HOSPITAL-ACQUIRED INFECTIONS

New York State
2009

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EXECUTIVE SUMMARY

Healthcare-associated infections are a major public health problem. According to the Centers for Disease Control and Prevention (CDC), there were an estimated 1.7 million healthcare-associated infections and 99,000 deaths from those infections in 2002. [1] A recent CDC report estimated the annual medical costs of healthcare-associated infections in U.S. hospitals to be between $28 and $45 billion, adjusted to 2007 dollars.[2] In July of 2005, Public Health Law 2819 was enacted mandating that New York hospitals report selected hospital-acquired infections (HAIs) to the State Department of Health (NYSDOH or "the Department"). 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 control activities in hospitals. In accordance with this law, the Department compiled 2009 data from 179 hospitals and the results are presented in this report: *Hospital-Acquired Infections, New York State 2009.*

This is the third annual report to be issued since reporting began in 2007. The initial report was submitted to the Governor, Legislature, hospitals and the public on June 30, 2008 followed by the second annual report submitted on June 30, 2009. All New York State (NYS) HAI reports are available at the following web site:

http://www.health.state.ny.us/statistics/facilities/hospital/hospital_acquired_infections/

The purpose of the pilot year, as defined by Public Health Law 2819 was to: develop a HAI reporting system; train hospitals to use the reporting system; develop standardized definitions, methods of surveillance and reporting; audit and validate the hospitals' infection data; support recommendations to improve the accuracy of data; and modify the system to ensure that hospital-specific infection rates, when released, would be fair, accurate, reliable and comparable. During the pilot year, hospital identifiers and hospital-identifiable data were encrypted by the Department in all public reports, as required by law.

The 2008 and 2009 reports provide HAI rates identified by hospital and by region for the following surgical site infections (SSIs): colon, coronary artery bypass graft (CABG) and hip replacement and for central line-associated blood stream infections (CLABSIs) in adult, pediatric, and neonatal intensive care units (ICUs).

METHODS

NYSDOH utilizes the CDC's National Healthcare Safety Network (NHSN) system for HAI reporting and was the first state to do so. Only hospitals that performed the selected surgical procedures or provided intensive care were required to report to the Department. In 2009, 179 acute care hospitals reported HAI data. Reporting indicators and risk adjustment methods were developed with the help of a Technical Advisory Workgroup (TAW) as required by Public Health Law 2819.

Since 2007, the Department has conducted on-site audits annually in 90 percent of all reporting hospitals. Surveys identifying indicator-specific infection prevention strategies were ascertained

from 98 percent of reporting hospitals. Survey results and audit findings are under review and an analysis of the findings will be issued under separate cover.

SUMMARY OF FINDINGS 2009

Analyses conducted of 2009 New York State hospital-acquired infection data are presented below by type of infection, beginning with SSIs and followed by CLABSIs.

Surgical Site Infection Data

Among the three types of surgical procedures monitored in New York State in 2009, the unadjusted SSI rates were highest for colon surgery (5.3 percent), followed by CABG surgery (2.3 percent for chest infections and 1.0 percent for donor site infections), and lastly hip replacement surgery (1.3 percent).

Colon Surgical Site Infections

Results

- 174 hospitals performed 17,475 colon surgery procedures and reported 929 colon SSIs in 2009, for an adjusted rate of 5.3 percent per 100 procedures using NHSN risk adjustment. This was lower than the national baseline (5.6 per 100 procedures), although the difference was not statistically significant.

- Annual NYS colon SSI rates have fluctuated between 5.9 per 100 procedures in 2007, 4.9 per 100 procedures in 2008, and 5.3 per 100 procedures in 2009. The downward trend in SSI rates was statistically significant.

- Of the 174 hospitals performing colon surgery in 2009, 12 hospitals had rates that were statistically higher than the state average and 12 had rates that were statistically lower than the state average in 2008. Of the 9 hospitals that had significantly high colon SSI rates in 2008, only one continued to be significantly higher than the state average in 2009.

- In 2009, 37 (21 percent) hospitals reported zero colon surgical site infections, but the majority of these facilities did not perform a sufficient number of procedures to include in the report or if reported, to be statistically significant.

- There was no association between SSI rates and the number of procedures performed.

- Of the 929 SSIs reported 91 percent of SSIs were identified during the initial hospitalization or readmission to the same or another hospital. Of the 9 percent of SSIs detected in outpatient settings, the majority were identified as superficial infections.

- Of the 929 colon SSIs, methicillin-resistant *Staphylococcus aureus* (MRSA) was identified in 64 (7 percent) of infections and was involved in just 0.4 percent of all colon procedures.

Lessons Learned

- Since 2007, the NYS colon SSI rates have shown a downward trend.

- The majority of SSIs were recognized on initial admission or readmission to a hospital. The majority of SSIs identified in outpatient locations were reported as superficial.

- Detection of SSIs in outpatient settings is extremely variable, labor intensive, and could not be standardized across hospitals. As a result, the Department does not include these infections in the hospital-specific comparisons.

- MRSA was not a common organism in colon SSIs.

Coronary Artery Bypass Graft (CABG) Surgical Site Infections

Results

- Forty hospitals performed 13,437 CABG procedures and reported 307 CABG chest SSIs in 2009, for an adjusted rate of 2.2 percent per 100 procedures using the NHSN risk adjustment.

- The NYS CABG chest SSI rate (2.2 per 100 procedures) was higher than the national baseline (2.0 per 100 procedures), although the difference was not statistically significant.

- Since reporting began in 2007, the CABG chest SSI rate in NYS has decreased significantly.

- Five hospitals had CABG chest SSI rates that were statistically higher than the state average and five hospitals had rates that were statistically lower than the state average in 2009. Of the five hospitals with high SSI rates in 2008, two remained statistically higher than the state average in 2008. The one hospital with a significantly lower CABG chest SSI rate in 2008 remained significantly lower than the state average in 2009.

- There was no association between SSI rates and the number of procedures performed for CABG chest incisions.

- Of 307 CABG chest SSIs reported, 96 percent were identified during the initial hospitalization or readmission to the same or and another hospital. Of the 4 percent of SSIs detected in outpatient settings, the majority were identified as superficial infections.

- Of the 307 CABG chest SSIs, MRSA was not the most common organism. MRSA was identified in 40 (13 percent) of the CABG chest SSIs and was involved in just 0.3 percent of all CABG procedures.

- Of the 13,437 CABG procedures, 12,414 involved a separate donor site. Of the 12,414 procedures, 129 (1.0 per 100 procedures using NHSN risk adjustment) resulted in a donor vessel SSIs.

- The NYS CABG donor vessel SSI rate (1.0 per 100 procedures) was higher than the national baseline rate (0.9 per 100 procedures), but the difference was not statistically significant.

- Since reporting began in 2007, the CABG donor vessel SSI rate in NYS has not changed significantly.

- Hospital-specific CABG donor vessel SSI rates in three hospitals were significantly higher than the state average and one hospital had a rate that was significantly lower than the state average in 2009. Of the five hospitals with significantly higher CABG donor vessel SSI rates in 2008, only one remained higher than the state average in 2009. Of the three hospitals with significantly lower CABG donor vessel SSI rates in 2008, only one remained lower than the state average in 2009.

- Seven (18 percent) hospitals reported zero CABG donor vessel infections in 2009.

- There was no association between SSI rates and the number of procedures performed with a separate donor site.

- Of the 12,414 CABG procedures involving a separate donor vessel site, MRSA was not the most significant organism. MRSA was identified in 12 (9.3 percent) of infections and was involved in just 0.1 percent of all CABG donor vessel site procedures.

- Of the 129 CABG donor vessel SSIs reported, 85 percent were identified during the initial hospitalization or on readmission to the same or another hospital. Of the 15 percent of SSIs detected in outpatient settings, the majority were identified as superficial infections.

Lessons Learned

- Since reporting began in 2007 CABG, chest SSI rates have decreased significantly, while donor vessel SSI rates have not changed significantly.

- The majority of CABG SSIs were recognized on initial admission or readmission to a hospital. The majority of SSIs identified in outpatient locations were reported as superficial.

- Detection of SSIs in outpatient settings is extremely variable, labor intensive, and could not be standardized across hospitals. As a result, the Department does not include these infections in the hospital-specific comparisons.

- There was no association between the number of CABG procedures performed and the SSI rates.

- MRSA was not one of the most common organisms involved in CABG SSIs.

Hip Surgical Site Infections

Results

- 169 hospitals performed 25,849 hip replacement or revision surgeries and reported 311 hip SSIs, for an adjusted rate of 1.3 percent per 100 procedures using NHSN risk adjustment. The NYS hip SSI rates in 2008 and 2009 were the same as the national baseline rate (2006-2008).

- Six hospitals had hip SSI rates that were significantly higher than the state average and one hospital had a rate that was significantly lower than the state average in 2009. Of the four hospitals with higher rates in 2008, none were significantly higher in 2009. The only hospital with a lower hip SSI rate in 2008 continued to be significantly lower in 2009.

- Sixty-six (39 percent) hospitals reported zero hip SSIs in 2009.

- The likelihood of infection was lower in hospitals that performed the most hip procedures.

- Of the 311 hip SSIs reported, 91 percent were identified during initial hospitalization or upon readmission to the same or another hospital. Of the 9 percent of SSIs detected in outpatient settings, the majority were identified as superficial infections.

- MRSA was associated with 33 percent of hip SSIs, but was involved in just 0.4 percent of all hip procedures.

Lessons Learned

- The hospitals that performed a high volume of hip replacement procedures had the lowest infection rates.

- The majority of SSIs were recognized on initial admission or readmission to a hospital. The majority of SSIs identified in outpatient locations were reported as superficial.

- Detection of SSIs in outpatient settings is extremely variable, labor intensive, and could not be standardized across hospitals. As a result, the Department did not include these infections in the hospital-specific comparisons.

- MRSA was one of the most common organisms involved in hip SSIs but was an extremely rare event occurring in only 0.4 percent or procedures.

Recommendations and Next Steps for Colon, CABG and Hip Replacement SSIs

- The Department will continue to monitor hospitals for data reporting completeness, timeliness and accuracy. Technical assistance will be provided as needed.

- The Department will evaluate facilities with the highest and lowest infection rates, determine if there are surveillance and reporting differences, assess trends over time and identify interventions to reduce infections and enhance patient safety.

- The Department will analyze the results of surveys conducted during 2008 and 2009 to identify strategies that are potentially effective in preventing colon, CABG, and hip replacement SSIs.

- The Department will consult with infection preventionists, hospital epidemiologists, and surgeons, to identify risk factors and prevention strategies to reduce colon, CABG, and hip replacement SSIs.

- The Department will analyze the influence of transfusions on colon surgery infection rates using hospital audits.

- The Department will provide hospitals with risk factors, strategies and interventions it identifies and work with them to ensure adoption of policies and procedures that reduce risk and enhance patient safety.

- Hospitals must closely monitor infection rates, implement prevention and control measures and measure effectiveness of the interventions using the HAI reporting data.

Central-Line Associated Blood Stream Infection (CLABSI) Data

In 2009, New York State monitored CLABSI rates in ten types of intensive care units (ICUs): cardiothoracic, coronary, medical-teaching, medical non-teaching, medical-surgical teaching, medical-surgical non-teaching, neonatal, neurosurgical, pediatric and surgical units.

Central Line-Associated Bloodstream Infections (CLABSI) in Adult and Pediatric ICUs

Results

- Compared to national baseline rates (2006-2008), NYS had a significantly higher CLABSI rate in non-teaching medical-surgical ICUs (1.9 per 1000 central line days) but a significantly lower rate in pediatric ICUs (2.3 per 1000 central line days) in 2009. None of the other adult ICU CLABSI rates in 2009 were significantly different than the national baseline rates (2006-2008) for the specific ICU.

- Since 2007, there has been an 18 percent reduction in adult/pediatric CLABSI rates in NYS after adjusting for type of ICU. The significant decreases occurred in cardiothoracic ICUs, medical ICUs in non-teaching hospitals, pediatric ICUs, and surgical ICUs. The major decline occurred between 2008 and 2009. None of the ICUs had a significant increase in CLABSI rates between 2007 and 2009.

