DELAWARE
Healthcare-Associated Infections in Hospitals
2013 First Quarter Cumulative Report
(April 1, 2012 – March 31, 2013)

What are healthcare associated infections (HAIs)?

Healthcare-associated infections (HAIs) are caused by a variety of bacteria, fungi, and viruses. These pathogens are acquired during the course of medical care in a hospital or other healthcare facility, and are not present prior to the patient's admission to the facility.

What types of HAIs are reported in Delaware?

Catheter-Associated Urinary Tract Infections (CAUTI)

A urinary tract infection (UTI) is an infection involving any part of the urinary system including the urethra, bladder, ureters, and kidney. Urinary catheters are tubes inserted into the bladder through the urethra to drain urine. One out of four hospitalized patients receives urinary catheters during their hospital stay.

Central Line-Associated Bloodstream Infections (CLABSI)

A "central line" is a tube that is placed into a patient's large vein or artery, usually in the neck, chest, arm, or groin. The catheter is often used as a device to draw blood, to give fluids, or to administer medications and may not be removed for several weeks. A bloodstream infection can occur when bacteria or other germs travel down a "central line" and enter the blood.

Surgical Site Infections (SSI)

A surgical site infection is an infection that occurs after surgery in the part of the body where the surgery took place. Surgical site infections can sometimes be superficial infections involving the skin only while others are more serious and can involve tissues under the skin, organs, or implanted material.

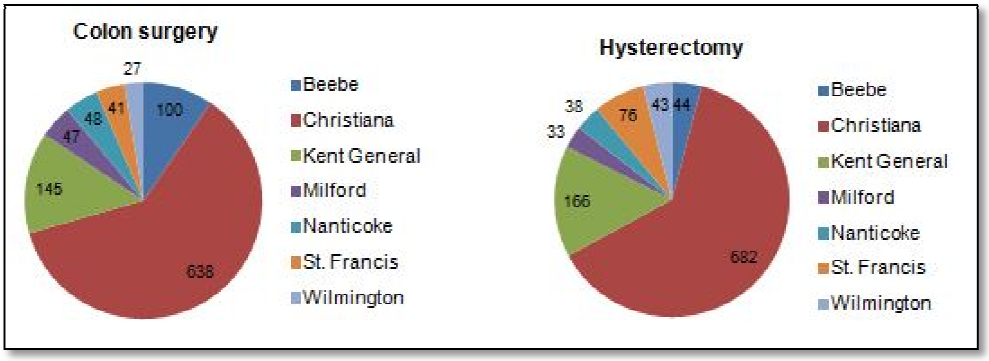
What surgical site infections are monitored in Delaware healthcare facilities?

Delaware monitors infections occurring during inpatient **colon surgeries** and **hysterectomies** according to requirements by the Centers for Medicare and Medicaid Services (CMS).

How many inpatient colon surgeries and hysterectomies are performed in Delaware?

An inpatient is a patient whose date of admission to the healthcare facility and the date of discharge are different calendar days. The pie chart below shows the number of colon surgeries and hysterectomies **for inpatients only**. There were 1,046 inpatient colon surgeries and 1,082 inpatient hysterectomies performed between April 1, 2012, and March 31, 2013. While Delaware facilities are required to report only **inpatient** procedures, these make up only a subset of the total number of procedures performed in Delaware.

Number of inpatient surgical procedures by healthcare facility, April 1, 2012 – March 31, 2013



Understanding HAI Data

Use the key to the right to assess how your hospital's HAI rate compares to HAI rates of similar hospitals in the U.S. Lower or similar rates are ideal. Based on the color indicated, you can then fill in the blank: "The rate of HAIs in my hospital is ____ than the rate of similar hospitals in the U.S."

The rate of HAIs in this hospital is _____than the rate of similar hospitals in the U.S.
HIGHER
SLIGHTLY HIGHER
SAME
SLIGHTLY LOWER
LOWER

* Note that a **box outlined in blue** means that there were a small number of procedures/devices in this hospital, so we are uncertain about these estimates; whether they would stay the same, decrease, or increase if the hospital had more procedures/devices.

Understanding SIRs and 95% Confidence Intervals (CI)

SIR compares the HAI rate in one hospital to the HAI rate among other U.S. hospitals of similar size and resources.

95% CI tells us the statistical reliability of the SIR estimate. Wider ranges signify more random variability in the data-collection process, typically because the hospital did not perform enough procedures to provide statistically reliable estimates.

The full report referenced here provides a detailed description of the background and methods for estimating and interpreting standardized infection ratios (SIRs) and 95% Confidence Intervals (CI).

