Delaware Healthcare-Associated Infections First Quarter 2024 Report

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health
Office of Infectious Disease Epidemiology

December 2024

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Delaware Department of Health and Social Services
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Delaware Hospital Infection Reports - Delaware Health and Social Services - State of Delaware

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Contents

Acronyms

ACH	Acute Care Hospital
CAUTI	Catheter-Associated Urinary Tract Infection
CDC	Centers for Disease Control and Prevention
CI	Confidence Interval (LCL = Lower Confidence Limit, UCL = Upper Confidence Limit)
CLABSI	Central Line-Associated Bloodstream Infection
CMS	Centers for Medicare and Medicaid Services
CDI	*Clostridioides difficile (C. diff)* infection
DHSS	Delaware Department of Health and Social Services
HAI	Health care-Associated Infection
HAIAC	Health care-Associated Infections Advisory Committee
ICU	Intensive Care Unit
IP	Infection Preventionist
LTACH	Long-Term Acute Care Hospital
MRSA	Methicillin-Resistant *Staphylococcus aureus* infection
MRSA-CA	Community-acquired MRSA infection
MRSA-HA	Health care-associated MRSA infection
NHSN	National Healthcare Safety Network
SIR	Standardized Infection Ratio
SSI	Surgical Site Infection
UTI	Urinary Tract Infection

Executive Summary

Healthcare-associated infections (HAIs) are infections that patients may develop while receiving treatment for other conditions within a healthcare setting. These HAIs can worsen preexisting illnesses and prolong hospital stays. In 2021, the Centers for Disease Control and Prevention's (CDC) survey that sampled many U.S. Acute Care Hospitals found that on any given day, about one in 31 hospitalized patients has at least one HAI.[1] These infections cause tens of thousands of deaths and cost the United States healthcare system billions of dollars annually.[1] More than half of all HAIs occurred outside the intensive care unit.

In 2007, the Delaware General Assembly passed House Bill 47, establishing the Healthcare-Associated Infections Disclosure Act (16 *Del. Code* §1001A).[2] The law requires hospitals to report HAIs to the Delaware Department of Health and Social Services (DHSS) by using the CDC's National Healthcare Safety Network (NHSN).[3] CDC's NHSN is the nation's most widely used tracking system for HAIs. NHSN provides healthcare facilities and states with data collection and reporting capabilities by using standardized definitions, allowing them to identify infection prevention problem areas, show benchmark progress, and comply with public reporting mandates to drive progress towards eliminating HAIs.

Delaware Code requires DHSS to submit quarterly reports to the legislature. Quarterly reports cover HAIs reported within a three-month timeframe to the Delaware Department of Health and Social Services (DHSS), Division of Public Health (DPH). This quarterly report pulls data from January 1, 2024 to March 31, 2024. As required by law, all quarterly reports will be made available to anyone upon request. Quarterly reports can be found here: Delaware Hospital Infection Reports - Delaware Health and Social Services - State of Delaware.

The Healthcare-Associated Infections Advisory Committee (HAIAC) was appointed by the DHSS Secretary in 2007 (Appendix A). The HAIAC assisted DHSS in the development of regulations, reviewed NHSN requirements, and selected reporting requirements for Delaware.[4]

[1] U.S. Department of Health and Human Services, Health Care-Associated Infections Health Care-Associated Infections | HHS.gov

[2] Title 16, § 1001A of the Delaware Code, About NHSN https://delcode.delaware.gov/title16/c010a/index.html

[3] Centers for Disease Control and Prevention, About NHSN http://www.cdc.gov/nhsn/about.html

[4] Delaware Register of Regulations Delaware Register of Regulations, Volume 12, Issue 11, May 2009

Reporting HAIs in Delaware

All eight ACHs in Delaware report HAIs through the NHSN. Beginning in mid-2012, the HAIAC determined that Delaware would follow the reporting requirements of the Centers for Medicare and Medicaid Services (CMS), effective September 1, 2013.[5]

This report includes data on the following types of HAIs:

(1) **Device-Related Infections** that occur in adult, pediatric, and neonatal intensive care units (ICUs) and adult and pediatric medical/surgery units at ACHs in Delaware:
   (a) catheter-associated urinary tract infections (CAUTIs)
   (b) central line-associated bloodstream infections (CLABSIs).

(2) **Surgical Site Infections** (SSIs) that occur among adults in ACHs following:
   (a) colon surgery or
   (b) abdominal hysterectomy.

(3) **Hospital-Onset Laboratory-Identified Events** that occur in ACHs:
   (a) Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia
   (b) *Clostridioides difficile* (*C. diff).*

Methods

Infection Preventionists (IPs) at ACHs in Delaware are required to report infections listed above to the NHSN using standardized definitions. For each type of infection, the IPs report the number of patients with infections (numerator) and the denominator, which are either the number of patients with a given device (device days), number of surgeries (procedures), or total number of patients at risk (patient days).

The **standardized infection ratio (SIR)** is calculated as the number of observed infections divided by the total number of predicted infections. The SIR, a summary measure used to track HAI prevention progress over time, compares the number of infections reported in a facility or state to the number of infections that were "predicted" or would be expected to have occurred based on previous years of reported data (i.e., baseline data).

$$\text{SIR} = \frac{\text{Number of observed infections}}{\text{Number of predicted infections}}$$

The number of predicted infections is an estimate based on aggregate data reported to CDC's NHSN during a specific historical baseline period. The predicted number is adjusted for each facility using variables found to be significant predictors of HAI incidence.

[5] Centers for Disease Control and Prevention, Healthcare Facility HAI Reporting Requirements to CMS via NHSN Current or Proposed Requirements http://www.cdc.gov/nhsn/PDFs/CMS/CMS-Reporting-Requirements.pdf

These numbers are also adjusted differently depending on the type of infection measured as shown below.[6] The **2015 Rebaseline** is a term that CDC's NHSN staff uses to describe updates to the original HAI baselines. The 2015 Rebaseline updated both the source of aggregate data and the risk adjustment methodology previously used to create the original baselines. For this report, the term "NHSN baseline" will be used to refer to the current the infection-specific baseline.

For ACHs:

SIRs for CLABSIs and CAUTIs are adjusted for the following potential risk factors for infection:

- facility bed size
- medical school affiliation
- status as a cancer hospital
- ICU location.

SIRs for SSIs are updated using CDC's Complex 30-Day CMS Inpatient Prospective Payment System (IPPS) model that allows facilities to review SSI data that would be submitted to CMS on their behalf and adjusts for:

- status as a cancer hospital
- patient factors including age, gender, American Society of Anesthesiology (ASA) Score,[7] Body Mass Index, closure technique, diabetes, and type of surgery.

SIRs for hospital-onset *C. difficile* and MRSA bloodstream infections are adjusted using slightly different risk factors:

- facility bed size
- hospital affiliation with a medical school
- number of patients admitted to the hospital who already have *C. difficile* or a MRSA bloodstream infection (community-acquired cases)
- for *C. difficile*, the type of test the hospital laboratory uses to identify *C. difficile* from patient specimens.