- Hospital CLABSI rates varied within ICU settings as follows:

    - Cardiothoracic ICU CLABSI rates were not significantly different in any hospital when compared to the state average.
    - Coronary ICU CLABSI rates were not significantly different in any hospital when compared to the state average.
    - Medical ICU CLABSI rates in teaching hospitals were significantly higher in two hospitals when compared to the state average. One of the hospitals with a significantly higher rate in 2009 was also higher than the state average in 2008.
    - Medical ICU CLABSI rates in non-teaching hospitals were significantly higher in two hospitals when compared to the state average. Neither of these hospitals with a significantly higher rate in 2009 was higher than the state average in 2008.
    - Medical-Surgical ICU CLABSI rates in teaching hospitals were significantly higher in three hospitals and lower in two hospitals when compared to the state average. None of the hospitals with a significantly higher rate in 2009 were higher than the state average in 2008. One of the hospitals with a lower rate in 2009 was also lower than the state average in 2008.

- Medical-Surgical ICU CLABSI rates in non-teaching hospitals were significantly higher in seven hospitals and lower in four hospitals when compared to the state average. Two of the hospitals with a higher rate in 2009 were also higher than the state average in 2008. Two of the hospitals with a lower rate in 2009 were also lower than the state average in 2008.
- Neurosurgical ICU CLABSI rates were significantly higher in one hospital when compared to the state average. The hospital with a higher rate in 2009 was not significantly different than the state average in 2008.
- Pediatric ICU CLABSI rates were significantly higher in two hospitals and lower in one hospital when compared to the state average. The hospital with the significantly lower rate in 2009 had been significantly higher than the state average in 2008.
- Surgical ICU CLABSI rates were significantly higher in five hospitals and one hospital was significantly lower when compared to the state average. Two of the hospitals with a significantly higher rate in 2009 were also higher than the state average in 2008.

- By comparing the number of observed (actual) CLABSIs in 2009 (N=1066) with the number expected based on rates in 2007 (N=1305), the Department was able to calculate the expected cost savings. Using the 2007 consumer price index (CPI) for inpatient hospital services, the dollar savings was estimated to be between $1.7 million and $7.0 million in adult and pediatric ICUs.

- CDC issued the first state specific report on CLABSIs in May 2010. Although NYS adult and pediatric CLABSI rates were average when compared to the national baseline, NYS and other states that audit and validate the data had the highest rates.

- MRSA was not one of the common organisms associated with CLABSIs in adult and pediatric ICU patients. MRSA was detected in four percent of infections.

Lessons Learned

- Since 2007, hospitals have made significant strides in reducing CLABSIs in adult and pediatric ICUs.

- Using the 2007 CPI for inpatient hospital services, the dollar savings associated with the reduction of CLABSI was estimated to be between $1.7 million and $7.0 million in adult and pediatric ICUs. The methods used to derive these estimates were developed by CDC.[2]

- Unless or until other states have the same extensive audit and validation processes, comparisons between state and national rates may be misleading.

- A report of zero CLABSIs in specific ICUs may not be statistically significant due to low numbers of patients and days with a central line.

- MRSA was not found to be a significant organism associated with CLABSIs in adult and pediatric ICUs. Targeting resources solely for prevention of MRSA-associated CLABSIs in ICUs is not warranted.

CLABSIs in Neonatal ICUs (NICU)

Results

- After adjusting for birth weight distribution, the NYS Regional Perinatal Centers(RPC)/ Level III NICU CLABSI rate in 2009 (2.4 per 1000 line days) was significantly lower than the national baseline rate (2.9 per 1000 line days in 2006-2008).

- NYS RPC CLABSI rates decreased significantly since 2007.

- For Level III NICUS not designated as RPCs, the rate of CLABSIs increased in 2009 to 3.2 per 1000 central line days, although the increase was not statistically significant.

- After adjusting for birth weight distribution, the NYS Level II/III NICU CLABSI rate in 2009 (3.3 per 1000 line days) was not statistically different than the national baseline rate of 2.6 per 1000 line days in 2006-2008. Between 2007 and 2009, the CLABSI rates in NYS Level II/III NICUs did not change significantly.

- Among the 18 RPCs, there were two hospitals with significantly higher CLABSI rates and one hospital with a significantly lower CLABSI rate when compared to the state average. One RPC had zero CLABSIs but the rate was not statistically significant. The risk-adjusted CLABSI rates in RPCs ranged from 0.0 to 8.8 per 1000 line days.

- Among the 21 Level III NICUs, there was one hospital with a statistical higher CLABSI rate when compared to the state average and one did not have the minimum of 50 central line days to include in the report. Of the 20 Level III NICUs with sufficient central line days, five reported zero CLABSIs in 2009. The risk-adjusted Level III CLABSI rates ranged from 0.0 to 19.0 per 1000 central line days. This wide range is due to the relatively infrequent use of central lines in this patient population.

- Among the 14 Level II/III NICUs, there was one hospital with a statistically higher CLABSI rate when compared to the state average and six reported zero CLABSIs in

2009. The rates ranged from 0.0 to 33.9 per 1000 central line days. This wide range is due to the relatively infrequent use of central lines in this patient population.

- MRSA was not the most common organism and was involved in just 5 percent of NICU CLABSIs.

- NYS CLABSI and Umbilical -Catheter Associated Blood Stream Infections (UCABSI) rates in NICUs have decreased significantly between 2007 and 2009. Using the 2007 CPI for inpatient hospital services, the dollar savings associated with the decrease was estimated to be between $765,000 and $3.1 million in NICUs. The methods used to derive these estimates were developed by CDC.[2]

Lessons Learned

- The substantial decrease in NICU CLABSI rates that occurred in RPCs throughout the state was associated with a NYSDOH-funded NICU CLABSI collaborative prevention project designed and implemented by RPCs throughout the state. This effort will be expanded to the affiliated Level III NICUs in 2010. Level III NICUs had an increase in CLABSIs in 2009 thus these prevention efforts are of critical importance.

- The reduction of CLABSI in RPC NICUs resulted in significant healthcare cost savings.

- Between 2007 and 2009, the CLABSI rates in NYS Level II/III NICUs did not change significantly.

- For Level III and Level II/III NICUs, there continues to be a wide range in CLABSI rates among hospitals. This wide range is due to the relatively infrequent use of central lines in this patient population.

- NYS conducts intensive audits to assure complete and accurate reporting of HAIs. At the present time, only four other states conduct audits on CLABSI rates. All of the states conducting audits have higher rates of CLABSI when compared to national data. Unless or until other states have the same extensive audit processes, comparisons with national rates may be misleading.

Recommendations and Next Steps for CLABSI and Reporting

- The Department will continue to monitor all hospitals for data reporting completeness, timeliness and accuracy. Technical assistance will be provided as needed.

- The Department will evaluate hospitals with the highest and lowest rates of CLABSIs to ensure complete and accurate reporting, assess trends over time and identify interventions to reduce infections and enhance patient safety.

- The Department will analyze the results of surveys conducted during 2008 and 2009 to identify strategies that were potentially effective in preventing ICU CLABSIs.

- The Department will consult with infection preventionists, hospital epidemiologists, physicians, and neonatologists to identify evidence-based infection prevention strategies to reduce infections and enhance patient safety.

- The Department will provide hospitals with risk factors, strategies and interventions it identifies and encourage adoption of policies and procedures that reduce risk and enhance patient safety.

- The Department will support expansion of the Regional Perinatal Centers and Level III CLABSI prevention initiatives to the affiliated Level III NICUs in 2010.

OVERALL LESSONS LEARNED

- No hospital in New York State was found to have had high HAI rates across the board. In other words, a hospital may have had a high SSI rate for one type of surgery, but the hospital did not have a high infection rate for other surgical procedures or CLABSIs.

- High surgical procedure volume within hospitals was associated with decreased infection rates for hip replacement procedures but volume was not associated with SSI rates for colon and CABG procedures.

- Targeting resources solely for prevention of MRSA-associated CLABSIs in ICUs were not warranted.

- Department staff members were able to use the NHSN to identify hospitals with the highest infection rates, target areas in need of improvement, recommend prevention strategies and monitor progress over time.

- Hospitals had access to their own data and were able to compare their rates to national levels and monitor trends over time. In addition, groups involved in quality improvement and patient safety projects utilized the NHSN to monitor the effectiveness of infection prevention interventions.

- Strict adherence to the surveillance definitions is critical to provide consistency and comparability of data across hospitals. While additional clinical findings may be

appropriate for treatment decisions, they may not be available or appropriate for mandatory reporting purposes due to variation between providers and institutions.

- Hospitals with more sophisticated post-discharge surveillance methods were able to detect more infections and reported higher infection rates. Post-discharge surveillance methods were highly variable, resource dependent, influenced by availability of hospital information systems, and affect the number of reported infections. The majority of severe infections were detected during the initial hospitalization or upon readmission. In order to fairly compare hospitals and not penalize facilities with the best surveillance systems, the NYSDOH did not include surgical site infections detected solely by post-discharge surveillance but will continue to monitor the impact of this omission.

- Use of additional patient-specific risk information improved the ability to compare hospital-specific coronary artery bypass graft and hip replacement surgical site infection rates. The data in this report have been adjusted for these factors.

- Timely and complete data submission was often affected by infection control staffing turnover, vacant positions and the need for education and training to comply with the reporting mandate. Hospitals need to provide back-up personnel to ensure compliance with reporting requirements and patient safety.

- Hospitals need to integrate health information technology systems to support infection prevention and reporting efforts. For example, only 30 percent of hospitals have utilized electronic data entry of operating room procedure log information. The other 70 percent of hospitals are still manually entering this data into the NHSN.

- NYS conducted intensive audits to assure complete and accurate reporting of all required HAIs. Only four other states conducted audits on CLABSI rates at the time CDC issued a state-based CLABSI rate report. All of the states conducting audits had higher rates of CLABSI when compared to national data.[9] Unless or until other states have the same extensive audit processes, comparisons with national rates may be misleading.

- Using the 2007 consumer price index (CPI) for inpatient hospital services, the dollar savings associated with the reduction in CLABSI rates in adult, pediatric and neonatal ICUs in New York was estimated to be between $2.5 and $10 million. The methods used to derive these estimates were developed by CDC.[2]

HAI Reporting Program - Next Steps

The Department will work to improve HAI reporting and infection prevention efforts including taking the following actions:

- Continue to focus on hospitals with the highest and lowest infection rates to identify risk factors for infection and opportunities for improvement.
- Integrate the hospital-specific infection rates into the Department's hospital profile web site, so it is easy to understand.
- Continue to monitor the accuracy and timeliness of data being submitted, discuss findings, ensure corrective action is taken and provide technical assistance as needed.
- Conduct onsite audits to evaluate surveillance methods, enhance surveillance definitions, and assess completeness and accuracy of reporting.
- Continue to evaluate the impact of post-discharge surveillance on surgical site infection rates and implications for public reporting.
- Continue to provide education, training and ongoing support to hospital infection reporting staff.
- Continue to provide hospitals with risk factors, strategies and interventions it identifies and encourage adoption of policies and procedures to reduce risk and enhance patient safety.
- Evaluate and monitor the effect of prevention practices on infection rates and seek opportunities to enhance patient safety.
- Evaluate the relationship between infection prevention personnel resources and surveillance activities, infection rates, and prevention projects.
- Collaborate with other department staff to investigate outbreaks and evaluate emerging trends.
- Consult with infection preventionists, hospital epidemiologists, surgeons, neonatologists and the Cardiac Advisory Committee to identify risk factors and prevention strategies to reduce infections.
- Monitor HAI prevention projects for compliance with program objectives, fiscal responsibility and potential applicability to other hospitals or healthcare settings.
- Continue to work with the TAW and seek guidance on the selection of reporting indicators, evaluation of system modifications, evaluation of potential risk factors, methods of risk adjustment and presentation of hospital-identified data.
- Continue to require, refine and report hospital-specific HAI indicators to allow consumers to make informed choices.
- Evaluate the impact of audit and validation on reported HAI infection rates and state-based comparisons.

