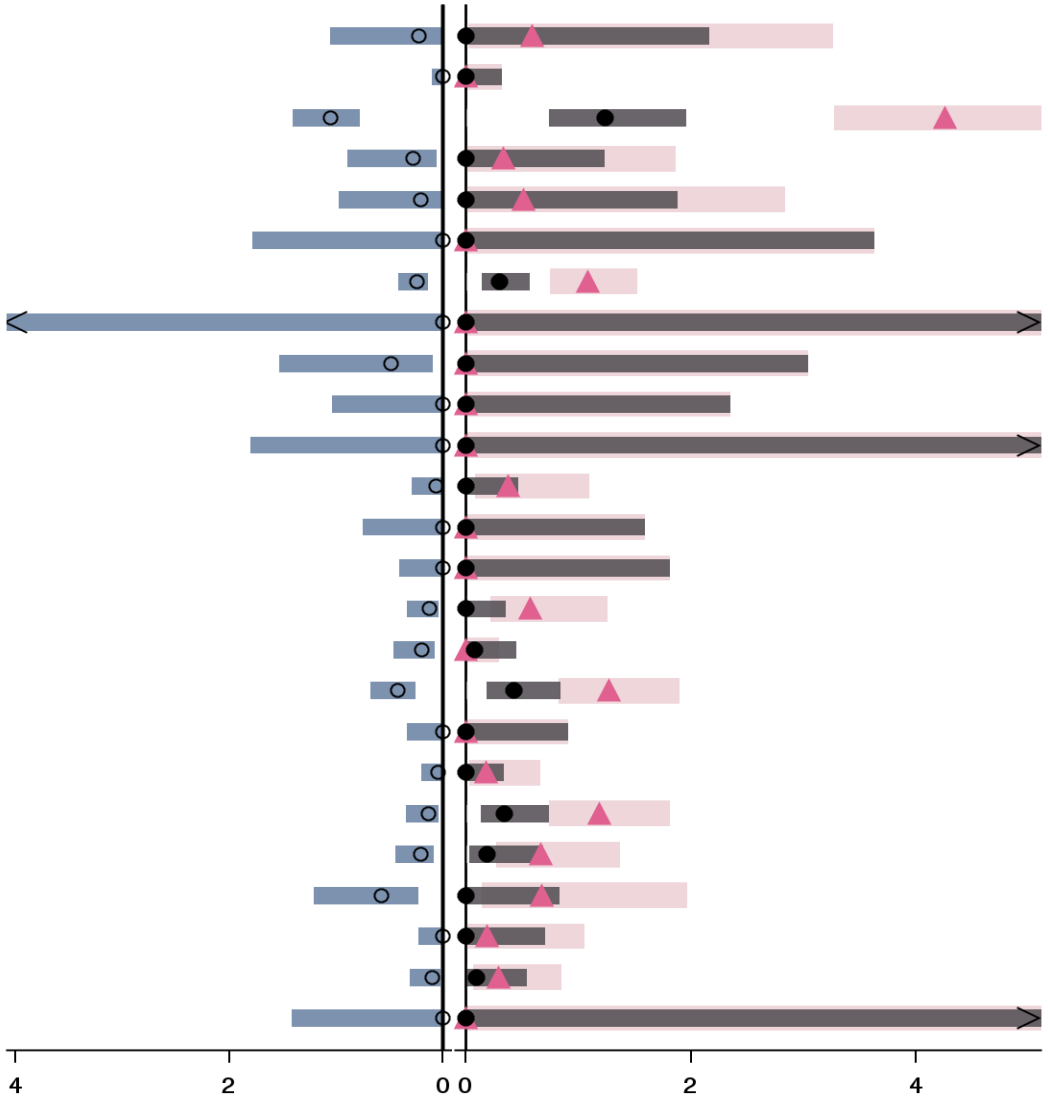
HO-All: hospital onset CRE incidence rate all sites per 10,000 patient days and 95% confidence interval (state average = 0.82)

HO-BSI: hospital onset CRE blood incidence rate per 10,000 patient days and 95% confidence interval (state average = 0.20)

All-Admprev: all body site CRE admissions prevalence rate per 1,000 admissions and 95% confidence interval (state average = 0.24)

**Figure 26. Carbapenem-resistant *Enterobacterales* rates, New York State, 2023 (Page 6 of 6)**

| Hospital Name | # All AdmPrev | # Adms | AdmPrev Rate | HO-All Rate | HO-BSI Rate | # Patdays | # All | # BSI |
|---|---|---|---|---|---|---|---|---|
| St Marys Amsterdam | 1 | 4503 | 0.2 | 0.6 | 0.0 | 17110 | 1 | 0 |
| St Peters Hospital | 0 | 29673 | 0.0 | 0.0 | 0.0 | 117714 | 0 | 0 |
| Staten Island U N | 33 | 31371 | 1.1 | 4.3 | 1.2 | 145723 | 62 | 18 |
| Staten Island U S | 2 | 7079 | 0.3 | 0.3 | 0.0 | 29954 | 1 | 0 |
| Stony Brk Southamptn | 1 | 4859 | 0.2 | 0.5 | 0.0 | 19656 | 1 | 0 |
| Stony Brook ELIH | 0 | 1682 | 0.0 | 0.0 | 0.0 | 10180 | 0 | 0 |
| Strong Memorial | 10 | 41171 | 0.2 | 1.1 | 0.3 | 304607 | 33 | 9 |
| Sunnyview Rehab Hosp | 0 | 378 | 0.0 | 0.0 | 0.0 | 3625 | 0 | 0 |
| Syosset Hospital | 2 | 4102 | 0.5 | 0.0 | 0.0 | 12163 | 0 | 0 |
| UHS Binghamton | 0 | 2902 | 0.0 | 0.0 | 0.0 | 15729 | 0 | 0 |
| UHS Chenango Memor | 0 | 1667 | 0.0 | 0.0 | 0.0 | 4950 | 0 | 0 |
| UHS Wilson | 1 | 16646 | 0.1 | 0.4 | 0.0 | 80265 | 3 | 0 |
| UPMC Chautauqua WCA | 0 | 4032 | 0.0 | 0.0 | 0.0 | 23262 | 0 | 0 |
| United Memorial | 0 | 7360 | 0.0 | 0.0 | 0.0 | 20366 | 0 | 0 |
| Unity Hosp Rochester | 3 | 23102 | 0.1 | 0.6 | 0.0 | 104465 | 6 | 0 |
| Univ Hosp SUNY Upst | 4 | 19903 | 0.2 | 0.0 | 0.1 | 125774 | 0 | 1 |
| Univ Hosp StonyBrook | 13 | 30762 | 0.4 | 1.3 | 0.4 | 188619 | 24 | 8 |
| Upst. Community Gen | 0 | 8916 | 0.0 | 0.0 | 0.0 | 40773 | 0 | 0 |
| Vassar Brothers | 1 | 23909 | 0.0 | 0.2 | 0.0 | 110189 | 2 | 0 |
| Westchester Medical | 3 | 22467 | 0.1 | 1.2 | 0.3 | 177600 | 21 | 6 |
| White Plains Hosp | 5 | 23931 | 0.2 | 0.7 | 0.2 | 105793 | 7 | 2 |
| Woodhull Med Ctr | 5 | 8747 | 0.6 | 0.7 | 0.0 | 44610 | 3 | 0 |
| Wyckoff Heights | 0 | 13330 | 0.0 | 0.2 | 0.0 | 52950 | 1 | 0 |
| Wynn Hospital MVHS | 2 | 20840 | 0.1 | 0.3 | 0.1 | 103687 | 3 | 1 |
| Wyoming County Comm. | 0 | 2117 | 0.0 | 0.0 | 0.0 | 6359 | 0 | 0 |




Data reported as of June 16, 2024. Facility-wide inpatient only, rehab and behavioral health units excluded.

HO-All: hospital onset CRE incidence rate all sites per 10,000 patient days and 95% confidence interval (state average = 0.82)

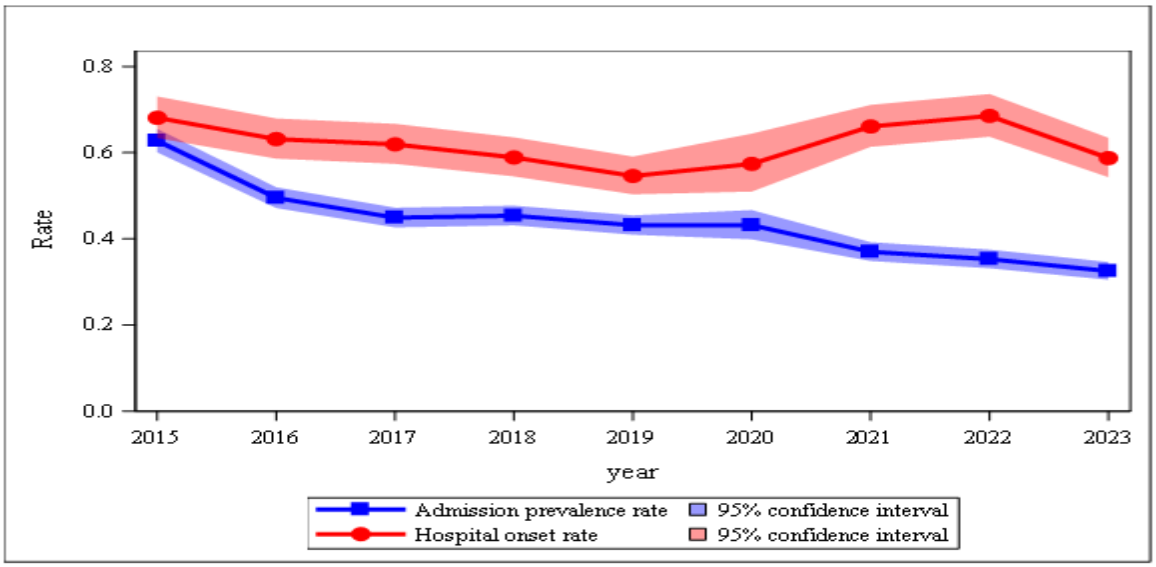
HO-BSI: hospital onset CRE blood incidence rate per 10,000 patient days and 95% confidence interval (state average = 0.20)

All-Admprev: all body site CRE admissions prevalence rate per 1,000 admissions and 95% confidence interval (state average = 0.24)

## Methicillin-resistant *Staphylococcus aureus* (MRSA) bloodstream infections

*Staphylococcus aureus* is a common bacteria found on the skin or in the nose of many healthy individuals. When *Staphylococcus aureus* is resistant to the antibiotics oxacillin, cefoxitin, or methicillin, it is called methicillin-resistant *Staphylococcus aureus* (MRSA). In 2023, all hospitals were required to report MRSA BSIs for participation in CMS incentive programs. While reporting single cases of MRSA is not required by NYS, the Department has access to these data through the DUA. Therefore, the Department does not audit the data, and hospital-specific MRSA rates cannot be published by the Department.

**Figure 27. MRSA bloodstream infections, New York State 2015-2022**




| Year | # Hosp | # Admission prevalent infections | # Admissions | Admission prevalence rate (per 1,000 admissions) | # Hospital onset infections | # Patient days | Hospital onset incidence rate (per 10,000 patient days) |
|---|---|---|---|---|---|---|---|
| 2015 | 174 | 1,459 | 2,325,035 | 0.628 | 777 | 11,410,301 | 0.681 |
| 2016 | 177 | 1,154 | 2,330,860 | 0.495 | 718 | 11,369,649 | 0.632 |
| 2017 | 175 | 1,057 | 2,358,724 | 0.449 | 695 | 11,222,935 | 0.619 |
| 2018 | 173 | 1,077 | 2,375,972 | 0.454 | 661 | 11,225,000 | 0.589 |
| 2019 | 165 | 1,012 | 2,344,834 | 0.432 | 596 | 11,055,103 | 0.539 |
| 2020* | 165 | 450 | 1,042,373 | 0.432 | 282 | 4,980,707 | 0.566 |
| 2021 | 165 | 791 | 2,139,136 | 0.369 | 706 | 10,870,012 | 0.649 |
| 2022 | 165 | 729 | 2,066,387 | 0.353 | 734 | 10,847,158 | 0.677 |
| 2023 | 165 | 684 | 2,104,437 | 0.325 | 637 | 10,940,524 | 0.582 |

Facility-wide inpatient data reported as of June 16, 2024. *Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

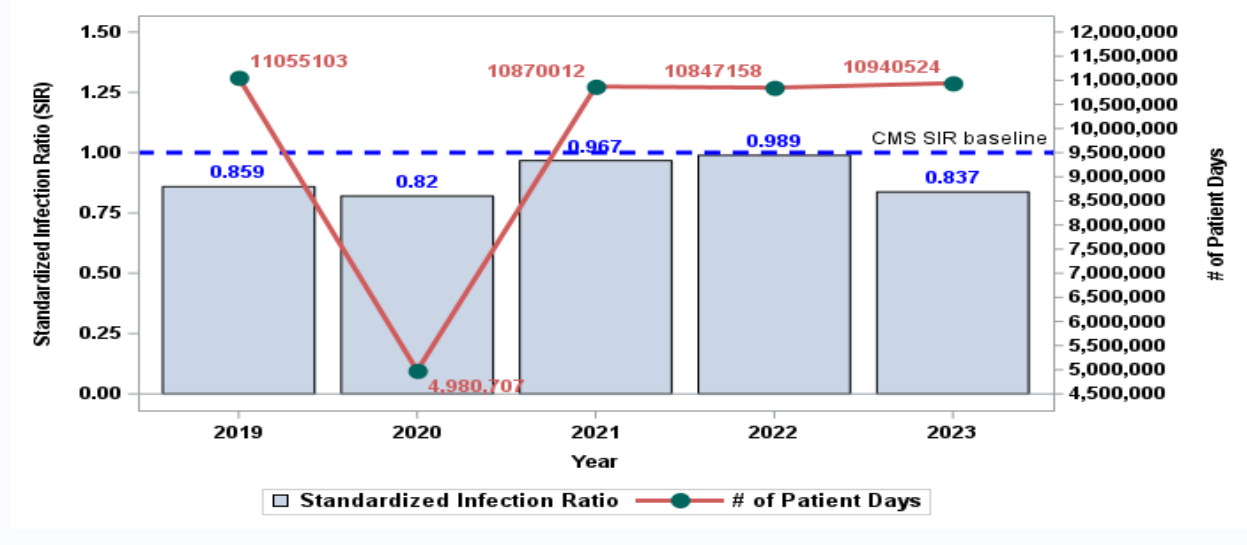
Between 2015 and 2023, the admission prevalence MRSA BSI rate decreased 48%. The admission rate decreased (8%) from 0.353 to 0.325 in 2023 compared to 2022. The hospital onset MRSA BSI rate decreased 14% between 2015 and 2023 but increased in 2022. The HO rate was significantly decreased from 0.677 to 0.582 (14%) between 2022 and 2023 (Figure 27).