Hospitals in Delaware

In 2024, there were eight ACHs in Delaware and their data contributed to this report. As mentioned previously, there are different risk factors that adjust the SIR baselines. These eight hospitals have all conducted an annual survey based on the NHSN standards (Table 1).

[6] Centers for Disease Control and Prevention, THE NHSN STANDARDIZED INFECTION RATIO (SIR) NHSN SIR Guide (cdc.gov)

[7] American Society of Anesthesiologists', Statement on ASA Physical Status Classification System
ASA Physical Status Classification System (asahq.org)

Table 1. Acute Care Hospitals in Delaware, 2024

Name and Address	Services	Beds	ICU beds*
Bayhealth Medical Center Kent Campus 640 S. State St. Dover, Del. 19901	This campus provides patients with care in several specialty divisions including, but not limited to, cardiology, intensive care, oncology, and obstetrics/gynecology. Bayhealth-Kent is also a teaching institution.	243	44 (including adult, pediatric, and neonatal levels II/III, III, or higher)
Bayhealth Medical Center Sussex Campus 100 Wellness Way Milford, Del. 19963	This campus provides patients with care in several specialty divisions including, but not limited to, cardiology, intensive care, oncology, and obstetrics/gynecology. Bayhealth-Sussex is also a teaching institution.	152	10 (including adult, pediatric, and neonatal levels II/III, III, or higher)
Beebe Healthcare Hospital 424 Savannah Rd. Lewes, Del. 19958	This campus provides patients with care in several specialty divisions including, but not limited to, cardiology, intensive care, oncology, neurology, and obstetrics/gynecology. Beebe Healthcare is also a teaching institution.	177	20 (including adult, pediatric, and neonatal levels II/III, III, or higher)
ChristianaCare Hospital 4755 Ogletown Stanton Rd. Newark, Del. 19718	This campus provides patients with care in several specialty divisions including, but not limited to, cardiology, intensive care, oncology, neurology, and obstetrics/gynecology. ChristianaCare Hospital is also a teaching institution.	999	151 (including adult, pediatric, and neonatal levels II/III, III, or higher)
ChristianaCare Wilmington Hospital 501 W. 14th St. Wilmington, Del. 19801	This campus provides patients with care in several specialty divisions including, but not limited to, cardiology, intensive care, oncology, neurology, and obstetrics/gynecology. ChristianaCare Wilmington Hospital is also a teaching institution.	244	9 (including adult, pediatric, and neonatal levels II/III, III, or higher)
Nemours Children's Hospital 1600 Rockland Rd. Wilmington, Del. 19803	This campus provides pediatric patients with care in several specialty divisions including, but not limited to, cardiology, intensive care, oncology, and neurology. Nemours Children's Hospital is also a teaching institution for graduate students only.	208	70 (including pediatric, and neonatal levels II/III, III, or higher)

Table 1. Acute Care Hospitals in Delaware, 2024 *(continued)*

Name and Address (continued)	Services	Beds	ICU beds*
St. Francis Hospital 701 N. Clayton St. Wilmington, Del. 19805	This campus provides patients with care in several specialty divisions including, but not limited to, cardiology, intensive care, oncology, neurology, and obstetrics/gynecology. St. Francis Hospital is also a teaching institution.	112	16 (including adult, pediatric, and neonatal levels II/III, III, or higher)
TidalHealth Nanticoke Hospital 801 Middleford Rd. Seaford, Del. 19973	This campus provides patients with care in several specialty divisions including, but not limited to, cardiology, intensive care, oncology, neurology, and obstetrics/gynecology. TidalHealth Nanticoke Hospital is also a teaching institution for undergraduate students.	65	4 (including adult, pediatric, and neonatal levels II/III, III, or higher)

* Number of ICU beds is of the total number of beds.

Source: Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.

Interpretation of the Standardized Infection Ratio (SIR)

Calculation of the SIR will result in one of the following:

- If the **SIR is less than 1.0, fewer infections were reported** during the surveillance period than predicted, given the baseline data.
- If the **SIR is equal to 1.0,** it indicates the numerator and denominator are relatively equal. In this instance, the number of infections reported during the surveillance period is the **same as the number predicted,** given the baseline data.
- If the **SIR is greater than 1.0, more infections were reported** during the surveillance period than predicted, given the baseline data.

NOTE: The SIR is not calculated when the number of infections is predicted to be <1, which is due to a small number of device days, procedures, or patient days.

Confidence Interval of the Standardized Infection Ratio (SIR)

Since the SIR is only an estimate of the "true" value, confidence intervals (CI) are provided which indicate the range of values within which the true SIR is thought to lie. The upper and lower limits are used to determine the statistical significance and precision of the SIR. There is a high degree of confidence that the true SIR lies within this range.

If the confidence interval includes the value of 1.0, then the SIR is *not statistically significant* (i.e., the number of observed events is not significantly different than the number predicted).

If the confidence interval does not include the value of 1.0, then the SIR *is statistically significant* (i.e., the number of observed events is significantly different than the number predicted). The confidence intervals are generally calculated at 95% (95% CI), which is an arbitrary and conveniently used level indicating that there is 95% confidence that the true SIR falls between the upper and lower limits of the CI.[8]

[8] Rothman KJ, Greenland S, Lash TL. Study Design and Conduct. Modern Epidemiology. 3rd ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2008.

Device-Related HAI Results

Central Line-Associated Bloodstream Infections (CLABSIs)

A central line is a tube or catheter placed into a patient's large vein or artery, usually in the neck, chest, arm, or groin. The central venous catheter is used to draw blood, provide fluids, or administer medications and may not be removed for several weeks. A bloodstream infection can occur when bacteria or other germs gain access via the central line and enter the bloodstream. Based on 2020 data from ivWatch, an estimated 30,100 central line-associated bloodstream infections (CLABSIs) occur in intensive care units and wards of U.S. acute care facilities annually.[12] These infections are usually serious, typically causing prolonged hospital stays, increased costs, and greater mortality risk. These infections are largely preventable when healthcare providers follow CDC-recommended infection prevention steps. Hospitals across the U.S. saw a 46% decrease in CLABSIs from 2008 to 2013.[9]

In the first quarter of 2024, a total of 15 CLABSIs were identified across all Delaware ACHs, compared to 18.16 CLABSIs predicted based on the NHSN CLABSI baseline (Table 2). The results of SIR (15/18.16) were 0.83, signifying that during this time period, Delaware identified fewer CLABSIs than predicted. Since the 95% confidence interval (0.48, 1.33) includes the value of 1, the SIR is not statistically significant. In other words, ACHs did not observe a statistically significantly different number of CLABSIs than predicted in Delaware.