Healthcare-Associated Infections in Delaware by Hospital
April 1, 2012 – March 31, 2012

STATEWIDE

CLABSI SIR= 0.50(0.35 - 0.69)
CAUTI SIR= 1.4 (1.1 - 1.8)
SSI Colon Surgery SIR= 0.72 (0.53 - 0.95)
SSI Hysterectomy SIR= 0.99 (0.54 - 1.5)

Interpretation of the Statewide HAI data

1. None of the boxes are outlined in blue, so we can assume that there is a relatively large number of devices/procedures, so we have more certainty about these SIR estimates.
2. **CLABSI**: The rate of central line-associated bloodstream infections (CLABSIs) for all hospitals statewide is lower than the CLABSI rate of similar hospitals in the U.S.
3. **CAUTI:** The rate of catheter-associated urinary tract infections (CAUTI) for all hospitals statewide is slightly higher than the CAUTI rate of similar hospitals in the U.S.
4. **Colon surgery:** The rate of surgical site infections associated with colon surgery for all hospitals statewide is lower than the surgical site infection rate of similar hospitals in the U.S.
5. **Hysterectomy:** The rate of surgical site infections associated with hysterectomy for all hospitals statewide is similar to the surgical site infection rate of similar hospitals in the U.S.

NEW CASTLE COUNTY

Al Dupont	Christiana	St. Francis	Wilmington
CLABSI SIR= 0.46 (0.21 - 0.86)	CLABSI SIR= 0.53 (0.32 - 0.83)	CLABSI SIR= 0.99 (0.12 - 3.6)	CLABSI SIR= 0 (--- - 2.6)
CAUTI SIR= 1.3 (0.41 - 3.0)	CAUTI SIR= 1.6 (1.2- 2.1)	CAUTI SIR= 0.42 (0.01 - 2.3)	CAUTI SIR= 1.1 (0.22- 3.1)
SSI Colon Surgery* N/A	SSI Colon Surgery SIR= 0.72 (0.49 - 1.0)	SSI Colon Surgery SIR= 0.50 (0.01 - 2.8)	SSI Colon Surgery SIR= 0 (--- - 2.5)
SSI Hysterectomy* N/A	SSI Hysterectomy SIR= 1.4 (0.80 - 2.3)	SSI Hysterectomy SIR= 0 (--- - 2.1)	SSI Hysterectomy Numbers too low to calculate

*Procedures not routinely performed at this hospital.

KENT COUNTY

Kent General	Milford
CLABSI SIR= 0.72 (0.15 - 2.1)	CLABSI SIR= 0 (--- - 2.7)
CAUTI SIR= 1.7 (0.72 - 3.3)	CAUTI SIR= 0.93 (0.02 - 5.2)
SSI Colon Surgery SIR= 0.68 (0.25 -1.5)	SSI Colon Surgery SIR= 1.8 (0.58 - 4.2)
SSI Hysterectomy SIR= 0.31 (0.01 - 1.7)	SSI Hysterectomy Numbers too low to calculate

SUSSEX COUNTY

Beebe	Nanticoke
CLABSI SIR= 0.46 (0.06 - 1.7)	CLABSI SIR= 0 (--- - 1.8)
CAUTI SIR= 0 (--- - 1.0)	CAUTI SIR= 2.0 (0.54 - 5.1)
SSI Colon Surgery SIR= 0.18 (0.01 - 1.0)	SSI Colon Surgery SIR= 1.3 (0.34 - 3.2)
SSI Hysterectomy Numbers too low to calculate	SSI Hysterectomy Numbers too low to calculate

What is Delaware doing to reduce the number of HAIs?

Delaware hospitals are working to reduce HAIs through prevention, surveillance (monitoring and detection), and response activities. To deliver better outcomes, they partner with the Delaware Division of Public Health, Centers for Medicare and Medicaid Services, Centers for Disease Control and Prevention, and regional quality improvement organizations such as Quality Insights of Delaware.

Delaware HAI prevention activities include but are not limited to:

1. Collaborating with local and regional partners to identify specific targets to reduce HAIs in Delaware healthcare facilities. Partners include state hospital associations, professional societies for infection control and healthcare epidemiology, academic organizations, laboratorians, networks of acute care hospitals and long term care facilities.
2. Improving overall use of surveillance data to identify and prevent HAI outbreaks or transmission in healthcare settings.
3. Developing and disseminating provider and patient education materials.
4. Conducting validation studies to assess the quality of HAI data reported.
5. Providing consumers access to useful healthcare quality measures through quarterly reports.

Prevention of HAIs is of the utmost importance among healthcare and public health communities. Ongoing efforts to reduce the occurrence of HAIs occur routinely at hospitals and other healthcare facilities across Delaware.

For more information about HAIs, see the following state and national resources:

- Delaware HAI Website: http://dhss.delaware.gov/dph/epi/haihomepage.html
- Centers for Disease Control and Prevention HAI Website: http://www.cdc.gov/hai/