MRSA BSI is one of the HAI measurements CMS uses for quality control via CMS incentive programs. NHSN calculates an HO MRSA BSI SIR among all inpatient units. SIR is a ratio calculated by comparing the actual number of MRSA BSIs to the predicted number of infections, based on 2015 national data adjusting for several risk factors.

An SIR greater than 1.0 indicates more BSIs were observed than predicted, whereas an SIR less than 1.0 indicates fewer BSIs occurred compared to the 2015 national data.

In 2023, NYS hospitals reported 637 MRSA BSIs in 10,980,754 patient days. With a predicted number of 761 infections, the overall SIR was 0.837. New York State SIRs are lower (better) than national levels based on 2015 data (SIR=1.0). In 2022 the SIR was 0.989 and significantly decreased (15%) to 0.837 in 2023 (Figure 28).

**Figure 28 Standardized infection ratio of hospital onset MRSA BSI and patient days, 2019-2023**.

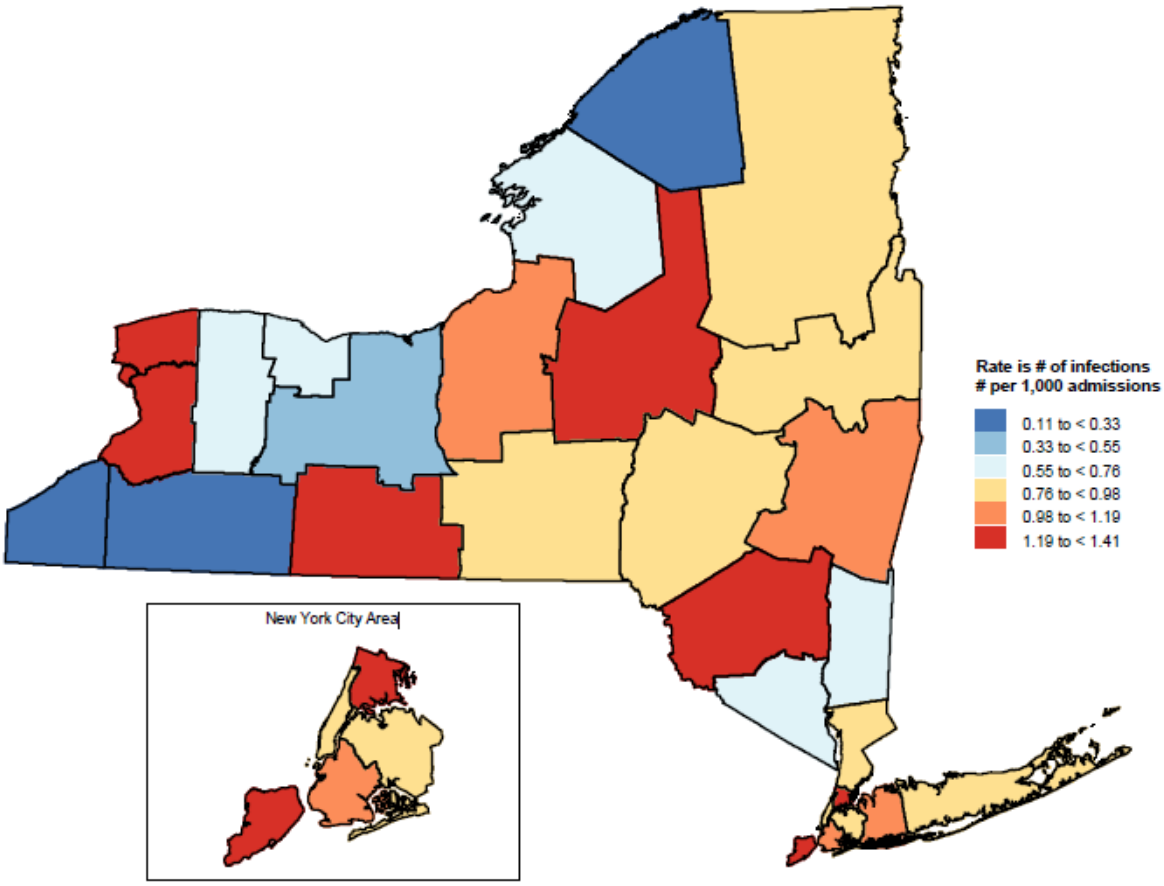



| Year | # of HO MRSA BSI | # Predicted | SIR | 95% Conf. interval |
|---|---|---|---|---|
| 2019 | 596 | 693.728 | 0.859 | 0.792 - 0.930 |
| 2020* | 282 | 343.831 | 0.82 | 0.729 - 0.920 |
| 2021 | 706 | 730.114 | 0.967 | 0.898 - 1.040 |
| 2022 | 734 | 742.210 | 0.989 | 0.919 - 1.062 |
| 2023 | 637 | 761.397 | 0.837 | 0.774 - 0.904 |

*Reporting was suspended from January through June 2020 due to the COVID-19 pandemic.

Figure 29 shows the FWI MRSA patient prevalence rate by county (or merged county for those with few or no hospitals).

**Figure 29. Facility wide inpatient MRSA BSI prevalence rates, New York State 2023**




Facility-wide inpatient data reported as of June 16, 2024. Small counties were merged.

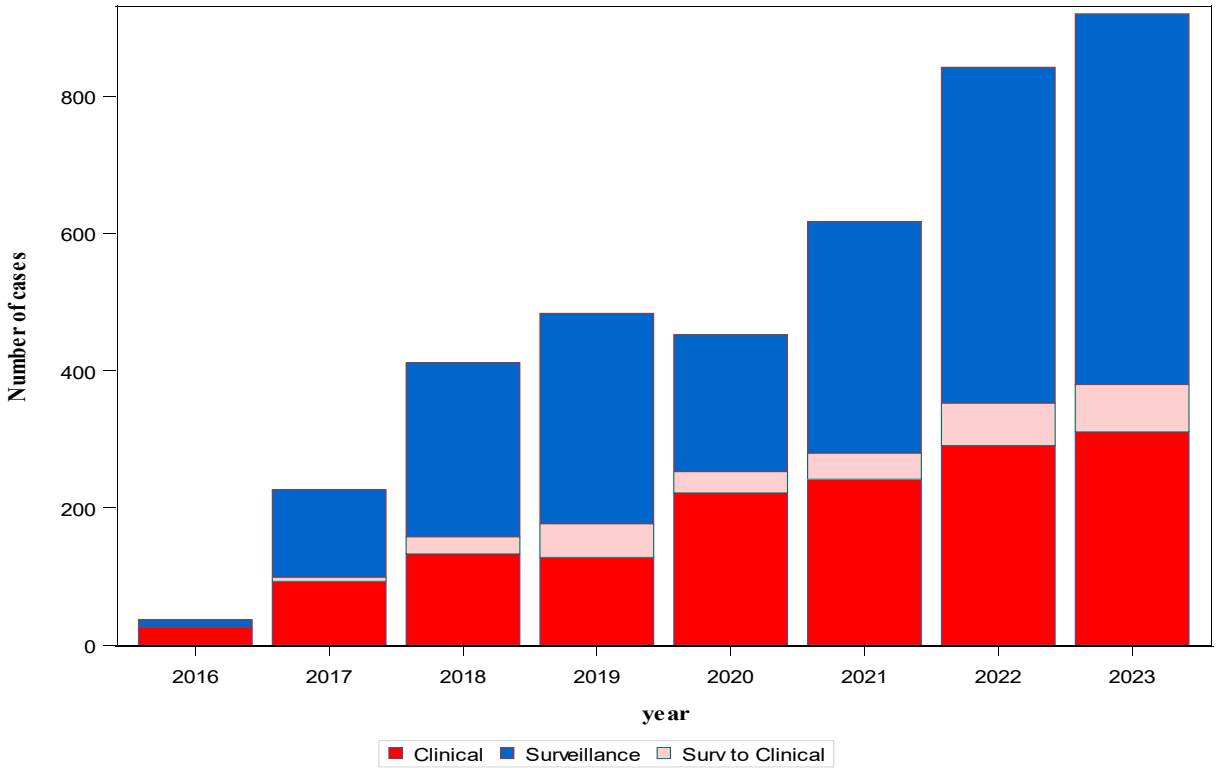
## *Candida auris* infections and colonizations

*Candida auris* (*C. auris*) is a globally emerging, multidrug-resistant yeast that has caused healthcare-associated outbreaks of invasive infections with high mortality. Epidemiologic and laboratory evidence continues to show that *C. auris* has been transmitted within healthcare facilities in New York City and the surrounding metropolitan area of NYS. The New York City (NYC)/metropolitan area is one of the areas in the United States where the most *C. auris* cases have been detected; *C. auris* may already be endemic in healthcare facilities in some of the most impacted localities. Other upstate regions have begun to see *C. auris* cases, with at least one case identified in every region of NYS.

This section summarizes the laboratory test results confirmed by Wadsworth Center, NYS's public health laboratory. Clinical cases are defined as persons with a positive *C. auris* culture from specimens collected to diagnose or treat disease in the normal course of care. Starting in 2019, this includes specimens from non-invasive sites such as wounds, urine, and the respiratory tract, where the presence of *C. auris* may simply represent colonization and not true infection. Screening/surveillance cases are defined as persons without signs or symptoms of infection but who have a positive *C. auris* test from specimens collected from point prevalence surveys, admission screening, and/or contact tracing. Some surveillance cases later developed clinical illness and so are also counted as surveillance-to-clinical cases. For example, if an asymptomatic person was identified as a surveillance case in 2021 then develops clinical illness in 2022, the person is counted both as a 2021 surveillance case and as a surveillance-to-clinical case in 2022. For consistency, if a person is identified as a surveillance case in 2022 and develops clinical illness later in 2022, the person is counted as both a surveillance case and as a surveillance-to-clinical case in 2022.

In 2023 there were 507 surveillance cases, 346 clinical cases, and 66 surveillance-to-clinical cases (Figure 30). A total of 187 patients had BSIs. The average patient age was 67 (range 20 to 101 years). Most positive tests (78%) were first identified by hospitals (Table 16); patients transfer frequently between hospitals and long-term care facilities, and diagnosis location may not represent the location where an individual acquired *C. auris*.

**Figure 30. *Candida auris* cases, New York State facilities 2016-2023**




| Year | # Clinical cases | # Surveillance to clinical | # Surveillance cases | # Total |
|---|---|---|---|---|
| 2016 | 25 | 0 | 16 | 41 |
| 2017 | 93 | 6 | 114 | 213 |
| 2018 | 130 | 24 | 215 | 369 |
| 2019 | 131 | 48 | 258 | 437 |
| 2020 | 222 | 33 | 172 | 427 |
| 2021 | 252 | 39 | 305 | 596 |
| 2022 | 323 | 54 | 437 | 814 |
| 2023 | 346 | 66 | 507 | 919 |

Samples reported as of June 16, 2024. First positive per person per specimen type (clinical/surveillance). Includes cases identified in hospitals, nursing homes, and other facility types.

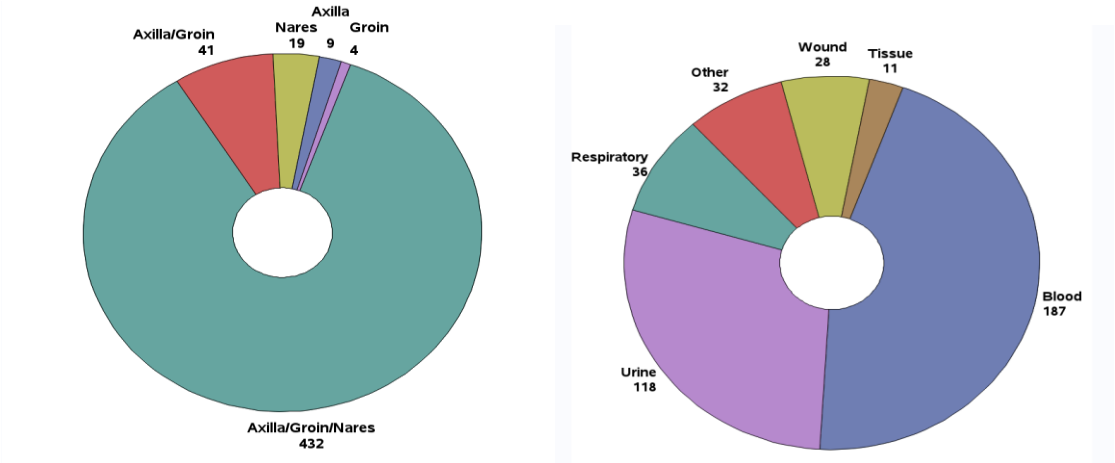
**Table 16. *Candida auris* cases (colonized or infected) by diagnosing facility type, 2016-2023**

| Year | # Facilities | # Cases | Cases by facility type | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Hospitals | | Ventilator capable NH | | Nursing homes | | Other /Unknown | |
| | | | # facilities | # Cases | # facilities | # Cases | # facilities | # Cases | # facilities | # Cases |
| 2016 | 15 | 41 | 10 | 27 | 4 | 13 | 1 | 1 | 0 | 0 |
| 2017 | 42 | 213 | 28 | 154 | 11 | 56 | 2 | 2 | 1 | 1 |
| 2018 | 59 | 369 | 32 | 281 | 18 | 79 | 9 | 9 | 0 | 0 |
| 2019 | 59 | 437 | 38 | 324 | 13 | 78 | 5 | 32 | 3 | 3 |
| 2020 | 55 | 427 | 39 | 374 | 9 | 44 | 6 | 7 | 1 | 2 |
| 2021 | 76 | 596 | 48 | 479 | 16 | 102 | 11 | 13 | 2 | 2 |
| 2022 | 93 | 814 | 65 | 616 | 21 | 189 | 4 | 5 | 3 | 4 |
| 2023 | 100 | 919 | 64 | 713 | 26 | 195 | 5 | 5 | 5 | 6 |

In 2023, 64 hospitals and 31 LTCFs were known to have cared for a person infected, colonized, or possibly colonized with *C. auris* within 90 days before diagnosis (Table 16). This count is likely underestimated because of the resource-intensive nature of patient tracking. *C. auris* is not a problem particular to any one facility but rather a challenge for all facilities in the region, regardless of whether *C. auris* has thus far been identified there. When a hospital or LTCF, (especially in NYC and the metropolitan area where most cases have been identified) cares for patients or residents whose positive colonization status is known, NYSDOH personnel work with the facility to institute the appropriate infection prevention and control measures and, in certain situations, to conduct point prevalence surveys to detect other patients and residents who might be colonized.