[9] ivWatch, CLABSIs: Risk Factors, Causes and Prevention CLABSIs: Risk Factors, Causes and Prevention - ivWatch

Table 2. Central Line-Associated Bloodstream Infections (CLABSIs) by Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024

Hospital	Central Line Device Days[a]	Number of Infections		SIR[b]	95% CI[c]		Interpretation of Standardized Infection Ratio (SIR)*
		Observed	Predicted		Lower[d]	Upper	
ALL[e]	**16920**	**15**	**18.16**	**0.83**	**0.48**	**1.33**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center, Kent Campus	**1489**	**0**	**1.61**	**0**	**---**	**1.86**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center, Sussex Campus	**270**	**0**	**0.26**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections < 1.
Beebe Healthcare	**916**	**0**	**0.81**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
ChristianaCare Hospital	**8221**	**8**	**8.88**	**0.90**	**0.42**	**1.71**	Fewer HAIs were observed than predicted.
ChristianaCare Wilmington Hospital	**1660**	**0**	**1.68**	**0**	**---**	**1.78**	Fewer HAIs were observed than predicted.
Nemours Children's Hospital	**3295**	**7**	**4**	**1.75**	**0.76**	**3.46**	More HAIs were observed than predicted.
St. Francis Hospital	**494**	**0**	**0.46**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
TidalHealth Nanticoke Hospital	**575**	**0**	**0.45**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.

NOTE: Data contained in this report were generated on August 22, 2024.

a. Device day is a count of patients with a specific device in the patient care location during a time period.
b. Standardized Infection Ratio (SIR) is only calculated if the predicted number is greater than or equal to 1.
c. Confidence Limits are endpoints of the confidence interval, a range of values that accounts for random error in estimation of the SIR.
d. The lower bound of 95% confidence interval is only calculated if the observed number is greater than 0.
e. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital

Sources: Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024..

Catheter-Associated Urinary Tract Infections (CAUTIs)

A catheter-associated urinary tract infection (CAUTI) involves infection in any part of the urinary system including urethra, bladder, ureters, and kidneys. Approximately 12% to 16% of adult hospital inpatients have a urinary catheter at some point during their hospital stay.[10] Each day that the urinary catheter remains, a patient has a 3% to 7% increased risk of acquiring a CAUTI.[11]

In 2015, urinary tract infections (UTIs) were the fifth most common type of healthcare-associated infection in the United States, with approximately 62,700 UTIs in ACHs.[12] Approximately 75% of UTIs acquired in the hospital are associated with a urinary catheter.[13] CAUTIs can lead to numerous complications, causing discomfort to the patient, prolonged hospital stays, or increased mortality.[14]

In the first quarter of 2024, 10 CAUTIs were observed in all ACHs, compared to 11.75 CAUTIs predicted based on the NHSN 2015 baseline data (Table 3). The results of all ACHs SIR (10/11.75) were 0.85, signifying that during this time period, Delaware identified fewer CAUTIs than predicted. Since the 95% confidence interval (0.43,1.52) includes the value of 1, DPH concluded that the SIR is not statistically significant. In other words, ACHs did not observe a statistically significantly different number of CAUTIs than predicted in Delaware.

[10] Centers for Disease Control and Prevention, Urinary Tract Infection (Catheter-Associated Urinary Tract Infection [CAUTI] and Non-Catheter-Associated Urinary Tract Infection [UTI]) and Other Urinary System Infection [USI]) Events 7 Catheter-associated Urinary Tract Infection (CAUTI) (saude.sp.gov.br)

[11] Centers for Disease Control and Prevention, Urinary Tract Infection (Catheter-Associated Urinary Tract Infection [CAUTI] and Non-Catheter-Associated Urinary Tract Infection [UTI]) and Other Urinary System Infection [USI]) Events 7 Catheter-associated Urinary Tract Infection (CAUTI) (saude.sp.gov.br)

[12] Centers for Disease Control and Prevention, Urinary Tract Infection (Catheter-Associated Urinary Tract Infection [CAUTI] and Non-Catheter-Associated Urinary Tract Infection [UTI]) Events Urinary Tract Infection (cdc.gov)

[13] Centers for Disease Control and Prevention, Catheter-associated Urinary Tract Infections (CAUTI) Catheter-associated Urinary Tract Infection Basics | UTI | CDC

[14] Scott RD. The Direct Medical Costs of Healthcare-Associated Infections in U.S. Hospitals and the Benefits of Prevention, 2009. Division of Healthcare Quality Promotion, National Center for Preparedness, Detection, and Control of Infectious Diseases, Coordinating Center for Infectious Diseases, Centers for Disease Control and Prevention, February 2009.

Table 3. Catheter-Associated Urinary Tract Infections (CAUTIs) by Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024

Hospital	Urinary Catheter Device Days[a]	Number of Infections		SIR[b]	95% CI[c]		Interpretation of Standardized Infection Ratio (SIR)[✖]
		Observed	Predicted		Lower[d]	Upper	
ALL[e]	**8587**	**10**	**11.75**	**0.85**	**0.43**	**1.52**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center Kent Campus	**1612**	**0**	**2.70**	**0**	**---**	**1.11**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center Sussex Campus	**311**	**0**	**0.33**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
Beebe Healthcare	**817**	**1**	**0.83**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
ChristianaCare Hospital	**3500**	**5**	**5.37**	**0.93**	**0.34**	**2.06**	Fewer HAIs were observed than predicted.
ChristianaCare Wilmington Hospital	**790**	**0**	**0.99**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
Nemours Children's Hospital	**505**	**3**	**0.61**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
St. Francis Hospital	**543**	**1**	**0.55**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
TidalHealth Nanticoke Hospital	**509**	**0**	**0.38**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.

NOTE: Data contained in this report were generated on August 22, 2024.

a. Device day is a count of patients with a specific device in the patient care location during a specific time period.
b. Standardized Infection Ratio (SIR) is only calculated if the predicted number is greater than or equal to 1.
c. Confidence Limits are endpoints of the confidence interval, a range of values that accounts for random error in estimation of the SIR.
d. The lower bound of 95% confidence interval is only calculated if the observed number is greater than 0.
e. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital).

Source: *Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Surgical Site Infection Results

In 2019, an estimated 13 million operative procedures were performed in ACHs in the United States.[15] A recent prevalence study found that surgical site infections (SSIs) were the most common healthcare-associated infections, accounting for 31% of all HAIs among hospitalized patients.[16]

All inpatient surgical procedures performed are assigned one or more specific ICD-10-PCS and corresponding CPT codes that correspond to "abdominal hysterectomy" and "colon surgery" procedures must be monitored for SSIs and included in SSI data submitted to NHSN.[17]

SSIs required to be reported to CMS include only deep incisional primary and organ/space infections that are routinely detected during the operative hospitalization or upon readmission to a hospital. These criteria avoid penalizing hospitals with more complete reporting as opposed to truly higher infection rates, since superficial SSIs may never come to the attention of hospital IPs. Only SSIs with an onset within 30 days of the procedure and SSIs identified in patients who were 18 years or older at the time of surgery are included in data that is reported to CMS via NHSN for colon and Abdominal Hysterectomy surgery.[18]

Colon Surgery

In the first quarter of 2024, seven SSIs associated with colon surgery were observed in all ACHs, compared to the 7.26 SSIs for colon surgery predicted based on NHSN 2015 baseline data (Table 4). The results of SIR (7/7.26) were 0.96 signifying that during this time period, Delaware identified fewer SSIs than predicted. Since the 95% confidence interval (0.42, 1.90) includes the value of 1, the SIR is not statistically significant. In other words, ACHs did not observe a statistically significantly different number of SSIs associated with colon surgeries than predicted in Delaware.