CONCLUSIONS

Since New York State hospitals have been reporting hospital-acquired infections to the NYSDOH, it is clear that the NHSN system is a useful tool in monitoring HAI rates and evaluating the effectiveness of prevention strategies. Hospitals have continuous access to their own data and can compare their rates to national levels and monitor trends over time. In addition, the NYSDOH has continuous access to the data reported by the hospitals for consistent real-time surveillance, identification of trends and provision of technical assistance as needed. The collected data are made available to the public annually, allowing the public the ability to review hospitals' performance for these particular procedures and help guide their personal medical decisions.

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Background

Healthcare-associated infections are a major public health problem. According to the Centers for Disease Control and Prevention (CDC), there were an estimated 1.7 million healthcare-associated infections and 99,000 deaths from those infections in 2002. [1] A recent CDC report estimated the annual medical costs of healthcare-associated infections to U.S. hospitals to be between $28 and $45 billion, adjusted to 2007 dollars.[2] These monetary costs do not measure the effect of these infections on the patients, their family members, friends and colleagues. Their emotional, physical and personal costs are not quantifiable.

In July, 2005, the Legislature passed and the Governor signed Public Health Law 2819 (Appendix A) requiring hospitals to report select hospital-acquired infections (HAIs) to the New York State Department of Health (NYSDOH or "the Department"). The legislation provided an initial "pilot phase" year (2007) to develop the reporting system; train hospitals on its use; standardize definitions, methods of surveillance and reporting; audit and validate the hospitals' infection data and modify the system to ensure that the hospital-identified infection rates would be fair, accurate and reliable. New York State (NYS) selected the CDC's National Healthcare Safety Network (NHSN) for reporting and New York was the first state to use this system. Currently, 21 states are committed to using the NHSN and it has become the standard for state reporting.

On June 30, 2008, the Department issued the pilot year report for 2007 describing the development and implementation of the HAI reporting system, an assessment of the overall accuracy of the data submitted in the pilot phase, guidance for improving the accuracy of hospital acquired infection reporting, lessons learned, and next steps.[3] The pilot year 2007 report and all subsequent reports are available at the following web site:
http://www.nyhealth.gov/statistics/facilities/hospital/hospital_acquired_infections/

The following report summarizes 2009 NYSDOH HAI reporting program activities; provides 2009 hospital-acquired infection rates by individual hospital, region, and NYS totals; and compares these rates to baseline national data (2006-2008).[8]

Technical Advisory Workgroup (TAW)

PHL 2819 requires NYSDOH to utilize a Technical Advisory Workgroup (TAW) to assist with the development of methods that ensure fair and accurate comparisons between hospitals and with data collection, reporting and analysis. The TAW is made up of a panel of professionals representing state and nationally-recognized experts in the prevention, identification and control of hospital acquired infection and the public reporting of performance data as prescribed in the legislation. This group plays a critical role in the selection of reporting indicators, the evaluation of system modifications, the evaluation of potential risk factors, methods of risk adjustment and presentation of the hospital-identified data. The TAW met twice a year in 2006-2008, once in 2009 and once, thus far, in 2010.

HAI Reporting Indicators for 2009

PHL 2189 provided for the reporting of select HAIs during the pilot year, 2007. The initial starter set included central line-associated bloodstream infections (CLABSIs) and surgical site infections (SSIs) associated with coronary artery bypass procedures and colon surgical procedures. Thereafter, the Department, with input from the TAW may phase in or phase out indicators to be reported. In 2008, the Department added infections associated with hip replacement or revision surgery and in July 2009, began pilot testing a new *Clostridium difficile* infection indicator. The hospital acquired infections included in this report are described below:

Surgical Site Infections (SSIs) are infections that occur after the operation in the part of the body where the surgery took place. Most SSIs are limited and only involve the skin surrounding the incision; others may be deeper and more serious. Infections related to the following types of surgery were reported:

- Colon - Colon surgery is a procedure performed on the lower part of the digestive tract also known as the large intestine or colon.
- Coronary artery bypass graft (CABG) - CABG surgery is a procedure performed for heart disease in which a vein or artery from the chest or another part of the body is used to create an alternate path for blood to flow to the heart, bypassing a blocked artery.
- Hip - Hip replacement or revision surgery involves removing damaged cartilage and bone from the hip joint and replacing them with new, man-made parts.

Central Line-Associated Bloodstream Infections (CLABSI) - A central line is a tube that is placed into a patient's large vein, usually in the neck, chest, arm or groin. The line is used to give fluids and medication, withdraw blood, and monitor the patient's condition. A bloodstream infection can occur when microorganisms (e.g., bacteria, fungi) travel around or through the tube, attach and multiply on the tubing or in fluid administered through the tubing and then enter the blood.

CLABSI are not monitored throughout the hospital, but rather, in selected intensive care units (ICUs). ICUs are hospital units that provide intensive observation and treatment for patients either dealing with, or at risk of developing life threatening problems. ICUs are described by the types of patients in the unit. The following ICU types are required to participate in the reporting program for CLABSI:

- Cardiothoracic Surgery ICUs
- Coronary ICUs
- Medical ICUs
- Medical Surgical ICUs
- Neonatal ICUs
- Neurosurgical ICUs
- Pediatric ICUs
- Surgical ICUs

Timeliness and Completeness of Reporting

HAI reporting program personnel monitored the timeliness, completeness and accuracy of hospital reports and conducted onsite audits at hospitals to assure compliance with the statutory reporting requirements. Some delays in reporting are inevitable due to the prolonged incubation period for some surgical site infections. For example, if an implant is involved (e.g., sternal wires, hip prostheses), an infection occurring up to a year after the surgery is still counted and reported. However, in general, reporting should occur as required within sixty days after the completion of each surveillance month.

Data Validation

Data reported to the NHSN are validated using a number of methods.

1) Point of entry checks - The NHSN is a web-based data reporting and submission 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.
2) Monthly checks for internal consistency - Each month, NYS HAI staff download the data from the 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.
3) Annual on-site audits - Audits of a sample of medical records are conducted by the Department to assess compliance with reporting requirements. Onsite visits have been conducted annually by HAI program staff. The 2009 data audits have been completed in 163 of 179 (91 percent) hospitals. The purposes of the audit are to:
    a. Enhance the reliability and consistency of applying the surveillance definitions;
    b. Evaluate the adequacy of surveillance methods to detect infections;
    c. Evaluate intervention strategies designed to reduce or eliminate specific infections; and
    d. For data inconsistencies identified, discrepancies are discussed and records modified by the hospitals as needed.

    Ongoing monitoring, education and training have been and continue to be provided to ensure the integrity of the data.
4) Checks for completeness in reporting - NYS HAI staff match the NHSN data to other NYSDOH data sets to assess the completeness of the data reported to the NHSN. The other databases include the Cardiac Surgery Reporting System[5] (CSRS) and Statewide Planning and Research Cooperative System[6] (SPARCS).
    a. NHSN CABG data are linked to the CSRS database. The cardiac services program collects and analyzes risk factor information for patients undergoing cardiac surgery and uses the information to monitor and report hospital and physician-specific mortality rates.
    b. NHSN colon and hip data are linked to the SPARCS database. SPARCS is an administrative billing database that contains details on patient diagnoses and treatments, services, and charges for every hospital discharge in New York State.

Thresholds for Reporting Hospital-Specific Infection Rates

Only hospitals that perform the selected surgical procedures or provide ICU care are required to report the designated indicator data and HAIs. 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 of central lines is small. To assure a fair and representative set of data, the Department adopted the NHSN minimum thresholds for reporting. The minimum thresholds are:

- For surgical site infections, there must be a minimum of 20 patients undergoing a surgical procedure.
- For CLABSIs and umbilical catheter-associated blood stream infections (UCABSIs) there must be a minimum of 50 central-line days. Central line days are the total number of days central lines are used for each patient in an ICU or NICU over a given period of time.

Risk Adjustment

Risk adjustment is a statistical technique that allows hospitals to be more fairly compared. The adjustment takes into account the differences in patient populations related to severity of illness and other factors that may affect the risk of developing a hospital acquired infection. 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. Therefore, before comparing the infection rates of hospitals, it is important to adjust for the proportion of high and low risk patients.

New York State and National Comparison

NYS annual HAI rates were compared to the baseline National data from 2006-2008[8]. The CDC modified definitions as of January 1, 2008 and used the newer definitions and methods of analysis for their 2006-2008 report. Therefore, the Department used the same modifications for National comparisons.

For the comparison of surgical site infection rates, NYS rates were directly adjusted based on the proportion of surgeries in each NHSN risk group in the 2006-2008 National baseline population. The NHSN 2006-2008 report uses three measures to account for risk differences in patients undergoing surgical procedures:

1. Wound class – contaminated or dirty wound sites at the time of surgery are more likely to become infected than clean wound sites.
2. Duration of surgery – longer surgeries are more likely to result in infection both because of the complexity of the surgical procedure and the amount of time the patient's internal organs are exposed.
3. American Society of Anesthesiologists' (ASA) Classification of Physical Status score – a scoring method used to capture the physical and medical condition of a patient prior to surgery. Severely ill patients or those with multiple medical conditions are more likely to

get an infection than healthier patients (see Glossary of Terms for more information on ASA score).

For the comparison of adult and pediatric CLABSI infection rates, crude rates were compared within each type of ICU. Patient level data is not collected on adult or pediatric patients with central lines so risk adjustment is limited to the type of intensive care unit and numbers of patients with a central line.

For the comparison of Neonatal ICU CLABSI and UCABSI, rates were indirectly standardized based on NHSN birth weight category, since there were few infections within birth weight categories. The infection information is collected by type of NICU [Level II/III, Level III or Regional Perinatal Center (RPC)] and birth weights of infants in the unit with central lines. NICU CLABSI and UCABSI rates are compared for facilities providing the same level of neonatal intensive care and have been adjusted for the birth weight distribution of infants with lines on the specific unit. The indirect standardization method was based on a Poisson regression model.

NYS Hospital-Specific Rate Comparisons

All NYS hospital-specific tables, charts and data analyses use the criteria and risk adjustments developed by the Department in conjunction with the Technical Advisory Workgroup. These changes resulted from lessons learned during the pilot year and include the use of additional sources of data to improve risk adjustment for hospital comparisons.

Surgical Site Infection Modifications:

1. The hospital-specific SSI rates do not include infections that were identified after hospitalization (post-discharge) if the infection did not involve a readmission to the same hospital where surgery was performed or admission to another hospital. This decision was made because post-discharge surveillance efforts were found to be extremely variable, labor intensive, and could not be standardized across hospitals. Despite post-discharge surveillance being required by the NHSN, the Department was unable to audit for accuracy or completeness, and inclusion of these infections would unfairly penalize facilities with the most intensive surveillance efforts.
2. The SSI reporting form was modified to capture additional information on surgical site infections that became evident after the patient had been discharged but involved a readmission to another hospital. These events were counted in the infection rate of the hospital where the original surgery was performed.

Central Line-Associated Bloodstream Infection Modifications:

1. The CLABSI reporting form was modified to identify cases in which multiple blood cultures were obtained, but only one specimen was positive, and the one positive was clinically considered to be a contaminant and no treatment was given. These events were deleted from the hospital-specific infection rates but were not deleted in national comparisons since the information was not available on the national level. This allows for exclusion of certain cases that meet the NHSN surveillance definitions but are not deemed clinically significant; exclusion by these criteria was rare.

2. Neonatal intensive care unit CLABSIs and UCABSIs do not include "clinical sepsis" events. Although the CDC's NHSN required reporting of these events (until January 2010), surveillance and detection is extremely difficult, labor intensive, and inconsistently applied. Since these events by definition do not involve positive blood cultures, their detection relies upon surveillance of clinical conditions that cannot be systematically or consistently ascertained by infection prevention staff.
3. The CLABSI reporting form was modified to capture information on the patient location (operating room, emergency room, intensive care unit, etc.) when a central line was placed. This information was collected to determine where to focus infection prevention efforts but was not used to modify the infection rates.