**Figure 31. Surveillance site (surveillance cases) and specimen sources (clinical cases), 2023**

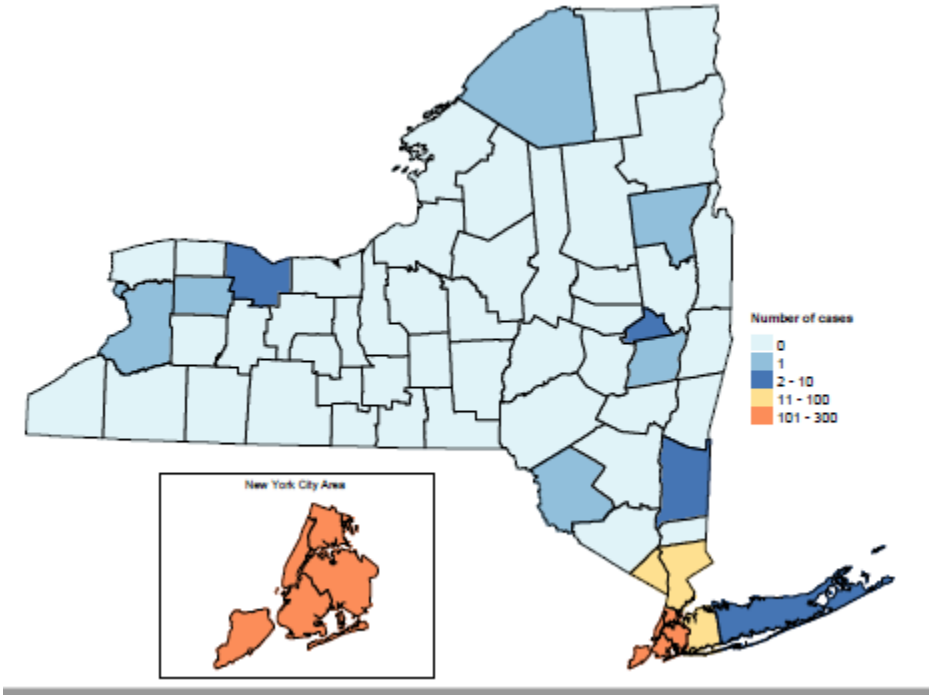
**Surveillance site** **Specimen source**



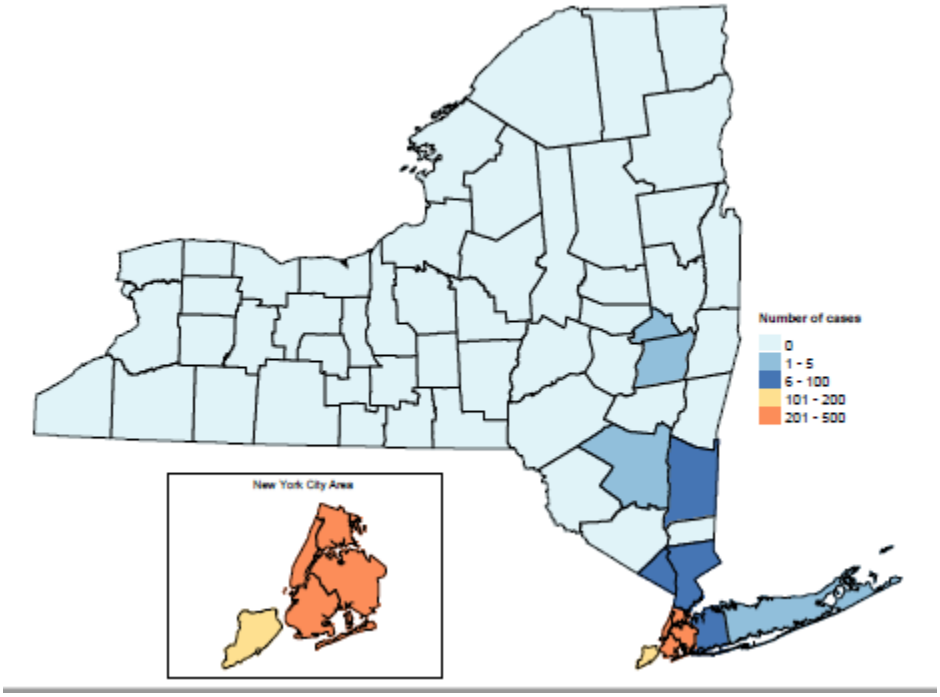

Most of the surveillance testing was performed from multiple sites (axilla/groin/nares). Among clinical cases, *C. auris* was isolated more often in blood specimens, followed by urine samples (Figure 31). Clinical and surveillance cases are mapped by county of diagnosis in Figure 32. Cases were concentrated in New York City.

**Figure 32. Cumulative number of patients colonized or infected with *Candida auris* by diagnosing facility county, New York State 2016-2023**

a) Clinical cases




b) Surveillance cases




Samples reported as of June 16, 2024. First positive per person per specimen type (clinical/surveillance). Includes cases identified in hospitals and LTCFs.

## Antimicrobial stewardship and use

### Table 17. Percentage of antimicrobial stewardship core elements and priorities met in NYS hospitals, by survey years 2022-2023

| Hospital Core Elements | % Met | | Priorities for Core Element Implementation | % Met | |
|---|---|---|---|---|---|
| | 2022 | 2023 | | 2022 | 2023 |
| **Hospital Leadership Commitment** | | | | | |
| Dedicate necessary human, financial, and information technology resources. | 99% | 100% | Antibiotic (Abx) stewardship physician and/or pharmacist leader(s) have antibiotic stewardship responsibilities in their contract, job description, or performance review. | 82% | 87% |
| **Accountability** | | | | | |
| Appoint a leader or co-leaders, such as a physician and pharmacist, responsible for program management and outcomes. | 99% | 99% | Antibiotic stewardship program is co-led by a physician and pharmacist. | 74% | 73% |
| **Pharmacy/Stewardship Expertise** | | | | | |
| Appoint a pharmacist, ideally as the co-leader of the stewardship program to help lead implementation efforts to improve antibiotic use. | 99% | 99% | Antibiotic stewardship physician and/or pharmacist leader(s) have completed infectious diseases specialty training, a certificate program, or other training on antibiotic stewardship. | 91% | 94% |
| **Action** | | | | | |
| Implement interventions, such as prospective audit and feedback or preauthorization, to improve antibiotic use. | 100% | 100% | Antibiotic stewardship program has facility-specific treatment recommendations for common clinical condition(s) and performs prospective audit/feedback or preauthorization. | 84% | 91% |
| **Tracking** | | | | | |
| Monitor antibiotic prescribing, impact of interventions, and other important outcomes, like CDIs and resistance patterns. | 99% | 100% | Hospital submits antibiotic use data to the NHSN Antimicrobial Use option[1]. | 65% | 86% |
| **Reporting** | | | | | |
| Regularly report information on antibiotic use and resistance to prescribers, pharmacists, nurses, and hospital leadership. | 99% | 100% | Antibiotic use reports are provided at least annually to target feedback to prescribers. In addition, the antibiotic stewardship program monitors adherence to facility-specific treatment recommendations for at least one common clinical condition. | 32% | 29% |
| **Education** | | | | | |
| Educate prescribers, pharmacists, nurses, and patients about adverse reactions from antibiotics, antibiotic resistance, and optimal prescribing. | 100% | 100% | No implementation priority identified. | | |
| **All 7 elements met*** | **99%** | **99%** | **All 6 priorities met**** | **16%** | **16%** |

Annual survey data downloaded from National Healthcare Safety Network on June 16, 2024. A total of 164 hospitals responded. [1]Priority element is taken from reported DUA data in NHSN data
* All seven Core Elements are met if a facility has "Yes" for all seven Core Elements. ** All six priorities for hospital core elements are met if a facility has "Yes" for all six priorities.

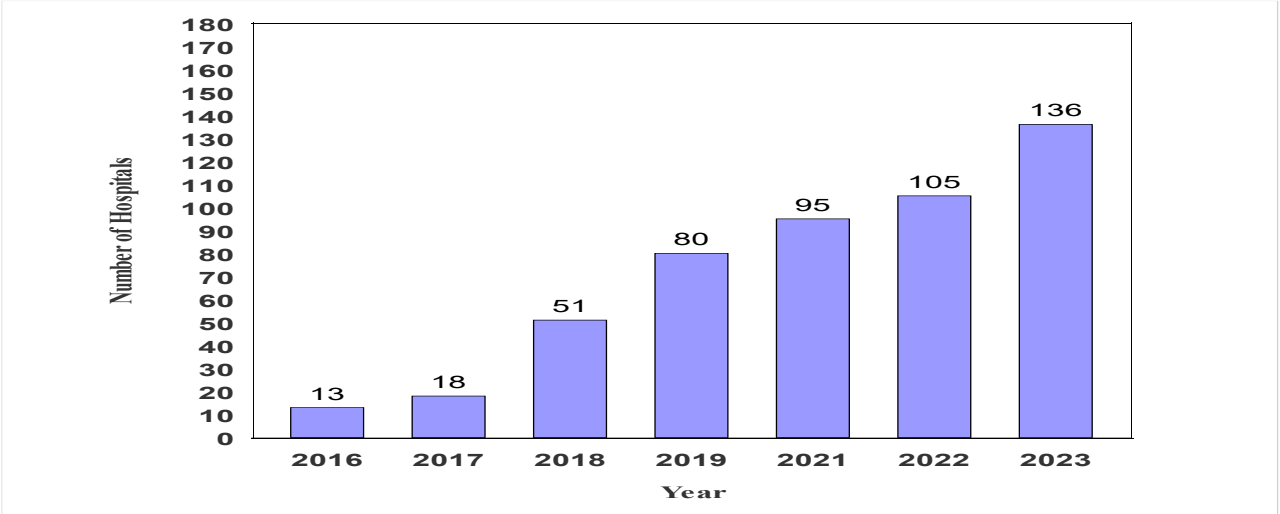
The CDC's *Core Elements of Hospital Antibiotic Stewardship Programs* outline structural and procedural components that are associated with successful antibiotic stewardship programs. It was updated in 2019 to reflect new evidence and lessons learned from implementing programs. In 2022, nearly 98% of U.S. hospitals had antibiotic stewardship programs that met all seven of the CDC's Core Elements. To continue enhancing hospital antibiotic stewardship programs, CDC released *Priorities for Hospital Core Element Implementation (Priorities)* in 2022 to help enhance the quality and impact of existing antibiotic stewardship programs.

The *Priorities* document highlights highly effective implementation approaches and is supported by evidence and stewardship experts. (Hospital Core Elements, ASPs) (Table 17). Percentages of seven (7) core elements and six (6) priorities are presented for 2022 and 2023. In 2023, only 29% of the 164 responding hospitals reported providing antibiotic use reports at least annually to providers, down from 32% in 2022.

**Measuring antimicrobial use**

Measuring the impact of antimicrobial stewardship programs (ASPs) can be accomplished several ways, including measuring antimicrobial use (AU), appropriate antimicrobial selection, patient outcomes, adverse events, or expenditures. The Department has access to hospitals' AU data through the data use agreement (DUA) with NHSN. Between 2015 and 2023, the number NYS of hospitals that submitted AU data to NHSN for at least 6 months increased from 13 to 136 (Figure 33). Acute care hospitals are now required to use the antimicrobial use and resistance (AUR) module within the NHSN to fulfill the Medicare Promoting Interoperability (PI) Program requirements beginning in calendar year 2024 (https://www.cdc.gov/nhsn/pdfs/cms/AUR_PIP_Op-Guidance_08-2023.pdf); more hospitals are expected to report their AUR data in NHSN.

**Figure 33. Number of hospitals reporting antimicrobial use data to the NHSN, New York State 2016-2023***




*2020 was not included because of incompleteness due to pandemic

In 2023, NYS hospitals reporting through the NHSN AU module reported an average antimicrobial usage rate of 575 antimicrobial use days per 1,000 days present (DOT) in adult medical, medical-surgical, and surgical ICUs and wards, step down units, and oncology units. DOT are the number of days for which any amount of a specific antimicrobial was administered to a patient in a specific location. Days present are the number of days in which a patient spent any time in a location and are always greater than the total number of patient days reported in the rest of this report.

NHSN provides a metric called the standardized antimicrobial administration ratio (SAAR) that compares the observed DOT to the predicted DOT in the referent population (voluntary reporters in United States, 2017) after adjusting for patient care location.

The 2023 NY state SAAR of 0.92 (Table 18) indicates that the NYS SAAR for all antibacterial agents used in adults was 8% lower than national SAAR based on 2017 baseline. The 2023 NYS SAARs ranged between 0.80 and 1.05, and DOT ranged between 22 and 575. SAAR alone is not a definitive measure of the appropriateness of antimicrobial use but suggests areas for further evaluation by stewardship programs.