[15] National Library of Medicine, Trends in US Surgical Procedures and Health Care System Response to Policies Curtailing Elective Surgical Operations During the COVID-19 Pandemic Trends in US Surgical Procedures and Health Care System Response to Policies Curtailing Elective Surgical Operations During the COVID-19 Pandemic - PubMed (nih.gov)

[16] Scott RD. The Direct Medical Costs of Healthcare-Associated Infections in U.S. Hospitals and the Benefits of Prevention, 2009. Division of Healthcare Quality Promotion, National Center for Preparedness, Detection, and Control of Infectious Diseases, Coordinating Center for Infectious Diseases, Centers for Disease Control and Prevention, February 2009.

[17] Centers for Disease Control and Prevention, Operational Guidance for Reporting Surgical Site Infection (SSI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements Operational Guidance for Reporting Surgical Site Infection (SSI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements

[18] Centers for Disease Control and Prevention, Surgical Site Infection (SSI) Surgical Site Infection (cdc.gov)

Table 4. Surgical Site Infections (SSIs) Associated with Colon Surgery by Delaware Acute Care Hospital, January 1, 2024 to March 31, 2024

Hospital	Inpatient[a] Procedures	Number of Infections		SIR[b]	95% CI[c]		Interpretation of Standardized Infection Ratio (SIR)[x]
		Observed	Predicted		Lower[d]	Upper	
ALL[e]	**251**	**7**	**7.26**	**0.96**	**0.42**	**1.91**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center, Kent Campus	**26**	**0**	**0.74**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
Bayhealth Medical Center, Sussex Campus	**20**	**1**	**0.53**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
Beebe Healthcare	**43**	**0**	**1.17**	**0**	**---**	**2.57**	Fewer HAIs were observed than predicted.
ChristianaCare Hospital	**130**	**6**	**3.83**	**1.57**	**0.64**	**3.26**	More HAIs were observed than predicted.
ChristianaCare Wilmington Hospital	**14**	**0**	**0.49**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
Nemours Children's Hospital [f]	**---**	**---**	**---**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
St. Francis Hospital	**4**	**0**	**0.10**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
TidalHealth Nanticoke Hospital	**14**	**0**	**0.41**	**--**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.

NOTE: Data contained in this report were generated on August 22, 2024.

a. An inpatient procedure is a procedure performed on a patient whose date of admission to the facility and date of discharge are different calendar days and the procedure takes place during a surgical operation.
b. Standardized Infection Ratio (SIR) is only calculated if the predicted number is greater than or equal to 1.
c. Confidence Limits are endpoints of the confidence interval, a range of values that accounts for random error in estimation of the SIR.
d. The lower bound of 95% confidence interval is only calculated if observed number is greater than 0.
e. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital.
f. Nemours Children's Hospital is not included in the statewide SIR estimate for SSIs because colon surgeries and abdominal hysterectomies are not routinely performed at this hospital (i.e., pediatric population).

Source: *Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Abdominal Hysterectomy

In the first quarter of 2024, two infection was observed in all ACHs, compared to the 0.77 predicted for SSIs associated with abdominal hysterectomy based on the NHSN 2015 baseline data (Table 5). SIRs were not calculated because all the ACHs predicted infections were less than 1.

Table 5. Surgical Site Infections (SSIs) Associated with Abdominal Hysterectomy by Delaware Acute Care Hospital, January 1, 2024 to March 31, 2024

Hospital	Inpatient[a] Procedures	Number of Infections		SIR[b]	95% CI[c]		Interpretation of Standardized Infection Ratio (SIR)[*]
		Observed	Predicted		Lower[d]	Upper	
ALL[e]	90	2	0.77	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.
Bayhealth Medical Center, Kent Campus	7	1	0.06	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.
Bayhealth Medical Center, Sussex Campus	12	0	0.09	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.
Beebe Healthcare	8	0	0.08	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.
ChristianaCare Hospital	37	1	0.31	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.
ChristianaCare Wilmington Hospital	2	0	0.02	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.
Nemours Children's Hospital [f]	---	---	---	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.
St. Francis Hospital	20	0	0.18	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.
TidalHealth Nanticoke Hospital	4	0	0.04	---	---	---	No conclusion. SIR is not calculated when the predicted number of infections is <1.

NOTE: Data contained in this report were generated on August 22,2024.

a. An inpatient procedure is a procedure performed on a patient whose date of admission to the facility and date of discharge are different calendar days and the procedure takes place during a surgical operation.
b. Standardized Infection Ratio (SIR) is only calculated if the predicted number is greater than or equal to 1.
c. Confidence Limits are endpoints of the confidence interval, a range of values that accounts for random error in estimation of the SIR.
d. The lower bound of 95% confidence interval is only calculated if the observed number is greater than 0.
e. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital.
f. Nemours Children's Hospital is not included in the statewide SIR estimate for SSIs because colon surgeries and abdominal hysterectomies are not routinely performed at this hospital (i.e., pediatric population).

Source: *Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Hospital-Onset Laboratory-Identified Events Results

Laboratory-Identified (LabID) event reporting enables laboratory testing data to be used without clinical evaluation of the patient, allowing for a less labor-intensive method to track MRSA and *C. difficile*. Of note, while all MRSA bacteremia can be considered true infections, a positive laboratory test for *C. difficile* may or may not indicate *C. difficile* disease rather than colonization. While providers should only test patients in whom they suspect *C. difficile* disease, this test is probably over-utilized.

Clostridioides difficile Infection (*C. diff*)

Clostridioides difficile infection, also known as *C. difficile and C. diff*, is a bacterium that causes inflammation of the colon. Antibiotic use is the most important risk factor for *C. diff* infection along with increasing age. It is estimated that there are almost half a million cases of *C. diff* in the U.S. per year, and one in 11 people over the age of 65 who are diagnosed with *C. diff* die within a month of diagnosis.[19] CDC provides guidelines and tools to the healthcare community to help prevent *C. difficile* infections and provides resources to help the public safeguard their own health.[20]

In the first quarter of 2024, 23 *C. diff* infections were observed in all ACHs, compared to the 66.25 *C. diff* infections predicted based on the NHSN 2015 baseline data (Table 6). The results of SIR (23/66.25) were 0.35, signifying that during this time period, Delaware identified fewer *C. diff* infections than predicted. Since the 95% confidence interval (0.23, 0.51) does not include the values of 1, the SIR is statistically significant. In other words, ACHs did observe a statistically significantly different number of *C. diff* infections than predicted in Delaware.