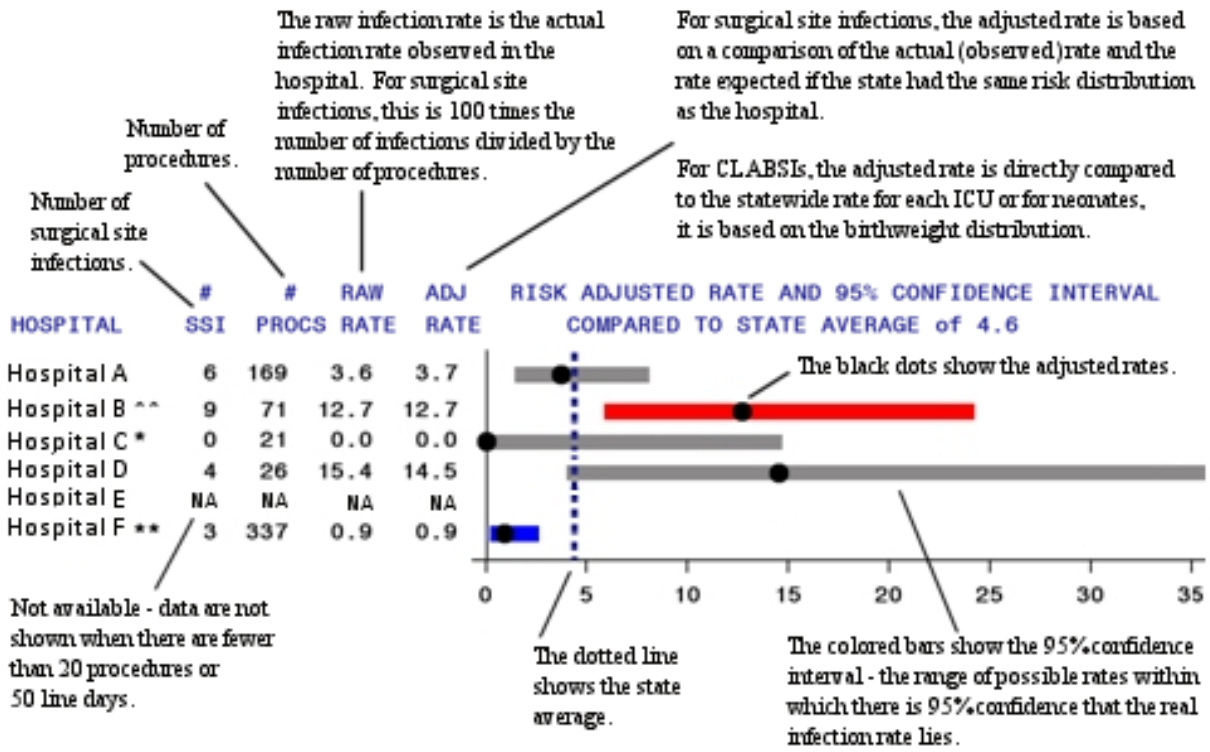
In addition to the NHSN risk factors, NYSDOH also utilized data from the CSRS, SPARCS and the NHSN to include the following patient-level risk factors for each HAI indicator:

1. Colon surgery – None of the additional risk factors studied improved the NHSN risk adjustment model.
2. Coronary Artery Bypass Graft surgery – For chest site infections, including the following indicators from the CSRS improved the risk adjustment model by 20%:
    a. Diabetes
    b. Body Mass Index (BMI) – relationship between weight and height
    c. End Stage Renal Failure (ESRD)
    d. Gender
    e. History of Chronic Obstructive Pulmonary Disease (COPD)
    f. Medicaid recipient
3. Coronary Artery Bypass Graft surgery – For donor (artery or vein) site infections, including the following indicators from the CSRS improved the risk adjustment model by 14%:
    a. BMI
    b. History of Congestive Heart Failure (CHF)
    c. Gender
    d. Age group
    e. Emergency or trauma patient
    f. History of Chronic Obstructive Pulmonary Disease (COPD)
    g. Diabetes
4. Hip Prosthesis surgery – Including the following indicators, available in the NHSN, improved the risk adjustment model by 4%:
    a. Initial surgery or revision
    b. Total hip replacement or partial hip replacement

Risk-adjusted infection rates for surgical site infections in each hospital were calculated using a two step method. First, all the data for the state were pooled to develop a logistic regression model predicting the risk of infection based on patient-specific risk factors. Second, that model was used to calculate the expected number of infections for each hospital. The observed infection rate was then divided by the hospital's expected infection rate. If the resulting ratio is larger than one, the provider has a higher infection rate than expected on the basis of its patient mix. If it is smaller than one, the provider has a lower infection rate than expected from 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." [7] Hospitals with risk-adjusted rates significantly higher or lower than the state average were identified using exact two-sided 95% Poisson confidence intervals. The Poisson distribution is used for rates based on rare events. All data analyses were performed using SAS versions 9.1 or 9.2 (SAS Institute, Cary NC).

Figure 1. How to Read Hospital-Specific Infection Rate Tables

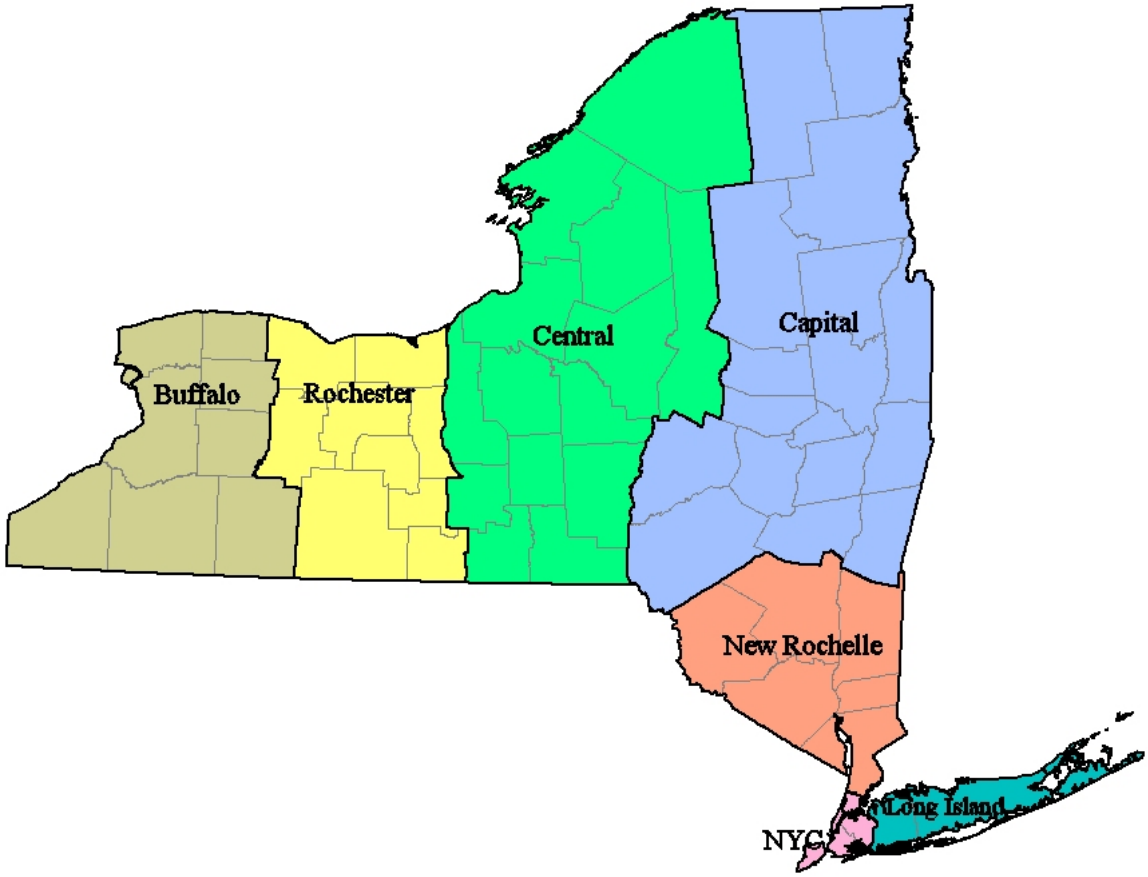


- Hospital A had an adjusted infection rate very similar to the state average. The grey bar (95% confidence interval) goes over the dotted line representing the state average, indicating no statistical difference in the rates.
- Hospital B has an adjusted infection rate that is significantly higher than 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 a *, because they do 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, because the blue bar is entirely to the left (representing lower rates) of the dotted line (Figure 1).

NYS Regional Comparisons

NYS rates by region were calculated for each indicator using the same inclusion and exclusion criteria as described in the section above for hospital comparisons. Due to the number of different risk factors used to adjust for SSI rate comparisons, indirect standardization was used therefore regions can only be compared to the state average. Regional CLABSI rates can be directly compared to one another for the same type of ICU. The following map depicts the NYS regions (Figure 2):

Figure 2– Regional Map



Analysis of Trends

All analyses of trends were based solely on NYS data (i.e. not comparing to National rates), and used consistent surveillance definitions for all years.

For surgical site infections, time trends were assessed separately for colon, CABG chest, CABG donor, and hip replacement infections. For colon and CABG surgical site infections, the Cochran-Armitage test for an overall linear trend between crude 2007 and 2009 rates was used. Since only two years of data were available for hip replacement SSI, the Chi-square test for a difference between 2008 and 2009 rates was used.

For blood stream infections (BSIs), a linear trend in crude Poisson rates was also tested within each type of ICU (results not shown). In addition, time trends were assessed using the standardized infection ratio (SIR) methodology suggested by the CDC.[9] The SIR is defined in this analysis as the number of observed infections in 2009, divided by the number of infections that would have been expected if NYS CLABSI rates had not changed since 2007. Possible changes in the use of central lines in ICUs between 2007 and 2009 are taken into account by adding up the number of ICU-specific observed and expected infections across the different types of ICU. An SIR of 1 would mean that there was no change in infection rates, after adjusting for type of ICU. An SIR of 0.8 would mean that there was a 20% reduction in infection rates, after adjusting for type of ICU.

Note: In 2007 hospitals with four or more adult and pediatric ICUs, BSI surveillance was only required for three consecutive months in each ICU, however the majority of facilities chose to report the entire year. Beginning in 2008, BSI surveillance in all ICUs was required for the entire year.

Colon Surgical Site Infection Rates

National and NYS Colon SSI Rates

In 2009, the NYS colon SSI rate (5.3 per 100 procedures) was lower than the national baseline (5.6 per 100 procedures), although the difference was not statistically significant. Annual NYS colon SSI rates have fluctuated between 5.9 per 100 procedures in 2007, 4.9 per 100 procedures in 2008, and 5.3 per 100 procedures in 2009 (Figure 3). The downward trend was statistically significant ($p = 0.009$ Cochran-Armitage Test for Trend).

In 2009, 929 colon SSIs were reported in NYS hospitals. Of these, 588 (63 percent) were identified during the initial hospitalization, 252 (27 percent) were identified upon readmission to the same hospital, 86 (9 percent) were detected in outpatient settings and 3 (<1 percent) involved a readmission to another hospital. Of the 86 infections detected in outpatient settings, 77 (90 percent) were superficial infections (Table 1). Detection of SSIs in outpatient settings is extremely variable, labor-intensive, and not standardized across hospitals; therefore, the Department did not include these infections in the regional and hospital-specific comparisons.

Colon SSI Regional Comparisons

Colon SSI rates were significantly higher in New York City (5.6 per 100 procedures) and lower in the New Rochelle Region (3.7 per 100 procedures) when compared to the state average (4.8 per 100 procedures) (Table 2).

Hospital-Specific Colon SSI Rate Comparisons

Of the 174 hospitals performing colon surgery in 2009, 21 performed fewer than 20 procedures and were not compared to the state average. Twelve hospitals had rates that were statistically higher than the state average and twelve had rates that were statistically lower than the state

average. Of the 9 hospitals that had significantly high colon SSI rates in 2008, only one continued to be significantly higher than the state average in 2009.