**Table 18. Antimicrobial usage and standardized antimicrobial administration ratio (SAAR) in NYS hospitals in 2023, (all units combined)**

| | Antimicrobial days observed | Antimicrobial days predicted | Days present | Antimicrobial use per 1,000 days present | SAAR based on national data 2017 |
|---|---|---|---|---|---|
| [1] All antibacterial agents | 4,515,959 | 4,882,672 | 7,850,129 | 575 | 0.92 |
| [2] Broad spectrum antibacterial agents predominantly used for hospital-onset infections | 1,273,569 | 1,216,712 | 7,850,129 | 162 | 1.05 |
| [3] Broad spectrum antibacterial agents predominantly used for community-acquired infections | 934,260 | 1,090,584 | 7,850,129 | 119 | 0.86 |
| [4] Antibacterial agents predominantly used for resistant Gram-positive infections | 627,055 | 785,745 | 7,850,129 | 80 | 0.80 |
| [5] Narrow spectrum beta-lactam agents | 681,466 | 695,550 | 7,850,129 | 87 | 0.98 |
| [6] Antibacterial agents posing the highest risk for CDI | 1,198,223 | 1,371,589 | 7,850,129 | 157 | 0.83 |
| [7] Antifungal agents predominantly used for invasive candidiasis | 169,598 | 197,434 | 7,850,129 | 22 | 0.86 |

National Healthcare Safety Network data reported as of June 16, 2024.

[1] excluding e.g., delafloxacin, meropenem/vaborbactam, piperacillin, ticarcillin/clavulanate

[2] amikacin (intravenous (IV) only), aztreonam (IV only), cefepime, ceftazidime, doripenem, gentamicin (IV only), imipenem/cilastatin, meropenem, piperacillin/tazobactam, tobramycin (IV only)

[3] cefaclor, cefdinir, cefixime, cefotaxime, cefpodoxime, cefprozil, ceftriaxone, ciprofloxacin, cefuroxime, ertapenem, gemifloxacin, levofloxacin, moxifloxacin

[4] ceftaroline, dalbavancin, daptomycin, linezolid, oritavancin, quinupristin/dalfopristin, tedizolid, telavancin, vancomycin (IV only)

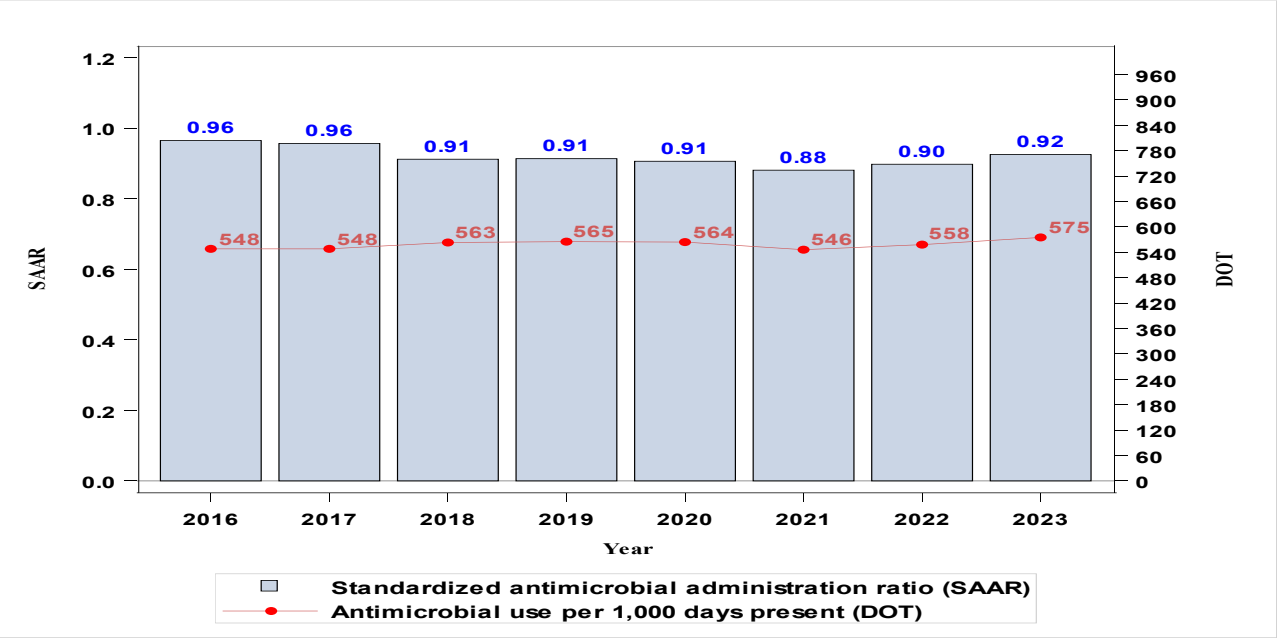
[5] amoxicillin, amoxicillin/clavulanate, ampicillin, ampicillin/sulbactam, cefadroxil, cefazolin, cefotetan, cefoxitin, cephalexin, dicloxacillin, nafcillin, oxacillin, penicillin G, penicillin V

[6] cefdinir, cefepime, cefixime, cefotaxime, cefpodoxime, ceftazidime, ceftriaxone, ciprofloxacin, clindamycin, gemifloxacin, levofloxacin, moxifloxacin

[7] anidulafungin, caspofungin, fluconazole, micafungin

Figure 34 shows SAAR and DOT for all adult antibacterial use from 2016 to 2023.

**Figure 34. Standardized antimicrobial administration ratio (SAAR) and antimicrobial use per 1,000 days present (DOT) in 2016-2023*.**



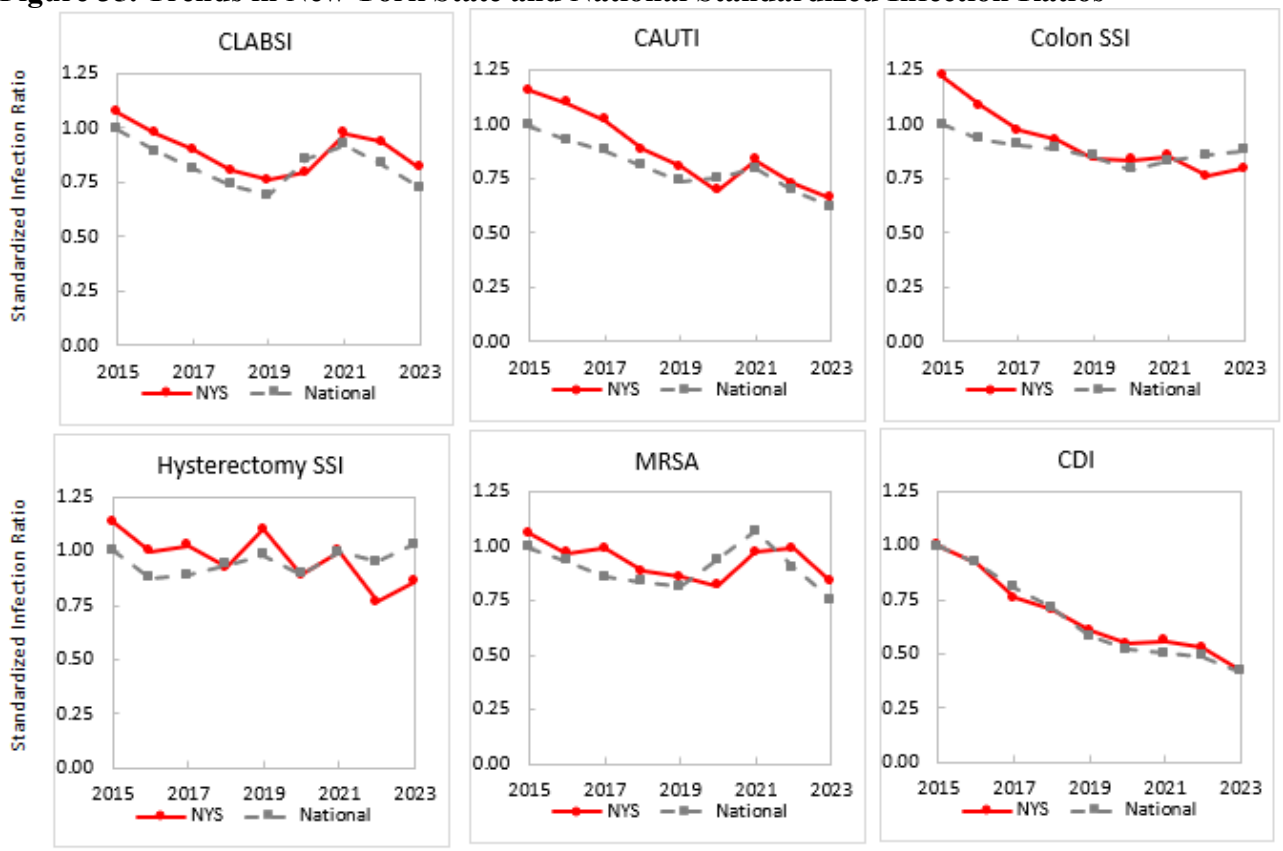

Over the years, antibiotic use (DOT) in NYS did show a slightly increasing trend (548-575), and the SAAR showed a slightly decreasing trend compared to 2016 data. However, the trend should be interpreted with caution because it is based on data voluntarily reported to NHSN and accessed by NYS through the DUA. Measurement of antibiotic use and evaluation and intervention to ensure appropriate use are important in healthcare, including hospitals, long term care, and ambulatory/outpatient care settings.[2,3,4] Guidelines and numerous training programs are available through federal and state partners, as well as professional associations. Efforts across healthcare settings to use antibiotics appropriately will contribute to public health goals to reduce antimicrobial resistance.

Patients should understand and be provided education on the consequences of inappropriate antibiotic use. Antibiotics are life-saving medications when used appropriately; misuse of antibiotics can cause harm. Consequences of using antibiotics when they are not needed can include antibiotic resistant infections that are difficult to treat, altering the bacteria in the gut thereby increasing the risk of infection with *C. difficile*, and experiencing adverse reactions to the medication (e.g., allergic reactions or diarrhea). CDC's *Be Antibiotics Aware* campaign contains patient-centered education to address patient concerns and to provide information about appropriate use of antibiotics.

## Comparison of NYS HAI rates with national HAI Rates

Approximate comparisons of concurrent state and national HAI rates are available in annual progress reports published by CDC[5]. Figure 35 summarizes data from the 2015-2023 CDC reports.

**Figure 35. Trends in New York State and National Standardized Infection Ratios**




| Type of Hospital-Acquired Infection | 2023 New York SIR^ | 2023 National SIR^ |
|---|---|---|
| Central-line associated bloodstream infections (CLABSIs)* | 0.819 | 0.724 |
| Catheter-associated urinary tract infections (CAUTI) | 0.658 | 0.621 |
| Colon surgical site infections (SSIs)* | 0.795 | 0.879 |
| Abdominal hysterectomy SSIs* | 0.856 | 1.031 |
| MRSA bacteremia | 0.837 | 0.755 |
| *Clostridioides difficile* infections (CDI)* | 0.423 | 0.420 |

Source of data: CDC. 2015 - 2023 National and State Healthcare-associated Infection Data Reports.
^ Standardized infection ratio is compared to national 2015 baseline.
* Data audited by New York State

In 2023, both state and national HAI rates improved or remained without significant change for all indicators except colon and hysterectomy SSIs. Figure 35 shows that most rates in NYS tend to track slightly higher than national rates, except for colon and abdominal hysterectomy SSI. Multiple factors may affect this trend:

1. Many states do not audit NHSN data, thereby missing infections that could be found on audit.

2. NYSDOH audit protocols may be more rigorous than those of other states and CMS in terms of the number of hospitals audited, the number of records audited in each hospital, and the methods used to efficiently target the records most likely to have errors.
3. Data validation processes in general often identify additional infections that were missed by hospital IPs. These missed infections are then reported through NHSN, resulting in higher reported rates.
4. Training conducted during audits may increase the skills of the hospital IPs, leading to better identification of HAIs, and therefore higher reported case rates.
5. The presence of a validation process in a state might encourage increased care and thoroughness in reporting, which could result in higher reported case rates.
6. NYS might truly have higher rates in some indicators compared to national rates.

## Summary

Table 19 summarizes the total number of each type of HAI for NYS in 2023. The table is sorted from most common to least common.

**Table 19. Inpatient infections reported by New York State hospitals in 2023**

| Type of infection | Number | Rate |
|---|---|---|
| Hospital onset *Clostridioides difficile* infections (CDIs) | 2,627 | 2.54/10,000 patient days |
| Surgical site infections (SSIs) following: | | |
| Colon surgery[B] | 729 | 3.81/100 procedures |
| Spinal fusion surgery[N] | 390 | 1.44/100 procedures |
| Coronary artery bypass graft (CABG) - chest site[N] | 117 | 1.21/100 procedures |
| Abdominal hysterectomy surgery[B] | 133 | 1.03/100 procedures |
| Hip replacement or revision surgery[N] | 268 | 0.89/100 procedures |
| CABG - donor site[N] | 16 | 0.18/100 procedures |
| Central line-associated bloodstream infections (CLABSIs) in intensive care units and medical and surgical wards[B] and step down, oncology, and mixed acuity and telemetry units[N] | 1,362 | 0.88/1,000 line days |
| Catheter-associated urinary tract infections[C] (CAUTIs) in intensive care units and medical/surgical wards | 934 | 0.78/1,000 urinary catheter days |
| Hospital onset methicillin-resistant *Staphylococcus aureus* (MRSA) bloodstream infections[C] | 747 | 0.58/10,000 patient days |
| Hospital onset carbapenem-resistant Enterobacterales (CRE) bloodstream infections[N] | 220 | 0.20/10,000 patient days |

N = required by NYS, C = required by Centers for Medicare and Medicaid Services (CMS; these data are accessible through a data use agreement but cannot be used for public reporting or regulatory action), B = required by both NYS and CMS. CDI, CRE, and MRSA events are from facility-wide inpatient location only. Data reported June 16, 2024. Data from inpatient rehabilitation and psychiatric facilities were excluded. SSI data exclude infections present at time of surgery or detected in outpatient settings without readmission. CLABSI data exclude mucosal barrier injury, ventricular assist device, and extracorporeal membrane oxygenation-associated BSI.

Table 20 summarizes the rates of improvement, number of prevented infections, and direct cost savings associated with the NYS indicators, sorted by cost savings. The greatest improvement is seen in CDIs, with a 51% decreased incidence. Cost savings are estimated with a range because HAIs vary in severity and studies upon which estimates are based differ somewhat in their cost estimates. Between 2015 and 2023, 29,315 infections were prevented because of reductions in HAI rates; this represents a cost savings of $345 to $632 million.