[19] Centers for Disease Control and Prevention, What is *C.diff*? About *C.* diff | *C.* diff | CDC

[20] Centers for Disease Control and Prevention, *Clostridioides difficile* Infection *Clostridioides difficile* Infection | HAI | CDCDe

Table 6. *Clostridioides difficile* (*C. diff*) Infections, Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024

Hospital	Patient Days[a]	Number of Infections		SIR[b]	95% CI[c]		Interpretation of Standardized Infection Ratio (SIR)[*]
		Observed	Predicted		Lower[d]	Upper	
ALL[e]	**138975**	**23**	**66.25**	**0.35**	**0.23**	**0.51**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center, Kent Campus	**21569**	**6**	**9.42**	**0.64**	**0.26**	**1.33**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center, Sussex Campus	**10019**	**0**	**4.19**	**0**	**---**	**0.72**	Fewer HAIs were observed than predicted.
Beebe Healthcare	**13980**	**3**	**8.27**	**0.36**	**0.09**	**0.99**	Fewer HAIs were observed than predicted.
ChristianaCare Hospital	**56089**	**8**	**32.20**	**0.25**	**0.12**	**0.47**	Fewer HAIs were observed than predicted.
ChristianaCare Wilmington Hospital	**15629**	**3**	**5.11**	**0.59**	**0.15**	**1.60**	Fewer HAIs were observed than predicted.
Nemours Children's Hospital	**11263**	**0**	**3.73**	**0**	**---**	**0.80**	Fewer HAIs were observed than predicted.
St. Francis Hospital	**4579**	**2**	**2.21**	**0.91**	**0.15**	**2.99**	Fewer HAIs were observed than predicted.
TidalHealth Nanticoke Hospital	**5847**	**1**	**1.11**	**0.90**	**0.05**	**4.43**	Fewer HAIs were observed than predicted.

NOTE: Data contained in this report were generated on August 22,2024.

a. The number of patient days is a count of the number of patients in a patient care location.
b. Standardized Infection Ratio (SIR) is only calculated if the predicted number is greater than or equal to 1.
c. Confidence Limits are endpoints of the confidence interval, a range of values that accounts for random error in estimation of the SIR.
d. The lower bound of 95% confidence interval is only calculated if the observed number is greater than 0.
e. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital.

Source: *Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Methicillin-resistant *Staphylococcus aureus* (MRSA)

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a type of staphylococcal bacteria that is resistant to certain antibiotics called beta-lactams. These antibiotics include methicillin and other common antibiotics such as oxacillin or nafcillin.

There are two types of MRSA strains: community-acquired (MRSA-CA) and healthcare-associated (MRSA-HA). In the community, MRSA infections usually manifest as skin infections, such as pimples and boils, and generally occur in otherwise healthy people. More severe or potentially life-threatening MRSA infections, such as bloodstream infections, pneumonia, and surgical site infections, occur most frequently among patients in healthcare settings. MRSA infections included in this report are only those associated with healthcare settings. MRSA infections included in this report are only those associated with ACHs with LabID event of blood cultures collected on or after the fourth day of hospitalization where the first day is the day of admission.

In the first quarter of 2024, six MRSA infections were observed in all ACHs, compared to the 11.78 MRSA infections predicted based on the NHSN 2015 baseline data (Table 7). The results of SIR (6/11.78) were 0.51, signifying that during this time period, Delaware identified fewer MRSA infections than predicted. Since the 95% confidence interval (0.21, 1.06) includes the value of 1, the SIR is not statistically significant. In other words, ACHs did not observe a statistically significantly different number of MRSA infections than predicted in Delaware.

Table 7. Methicillin-resistant *Staphylococcus aureus* (MRSA) Bloodstream Infections. Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024

Hospital	Patient Days[a]	Number of Infections		SIR[b]	95% CI[c]		Interpretation of Standardized Infection Ratio (SIR)[*]
		Observed	Predicted		Lower[d]	Upper	
ALL[e]	**151787**	**6**	**11.78**	**0.51**	**0.21**	**1.06**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center, Kent Campus	**22106**	**0**	**1.25**	**0**	**---**	**2.39**	Fewer HAIs were observed than predicted.
Bayhealth Medical Center, Sussex Campus	**10358**	**1**	**0.71**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
Beebe Healthcare	**14336**	**0**	**0.57**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
ChristianaCare Hospital	**63912**	**3**	**6.96**	**0.43**	**0.11**	**1.17**	Fewer HAIs were observed than predicted.
ChristianaCare Wilmington Hospital	**15629**	**0**	**1.55**	**0**	**---**	**1.93**	Fewer HAIs were observed than predicted.
Nemours Children's Hospital	**14133**	**2**	**0.32**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
St. Francis Hospital	**5034**	**0**	**0.21**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.
TidalHealth Nanticoke Hospital	**6279**	**0**	**0.20**	**---**	**---**	**---**	No conclusion. SIR is not calculated when the predicted number of infections is < 1.

NOTE: Data contained in this report were generated on August 22, 2024

a. The number of patient days is a count of the number of patients in a patient care location.
b. Standardized Infection Ratio (SIR) is only calculated if the predicted number is greater than or equal to 1.
c. Confidence Limits are endpoints of the confidence interval, a range of values that accounts for random error in estimation of the SIR.
d. The lower bound of 95% confidence interval is only calculated if the observed number is greater than 0.
e. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital

Source: *Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals, Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Organisms Line Listing Report

The line listing is an organized, detailed list of each organism entered in NHSN for the reporting period of January 1, 2024 through March 31, 2024 for ACH Bloodstream Infections (BSI), Surgical Site Infections (SSI), and Urinary Tract Infections (UTI) events. The Organisms Line Listing report shows the ACH name, NHSN code (abbreviation), and event type to provide context for the following visual of graphs displaying most commonly found organisms this quarter. (Tables 8, 9, 10)

Table 8. Line List of pathogens identified in Bloodstream Infections (BSI), Delaware Acute Care Hospitals, of January 1, 2024 to March 31, 2024

Hospital Name[A]	*NHSN Organism Name* (NHSN Code)	Number of Organisms[B]
Bayhealth Medical Center, Kent Campus	*Streptococcus* (STR)	1
ChristianaCare Hospital	*Staphylococcus epidermidis* (SE)	3
ChristianaCare Hospital	*Staphylococcus capitis* (STACS)	1
ChristianaCare Hospital	*Candida parapsilosis* (CP)	1
ChristianaCare Hospital	*Enterococcus faecium* (ENTFM)	1
ChristianaCare Hospital	*Escherichia coli* (EC)	3
ChristianaCare Hospital	*Bacteroides fragilis* (BF)	1
ChristianaCare Hospital	*Staphylococcus aureus* (SA)	2
ChristianaCare Hospital	*Parabacteroides distasonis* (BACDT)	1
ChristianaCare Hospital	*Klebsiella pneumoniae* (KP)	2
ChristianaCare Hospital	*Candida glabrata* (CG)	1
ChristianaCare Wilmington Hospital	*Pseudomonas aeruginosa* (PA)	1
Nemours Children's Hospital	*Klebsiella pneumoniae* (KP)	3
Nemours Children's Hospital	*Staphylococcus aureus* (SA)	3
Nemours Children's Hospital	*Streptococcus mitis* (STRVM)	2
Nemours Children's Hospital	*Enterococcus faecalis* (ENTFS)	1
Nemours Children's Hospital	*Staphylococcus epidermidis* (SE)	1
Nemours Children's Hospital	*Pseudomonas aeruginosa* (PA)	1

NOTE: Data contained in this report were generated on August 22, 2024.

A. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital).

B. An event type can report up to three pathogens per patient.

Sources: *Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Table 9. Line List of pathogens identified in Surgical Site Infections (SSI), Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024

Hospital Name	*NHSN Organism Name* (NHSN Code)	Number of organisms
BeeBe Healthcare	Not Identified	1
Bayhealth Medical Center, Kent Campus	*Bacteroides fragilis group (*BFG)	1
Bayhealth Medical Center, Kent Campus	*Candida albicans* (CA)	2
Bayhealth Medical Center, Kent Campus	*Enterococcus faecium* (ENTFM)	1
Bayhealth Medical Center, Kent Campus	*Staphylococcus, coagulase negative* (CNS)	1
Bayhealth Medical Center, Kent Campus	*Staphylococcus aureus* (SA)	1
Bayhealth Medical Center, Sussex Campus	*Escherichia coli* (EC)	1
Bayhealth Medical Center, Sussex Campus	*Bacteroides fragilis group* (BFG)	1
Bayhealth Medical Center, Sussex Campus	Not Identified	1
ChristianaCare Hospital	*Candida albicans* (CA)	2
ChristianaCare Hospital	*Escherichia coli* (EC)	5
ChristianaCare Hospital	*Streptococcus anginosus* (STRVN)	3
ChristianaCare Hospital	*Bacteroides thetaiotaomicron* (BACTH)	3
ChristianaCare Hospital	*Pseudomonas aeruginosa* (PA)	1
ChristianaCare Hospital	*Enterococcus faecium* (ENTFM)	5
ChristianaCare Hospital	Not Identified	1
ChristianaCare Hospital	*Staphylococcus epidermidis* (SE)	1
ChristianaCare Hospital	*Clostridium septicum* (CLOSE)	1
ChristianaCare Hospital	*Bacteroides fragilis* (BF)	1
ChristianaCare Hospital	*Enterobacter cloacae complex* (ENCCX)	1
ChristianaCare Hospital	*Enterococcus faecalis* (ENTFS)	2
ChristianaCare Hospital	*Klebsiella pneumoniae* (KP)	1
ChristianaCare Hospital	*Yeast* (YEAST)	1
ChristianaCare Hospital	*Anaerobic Gram- negative bacillus* (ANAGNR)	1
ChristianaCare Hospital	*Streptococcus constellatus* (STRVC)	1
ChristianaCare Wilmington Hospital	*Streptococcus agalactiae (group B streptococci)* (GBS)	2
ChristianaCare Wilmington Hospital	*Proteus mirabilis* (PM)	1
ChristianaCare Wilmington Hospital	*Enterococcus faecalis* (ENTFS)	1
ChristianaCare Wilmington Hospital	*Corynebacterium striatum (CORST)*	1
TidalHealth Nanticoke Hospital	*Corynebacterium amycolatum* (CORAMY)	3
TidalHealth Nanticoke Hospital	*Corynebacterium jeikeium* (CORJK)	2
TidalHealth Nanticoke Hospital	Enterobacter cloacae complex - ENCCX	1
TidalHealth Nanticoke Hospital	*Staphylococcus epidermidis* (SE)	1
TidalHealth Nanticoke Hospital	Not Identified	2

NOTE: Data contained in this report were generated on August 22, 2024.

A. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital).

B. An event type can report up to three pathogens per patient.

Sources: *Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Table 10. Line List of pathogens identified in Urinary Tract Infections (UTI), Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024

Hospital Name[A]	*NHSN Organism Name* (NHSN Code)	Number of Organisms[B]
BeeBe Healthcare	*Enterococcus faecalis* (ENTFS)	1
Bayhealth Medical Center, Kent Campus	*Klebsiella pneumoniae* (KP)	1
Bayhealth Medical Center, Sussex Campus	*Pseudomonas aeruginosa* (PA)	1
Bayhealth Medical Center, Sussex Campus	*Escherichia coli* (EC)	1
ChristianaCare Hospital	*Escherichia coli* (EC)	4
ChristianaCare Hospital	*Citrobacter koseri* (CITKO)	1
ChristianaCare Hospital	*Proteus mirabilis* (PM)	1
ChristianaCare Hospital	*Klebsiella pneumoniae* (KP)	2
ChristianaCare Hospital	*Pseudomonas aeruginosa* (PA)	1
Nemours Children's Hospital	*Enterococcus faecalis* (ENTFS)	1
Nemours Children's Hospital	*Staphylococcus, coagulase negative* (CNS)	1
Nemours Children's Hospital	*Klebsiella oxytoca* (KO)	1
St. Francis Hospital	*Enterococcus faecalis* (ENTFS)	1