In 2009, 37 (21 percent) hospitals reported zero colon surgical site infections, but the majority of these facilities did not perform a sufficient number of procedures to report or if reported, to be statistically significant. There was no association between SSI rates and the number of procedures performed (Figure 4).

Microorganisms Associated with Colon SSIs

In NYS, the most common microorganisms associated with colon SSIs were Enterococci, *Escherichia sp.,* and *Staphylococcus aureus.* Methicillin-Resistant *Staphylococcus aureus* (MRSA) would have been the seventh most common organism if considered separately from sensitive *Staphylococcus aureus* isolates. MRSA accounted for less than 7 percent of colon SSIs. Of the 17,475 colon surgery procedures, 64 (0.4 percent) resulted in an MRSA colon SSI (Table 3).

CABG Surgical Site Infection Rates

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 infection rates are presented separately.

National and NYS CABG Chest SSI Rates

In 2009, the NYS CABG chest SSI rate (2.2 per 100 procedures) was higher than the national baseline (2.0 per 100 procedures), although the difference was not statistically significant. Since reporting began in 2007, the CABG chest SSI rate in NYS has decreased significantly (Cochran-Armitage Test for Trend, p=0.02) (Figure 5).

In 2009, 307 CABG chest SSIs were reported by the 40 hospitals performing CABG procedures in NYS. Of these, 73 (24 percent) were identified during the initial hospitalization, 221 (72 percent) were identified upon readmission to the same hospital, 12 (4 percent) were detected in outpatient settings and 1 (<1 percent) involved a readmission to another hospital (Table 4). Of the 12 infections detected in outpatient settings, 10 (83 percent) were superficial infections. Detection of SSIs in outpatient settings is extremely variable, labor-intensive, and not standardized across hospitals; therefore, the Department did not include these infections in the regional and hospital-specific comparisons.

In NYS, regional and hospital-specific CABG chest SSI rates were further risk adjusted based upon the following patient-specific risk factors: diabetes, obesity, end stage renal disease, female gender, chronic obstructive pulmonary disease (COPD), and Medicaid status.

CABG Chest SSI Regional Comparisons

Within NYS, Buffalo (3.5 per 100 procedures) and NYC (2.9 per 100 procedures) regions had significantly higher CABG chest SSI rates and Rochester (1.3 per 100 procedures), New Rochelle (1.3 per 100 procedures) and Long Island (1.5 per 100 procedures) had significantly lower rates than the state average of 2.2 per 100 procedures (Table 2).

Hospital-Specific CABG Chest SSI Rate Comparisons

Hospital-specific CABG chest SSI rates are provided in Figure 6. In 2009, five hospitals had rates that were statistically higher than the state average and five hospitals had rates that were statistically lower than the state average. Of the five hospitals with high SSI rates in 2008, two remained statistically higher than the state average in 2009. The one hospital with a significantly lower CABG chest SSI rate in 2008 remained statistically lower than the state average in 2009. One hospital reported zero CABG chest site infections in 2009. There was no association between SSI rates and the number of procedures performed.

Microorganisms Associated with CABG Chest SSIs

The most common microorganisms associated with CABG chest SSIs were *Staphylococcus aureus* and coagulase negative staphylococci. MRSA would have been the third most common organism if counted separately from sensitive *Staphylococcus aureus* isolates. MRSA was associated with 13 percent of chest SSIs in CABG surgery. Of the 13,437 CABG procedures, 40 (0.3 percent) patients developed an MRSA CABG chest SSIs (Table 5).

National and NYS CABG Donor Vessel SSI Rates

In 2009, the NYS CABG donor vessel SSI rate (1.0 per 100 procedures) was higher than the national baseline rate (0.9 per 100 procedures), but the difference was not statistically significant. Since reporting began in 2007, the CABG donor SSI rate in NYS has not significantly changed (Cochran-Armitage Test for Trend, p=0.48) (Figure 7).

In 2009, 129 CABG donor SSIs were reported by the 40 hospitals performing CABG procedures in NYS. Of these, 27 (21 percent) were identified during the initial hospitalization, 83 (64 percent) were identified upon readmission to the same hospital, 19 (15 percent) were detected in outpatient settings, and none involved readmission to another hospital. Of the 19 infections detected in outpatient settings, 16 (84 percent) were superficial incisional infections (Table 6). Detection of SSIs in outpatient settings is extremely variable, labor-intensive, and not standardized across hospitals; therefore, the Department did not include these infections in the regional and hospital-specific comparisons.

In NYS, regional and hospital-specific CABG donor SSI rates were further risk adjusted based upon the following patient-specific risk factors: body mass index, gender, diabetes, COPD, congestive heart failure, age over 75, and emergency/trauma.

CABG Donor Vessel SSI Regional Comparisons

The CABG donor vessel SSI rate was significantly higher in the New York City region (1.2 per 100 procedures) when compared to the state average (0.9 per 100 procedures). New York City was the only region with a statistically significant difference in CABG donor vessel SSI rates (Table 2).

Hospital-Specific CABG Donor Vessel SSI Rate Comparisons

Hospital-specific CABG donor vessel SSI rates are provided in Figure 8. In 2009, three hospitals had CABG donor vessel SSI rates that were statistically higher than the state average and one hospital had a rate that was statistically lower than the state average. Of the five hospitals with statistically higher CABG donor SSI rates in 2008, only one remained higher than the state average in 2009. Of the three hospitals with statistically lower CABG donor SSI rates in 2008, only one remained lower than the state average in 2009. Seven (18 percent) hospitals reported zero CABG donor vessel site infections in 2009. There was no association between SSI rates and the number of procedures performed.

Microorganisms Associated with CABG Donor Site SSIs

The most common microorganisms associated with CABG donor vessel site SSIs were *Staphylococcus aureus, Escherichia sp.* and enterococci. MRSA would have been the seventh most common organism if counted separately from sensitive *Staphylococcus aureus* isolates. MRSA was associated with 9 percent of CABG donor vessel SSIs. Of the 12,414 CABG procedures involving a separate donor vessel site, 12 (0.1 percent) patients developed an MRSA CABG donor vessel SSI (Table 7).

Hip Surgical Site Infection Rates

National and NYS Hip SSI Rates

HIP SSI rates became reportable in 2008. After applying the NHSN risk adjustment strategy, the NYS hip SSI rates in 2008 and 2009 were the same as the national baseline rate (2006-2008). The national and NYS rates were 1.3 hip SSIs per 100 procedures (Figure 9).

In 2009, 169 hospitals performed hip surgery. Of the 311 hip SSIs reported, 34 (11 percent) were identified during the initial hospitalization, 243 (78 percent) were identified upon readmission to the same hospital, 27 (9 percent) were identified in outpatient settings and 7 infections (3 percent) involved a readmission to another hospital (Table 7). Of the 27 infections that were detected in outpatient settings, 24 (89 percent) were superficial incisional infections, 1 (4 percent) infection was a deep incisional infection, and 2 (7 percent) were organ space infections. Since detection of SSIs in outpatient settings is extremely variable, labor intensive, and could not be standardized across hospitals; the Department did not include the infections identified in outpatient settings in the regional and hospital-specific comparisons (Table 8).

In NYS, regional and hospital-specific hip SSI rates were further adjusted for type of procedure (total versus partial and replacement versus revision). This information was not available at the national level and therefore, could not be used for NYS and national comparisons.

Hip SSI Regional Comparisons

Within NYS, the rate of hip SSIs was significantly lower in the Central Region when compared to the statewide average. No other statistically significant regional differences were identified (Table 2).

Hospital-Specific Hip SSI Rate Comparisons

Hospital-specific hip SSI rates are provided in Figure 10. In 2009, six hospitals had hip SSI rates that were statistically higher than the state average and one hospital had a rate that was statistically lower than the state average. Of the four hospitals with statistically higher rates in 2008, none were significantly higher in 2009. The only hospital with a significantly lower hip SSI rate in 2008 continued to be significantly low in 2009. Sixty-six (39 percent) hospitals reported zero hip SSIs in 2009.

Since hip replacements involve implanted hardware, infections may not be evident for up to one year after the procedure. Therefore, the reported 2008 SSI rates changed slightly between last year's report and this report. High surgical volume within hospitals was associated with decreased infection rates.

Microorganisms Associated with Hip SSIs

The most common microorganisms associated with hip SSIs were *Staphylococcus aureus,* coagulase negative staphylococci, and enterococci. MRSA was the most common organism if counted separately from sensitive *Staphylococcus aureus* isolates. MRSA was associated with 33 percent of hip SSIs. Of the 25,849 hip surgeries performed, 102 (0.4 percent) patients developed an MRSA SSI (Table 9).

CLABSIs in Adult/Pediatric ICUs

National and NYS CLABSI Rates in Adult/Pediatric ICUs

Compared to national baseline rates (2006-2008), NYS had a significantly higher CLABSI rate in non-teaching medical-surgical ICUs but a significantly lower rate in pediatric ICUs in 2009. None of the other adult ICU CLABSI rates in 2009 were significantly different than the national baseline rates (2006-2008) for the specific ICU.

Since 2007, there was an 18 percent reduction in adult/pediatric CLABSI rates in NYS after adjusting for type of ICU. The significant decreases occurred in Cardiothoracic ICUs, Medical ICUs in non-teaching hospitals, Pediatric ICUs, and Surgical ICUs. The major decline occurred between 2008 and 2009. None of the ICUs had a significant increase in CLABSI rates between 2007 and 2009 (Table 10).

Using the standardized infection ratio methodology suggested by the CDC, the number of observed CLABSIs (N=1066) in 2009 was compared to the number of expected CLABSIs (N=1305) based on rates in 2007 (Table 11). Using the 2007 consumer price index (CPI) for inpatient hospital services, the dollar savings was estimated to be between $1.7 million and $7.0 million in adult and pediatric ICUs.[2]

After consultation with the technical advisory workgroup, a custom field was added to the reporting system in 2008 to document likely contamination rather than true infection. These events involve situations in which multiple blood cultures were obtained but only one specimen was positive, the one positive was thought to be a contaminant and either no treatment was given or treatment was discontinued upon reviewing the blood culture results. These events were deleted from New York State regional and hospital-specific infection rate comparisons but were not deleted in the national comparisons since the information was not available on the national level.

CLABSI Rates in Adult/Pediatric ICUs - Regional Comparisons (Table 2)

Within NYS, regional CLABSI rates were compared to the state average for the specific type of ICU. The following differences in regional CLABSI rates by type of ICU were seen in 2009:

- Cardiothoracic ICU CLABSI rates were significantly lower in the Central Region.
- Coronary ICU CLABSI rates were significantly lower in the Central and New Rochelle Regions.
- Medical ICU CLABSI rates in teaching hospitals were not significantly different in any Region.
- Medical ICU CLABSI rates in non-teaching hospitals were significantly higher in the New Rochelle Region.
- Medical-Surgical ICU CLABSI rates in teaching hospitals were significantly higher in the Buffalo Region.
- Medical-Surgical ICU CLABSI rates in non-teaching hospitals were significantly higher in NYC and significantly lower in the Central Region.
- Neurosurgical ICU CLABSI rates were significantly higher in the New Rochelle Region.
- Pediatric ICU CLABSI rates were significantly lower in the Capital Region.
- Surgical ICU CLABSI rates were significantly higher in the Buffalo Region and significantly lower in the Central Region.

There did not appear to be consistent regional differences in CLABSI rates by type of ICU between 2008 and 2009.