Table 20 also compares NYS progress to national and state prevention goals. NYS met the 2020 CDI and colon and CABG SSI goals but did not meet goals for the other indicators.

**Table 20. Cost savings associated with change in HAI rates between 2015 and 2023**

| Type of infection | National/State 2015-2019 prevention goal | 2023 Improvement since 2015 (compared to 2020 goal) | # Prevented infections | Direct cost savings (in millions) | |
|---|---|---|---|---|---|
| | | | | Min | Max |
| Hospital onset *Clostridioides difficile* infections (CDI) | 30% | improved 65% (goal met) | 24,513 | $260.0 | $370.2 |
| Colon surgery SSIs | 30% | improved 32% (goal met) | 2,192 | $43.1 | $125.8 |
| Coronary artery bypass graft chest SSIs | 30% | improved 34% (goal met) | 190 | $6.9 | $20.2 |
| Central line-associated bloodstream infections (CLABSIs) | 50% | improved 21% (goal not met) | 1,989 | $24.0 | $96.00 |
| Hospital onset carbapenem-resistant *Enterobacterales* (CRE) bloodstream infections | 25% | improved 1% (goal not met) | 222 | $7.2 | $8.7 |
| Abdominal hysterectomy surgery SSIs | 30% | improved 16% (goal not met) | 81 | $1.6 | $4.71 |
| Hip replacement or revision surgery SSIs | 30% | improved 7% (goal not met) | 128 | $2.5 | $7.3 |
| Total | | | 29,315 | $345 | $632 |

Cost ranges for CDI, SSI, and CLABSI are from Scott RD. The direct medical costs of healthcare-associated infections in U.S. hospitals and the benefits of prevention. CDC, Division of Healthcare Quality Promotion, Atlanta GA, March 2009. Report CS200891-A.
Cost ranges for CRE are from Bartsch SM et. al. Potential economic burden of carbapenem-resistant Enterobacterales (CRE) in the United States. Clin Microbiol Infect. 2017; 48:e9-48.e16.
All costs converted to 2016 dollars based on the Consumer Price Index for Hospital Inpatient Services.

Compared to 2022 data, some HAI rates showed improvements in 2023. In 2023, all SSI rates except hip arthroplasty SSI rate were worse than 2022 SSI rates. However, hospital onset CDI and CRE incidence rates and overall CLABSI rates improved significantly in 2023 compared to 2022 rates (Table 21).

**Table 21. Summary of Hospital-Acquired Infections, New York State, 2022 and 2023.**

| Type of hospital-acquired infection | 2022 Rate | 2023 Rate | Change |
|---|---|---|---|
| Central-line associated bloodstream infections (CLABSIs)* | 0.97 | 0.88 | 9% improvement |
| Surgical site infections (SSIs) | | | |
| Colon surgery | 3.63 | 3.81 | 5% worse |
| Coronary artery bypass graft (chest) | 1.04 | 1.21 | 14% worse |
| Hip replacement/revision surgery | 0.96 | 0.89 | 7% improvement |
| Abdominal hysterectomy | 0.97 | 1.03 | 6% worse |
| Spinal fusion surgery | 1.34 | 1.44 | 7% worse |
| Hospital onset *Clostridioides difficile* infections (CDI) | 3.30 | 2.54 | 23% improvement |
| Hospital onset carbapenem-resistant *Enterobacterales* (CRE) | 0.92 | 0.82 | 11% improvement |

## Recommendations and Next Steps

NYSDOH continues to monitor and report HAI rates to encourage continued reduction in HAIs. Following the Department's HAI program policy on hospitals that have significantly high rates (available at http://www.health.ny.gov/statistics/facilities/hospital/hospital_acquired_infections/), the Department continues to work with hospitals that are underperforming to ensure that they implement effective improvement plans and show progress in decreasing infection rates. The Department also continues to notify hospitals of current issues in surveillance and infection prevention and control practices through email communication and webinars.

The Department continues to work with the HAI TAW to seek advice on the selection of reporting indicators, methods of risk adjustment, presentation of hospital-identified data, and overall planning for the reduction of HAIs in NYS.
The Department continues to conduct medical record audits to verify appropriate use of surveillance definitions and accurate reporting by hospitals. Valid data are important for the analysis of HAI rates within the state, as well as for the analysis of NYS rates in comparison with other states' rates.

Efforts to combat the spread of CRE and *Candida auris* (and other MDROs) in NYS healthcare facilities continue. The Department continues to conduct site visits to hospitals and LTCFs to evaluate and discuss infection surveillance and prevention and control practices, barriers to implementation, antibiotic stewardship activities, and other strategies intended to reduce facility incidence rates, and to assist as needed.

## Appendix 1: List of Abbreviations

AIDS – Acquired immune deficiency syndrome
ASA – American Society of Anesthesiologists'
ASP – Antimicrobial stewardship program
BMI – Body mass index
BSI – Bloodstream infection
CABG – Coronary artery bypass graft
CAUTI – Catheter-associated urinary tract infection
CDC – Centers for Disease Control and Prevention
CDI – *Clostridioides difficile* infection
*C. auris – Candida auris*
*C. difficile – Clostridioides difficile*
CI – Confidence interval
CLABSI – Central line-associated bloodstream infection
CLSI - Clinical Laboratory Standards Institute
CMS – Centers for Medicare and Medicaid Services
CO – Community onset
CO-NMH – Community onset-not my hospital
CO-PMH – Community onset-possibly my hospital
CRE – Carbapenem-resistant Enterobacterales
DOH – Department of Health
DOT – Days of therapy
DUA – Data use agreement
EB – Epidermolysis bullosa
ECMO – Extracorporeal membrane oxygenation
ED – Emergency department
EIA – Enzyme immunoassay
FDIA - Factitious disorder imposed on another
FWI – Facility-wide inpatient
HAI – Hospital-acquired infection
HO – Hospital-onset
ICU – Intensive care unit
IP – Infection preventionist
IPF – Inpatient psychiatric facility
IRF – Inpatient rehabilitation facility
IV – Intravenous
LabID – Laboratory identified
LTCF – Long term care facility
MBI – Mucosal barrier injury
MDR – Multidrug resistant
MDRO – Multidrug resistant organism
MRSA – Methicillin-resistant *Staphylococcus aureus*
MSbP – Munchausen syndrome by proxy
NAAT – Nucleic acid amplification test
NICU – Neonatal intensive care unit
NHSN – National Healthcare Safety Network
NYC – New York City
NYS – New York State
OBS – Observation unit

OP – Outpatient
PATOS – Present at time of surgery
PDS – Post-discharge surveillance
PPE – Personal protective equipment
RPC – Regional Perinatal Center
SAAR – Standardized antimicrobial administration ratio
SIR – Standardized infection ratio
SPARCS – Statewide Planning and Research Cooperative System
Spp. – Species (plural)
SSI – Surgical site infection
TAW – Technical Advisory Workgroup
UTI – Urinary tract infection
VAD – Ventricular assist device
VRE – Vancomycin-resistant Enterococci

## Appendix 2: Glossary of Terms

**ASA score:** This is a scale used by the anesthesiologist to classify the patient's physical condition before surgery. It uses the American Society of Anesthesiologist's (ASA) Classification of Physical Status. It is one of the factors that help determine a patient's risk of possibly developing an SSI. Here is the ASA scale:
1 - Normally healthy patient
2 - Patient with mild systemic disease
3 - Patient with severe systemic disease
4 - Patient with an incapacitating systemic disease that is a constant threat to life
5 -A patient who is not expected to survive with or without the operation.

**Admission prevalence rate:** the percent of patients that are admitted to the hospital already carrying an infection. This is calculated as the number of admission prevalent cases divided by the number of admissions.

**Birth weight categories:** the weight of an infant at the time of birth. Infants remain in their birth weight category even if they gain weight. Birth weight category is important because the lower the birth weight, the higher the risk of developing an infection.

**Body mass index (BMI):** a measure of the relationship between a person's weight and their height. The formula to calculate BMI is weight (kg)/[height (m)]$^2$.
**Catheter-associated urinary tract infection (CAUTI):** an infection of the bladder or kidneys associated with the use of a urinary catheter. Hospitalized patients may have a urinary catheter, a thin tube inserted into the bladder through the urethra, to drain urine when they cannot urinate.
**Carbapenem:** a potent antibiotic. Examples of carbapenem antibiotics include ertapenem, meropenem, doripenem, and imipenem. Carbapenems are considered antibiotics of near last resort by medical professionals.
**Carbapenem-resistant Enterobacterales (CRE):** bacteria in the Enterobacterales family that are resistant to carbapenems.
**Central line:** a long thin tube that is placed into a large vein, usually in the neck, chest, arm, groin, or umbilical cord. The tube is threaded through the vein until it reaches a large vein near the heart. A central line is used to give fluids or medication, withdraw blood, provide nutrition, and monitor the patient's condition.
**Central line-associated bloodstream infection (CLABSI):** a bloodstream infection that occurs when microorganisms travel around and through a central line or umbilical catheter and then enter the blood.
**Central line-associated bloodstream infection (CLABSI) rate:** the total number of central line-associated bloodstream infections divided by the number of central line days multiplied by 1,000. Lower rates are better.
**Central line days (device days):** the total number of days a central line is used. A daily count of patients with a central line in place is performed at the same time each day. Each patient with one or more central lines at the time the daily count is performed is counted as one central line day.

***Clostridioides difficile (C. difficile)*:** a bacterium that naturally resides in the bowels of some people without symptoms of infection, but which can cause infections in some situations**.** Overgrowth of *C. difficile* in the bowel sometimes occurs after a patient takes antibiotics, which can kill beneficial bacteria in the bowel. Sometimes people become infected with *C. difficile* from touching their mouth after coming in contact with contaminated environmental surfaces or patient care items. Symptoms range from mild to severe diarrhea; in some instances, death can occur.

**Colon surgery:** a procedure performed on the lower part of the digestive tract also known as the large intestine or colon.

**Community onset (CO):** a documented infection occurring within 3 days of hospital admission.

**Community onset - not my hospital (CO-NMH):** a documented infection occurring within 3 days of hospital admission and more than 4 weeks after discharge from the same hospital.

**Community onset – possibly my hospital (CO-PMH):** a documented infection occurring within 3 days of readmission to the same hospital when a discharge from the same hospital occurred within the last 4 weeks.

**Confidence interval (CI):** the range around a measurement that is a measure of conciseness. A 95% CI means that one can be 95% confident that the true measurement falls within the interval. If hospital A reports 1 infection out of 20 procedures (i.e. 5%, with 95% CI: 0% to 25%), and hospital B reports 10 infections out of 200 procedures (i.e. 5% with 95% CI: 2% to 9%), one can see that both hospitals have the same rate, but one is less confident that the rate is truly 5% at hospital A because it was based on only 1 infection.

**Coronary artery bypass graft (CABG) surgery:** a surgical procedure for heart disease in which a vein or artery from another part of the body is used to create an alternate path for blood to flow to the heart, bypassing a blocked artery.

**Deep incisional SSI:** an infection that involves the deep soft tissues (e.g., fascial and muscle layers) of the incision and meets the NHSN criteria as described in the NHSN Patient Safety Manual.

**Device utilization ratio:** the number of device days divided by the number of patient days. It is calculated for central line utilization and urinary catheter utilization.

**Diabetes:** a disease in which the body does not produce or properly use insulin. Insulin is needed to control the amount of sugar normally released into the blood.

**Donor incision site for coronary artery bypass graft (CABG):** CABG surgery with a chest incision and donor site incisions (donor sites include the patient's leg or arm) from which a blood vessel is removed to create a new path for blood to flow to the heart. CABG surgical incision site infections involving the donor incision site are reported separately from CABG surgical chest incision site infections.

**Duration:** the time between skin incision and suturing or stapling the skin closed. In the NHSN protocol, if a person has another operation through the same incision within 24 hours of the end of the original procedure, only one procedure is entered into NHSN, and the total duration of the procedure is assigned as the sum of the two durations. Infection risk tends to increase with duration of surgery.

**Epidermolysis bullosa (EB):** a group of genetic disorders characterized by blister formation after minor trauma to the skin.

**Factitious disorder imposed on another (FDIA):** a condition where a patient or caregiver makes up or causes an illness, for example deliberate contamination of a sterile device such as a central line. This condition was formerly known as "Munchausen syndrome by proxy (MSbP)".

**Higher than state average:** the risk adjusted rate for each hospital is compared to the state average to determine if it is significantly higher or lower than the state average. A rate is significantly higher than the state average if the confidence interval around the risk adjusted rate falls entirely above the state average.

**Hip replacement surgery:** removing damaged cartilage and bone from the hip joint and replacing with new, artificial parts.

**Hospital-acquired infection (HAI):** an infection that occurs in a patient as a result of being in a hospital setting after having medical or surgical treatments.

**Hospital Onset (HO):** documented infection occurring after the third day of hospital admission.

**Hysterectomy:** the surgical removal of a person's uterus.

**Infection control and prevention processes:** routine measures to prevent infections that can be used in all healthcare settings. Some hospitals make the processes mandatory. Examples include:

- Complete and thorough hand hygiene.
- Use of personal protective equipment such as gloves, gowns, and/or masks when caring for patients in selected situations to prevent the spread of infections.
- Use of an infection prevention checklist when inserting central lines. The list reminds healthcare workers to perform meticulous hand hygiene; clean the patient's skin before insertion with the correct type of skin cleanser; wear the recommended sterile gown, gloves and mask; and place sterile barriers around the insertion site, etc.
- Monitoring to ensure that employees and visitors follow the proper infection prevention and control procedures.

**Infection preventionist (IP):** health professional that has special training in infection prevention and control and monitoring.

**Intensive care unit (ICU):** hospital units that provide intensive observation and treatment for patients either suffering from or at risk of developing life-threatening problems. ICUs are described by the type of patient care needed. Many hospitals care for patients with both medical and surgical conditions in a combined medical/surgical ICU, while others have separate ICUs for medical, surgical, and other specialties based on the patient care services provided by the hospital.

**Lower than state average:** the risk adjusted rate for each hospital is compared to the state average to determine if it is significantly higher or lower than the state average. A rate is significantly lower than the state average if the confidence interval around the risk adjusted rate falls entirely below the state average.