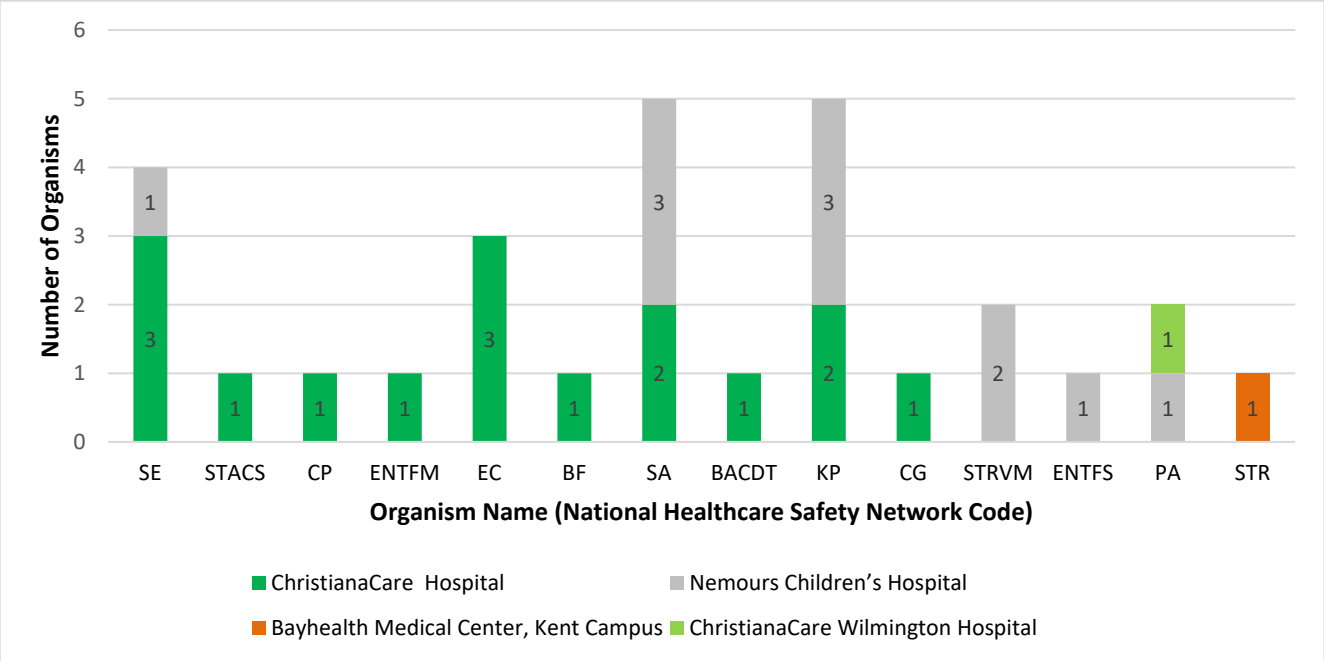
NOTE: Data contained in this report were generated on August 22, 2024.

A. Acute Hospitals listed (Bayhealth Medical Center, Kent Campus; Bayhealth Medical Center, Sussex Campus; Beebe Healthcare; ChristianaCare Hospital; Nemours Children's Hospital; St. Francis Hospital; TidalHealth Nanticoke Hospital; ChristianaCare Wilmington Hospital).

B. An event type can report up to three pathogens per patient.

Sources: *Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Figure 1. Bloodstream Infections (BSIs) Pathogens by Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024



NOTE:

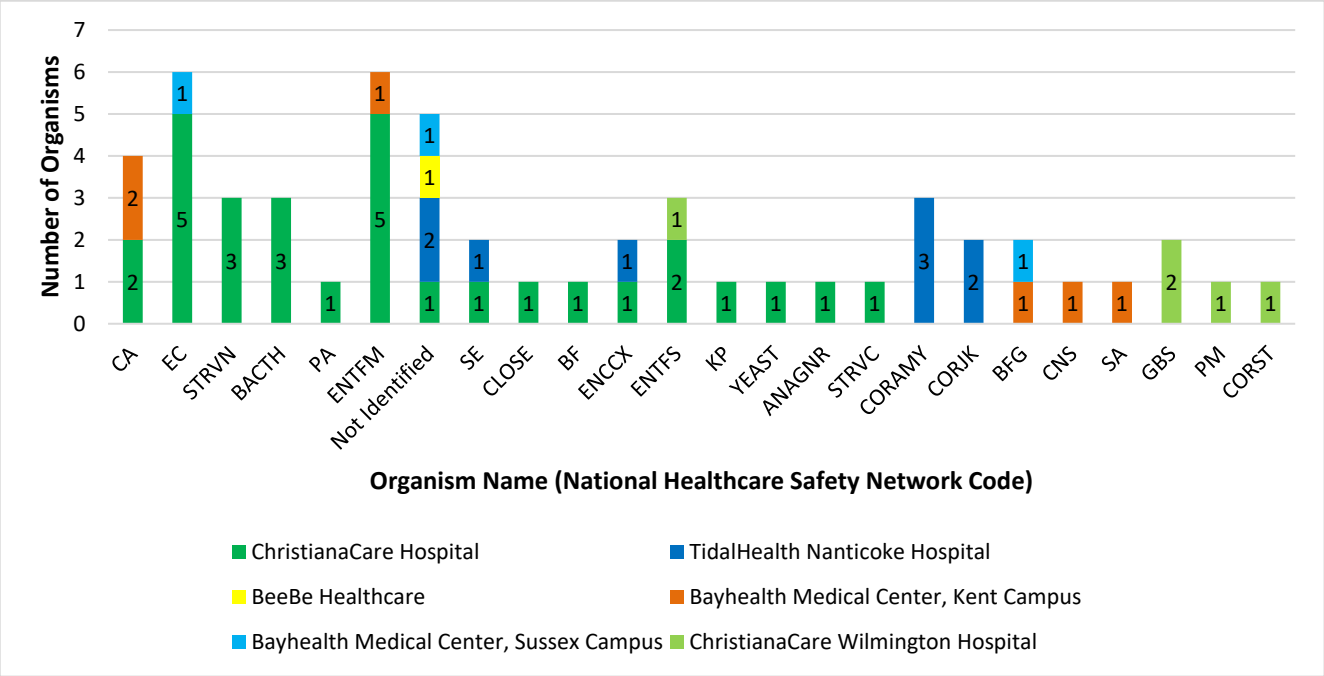
A. Acute Hospitals Bayhealth Medical Center; Beebe Healthcare Sussex Campus; St. Francis Hospital; and TidalHealth Nanticoke Hospital did not report Bloodstream Infections (BSIs) Pathogens.

B. Organism name (NHSN code) listed *Bacteroides fragilis* (BF), *Candida glabrata* (CG), *Candida parapsilosis* (CP), *Enterococcus faecalis* (ENTFS), *Enterococcus faecium* (ENTFM), *Escherichia coli* (EC), *Klebsiella pneumoniae* (KP), *Parabacteroides distasonis* (BACDT), *Pseudomonas aeruginosa* (PA), *Staphylococcus aureus* (SA), *Staphylococcus capitis* (STACS), *Staphylococcus epidermidis* (SE), *Streptococcus* (STR), *Streptococcus mitis* (STRVM).