Hospital-Specific CLABSI Rates in Adult and Pediatric ICUs

Within NYS, hospital-specific CLABSI rates were compared to the state average for the specific type of ICU. If CLABSI rates are statistically lower than the state average, the bar is blue and if

statistically higher, the bar is red (Figures 11 –19). The following statistically significant differences were seen in 2009:

- Hospital-Specific Cardiothoracic ICU CLABSI rates were not significantly different in any hospital when compared to the state average.
- Hospital-Specific Coronary ICU CLABSI rates were not significantly different in any hospital when compared to the state average.
- Hospital-Specific Medical ICU CLABSI rates in teaching hospitals were significantly higher in two hospitals when compared to the state average. One of the hospitals with a significantly higher rate in 2009 was also higher than the state average in 2008.
- Hospital-Specific Medical ICU CLABSI rates in non-teaching hospitals were significantly higher in two hospitals when compared to the state average. Neither of these hospitals with a significantly higher rate in 2009 was higher than the state average in 2008.
- Hospital-Specific Medical-Surgical ICU CLABSI rates in teaching hospitals were significantly higher in three hospitals and lower in two hospitals when compared to the state average. None of the hospitals with a significantly higher rate in 2009 were higher than the state average in 2008. One of the hospitals with a lower rate in 2009 was also lower than the state average in 2008.
- Hospital-Specific Medical-Surgical ICU CLABSI rates in non-teaching hospitals were significantly higher in seven hospitals and lower in four hospitals when compared to the state average. Two of the hospitals with a higher rate in 2009 were also higher than the state average in 2008. Two of the hospitals with a lower rate in 2009 were also lower than the state average in 2008.
- Hospital-Specific Neurosurgical ICU CLABSI rates were significantly higher in one hospital when compared to the state average. The hospital with a higher rate in 2009 was not significantly different than the state average in 2008.
- Hospital-Specific Pediatric ICU CLABSI rates were significantly higher in two hospitals and lower in one hospital when compared to the state average. The hospital with the significantly lower rate in 2009 had been significantly higher than the state average in 2008.
- Hospital-Specific Surgical ICU CLABSI rates were significantly higher in five hospitals and one hospital was significantly lower when compared to the state average. Two of the hospitals with a significantly higher rate in 2009 were also higher than the state average in 2008.

Some hospitals have reported zero CLABSIs in specific ICUs although the rate may not be statistically significant due to the lower number of patients and days with a central line. The following number and percent reported zero infections by ICU type:

- 10/33 (33 percent) Cardiothoracic ICUs
- 14/46 (30 percent) Coronary ICUs
- 0/20 (0 percent) Medical ICUs in teaching hospitals
- 4/25 (16 percent) Medical ICUs in non-teaching hospitals
- 2/17 (12 percent) Medical-Surgical ICUs in teaching hospitals
- 42/113 (37 percent) Medical-Surgical ICUs in non-teaching

- 2/15 (13 percent) Neurosurgical ICUs
- 16/30 (53 percent) Pediatric ICUs
- 5/39 (13 percent) Surgical ICUs

Microorganisms Associated with CLABSIs in Adult and Pediatric ICUs (Table 12)

The most common microorganisms identified in adult/pediatric ICU-related CLABSIs were enterococci, coagulase negative staphylococci, yeast and *Klebsiella species*. MRSA was the eighth most common organism, accounting for 4 percent of adult/pediatric CLABSIs.

Lessons for Safety and Quality Improvement for Prevention of CLABSIs

NYS CLABSI rates in adult and pediatric ICUs have decreased significantly between 2007 and 2009. Using the 2007 consumer price index (CPI) for inpatient hospital services, the dollar savings in 2009 was estimated to be between $1.7 million and $7.0 million in adult and pediatric ICUs.[2]

NYS conducts intensive audits to assure complete and accurate reporting of HAIs. At the present time, only four other states conduct audits on CLABSI rates. All of the states conducting audits have higher rates of CLABSI when compared to national data. Unless or until other states have the same extensive audit processes, comparisons with national rates may be misleading.

Although there is a great deal of media attention surrounding MRSA, this organism is not a major cause of CLABSIs in NYS ICUs and therefore, targeting resources solely for prevention of MRSA-associated CLABSIs in ICUs is not warranted.

National and NYS CLABSI and UCABSI Rates in Neonatal ICUs (NICUs)

Regional Perinatal Center (RPC) and Level III NICU CLABSI and UCABSI Rates

CLABSI and UCABSI rates in RPCs and Level III NICUs must be combined for national comparisons since the RPC designation is not used nationally.

After adjusting for birth weight distribution, the NYS RPC/Level III NICU CLABSI rate in 2009 (2.4 per 1000 line days) was significantly lower than the national baseline rate (2.9 per 1000 line days in 2006-2008) (Figure 20).

Between 2007 and 2009, the CLABSI rates in NYS RPC/Level III NICUs have decreased significantly ($p<0.01$ Poisson Trend Test). The significantly decreased rate in 2009 was associated with the prevention of CLABSI in RPCs. The rate of CLABSIs in Level III NICUs increased in 2009, although the increase was not statistically significant ($p=0.08$ Poisson Trend Test) (Figure 21).

After adjusting for birth weight distribution, the NYS RPC/Level III NICU UCABSI rate in 2009 (1.8 per 1000 line days) was not significantly different the national baseline rate (1.9 per 1000 line days in 2006-2008) (Figure 22).

Between 2007 and 2009, the UCABSI rates in NYS RPC/Level III NICUs decreased significantly ($p<0.01$ Poisson Trend Test). The significant decrease in 2009 occurred in RPCs (3.2 to 1.4 per 1000 umbilical catheter days) ($p<0.01$ Poisson Trend Test). Although the UCABSI rate decreased in Level III NICUs (3.7 to 2.8 per 1000 umbilical catheter days), the decrease was not statistically significant ($p=0.74$ Poisson Trend Test).

Level II/III NICU CLABSI and UCABSI Rates

After adjusting for birth weight distribution, the NYS Level II/III NICU CLABSI rate in 2009 (3.3 per 1000 line days) was not statistically different than the national baseline rate of 2.6 per 1000 line days in 2006-2008 (Figure 23). Between 2007 and 2009, the CLABSI rates in NYS Level II/III NICUs did not change significantly ($p=0.28$ Poisson Trend Test).

After adjusting for birth weight distribution, the NYS Level II/III NICU UCABSI rate in 2009 (3.6 per 1000 umbilical catheter days) was not significantly different the national baseline rate (2.3 per 1000 line days in 2006-2008) (Figure 24). Between 2007 and 2009, the UCABSI rates in NYS Level II/III NICUs did not change significantly ($p=0.32$ Poisson Trend Test).

CLABSI and UCABSI Rates in Neonatal ICUs - Regional Comparisons

In NYS, a custom field was used to identify cases in which multiple blood cultures were obtained, only one specimen was positive, the one positive was considered a contaminant and no treatment was given. These events were deleted from the regional and hospital-specific infection rates but were not deleted in national comparisons since the information was not available on the national level.

For all NYS NICU CLABSI and UCABSI regional analyses, three categories of NICU are used: RPC, Level III, and Level II/III.

In 2009, there was only one regional difference in CLABSI rates: the RPC CLABSI rate in the Capital Region was significantly lower than the state average (Table 2).

Hospital-specific CLABSI Rates in NICUs

For all hospital-specific CLABSI analyses, three categories of NICU are used: RPC, Level III and Level II/III.

Among the 18 RPCs, there were two hospitals with significantly higher CLABSI rates. One hospital had a significantly lower CLABSI rate and only one infection. One hospital had zero CLABSIs but the rate was not statistically significant. The risk-adjusted CLABSI rates in RPCs ranged from 0.0 to 8.8 per 1000 line days (Figure 25).

Among the 21 Level III NICUs, there was one hospital with a statistical higher CLABSI rate and one hospital did not have the minimum of 50 central line days to include in the report. Of the 20 Level III NICUs with sufficient central line days, five reported zero CLABSIs in 2009. The risk-adjusted Level III CLABSI rates ranged from 0.0 to 19.0 per 1000 central line days. This wide range is due to the relatively infrequent use of central lines in this patient population (Figure 26).

Among the 14 Level II/III NICUs, there was one hospital with a statistically higher CLABSI rate and six reported zero CLABSIs in 2009. The rates ranged from 0.0 to 33.9 per 1000 central line days. This wide range is due to the relatively infrequent use of central lines in this patient population (Figure 27).

Microorganisms Associated with CLABSIs in NICUs – Table 13

The most common microorganisms identified in NICU-related CLABSIs were coagulase negative staphylococci, *Staphylococcus aureus*, yeast and enterococci. MRSA was the seventh most common organism, accounting for less than 5 percent of these infections.

Umbilical Catheter-Associated Bloodstream Infection Rates in Neonatal ICUs

Hospital-Specific UCABSI Rates in NICUs (Figures 28-30)

For all hospital-specific UCABSI analyses, three categories of NICU are used: RPC, Level III and Level II/III.

Two hospitals had significantly higher UCABSI rates, one Level III facility and one Level II/III NICU facility.

Eight (44 percent) of the 18 RPCs had zero UCABSIs. Risk-adjusted UCABSI rates ranged from 0.0 to 5.0 per 1000 umbilical catheter days in RPCs. There were no statistically significant differences.

Ten (48 percent) of the 21 Level III NICUs had zero UCABSIs. The risk-adjusted UCABSI rates ranged from 0.0 to 9.2 per 1000 umbilical catheter days. Only one Level III facility had a significantly higher UCABSI rate.

Five (36 percent) of the 14 Level II/III NICUs had zero UCABSIs. The UCABSI rates ranged from 0.0 to 32.8 per 1000 umbilical catheter days. This wide range is due to the relatively infrequent use of umbilical lines in this patient population. Only one Level II/III had a significantly higher UCABSI rate.

Microorganisms Associated with Umbilical Catheter-Associated BSIs in NICUs – Table 14

The most common microorganisms identified in NICU-related UCABSIs were coagulase negative staphylococci, *Staphylococcus aureus* and yeast. Six of the infections involved MRSA (10 percent).

Lessons for Safety and Quality Improvement for Prevention of CLABIs and UCABSIs in NICUs

NYS CLABSI and UCABSI rates in NICUs have decreased significantly between 2007 and 2009 (Table 15). Using the standardized infection ratio methodology suggested by the CDC, the number of observed CLABSIs and UCABSIs (N=234) in 2009 was compared to the number of expected CLABSIs and UCABSIs (N=339) based on rates in 2007. Using the 2007 consumer price index (CPI) for inpatient hospital services, the dollar savings associated with the decrease in 2009 was estimated to be between $765,000 and $3.1 million in NICUs. The methods used to derive these estimates were developed by CDC.[2]

The substantial decrease in NICU CLABSI rates occurred in RPCs throughout the state. This decrease was associated with a NYSDOH-funded NICU CLABSI collaborative prevention project designed and implemented by RPCs throughout the state. This effort will be expanded to the affiliated Level III NICUs in 2010. Level III NICUs had an increase in CLABSIs in 2009 thus these prevention efforts are of critical importance.

Survey of Personnel Resources for Infection Prevention and Control in NYS Hospitals – (Figures 31-32)

To measure the impact of mandatory HAI reporting on infection prevention personnel and programs, an infection prevention and control resource survey was conducted in the summer of 2009. Information was obtained on the number of infection preventionists (IPs) and hospital epidemiologists (HEs); IP/HE educational background and certification; infection control program support services; activities and responsibilities of infection prevention and control program staff; and an estimate of time dedicated to various activities, including surveillance.

This report includes a figure with the average number of full-time-equivalent (FTE) infection preventionists to acute care (AC) beds and the average FTE infection preventionists to an aggregate measure that takes into consideration the number of ICU beds, long term care beds, dialysis centers, ambulatory surgery centers, ambulatory clinics and private physician offices in addition to acute care beds (Figure 31). The following equivalents were used: ICU bed = 2 acute care beds; long term care bed = ½ an acute care bed; dialysis facility = 50 acute care beds; ambulatory surgery center = 50 acute care beds; ambulatory clinic = 10 acute care beds; and a private physician's office = 5 acute care beds.

In 2009, the average FTE infection preventionist in NYS was responsible for 138 acute care beds or an aggregate measure equivalent to 257 AC beds. These averages were calculated for each hospital and then the hospitals were ranked. Hospitals in the lowest 15th percentile using either infection prevention staffing measure were designated with a "**Low**" for low IP resources in Figure 32.

Additional analyses will be performed to determine the association between IP resources and infection rates, prevention project involvement, and additional hospital-specific infection prevention measures.

NYSDOH-FUNDED HAI PREVENTION PROJECTS

HAI Prevention Projects begun in FY 2008-2009 continued in FY 2009-2010 with continued funding in FY 2010-2011

On August 22, 2007, the NYSDOH issued a Request for Applications (RFA) from non-profit health care organizations to develop, implement and evaluate strategies to reduce or eliminate targeted hospital-acquired infections. To be eligible, each applicant had to obtain the collaboration and commitment of at least five participating hospitals. The HAI reporting program is responsible for the evaluation, selection and oversight of the projects.