**Methicillin-resistant *Staphylococcus aureus* (MRSA):** *Staphylococcus aureus* (SA) is a common bacterium normally found on the skin or in the nose of 20 to 30 percent of healthy individuals. When SA is resistant to the antibiotics oxacillin, cefoxitin, or methicillin, it is defined as MRSA for surveillance purposes.

**Munchausen Syndrome by Proxy (MSbP):** a condition where a patient or caregiver makes up or causes an illness, for example deliberate contamination of a sterile device such as a central line. Munchausen syndrome by proxy is now called "factitious disorder imposed on another".

**National Healthcare Safety Network (NHSN):** a secure, internet-based national data reporting system that NYS hospitals must use to report HAIs. The NHSN is managed by the CDC's Division of Healthcare Quality Promotion.

**Neonatal intensive care units:** hospital units that provide care to newborns.

- **Level II/III Units**: provide care to newborns at Level II (moderate risk) and Level III (requiring increasingly complex care).
- **Level III Units:** provide highly specialized care to newborns with serious illness, including premature birth and low birth weight.
- **Regional Perinatal Centers (RPC):** Level IV units, providing all the services and expertise required by the most acutely sick or at-risk pregnant women and newborns. RPCs provide or coordinate maternal-fetal and newborn transfers of high-risk patients from their affiliate hospitals to the RPC and are responsible for support, education, consultation, and improvements in the quality of care in the affiliate hospitals within their region.

**Obesity:** a condition in which a person has too much body fat that can lower the likelihood of good health. It is commonly defined as a body mass index (BMI) of 30 $kg/m^2$ or higher.

**Organ/space SSI:** a surgical site infection that involves a part of the body, excluding the skin incision, fascia, or muscle layers, that is opened or manipulated during the operative procedure.

**Patient day:** the number of hospitalizations multiplied by the length of stay of each hospitalization. One patient hospitalized for 6 days will contribute 6 patient days to the hospital total, as will two patients each hospitalized for 3 days.

**Post discharge surveillance:** the process IPs use to identify infections after patients have been discharged from the hospital. It includes screening a variety of data sources, including re-admissions, emergency department visits and/or contacting the patient's healthcare provider.

**Raw rate:** rates that are not adjusted to account for differences in the patient populations.

- **Bloodstream infections:** raw rate is the number of infections (the numerator) divided by the number of line days (the denominator) then multiplied by 1,000 to give the number of infections per 1,000 line days.
- **Surgical site infections:** raw rate is the number of infections (the numerator) divided by the number of procedures (the denominator) then multiplied by 100 to give the number of infections per 100 operative procedures.
- **Admission Prevalent infection:** raw rate is the number of infections (the numerator) divided by the number of admissions (the denominator) then multiplied by 100 to give the number of infections per 100 admissions.
- **Hospital onset infection:** raw rate is the number of infections (the numerator) divided by the number of patient days (the denominator) then multiplied by 10,000 to give the number of infections per 10,000 patient days.

**Risk adjustment:** accounts for differences in patient populations and allows hospitals to be compared. A hospital that performs a large number of complex procedures on very sick patients would be expected to have a higher infection rate than a hospital that performs more routine procedures on healthier patients.

**Risk-adjusted rate:** based on a comparison of the actual (observed) rate and the rate that would be predicted if, statewide, the patients had the same distribution of risk factors as the hospital.

**Statewide Planning and Research Cooperative System (SPARCS):** a comprehensive data reporting system established in 1979 as a result of cooperation between the health care industry and NYS government. Initially created to collect information on discharges from hospitals, SPARCS currently collects patient level detail on patient characteristics, diagnoses and treatments, services, and charges for every hospital discharge, ambulatory surgery procedure and emergency department admission in NYS.

**Standardized infection ratio (SIR):** compares infection rates in a smaller population with infection rates in a larger standard population, after adjusting for risk factors that might affect the chance of developing an infection. In this report, the SIR is used to compare NYS to the national standard. The SIR is calculated by dividing the actual number of infections in the smaller group by the number of infections that would be statistically predicted if the standard population had the same risk distribution as the observed population.

- An SIR of 1.0 means the observed number of infections is equal to the number of predicted infections.
- An SIR above 1.0 means that the infection rate is higher than that found in the standard population. The difference above 1.0 is the percentage by which the infection rate exceeds that of the standard population. For example, a hospital SIR of 1.12 indicates that the hospital performed 12% worse than the state average.
- An SIR below 1.0 means that the infection rate is lower than that of the standard population. The difference below 1.0 is the percentage by which the infection rate is lower than that experienced by the standard population. For example, a hospital SIR of 0.85 indicates that the hospital performed 15% better than the state average.

**Superficial incisional SSI:** an infection that involves only skin and soft tissue layers of the incision and meets NHSN criteria as described in the NHSN Patient Safety Protocol.

**Surgical site infection (SSI):** an infection that occurs after the operation in the part of the body where the surgery took place (incision).

**Validation:** a method of making sure the HAI data reported to NYS are complete and accurate. Complete reporting of HAIs, total numbers of surgical procedures performed, central line days, and patient information to assign risk scores must all be validated. The accuracy of reporting is evaluated by reviewing patient records. The purpose of validation is to:

- Assess the accuracy and quality of the data submitted to NYS.
- Provide hospitals with information to help them use the data to improve and decrease HAIs.
- Provide education to the IPs and other hospital staff, to improve reporting accuracy and quality.
- Look for unreported HAIs.
- Make recommendations for improving data accuracy and/or patient care quality issues.

## Appendix 3: Methods

For more details on the HAI surveillance protocols used to collect this data, please see the NHSN website at http://www.cdc.gov/nhsn/. This section of the report focuses on NYS-specific methods and provides additional information helpful for interpreting the results.

### Data Validation

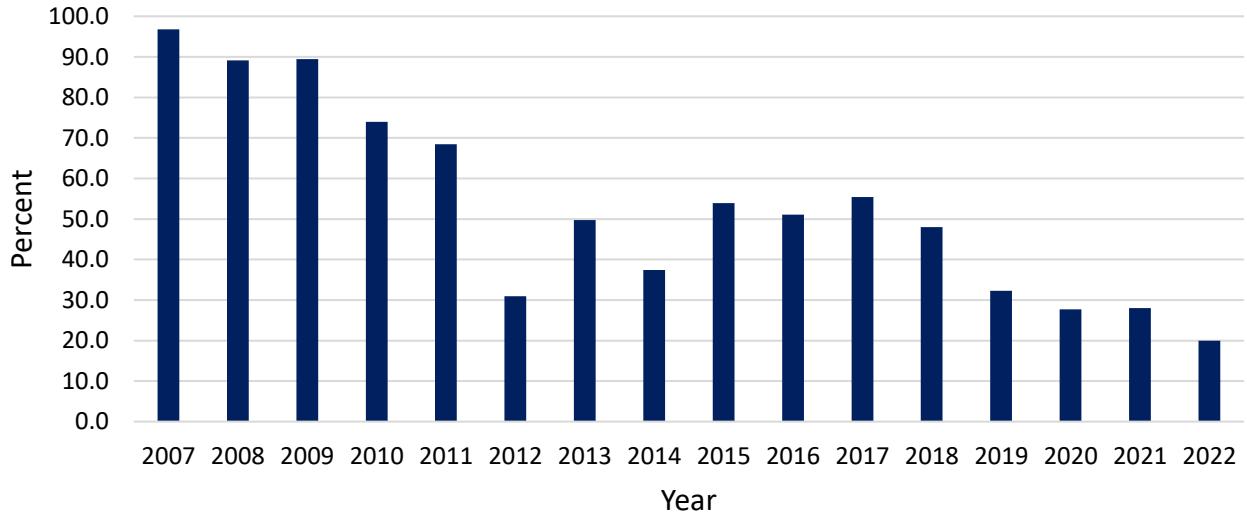
The Department validates data reported to the NHSN using several methods.

Point of entry checks - NHSN is a national, web-based data reporting and analysis program that includes validation routines for many data elements, reducing common data entry errors. Hospitals can view, edit, and analyze their data at any time.

Bi-monthly checks for internal consistency – Every other month, Department HAI staff download the data from NHSN and run it through a computerized data validation code. Data that are missing, unusual, inconsistent, or duplicate are identified and investigated through email or telephone communication with hospital staff. Hospitals are given the opportunity to verify and/or correct the data.

Audits – Audits of a sample of medical records are conducted by the Department to assess compliance with reporting requirements. The purposes of the audit are to enhance the reliability and consistency of applying the surveillance definitions; evaluate the adequacy of surveillance methods to detect infections; and evaluate intervention strategies designed to reduce or eliminate specific infections. Audits have been an important component of the Department's program since its inception in 2007 and are conducted routinely. Figure 38 summarizes the percentage of hospitals audited by year. A hospital was more likely to be audited in a given year if it had significantly high or low rates in the previous year, was not audited the previous year, performed poorly during the previous audit, or hired new hospital IP staff. Audits for 2019 and 2020 data were disrupted by the COVID-19 pandemic, and only a small percentage of hospitals were audited.

**Figure 38. Percent of hospitals audited each year, New York State**




For CLABSI audits, Department staff review the medical records of patients identified as having a positive blood culture result during a specified time period. For CDI and CRE audits, Department staff review a laboratory list of positive laboratory reports during a specified time period. For SSI

audits, Department staff review a targeted selection of medical records to efficiently identify under reporting. Specifically, the SPARCS database is used to preferentially select patients with an infection reported to the SPARCS billing database but not NHSN.

The 2022 audit results are summarized in this annual report. In 2022, Department staff reviewed 2,280 records and agreed with the hospital-reported infection status 96.1% of the time. Table 22 summarizes the number of inconsistencies in reporting infections out of the total number of qualified records, defined as fully-reviewed records which may or may not meet the NHSN surveillance definition for the relevant infection. If a record contains an event that should not have been reported because it does not meet the surveillance definition the review is stopped mid-record and that record deemed unqualified for inclusion in the summary table below. Hospitals are more likely to under report than over report infections. The overall agreement rates for this sample should not be used to infer the overall agreement for NYS data because 1) hospitals were not randomly selected for audit and 2) the sample of records within each hospital is not random.

**Table 22. Brief summary of 2022 HAI audits**

| Type of Infection | # Qualified[1] records reviewed | Hospital said HAI = Y; auditor agreed | Hospital said HAI = Y; auditor disagreed | Hospital said HAI = N; auditor agreed | Hospital said HAI = N; auditor disagreed | Overall % agreement |
|---|---|---|---|---|---|---|
| FUSN | 136 | 15 | 0 | 120 | 1 | 99.3% |
| CABG SSI | 44 | 8 | 0 | 33 | 3 | 93.2% |
| COLO SSI | 261 | 33 | 0 | 213 | 15 | 94.3% |
| HPRO SSI | 260 | 21 | 0 | 236 | 3 | 98.8% |
| HYST SSI | 217 | 11 | 0 | 204 | 2 | 99.1% |
| CLABSI | 300 | 98 | 1 | 179 | 22 | 92.3% |
| CDI | 905 | 816 | 0 | 47 | 42 | 95.4% |
| CRE | 156 | 141 | 0 | 15 | 0 | 100.0% |
| Total | 2280 | 1143 | 1 | 1047 | 89 | 96.1% |

The 2022 audit was conducted between October 2022 and June 2023 and predominantly covered 2022 data.
SSI = surgical site infection; CLABSI = central line associated bloodstream infection; CDI = *Clostridioides difficile* infection; CRE = carbapenem resistant Enterobacterales.
[1] Unqualified records are not shown; these included patients with no central lines (for CLABSI auditing) and procedures that should not have been reported (for SSI auditing).

## Thresholds for Reporting Hospital-Specific Infection Rates

This report contains data from 161 hospitals reporting complete data for 2023. Hospitals that perform very few procedures or have ICUs with very few patients with central lines have infection rates that fluctuate greatly over time. This is because even a few cases of infection will yield a numerically high rate in the rate calculation when the denominator is small. To assure a fair and representative set of data, the Department adopted minimum thresholds, as follows:

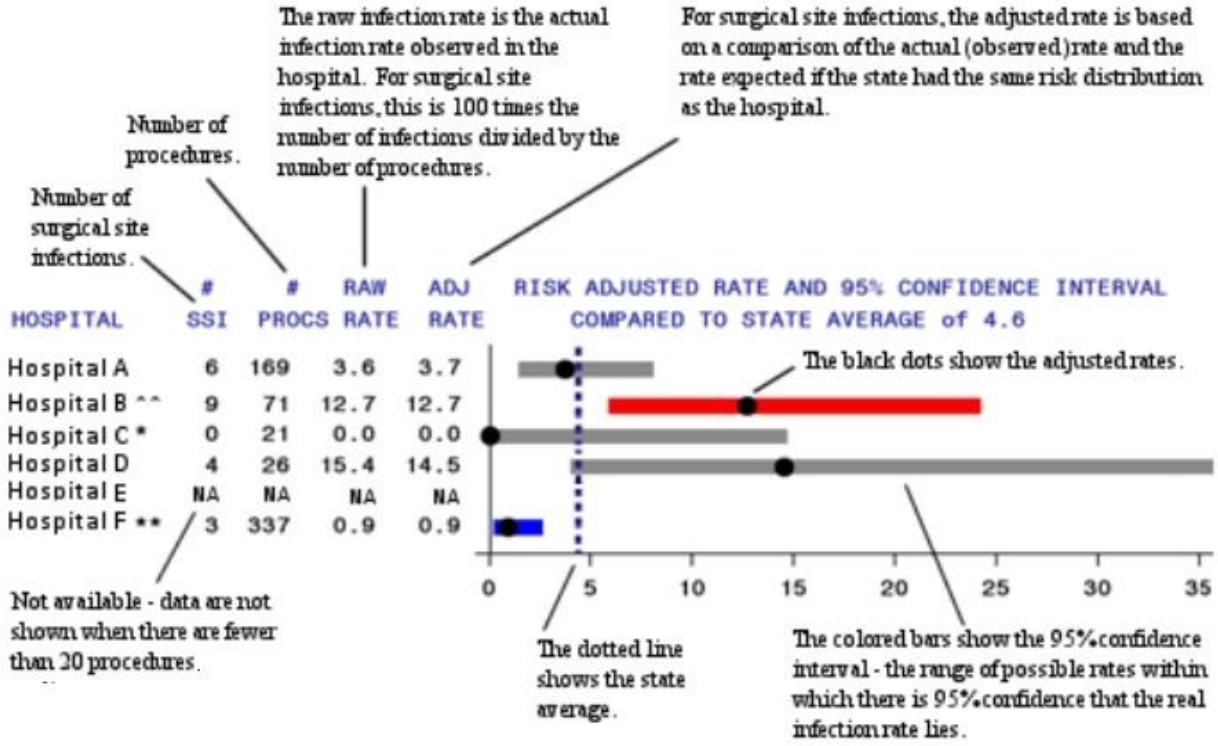
- For surgical site infections, there must be a minimum of 20 patients undergoing a surgical procedure.
- For CLABSIs, there must be a minimum of 50 central line days. Central line days are the total number of days central lines are used summed for each patient in a location over a given time.
- For CDI and CRE there must be a minimum of 50 patient days.