Sources*: Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Organisms Name (National Healthcare Safety Network Code) Number of Organisms

Figure 2. Surgical Site Infections (SSIs) Pathogens by Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024



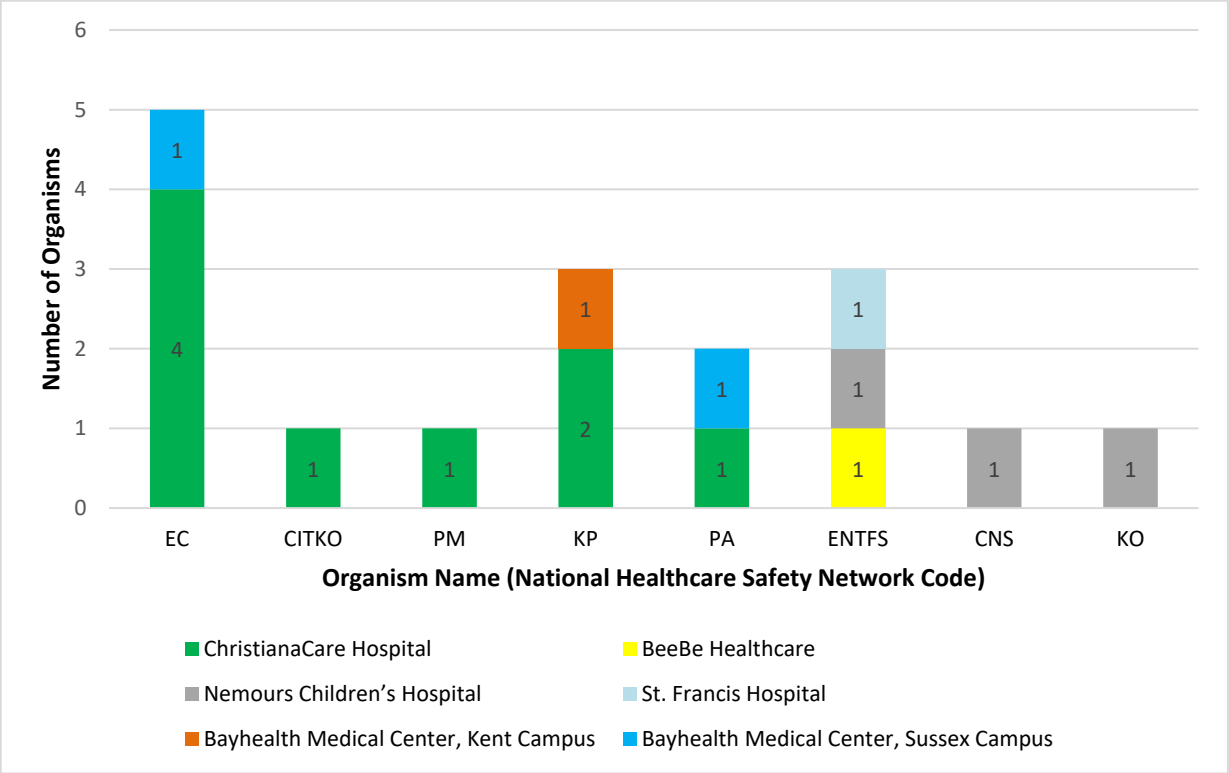
NOTE:

A. Acute Hospitals Nemours Children's Hospital; and St. Francis Hospital did not report Surgical Site Infections (SSIs) pathogens.

B. Organism name (NHSN code) listed: *Anaerobic Gram- negative bacillus* (ANAGNR), *Bacteroides fragilis* (BF), *Bacteroides thetaiotaomicron* (BACTH), *Candida albicans* (CA), *Clostridium septicum* (CLOSE), *Corynebacterium amycolatum* (CORAMY), *Corynebacterium jeikeium* (CORJK), *Corynebacterium striatum* (CORST), Enterobacter cloacae complex – ENCCX, *Enterobacter cloacae complex* (ENCCX), *Enterococcus faecalis* (ENTFS), *Enterococcus faecalis* (ENTFS), *Escherichia coli* (EC), *Klebsiella pneumoniae* (KP), *Not Identified*, *Proteus mirabilis* (PM), *Pseudomonas aeruginosa* (PA), *Staphylococcus aureus* (SA), *Staphylococcus epidermidis* (SE), *Staphylococcus, coagulase negative* (CNS), *Streptococcus agalactiae (group B streptococci)* (GBS) , *Streptococcus anginosus* (STRVN), *Streptococcus constellatus* (STRVC), *Yeast* (YEAST).

Sources*: Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Figure 3. Urinary Tract Infections (UTIs) Pathogens by Delaware Acute Care Hospitals, January 1, 2024 to March 31, 2024



NOTE:

A. Acute Hospitals ChristianaCare Wilmington Hospital; and TidalHealth Nanticoke Hospital did not report Urinary Tract Infections (UTIs) Pathogens.

B. Organism name (NHSN code) listed: *Citrobacter koseri* (CITKO), *Enterococcus faecalis* (ENTFS), *Escherichia coli* (EC), *Klebsiella oxytoca* (KO), *Klebsiella pneumoniae* (KP), *Proteus mirabilis* (PM), *Pseudomonas aeruginosa* (PA), *Staphylococcus, coagulase negative* (CNS).

C.

Sources*: Delaware Department of Health and Social Services, Division of Public Health, Healthcare-Associated Infections Delaware Acute Care Hospitals; and Centers for Disease Control and Prevention, National Healthcare Safety Network data, 2024.*

Appendix A

A1. Membership of the Delaware Healthcare Associated Infections Advisory Committee, 2023

Name	Position in Code[25]	Affiliation
Abdul-Alim, Lorraine	Quality Member	Select Medical
Achenbach, Robin	Health Insurer	Highmark Blue Cross Blue Shield
Anderson, Donna	Hospital Infection Control	Stockley Center
Briody, Carol	Infection Control Practitioner	ChristianaCare Hospital
Cerri, Anneke	Infection Control Nurse	Delaware Department of Correction
Chasanov, William	Infectious Disease Physician	Beebe Healthcare
Drees, Marci	Infectious Disease Physician	ChristianaCare Hospital
Duffalo, Chad	Infectious Disease Physician	ChristianaCare Hospital
Eppes, Stephen	Infectious Disease Physician	ChristianaCare Hospital
Fierro, Amy	Infection Control Prevention Practitioner	DHSS, Division of Substance Abuse and Mental Health
Sullivan, Dawn	Hospital Infection Control	TidalHealth Nanticoke Hospital
Gardner, Kelly (Chair)	Infection Control Prevention Practitioner	Bayhealth Medical Center
Gilman, Margaret	Infection Control Prevention Practitioner	Nemours Children's Hospital
Heiks, Cheryl	Consumer Organization	Delaware Healthcare Facilities Association
Helmick, Holly	Infection Control Prevention Practitioner	Bayhealth Medical Center
Maduka-Ezeh, Awele	Medical Director	DHSS, Division of Public Health
Horney, Jennifer	Academic Researcher	University of Delaware College of Health Sciences
Mills, James V.	Infection Control Prevention Practitioner	Wilmington Veterans Affairs Medical Center
Olurin, Omo	Health Maintenance Organization	Delaware Physicians Care Inc.
Richardson, Elizabeth	Hospital Infection Control	Beebe Healthcare
Sagisi, Alfredo	Dialysis	Fresenius Medical Care
Sanders, Lisa	Organized Labor	United Food and Commercial Workers Local 152
Snow, Jessica	Purchaser of Health Insurance	N/A
Tatman, Jill	Direct Care Nursing Staff	Bayhealth Medical Center
Watts, Lynn	Freestanding Surgical Center	Eden Hill Medical Center
Williams, Megan	Healthcare Association	Delaware Healthcare Association

Source: *Delaware Healthcare Associated Infections Advisory Committee Membership List, 2022-2023.*

Appendix B

Hospital Comments (Not for Publication)