Continuum Health Partners, New York City, FY 2009-2010 - $184,240

This project was designed to evaluate the impact of obtaining active surveillance cultures for MRSA on patients admitted to ICUs in five hospitals. Although the ultimate goal was to reduce MRSA transmission and infection other objectives included measuring the costs and effectiveness of the intervention, determining if a concomitant reduction in length of stay in the ICU or reduction in mortality occurred, and measuring the indirect effects on the incidence of other multi-drug resistant organisms (MDROs).

Year one of this project focused on an evaluation of active surveillance cultures for MRSA in adult ICU patients in 5 hospitals. The following findings were reported:

- The number of MRSA and MDRO infections was very low.
- It is premature to determine if the introduction of active surveillance cultures combined with standard infection prevention strategies are effective in reducing MRSA transmission or infection among patients in the medical, surgical, and medical surgical ICUs.
- Environmental cleaning bundles may prove to be as effective, if not more effective in preventing MRSA transmission as active surveillance screening.
- Participating ICUs realized $870,000 in costs avoided through prevention of MRSA infections.
- Molecular typing showed that 85% of infections were associated with the patients' colonizing strains.

In year two, the use of 2% chlorhexidine (CHG) cloths for bathing of patients was introduced.

- Overall compliance with hand hygiene for the Project ICUs was 96%, gown and glove use was 97%, 2% CHG bathing protocol was 84% and compliance with active surveillance cultures being done on admission to the ICUs was 85%.
- The median MDRO rate decreased from 12.3 to 6.3 per 1,000 patient days.

North Shore University Hospital, FY 2009-2010 - $184,240

This project was designed to evaluate MRSA transmission, the effect of prevention measures and rapid MRSA detection technology and strain typing of isolates.

- DNA fingerprinting identified that the most common strains were associated with the community rather than hospital strains.

- Patients admitted from the community (home) accounted for 53% of cases and the most common underlying conditions were cardiac disease, diabetes mellitus and hematologic disease.
- Healthcare-associated risk factors included surgery over the prior 12 months, repeat admissions over the prior 12 months and a history of antibiotic use over the prior 12 months.

University of Rochester School of Medicine & Dentistry, FY 2009-2010 - $184,240

This project was designed to reduce central line-associated bloodstream infections outside the ICU using evidence-based protocols for central line insertion and care. Six facilities are part of this Rochester Infection Prevention group: a tertiary care hospital, a large community hospital, a university hospital and several community hospitals. The project includes thirty-eight nursing units from these six facilities.

Findings and accomplishments:

- The burden of CLABSI was high on non-ICU wards.
- Between June 2008 and March 2010, the CLABSI rate decreased
    - Overall from 2.8/1000 to 1.0/1000 CL days
    - On Medical/Surgical wards from 5.7/1000 to 2.1/1000 CL days
- Nursing staff play an important role in prevention of CLABSI
    - Units with nurse champion reduced CLABSI rate from 9.0/1000 central line days to 3.0/1000 central line days
- The use of a central line care maintenance protocol has led to a decrease of CLABSI on the general medical wards.
- Establishing innovative infection control practices requires a "culture change" facilitated by leadership involvement and identifying champions.
- Participation in this prevention project has earned the Infection Preventionists in the Rochester Finger Lakes APIC Chapter national recognition as recipients of the 2009 APIC Chapter Excellence Award in Research. This award is given to the Chapter that best demonstrates excellence in supporting, promoting and publicizing research in infection surveillance, prevention and control.

[1]*Estimating Central Line Days Outside ICU Using Weekly Device Use Ratio.* Mark Shelly MD, Ghinwa Dumyati, MD. Abstract presented at SHEA March, 2009.
[2] *New York State Infection Prevention Grant to study Central Line Infections.* Linda Greene RN, MPS, CIC. Abstract to be presented at APIC June, 2009.
[3]*The Burden of Central Line Associated Blood Stream Infections in Non-ICU Patients: Results of Multi-Hospital Surveillance in Rochester, NY.* Ghinwa Dumyati MD, et al. Abstract presented at SHEA March, 2009.

Westchester County Healthcare Corporation, FY 2009-2010 - $184,240

This two-year project involving five hospitals was designed to reduce the incidence of hospital-associated bloodstream infections (BSI) in ICUs and respiratory care patients. The five hospital study in the five ICU and one respiratory care unit evaluated the impact of daily CHG bathing on healthcare-

associated bloodstream infections and blood culture contaminants. The following results were identified:

- Statistically significant reductions in health care associated bloodstream infections (4.5 to 2.0 per 1000 patient days), CLABSIs (8.7 to 3.9 per 1000 CL days), and contaminated blood cultures.
- Chlorhexidine bathing had minimal risk and was well tolerated by patients.

Joan & Sanford I. Weill Medical College of Cornell University, 10/1/08-9/30/10 - $186,169

All eighteen Regional Perinatal Centers (RPC) have participated in a two-year CLABSI prevention project in the neonatal intensive care units (NICUs). The first year was used to develop and standardize the prevention bundle, implement a set of evidence-based practice recommendations, design implementation and evaluation tools, monitor compliance with the prevention bundle and monitor the effectiveness of these efforts on CLABSI rates. In year two, the tools and practices will be expanded to the Level III NICUs across the state. The following results have occurred:

- The overall RPC NICU CLABSI rate decreased by 67 percent.
- The standardized evidence-based NICU central line (CL) care bundle has demonstrated its effectiveness in markedly reducing CLABSI rates.
- The use of CL insertion and daily care checklists were associated with decreased CLABSI rates.

HAI Prevention Project initiated March 1, 2009

Greater New York Hospital Association (GNYHA) 4/01/09-3/31/10 - $184,000

GNYHA and the United Hospital Fund collaborated on an initiative to design and implement an antimicrobial stewardship program (ASP) in three acute care and three long-term care facilities. The goal of this initiative was to develop a toolkit that included a "bundle" of evidence-based practices that can be used by healthcare facilities to implement an effective and sustainable antimicrobial stewardship program. The following accomplishments have been achieved:

- Tool kit has been developed and disseminated to the six participating health care facilities. The tool contains or will contain:
    - Materials are designed to assess baseline knowledge of antibiotic prescribing practices and antimicrobial resistance.
    - Education materials including clinician and administrator oriented presentations, a teaching guide, and a clinical assessment for prescribing physicians.
    - Marketing tools to be used by various departments when implementing an antimicrobial stewardship program will also be incorporated into the toolkit.
    - Stewardship team strategies and their importance in the success of an ASP.

SUMMARY OF HAI RATES

A summary of hospital-specific infection rates for all HAI indicators is provided in Table 16.

Surgical Site Infection Summary: Among the tracked surgeries, the unadjusted infection rates were highest for colon surgery (5.3%), followed by CABG surgery (2.3% for chest site infections and 1.0% for donor site infections), and lastly hip replacement surgery (1.3%) for operations performed in New York State in 2009.

Colon SSIs: Since 2007, there has been a significant decrease in colon SSI rates but the majority of the decline occurred in 2008. The 2009 NYS colon SSI rate was not significantly different than national baseline rate (2006-2008).

CABG SSIs: Since 2007, there has been a significant decrease in CABG chest SSI rates. The rate decreased in 2008 and remained low in 2009. Whereas the 2007 NYS CABG chest SSI rate was significantly higher than national baseline rate, the 2008 and 2009 NYS CABG chest SSI rates were not significantly different from the national baseline.

Hip SSIs: Since reporting of hip SSI rates began in 2008, the NYS rates have not changed nor have the rates been significantly different that national baseline rate

Adult and Pediatric ICU CLABSI Rates: NYS CLABSI rates in adult and pediatric ICUs have decreased significantly between 2007 and 2009. Using the 2007 CPI for inpatient hospital services, the dollar savings in 2009 was estimated to be between $1.7 million and $7.0 million in adult and pediatric ICUs.[2]

Neonatal ICU CLABSI Rates: NYS CLABSI and UCABSI rates in NICUs have decreased significantly between 2007 and 2009. Using the 2007 CPI for inpatient hospital services, the dollar savings associated with the decrease in 2009 was estimated to be between $765,000 and $3.1 million in NICUs. The methods used to derive these estimates were developed by CDC.[2]

The substantial decrease in NICU CLABSI rates occurred in RPCs throughout the state. This decrease was associated with a NYSDOH-funded NICU CLABSI collaborative prevention project designed and implemented by RPCs throughout the state. This effort will be expanded to the affiliated Level III NICUs in 2010. Level III NICUs had an increase in CLABSIs in 2009 thus these prevention efforts are of critical importance.

HAI REPORTING – LESSONS LEARNED

The Department and hospitals, through annual on-site audits, monthly data checks, newsletters, and regional conference calls, have learned the following important lessons regarding HAI reporting:

1. The NHSN is a useful tool in monitoring the infection rates and the effectiveness of prevention strategies. Hospitals have continuous access to their own data and can compare their rates to national levels and monitor trends over time. Groups such as the Department of Health and other quality improvement projects can have continuous access to the data reported by the hospitals for continuous, consistent, and real-time surveillance.

2. Surveillance lessons:
    a. Strict adherence to the surveillance definitions is critical to provide consistency and comparability of data across hospitals. Additional clinical findings are appropriate for treatment decisions but may not be available or appropriate for mandatory reporting purposes due to variation between providers and institutions.
    b. Post-discharge surveillance methods are highly variable, dependent upon allocated resources, integration of information systems, and when performed, result in higher infection rates. The majority of severe infections are detected during the initial hospitalization or upon readmission. In order to fairly compare hospitals and not penalize facilities with the best surveillance systems, the NYSDOH did not include surgical site infections detected solely by post-discharge surveillance but is continuing to monitor the impact of this omission.
    c. Use of additional patient-specific risk information improved the ability to compare hospital-specific coronary artery bypass graft and hip replacement surgical site infection rates. The data in this report have been adjusted for these factors.
    d. Timely and complete data submission was often affected by infection control staffing turnover, vacant positions and the need for education and training to comply with the legislative mandate. Hospitals need to provide back-up personnel to ensure compliance with reporting requirements and patient safety.
    e. Hospitals need to integrate health information technology systems to support infection prevention and reporting efforts. For example, only 30 percent of hospitals have utilized electronic data entry of operating room procedure log information. The other 70 percent of hospitals are still manually entering this data into the NHSN.
    f. NYS conducts intensive audits to assure complete and accurate reporting of HAIs. At the present time, only four other states conduct audits on CLABSI rates. All of the states conducting audits have higher rates of CLABSI when compared to national data. Unless or until other states have the same extensive audit processes, comparisons with national rates may be misleading.

HAI REPORTING PROGRAM - NEXT STEPS

The Department will work to improve HAI reporting and infection prevention efforts including taking the following actions:

1. Integrate the hospital-specific infection rates into the Department's hospital profile web site.
2. Continue to monitor the accuracy and timeliness of data being submitted, discuss findings and ensure corrective action is taken.
3. Conduct onsite audits to evaluate surveillance methods, enhance surveillance definitions, and assess completeness and accuracy of reporting.
4. Continue to provide education, training and ongoing support to hospital infection reporting staff.
5. Continue to evaluate the impact of post-discharge surveillance on surgical site infection rates and implications for public reporting.
6. Evaluate and monitor the effect of prevention practices on infection rates.
7. Evaluate the relationship between infection prevention personnel resources and surveillance activities, infection rates, and prevention projects.
8. Collaborate with other department staff to investigate outbreaks and evaluate emerging trends.
9. Consult with infection preventionists, hospital epidemiologists, surgeons and the Cardiac Advisory Committee to identify risk factors and prevention strategies to reduce HAIs.
10. Monitor HAI prevention projects for compliance with program objectives, fiscal responsibility and potential applicability to other hospitals or healthcare settings.
11. Continue to work with the TAW to monitor, evaluate, and select mandatory reporting indicators; evaluate system modifications, identify and evaluate risk factors, refine methods of risk adjustment and presentation of the data.