**Risk adjustment**

Risk adjustment is a statistical technique that allows hospitals to be more fairly compared. The adjustment considers the differences in patient populations related to severity of illness and other factors that may affect the risk of developing an HAI. A hospital that performs many complex procedures on very sick patients would be expected to have a higher infection rate than a hospital that performs more routine procedures on healthier patients. Therefore, before comparing the infection rates of hospitals, it is important to adjust for the proportion of high- and low-risk patients.

Risk adjusted rates for SSIs in each hospital are calculated using a two-step method. First, all the data for the state is pooled to develop a logistic regression model predicting the risk of infection based on patient-specific risk factors. Second, that model is used to calculate the predicted number of infections for each hospital. The observed infection rate is then divided by the hospital's predicted infection rate. If the resulting ratio is above 1.0, the hospital has a higher infection rate than expected based on its patient mix. If it is below 1.0, the hospital has a lower infection rate than expected based on its patient mix. For each hospital, the ratio is then multiplied by the overall statewide infection rate to obtain the hospital's risk-adjusted rate. This method of risk adjustment is called "indirect adjustment." Hospitals with risk-adjusted rates significantly higher or lower than the state average are identified using 95% (99% for HO *Clostridioides difficile*) confidence intervals for all indicators. All data analyses were performed using SAS version 9.4 (SAS Institute, Cary NC). Figure 36 provides an example of how to interpret the hospital-specific SSI infection rate tables.

**Figure 36. How to read hospital-specific SSI rate**




Hospital A had an adjusted infection rate very similar to the state average. The grey bar (95% confidence interval) goes over the dotted line representing the state average, indicating no statistical difference in the rates.

Hospital B has an adjusted infection rate that is significantly higher than the state average, because the red bar is entirely to the right (representing higher rates) of the dotted line.

Hospital C had zero infections, but this was not considered to be statistically lower than the state average because the grey bar goes over the dotted line. All hospitals that observed zero infections get an asterisk (*) because they deserve acknowledgement for achieving zero infections.

Hospital D had the highest infection rate, but this was not statistically higher than the state average.

Hospital E - the data are not shown because the hospital performed fewer than 20 procedures, and therefore the rates are not stable enough to be reported.

Hospital F - had an adjusted infection rate that is statistically lower than the state average, so the blue bar is entirely to the left (representing lower rates) of the dotted line.

## Comparison of NYS and CMS HAI Reporting

In addition to the indicators required by NYS law, hospitals are encouraged by the Centers for Medicaid and Medicare Services (CMS) to report HAI data. The CMS Hospital Inpatient Quality Reporting Program offers financial incentives to hospitals that report HAI data and publishes the nationwide data on the Hospital Compare website (Hospital Quality Initiative Public Reporting | CMS). The CMS website compares hospital-specific CLABSI, CAUTI, colon SSI, hysterectomy SSI, MRSA bloodstream infection, and CDI infection rates to national benchmarks. The HAI rates reported by NYS and CMS may differ.

The first important difference is the peer group to which each hospital is compared.

- In the NYS 2023 report, each hospital's 2023 data is compared to 2023 data reported by other hospitals in NYS.
- In CMS Hospital Compare, each hospital's 2023 data is compared to 2015 data reported by other hospitals in the United States.

In general, NYS hospital standardized infection ratios (SIRs) tend to be higher than CMS SIRs for two reasons.

- HAI rates decrease over time as infection prevention practices improve; the NYS benchmark is expected to decrease over time (but the average SIR is always 1.0 because comparison is in the same year), while the CMS benchmark remains the same (SIRs decrease over time).
- NYS HAI data are audited more than data from many other states. Auditing is likely to increase HAI rates because missed infections are identified and entered into the National Healthcare Surveillance Network (NHSN), and training efforts lead to better identification of HAIs.

We also note that by comparing data within the same year, the Department ensures that the same protocol is followed for identification of a hospital's data and the data to which it is compared. There have been several small changes and clarifications in the protocol between 2015 and 2023. Finally, the statistical models used to predict HAI rates in NYS and the CMS models are slightly different. These differences are described in Table 23. For HAI rates published on Hospital Compare we show the CMS model, and for HAI rates not published on Hospital Compare, we show a model available through the NHSN application that hospitals may or may not use for internal benchmarking.[6]

Each approach has advantages and disadvantages and may be implemented for different purposes. NYS assesses hospital-specific performance each year, while CMS and NHSN measure improvement over time. NYS often avoids using hospital-level risk adjustment variables (e.g., teaching hospital versus non-teaching hospital) because these are effects we are interested in measuring, while NHSN may include these variables to increase the homogeneity of the groups under comparison. NYS includes superficial infections (except those identified from post-discharge surveillance) because they have been found to be similar to deeper infections in terms of infectious etiologies and length of stay, while CMS focuses on deeper infections because they may be reported more consistently across facilities[7].

**Table 23. Comparison of New York State and Centers for Medicare and Medicaid Services (CMS) methods for 2023 HAI reports**

| Indicator | Report | Exclusions | Risk adjustment |
|---|---|---|---|
| CLABSI | NYS | *MBI, ECMO, VAD, Patient Injection, EB, FDIA (formerly MSbP); Pus at the vascular site | In adult/pediatric units, CLABSI rates are compared within each CDC location independently. In NICUs, CLABSI rates are compared by level (RPC, Level 3, Level 2/3) and birthweight group. Hospital compared to NYS 2023 average. |
| | CMS | *MBI, ECMO, VAD, Patient Injection, EB, FDIA (formerly MSbP); Pus at the vascular site | In adult/pediatric units, negative binomial regression model with location type, facility bed size, medical school affiliation, and facility type. In NICUs, only birthweight group. Hospital compared to National 2015 average. |
| Colon SSI | NYS | SSIs detected by post discharge surveillance (PDS) or present at time of surgery (PATOS) | ASA, duration, BMI, laparoscope and trauma. Hospital compared to NYS 2023 average. |
| | CMS | Complex 30-day SSI model: age<18, superficial SSIs, PATOS, outliers | Diabetes, ASA, gender, age, BMI, closure technique, oncology hospital. Hospital compared to National 2015 average. |
| Hysterectomy SSI | NYS | PDS, PATOS | Diabetes, ASA, BMI, duration, laparoscope. Hospital compared to NYS 2023 average. |
| | CMS | Complex 30-day SSI model: age<18, superficial SSIs, PATOS, outliers | Diabetes, ASA, BMI, age, cancer hospital. Hospital compared to National 2015 average. |
| Hip SSI | NYS | PDS, PATOS | ASA, BMI, procedure type. Hospital compared to NYS 2023 average. |
| | NHSN | Complex admission/readmission model: superficial SSIs, PDS, PATOS, outliers | Adults: Diabetes, trauma, anesthesia, ASA, wound class, medical school affiliation, hospital bed size, age, duration, BMI, procedure type. Children: intercept only. Hospital compared to National 2015 average. |
| CABG chest SSI | NYS | PDS, PATOS | Diabetes, BMI, gender. Hospital compared to NYS 2023 average. |
| | NHSN | Complex admission/readmission model: superficial SSIs, PDS, PATOS, outliers, children. | Diabetes, gender, ASA, trauma, wound class, medical school affiliation, hospital bed size, age duration, BMI, age-gender interaction. Hospital compared to National 2015 average. |
| CABG donor SSI | NYS | PDS, PATOS | BMI, diabetes. Hospital compared to NYS 2023 average. |
| | NHSN | No model | No model |
| *Clostridium difficile* | NYS | Outlier community onset (CO) prevalence rate | CDI test type, CO admission prevalence rate, hospital bed size, % patient days in adult ICUs. Hospital compared to NYS 2023 average. |
| | CMS | Outlier CO prevalence rate | Hospitals: CDI test type, CO admission prevalence rate, medical school affiliation, number of ICU beds, facility type, facility bed size, reporting from ED. Long term acute care hospitals: CDI test type, CO rate, % ventilator, % single occupancy. Hospital compared to National 2015 average. |

# Appendix 4

## List of hospitals by county

Table 24 lists the hospitals individually identified in this report. Additional information on the hospitals can be obtained from the Department's Hospital Profile at https://profiles.health.ny.gov/hospital/.

### Table 24. List of hospitals included in this report, by county.

| County | PFI | CMS ID | Hospital name | Hospital name in the report |
|---|---|---|---|---|
| Albany | 0001 | 330013 | Albany Medical Center Hospital | Albany Med Ctr |
| | 0005 | 330057 | St Peters Hospital | St Peters Hospital |
| Allegany | 0039 | 330096 | Memorial Hosp of Wm F & Gertrude F Jones A/K/A Jones Memorial Hosp | Jones Memorial |
| Bronx | 1178 | 330009 | BronxCare Hospital Center | Bronx-Lebanon |
| | 1175 | 332006 | Calvary Hospital Inc | Calvary Hospital |
| | 1165 | 330127 | Jacobi Medical Center | Jacobi Med Ctr |
| | 1172 | 330080 | Lincoln Medical & Mental Health Center | Lincoln Med Ctr |
| | 3058 | 330059 | Montefiore Med Center - Jack D Weiler Hosp of A Einstein College Div | Montefiore-Einstein |
| | 1169 | 330059 | Montefiore Medical Center - Henry & Lucy Moses Div | Montefiore-Moses |
| | 1168 | 330059 | Montefiore Medical Center - Wakefield Hospital | Montefiore-Wakefield |
| | 1186 | 330385 | North Central Bronx Hospital | North Central Bronx |
| | 1176 | 330399 | SBH Health System | St Barnabas |
| Broome | 0043 | 330011 | Our Lady of Lourdes Memorial Hospital | Our Lady of Lourdes |
| | 0042 | 330394 | United Health Services Hospitals Inc - Binghamton General Hospital | UHS Binghamton |
| | 0058 | 330394 | United Health Services Hospitals Inc. - Wilson Medical Center | UHS Wilson |
| Cattaraugus | 0066 | 330103 | Olean General Hospital | Olean General |
| Cayuga | 0085 | 330235 | Auburn Community Hospital | Auburn Memorial |
| Chautauqua | 0098 | 330229 | Brooks-TLC Hospital System, Inc | Brooks Memorial |
| | 0103 | 330239 | UPMC Chautauqua at WCA | UPMC Chautauqua WCA |
| Chemung | 0116 | 330090 | Arnot Ogden Medical Center | Arnot Ogden Med Ctr |
| Chenango | 0128 | 330033 | Chenango Memorial Hospital Inc | UHS Chenango Memor |
| Clinton | 0135 | 330250 | The University of Vermont Health Network-Champlain Valley Physicians Hospital | Champlain Valley |
| Columbia | 0146 | 330094 | Columbia Memorial Hospital | Columbia Memorial |
| Cortland | 0158 | 330175 | Guthrie Cortland Medical Center | Cortland Reg Med |
| Dutchess | 0180 | 330067 | Mid-Hudson Valley Division of Westchester Medical Center | MidHudson Reg of WMC |
| | 0192 | 330049 | Northern Dutchess Hospital | Northern Dutchess |
| | 0181 | 330023 | Vassar Brothers Medical Center | Vassar Brothers |

| County | PFI | CMS ID | Hospital name | Hospital name in the report |
|---|---|---|---|---|
| Erie | 0207 | 330005 | Buffalo General Medical Center | Buffalo General |
| | 0210 | 330219 | Erie County Medical Center | Erie County Med Ctr |
| | 0267 | 330102 | Kenmore Mercy Hospital | Kenmore Mercy |
| | 0213 | 330279 | Mercy Hospital of Buffalo | Mercy Hosp Buffalo |
| | 3067 | 330005 | Millard Fillmore Suburban Hospital | Millard Fill. Suburb |
| | 0208 | 330005 | John R. Oishei Children's Hospital | Oishei Childrens |
| | 0216 | 330354 | Roswell Park Cancer Institute | Roswell Park |
| | 0218 | 330078 | Sisters Of Charity Hospital | Sisters of Charity |
| | 0292 | 330078 | Sisters of Charity Hospital - St Joseph Campus | Sisters- St Joseph |
| Franklin | 0324 | 330079 | Adirondack Medical Center - Saranac Lake Site | Adirondack Medical |
| | 0325 | 330084 | The University of Vermont Health Network -Alice Hyde Medical Center | Alice Hyde Med Ctr |
| Fulton | 0330 | 330276 | Nathan Littauer Hospital | Nathan Littauer |
| Genesee | 0339 | 330073 | United Memorial Medical Center North Street Campus | United Memorial |
| Jefferson | 0367 | 330157 | Samaritan Medical Center | Samaritan- Watertown |
| Kings | 1286 | 330233 | Brookdale Hospital Medical Center | Brookdale Hospital |
| | 1288 | 330056 | Brooklyn Hospital Center - Downtown Campus | Brooklyn Hosp Ctr |
| | 1309 | 330397 | Interfaith Medical Center | Interfaith Med Ctr |
| | 1301 | 330202 | Kings County Hospital Center | Kings County Hosp |
| | 1305 | 330194 | Maimonides Medical Center | Maimonides Med Ctr |
| | 1324 | 330169 | Mount Sinai Brooklyn | Mt Sinai Brooklyn |
| | 1293 | 330019 | Maimonides Midwood Community Hospital | NY Community Hosp |
| | 1306 | 330236 | New York - Presbyterian Brooklyn Methodist Hospital | NYP-Brklyn Methodist |
| | 1304 | 330306 | NYU Langone Hospital-Brooklyn | NYU Langone Brooklyn |
| | 1320 | 330350 | University Hospital of Brooklyn | SUNY Downstate MedCr |
| | 1294 | 330196 | SOUTH BROOKLYN HEALTH | South Brooklyn Health |
| | 1692 | 330396 | Woodhull Medical & Mental Health Center | Woodhull Med Ctr |
| | 1318 | 330221 | Wyckoff Heights Medical Center | Wyckoff Heights |
| Livingston | 0393 | 330238 | Nicholas H Noyes Memorial Hospital | Noyes Memorial |
| Madison | 0397 | 330115 | Oneida Health Hospital | Oneida Healthcare |
| Monroe | 0409 | 330164 | Highland Hospital | Highland Hospital |
| | 0411 | 330125 | Rochester General Hospital | Rochester General |
| | 0413 | 330285 | Strong Memorial Hospital | Strong Memorial |
| | 0471 | 330226 | The Unity Hospital of Rochester | Unity Hosp Rochester |
| Montgomery | 0484 | 330047 | St Mary's Healthcare | St Marys Amsterdam |

| County | PFI | CMS ID | Hospital name | Hospital name in the report |
|---|---|---|---|---|
| Nassau | 0490 | 330181 | Glen Cove Hospital | Glen Cove Hospital |
| | 0518 | 330372 | Long Island Jewish Valley Stream | LIJ at Valley Stream |
| | 0513 | 330259 | Mercy Hospital | Mercy Med Ctr |
| | 0511 | 330167 | NYU Langone Hospital-Long Island | NYU Winthrop |
| | 0528 | 330027 | Nassau University Medical Center | Nassau University |
| | 0541 | 330106 | North Shore University Hospital | North Shore |
| | 0552 | 330331 | Plainview Hospital | Plainview Hospital |
| | 0527 | 330198 | Mount Sinai South Nassau | South Nassau Comm. |
| | 0563 | 330182 | St. Francis Hospital & Heart Center | St Francis- Roslyn |
| | 0551 | 330332 | St Joseph Hospital | St Joseph- Bethpage |
| | 0550 | 330106 | Syosset Hospital | Syosset Hospital |
| New York | 1438 | 330204 | Bellevue Hospital Center | Bellevue Hospital |
| | 1445 | 330240 | Harlem Hospital Center | Harlem Hospital |
| | 1486 | 332008 | Henry J. Carter Specialty Hospital | Henry J. Carter |
| | 1447 | 330270 | Hospital for Special Surgery | Hosp for Spec Surg |
| | 1450 | 330119 | Lenox Hill Hospital | Lenox Hill Hospital |
| | 1453 | 330154 | Memorial Hospital For Cancer And Allied Diseases | Memor SloanKettering |
| | 1454 | 330199 | Metropolitan Hospital Center | Metropolitan Hosp |
| | 1456 | 330024 | Mount Sinai Hospital | Mt Sinai |
| | 1439 | 330169 | Mount Sinai Beth Israel | Mt Sinai Beth Israel |
| | 1469 | 330046 | Mount Sinai Morningside | Mt Sinai St Lukes |
| | 1466 | 330046 | Mount Sinai West | Mt Sinai West |
| | 3975 | 330101 | New York Presbyterian Hospital - Allen Hospital | NYP-Allen |
| | 1464 | 330101 | New York Presbyterian Hospital Columbia Presbyterian Center | NYP-Columbia |
| | 1437 | 330064 | New York-Presbyterian Lower Manhattan Hospital | NYP-Lower Manhattan |
| | 1464 | 330101 | New York Presbyterian Hospital Columbia Presbyterian Center | NYP-Morgan Stanley |
| | 1458 | 330101 | New York Presbyterian Hospital New York Weill Cornell Center | NYP-Weill Cornell |
| | 1446 | 330214 | NYU Langone Orthopedic Hospital | NYU Orthopedic Hosp |
| | 1463 | 330214 | NYU Langone Hospitals | NYU Tisch |
| Niagara | 0583 | 330188 | Mount St. Marys Campus | Mount St. Marys |
| | 0574 | 330065 | Niagara Falls Memorial Medical Center | Niagara Falls |
| Oneida | 0589 | 330215 | Rome Memorial Hospital Inc | Rome Memorial |
| | 059 | 330044 | Wynn Hospital | Wynn Hospital MVHS |
| Onondaga | 0636 | 330203 | Crouse Hospital | Crouse Hospital |
| | 0630 | 330140 | St Josephs Hospital Health Center | St Josephs- Syracuse |
| | 0635 | 330241 | University Hospital SUNY Health Science Center | Univ Hosp SUNY Upst |
| | 0628 | 330241 | UPSTATE University Hospital at Community General | Upst. Community Gen |
| Ontario | 0676 | 330265 | Clifton Springs Hospital And Clinic | Clifton Springs |
| | 0678 | 330074 | F F Thompson Hospital | FF Thompson |
| | 0671 | 330058 | Geneva General Hospital | Geneva General |

| County | PFI | CMS ID | Hospital name | Hospital name in the report |
|---|---|---|---|---|
| Orange | 0708 | 330135 | Bon Secours Community Hospital | Bon Secours |
| | 0699 | 330126 | Garnet Health Medical Center | Garnet Middletown |
| | 0704 | 330205 | St Anthony Community Hospital | St Anthony |
| | 0694 | 330264 | St Luke's Cornwall Hospital Newburgh | St Lukes Cornwall |
| Oswego | 0727 | 330218 | Oswego Hospital | Oswego Hospital |
| Otsego | 0739 | 330085 | A.O. Fox Memorial Hospital | AO Fox Memorial |
| | 0746 | 330136 | Mary Imogene Bassett Hospital | Mary Imogene Bassett |
| Putnam | 0752 | 330273 | Putnam Hospital | Putnam Hospital |
| Queens | 3376 | 330195 | Cohens Children Hospital at LOJ | Cohens Childrens |
| | 1626 | 330128 | Elmhurst Hospital Center | Elmhurst Hospital |
| | 1628 | 330193 | Flushing Hospital Medical Center | Flushing Hospital |
| | 1629 | 330014 | Jamaica Hospital Medical Center | Jamaica Hospital |
| | 1638 | 330353 | Long Island Jewish Forest Hills | LIJ at Forest Hills |
| | 1630 | 330195 | Long Island Jewish Medical Center | Long Isl Jewish(LIJ) |
| | 1639 | 330024 | Mount Sinai Hospital - Mount Sinai Hospital of Queens | Mt Sinai Queens |
| | 1637 | 330055 | NewYork-Presbyterian-Queens | NYP-Queens |
| | 1633 | 330231 | Queens Hospital Center | Queens Hospital |
| | 1635 | 330395 | St Johns Episcopal Hospital So Shore | St Johns Episcopal |
| Rensselaer | 0756 | 330180 | Samaritan Hospital | Samaritan- Troy |
| Richmond | 1738 | 330028 | Richmond University Medical Center | Richmond Univ MC |
| | 1740 | 330160 | Staten Island University Hosp-North | Staten Island U N |
| | 1737 | 330160 | Staten Island University Hospital Prince's Bay | Staten Island U S |
| Rockland | 0779 | 330158 | Good Samaritan Hospital Of Suffern | Good Samar. Suffern |
| | 0776 | 330104 | Montefiore Nyack | Montefiore-Nyack |
| Saratoga | 0818 | 330222 | Saratoga Hospital | Saratoga Hospital |
| Schenectady | 0848 | 330153 | Ellis Hospital - Bellevue Woman's Care Center Division | Bellevue Ellis |
| | 0829 | 330153 | Ellis Hospital | Ellis Hospital |
| | 0831 | 330406 | Sunnyview Hospital And Rehabilitation Center | Sunnyview Rehab Hosp |
| St.Lawrence | 0815 | 330197 | Canton-Potsdam Hospital | Canton-Potsdam |
| | 0798 | 330211 | Claxton-Hepburn Medical Center | Claxton-Hepburn |
| Steuben | 0866 | 330277 | Corning Hospital | Corning Hospital |
| Suffolk | 0925 | 330286 | Good Samaritan Hospital Medical Center | Good Samar. W Islip |
| | 0913 | 330045 | Huntington Hospital | Huntington Hospital |
| | 0895 | 330185 | John T Mather Memorial Hospital Of Port Jefferson New York Inc | JT Mather Hospital |
| | 0885 | 330141 | Long Island Community Hospital | Long Isl. Community |
| | 0938 | 330107 | Peconic Bay Medical Center | Peconic Bay Medical |
| | 0924 | 330043 | South Shore University Hospital | South Shore UHosp |
| | 0943 | 330401 | St Catherine of Siena Hospital | St Catherine Siena |
| | 0896 | 330246 | St Charles Hospital | St Charles Hospital |
| | 0889 | 330340 | Stony Brook Southampton Hospital | Stony Brk Southamptn |
| | 0891 | 330088 | Stony Brook Eastern Long Island Hospital | Stony Brook ELIH |
| | 0245 | 330393 | Stony Brook University Hospital | Univ Hosp StonyBrook |

| County | PFI | CMS ID | Hospital name | Hospital name in the report |
|---|---|---|---|---|
| Sullivan | 0971 | 330386 | Garnet Health Medical Center - Catskills | Garnet Catskills |
| Tompkins | 0977 | 330307 | Cayuga Medical Center at Ithaca | Cayuga Medical Ctr |
| Ulster | 989 | 330004 | HealthAlliance Hospital Mary's Avenue Campus | HealthAlliance-MaryC |
| Warren | 1005 | 330191 | Glens Falls Hospital | Glens Falls Hospital |
| Wayne | 1028 | 330030 | Newark-Wayne Community Hospital | Newark Wayne |
| Westchester | 1138 | 333301 | Blythedale Childrens Hospital | Blythedale Childrens |
| | 1061 | 330086 | Montefiore Mount Vernon Hospital | Montefiore-Mt Vernon |
| | 1072 | 330184 | Montefiore New Rochelle Hospital | Montefiore-NewRochl |
| | 1039 | 330267 | NewYork-Presbyterian/Hudson Valley Hospital | NYP-Hudson Valley |
| | 1122 | 330061 | New York-Presbyterian Westchester | NYP-Lawrence |
| | 1117 | 330162 | Northern Westchester Hospital | Northern Westchester |
| | 1129 | 330261 | Phelps Hospital | Phelps Memorial |
| | 1124 | 330208 | SJRH - Dobbs Ferry Pavilion | St Johns Dobbs Ferry |
| | 1097 | 330208 | SJRH - St Johns Division | St Johns Riverside |
| | 1098 | 330006 | St Josephs Medical Center | St Josephs- Yonkers |
| | 1139 | 330234 | Westchester Medical Center | Westchester Medical |
| | 1045 | 330304 | White Plains Hospital Center | White Plains Hosp |
| Wyoming | 1153 | 330008 | Wyoming County Community Hospital | Wyoming County Comm. |

# Acknowledgements


**New York State Department of Health Staff**

Director, Bureau of Healthcare Associated Infections (BHAI) –Ernest J Clement, MSN, RN, CIC
State HAI Coordinator – Karyn Langguth McCloskey
Director, Data Analysis Unit, BHAI – Boldtsetseg Tserenpuntsag, DrPH, MPH
Metropolitan Area- Long Island, and Queens County HAI Reporting Program Representative – Marie Tsivitis, MT(ASCP), MPH, CIC, FAPIC
Central and Western Regions HAI Reporting Program Representative – Robin Knab, CLT, M(ASCP)$^{CM}$, CIC
Metropolitan Area- NYC: New York, and Kings County HAI Reporting Program Representative – Anna Yeo, MBA, CIC
Capital Region and Bronx County HAI Reporting Program Representative – Kelly Sackett, MPH, CIC
Metropolitan Area-Dutchess, Ulster, Orange, Putnam, Sullivan, Westchester and Rockland County HAI Reporting Program Representative: Jillian Karr, MPH, CIC
Data Analyst – Jeffrey Wu, MS
Data Analyst – Guillermo Aedo, MPH
Data Analyst – Nikita Kute, PhD
Program Director-Antimicrobial Resistance, Surveillance, and Response Program – Sarah Kogut, MPH, CIC
Program Director-Healthcare Epidemiology and Infection Control Program – Monica Quinn, RN, MS, CIC
Research Scientist – Coralie Bucher, MPH
Health Program Administrator – Sallie Ann Avery

**Technical Advisory Workgroup**

Physicians

John Crane, MD, Erie County Medical Center (2012-current)
Paul Graman, MD, Strong Memorial Hospital (2006-current)
Mini Kamboj, MD, Memorial Sloan-Kettering Cancer Center (2015-current)
Gopi Patel, MD, Mount Sinai Hospital (2017-current)
Lisa Saiman, MD, MPH, Columbia University Medical Center (2008-current)
Stephen Thomas, MD, State University of New York – Upstate Medical (2019 – current)
Krystina Woods, MD, Mt. Sinai West (2018-current)

Infection Preventionists

Donna Armellino, RN, DNP, CIC, Northwell Health (2006 – 2016 and 2023 – current)
Susan Bayh-Martino, RN MBA, South Oaks Hospital and Zucker Hillside Hospital (2015-current)
Terry Hammill, RN, ICP, Oswego Health (2015-current)
Charlene Ludlow, RN, MHA, CIC, Erie County Medical Center (2008-current)
Veronica Mataprasad, MT, MPH, CIC, Northwell Health-Lenox Hill Hospital (2017-current)
Carrie Mosley, RN, BSN, Leading Age New York, (2023 – current)
Rodolfo Simons, Jr., Mt. Sinai Hospital (2017-current)
Michelle Vignari, RN, CIC Director IP, FF Thompson Health (2017-current)

Consumer

Vacant

Preparedness Representatives

Kate Butler-Azzopardi, NYSDOH Office of Health Emergency Preparedness (2023-current)

Healthcare Organization Representatives

Wing Lee, Greater New York Hospital Association (2023)
Maria Sacco, RRT, CPHQ, Healthcare Association of New York State (2023-current)

New York City Department of Health and Mental Hygiene - Healthcare Acquired Infections Program Representatives

William Greendyke, MD, New York City Department of Health and Mental Hygiene (2023 – current)
Molly Kratz, MPH, New York City Department of Health and Mental Hygiene (2023- current)

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