HAI Reporting Indicators for 2010

The Department will continue to require the same HAI reporting indicators in 2010 as were reported in 2009. In addition, *Clostridium difficile* infection rates using a new proxy indicator (Laboratory Identified Events) will be required and results for 2010 will be reported in next year's report.

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Abbreviations

AC – Acute Care
ASA – American Society of Anesthesiologists' Classification of Physical Status
ASP – Antimicrobial Stewardship Program
BSI – Bloodstream Infection
CABG – Coronary Artery Bypass Graft Surgery
CDC – Centers for Disease Control and Prevention
CEOs – Chief Executive Officers
CHF – Congestive Heart Failure
CI – Confidence Interval
CL – Central Line
CLABSI – Central Line Associated Bloodstream Infection
CNS – Coagulase Negative Staphylococcus
CPI – Consumer Price Index
CSEP – Clinical Sepsis
CSRS – Cardiac Surgery Reporting System[4]
DIP – Deep Incisional Infection at the Primary Surgical Site (for CABG procedures, this would be the chest site)
DIS – Deep Incisional Infection at the Secondary Surgical Site (for CABG procedures, this would be the donor vessel site)

DOH – New York State Department of Health
FTE – Full-Time Equivalent
GNYHA – Greater New York Hospital Association
HAI – Hospital-Acquired Infection
HE – Hospital Epidemiologist
IC – Infection Control
ICD-9 – International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)
ICP – Infection Prevention and Control Specialist
ICU – Intensive Care Unit
IP – Infection Preventionist
IT – Information Technology
LCBI – Laboratory Confirmed Bloodstream Infection
MDRO – Multi-Drug Resistant Organism
MRSA – Methicillin-Resistant *Staphylococcus aureus*
MSSA – Methicillin-Sensitive *Staphylococcus aureus*
NICU – Neonatal Intensive Care Unit
NHSN – National Healthcare Safety Network
NYS – New York State
NYSDOH – New York State Department of Health
OR – Operating Room
OR – Odds Ratio (statistical term)
OS – Organ Space Infection
PDS – Post-Discharge Surveillance
PHL – Public Health Law
RPC – Regional Perinatal Center (Level IV – highest level of NICU care)
SHEA – Society for Healthcare Epidemiology of America
SIP – Superficial Incisional Infection at the Primary Surgical Site (for CABG procedures, this would be the chest site)
SIS – Superficial Incisional Infection at the Secondary Surgical Site (for CABG procedures, this would be the donor vessel site)
SPARCS - Statewide Planning and Research Cooperative System[6]
SSI – Surgical Site Infection
TAW – Technical Advisory Workgroup
UC – Umbilical Catheter
UCABSI – Umbilical Catheter-Associated Blood Stream Infection
VAP – Ventilator-Associated Pneumonia
VRE – Vancomycin-Resistant Enterococci

Glossary of Terms

Term	Definition
Active Surveillance	A system used by a trained infection preventionist (IP) to look for infections during a patient's hospital stay. A variety of tools are used to identify infections and determine if they are related to their hospital stay or if the infection was present on hospital admission. These tools may include, but are not limited to, information from laboratory, radiology, operation, pharmacy reports and nursing care units and/or patient treatment areas.
ASA Score	This is a scale used by the anesthesiologist to classify the patient's physical condition prior to surgery. It uses the American Society of Anesthesiologist (ASA) Classification of Physical Status. It is one of the factors that help determine a patient's risk of possibly developing a SSI. Here is the ASA scale: Normally healthy patient Patient with mild systemic disease Patient with severe systemic disease Patient with an incapacitating systemic disease that is a constant threat to life A patient who is not expected to survive with or without the operation.
Birth weight Categories	Birth weight refers to the weight of the 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)	BMI is a measure of the relationship between a person's weight and their height. It is calculated with the following formula: kg/m^2.
Central Line	A Central Line is a tube that is placed into a patient's large vein, usually in the neck, chest, arm or groin. A central line is needed to give fluids, medication, withdraw blood, and for monitoring the patient's condition.
Central Line Bloodstream Infection (CLABSI)	A bloodstream infection can occur when microorganisms travel around and through a central line or umbilical catheter and then enter the blood.
Central Line Bloodstream Infection (CLABSI) Rate	To get this rate, we divide the total number of central line-associated bloodstream infections by the number of central line days. That result is then multiplied by 1,000. Lower rates are better.
Central Line Days (Device Days)	This is the total number of days a central line is used for patients in an ICU or a NICU. 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.
Clinical Sepsis	A patient 1 year of age or younger who has at least one of the following clinical signs or symptoms with no other recognized cause: fever greater than 38° C. taken rectally, hypothermia (less than 37°C.), temporary absence of breathing, or an abnormally slow heart rate; and blood culture not done or no organisms detected in blood and no apparent infection at another site, and

	physician institutes treatment for sepsis.
Colon Surgery	Colon surgery is a procedure performed on the lower part of the digestive tract also known as the large intestine or colon.
Confidence Intervals	The confidence interval for a hospital's infection rate is the range of possible rates within which there is a 95% confidence that the real infection rate for that hospital lies, given the number of infections and procedures that were observed in that hospital in a specific time period.
Coronary Artery Bypass Graft Surgery	Coronary artery bypass graft (CABG) surgery is a treatment 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.
Diabetes	Diabetes is 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	Coronary Artery By-pass Donor and Chest Surgery (CBGB) is surgery with a chest incision and donor site incisions (donor sites include the patient's leg or arm) from where blood vessel is removed to create a new path for blood to flow to the heart. CBGB surgical incision site infections involving the donor incision site are reported separately from CBGB surgical chest incision site infections.
Duration Cut Point	The cut point of an operation is the typical time between skin incision (cut) and stitching or stapling the skin closed. The duration cut point is the time assigned to that type of surgical operation procedure. Infection risks may increase due to longer than expected surgical procedure time.
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	Hip replacement surgery involves removing damaged cartilage and bone from the hip joint and replacing them with new, man-made parts.
Hospital Acquired Infection (HAI)	A hospital acquired infection is an infection that occurs in a patient as a result of being in a hospital setting after having medical or surgical treatments.
Infection control / prevention processes	These are routine measures to prevent infections that can be used in all healthcare settings. These steps or principles can be expanded to meet the needs of specialized types of hospitals. Some hospitals make the processes mandatory. Examples include Complete and thorough hand washing 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 putting central lines in patients. The list reminds healthcare workers to clean their hands thoroughly; clean the patient's skin before insertion with the right type of soap; wear the recommended sterile gown, gloves and mask; and place sterile barriers around the insertion site, etc.

	Monitoring to ensure that employees, doctors and visitors are following the proper infection prevention procedures.
Infection Preventionists (IP)	Health professionals that have special training in infection prevention and monitoring.
Inpatient	A patient whose date of admission to the healthcare facility and the date of discharge are different calendar days.
Intensive Care Unit (ICU)	Intensive Care Units are hospital units that provide intensive observation and treatment for patients (adult, pediatric or newborn) either dealing with, or at risk of developing life threatening problems. ICUs are described by the types of patients cared for. Many hospitals typically 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 specialty ICUs 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.
National Healthcare Safety Network (NHSN)	This is a standardized data reporting system that New York State hospitals must use to identify and report select HAI's and enter required data on uninfected patients. NHSN is a secure, internet-based surveillance (monitoring and reporting) system. The NHSN is managed by the CDC's Division of Healthcare Quality Promotion.
Neonatal Intensive Care Level II/III Units	Patient care units that provide: Level II care to newborns at moderate risk and Level III care for newborns requiring increasingly complex care.
Neonatal Intensive Care Level III	Patient care units that provide a highly specialized care to newborns with serious illness, including premature birth and low birth weight and newborns under the supervision of a neonatologist.
Regional Perinatal Centers	Regional Perinatal Centers (RPC) provide 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.
NHSN Patient Safety Protocol Manual	This contains standardized definitions and data collection methods that are essential for consistent, fair reporting of hospital infection rates.
Obesity	Obesity, defined as greater than 20% of your ideal body weight, is 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.
Operative Procedure	An operation that takes place during a one single trip to the operating room (OR) where a surgeon makes at least one incision (cut) through the skin or

	mucous membrane, and stitches or staples the incision before the patient leaves the OR.
Outcome Data (HAI)	HAI outcome data are derived from reports based on data submitted by New York State hospitals into the NHSN. NHSN is a secure, internet-based surveillance (monitoring and reporting) system.
Post discharge surveillance	This is the process IPs use to seek out 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 doctor.
Raw Rate CLABSI	Raw rate is the number of infections (the numerator) divided by the number of line days (the denominator) or the number of umbilical catheter days (denominator) then multiplied by 1000 to be able to report the number of infections per 1000 line days or per 1000 umbilical catheter days.
Raw Rate Surgical Procedures	Raw rate is the number of infections (the numerator) divided by the number of procedures (the denominator) then multiplied by 100 to be able to report the number of infections per 100 operative procedures. Raw rates are not adjusted to account for differences in the patient populations.
Risk Adjustment	Risk adjustment accounts for differences in patient populations and allow for 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	For surgical site infections, the risk-adjusted rate is based on a comparison of the actual (observed) rate and the expected rate if statewide the patients had the same distribution of risk factors as the hospital. For CLABSIs, the adjusted rate is a comparison of the actual rate and the expected rate based on statewide rates for each ICU or within birth weight categories for neonates.
SPARCS	The Statewide Planning and Research Cooperative System (SPARCS) is a comprehensive data reporting system established in 1979 as a result of cooperation between the health care industry and 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 patient, and emergency department admission in New York State.
Surgical Implant	A surgical implant is a nonhuman-derived object, material, or tissue that is permanently placed in a patient during an operation. Examples include: heart valves, metal rods, mesh, wires, screws, cements, hip replacements and other devices.
Surgical Site Infection (SSI)	A surgical site infection (SSI) is an infection that occurs after the operation in the part of the body where the surgery took place (incision). Most SSI's are limited and only involve the skin surrounding the incision; others may be deeper and more serious.

Surgical Site Infection (SSI) Rate	Surgical site infection rates per 100 operative procedures are found by dividing the number of SSIs by the number of total number of specific operative procedures within a given reporting period. The results are then multiplied by 100. These calculations are performed separately for each type of surgical procedure. They are listed by risk index
Surgical Site Infection (SSI) Risk Index	This is a score used to predict a patient's risk of acquiring a surgical site infection. The risk index score, ranging from 0 to 3, reveals how many of these risk factors are present: the anesthesiologist has given the patient an American Society of Anesthesiologists' (ASA) physical status score of 3, 4, or 5; the operation site is determined to be contaminated or dirty / infected at the time of the procedure and the operation lasts longer than expected (the duration cut point time).
Umbilical Catheter	Umbilical catheter is a tube that is inserted through the umbilical blood vessel in a newborn.
Umbilical Catheter Days (Device Days)	This is the total number of days an umbilical catheter are present in newborns in a NICU. The count is performed at the same time each day. Each newborn with both an umbilical catheter and a central line is counted as one umbilical catheter day.
Validation	Validation is a way 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. Visiting hospitals and reviewing patient records is used to evaluate the accuracy of reporting. The purpose of the validation visits are 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 HAI's. Provide education to the IPs and other hospital employees and doctors, to improve reporting accuracy and quality. Look for unreported HAIs Make recommendations for improving data accuracy and/or patient care quality issues.
Wound Class	This is a way of determining how clean or dirty the operation body site is at the time of the operation. Operation body sites are divided into four classes: Clean: An uninfected operation body site is encountered and the respiratory, digestive, genital, or uninfected urinary tracts are not entered. Clean-Contaminated: Operation body sites in which the respiratory, digestive, genital or urinary tracts are entered under controlled conditions and without unusual contamination. Contaminated: Operation body sites that have recently undergone trauma, operations with major breaks in sterile technique (e.g., open cardiac massage) or gross spillage from the gastrointestinal tract. Dirty or Infected: Includes old traumatic wounds with retained dead tissue and those that involve existing infection or perforated intestines.

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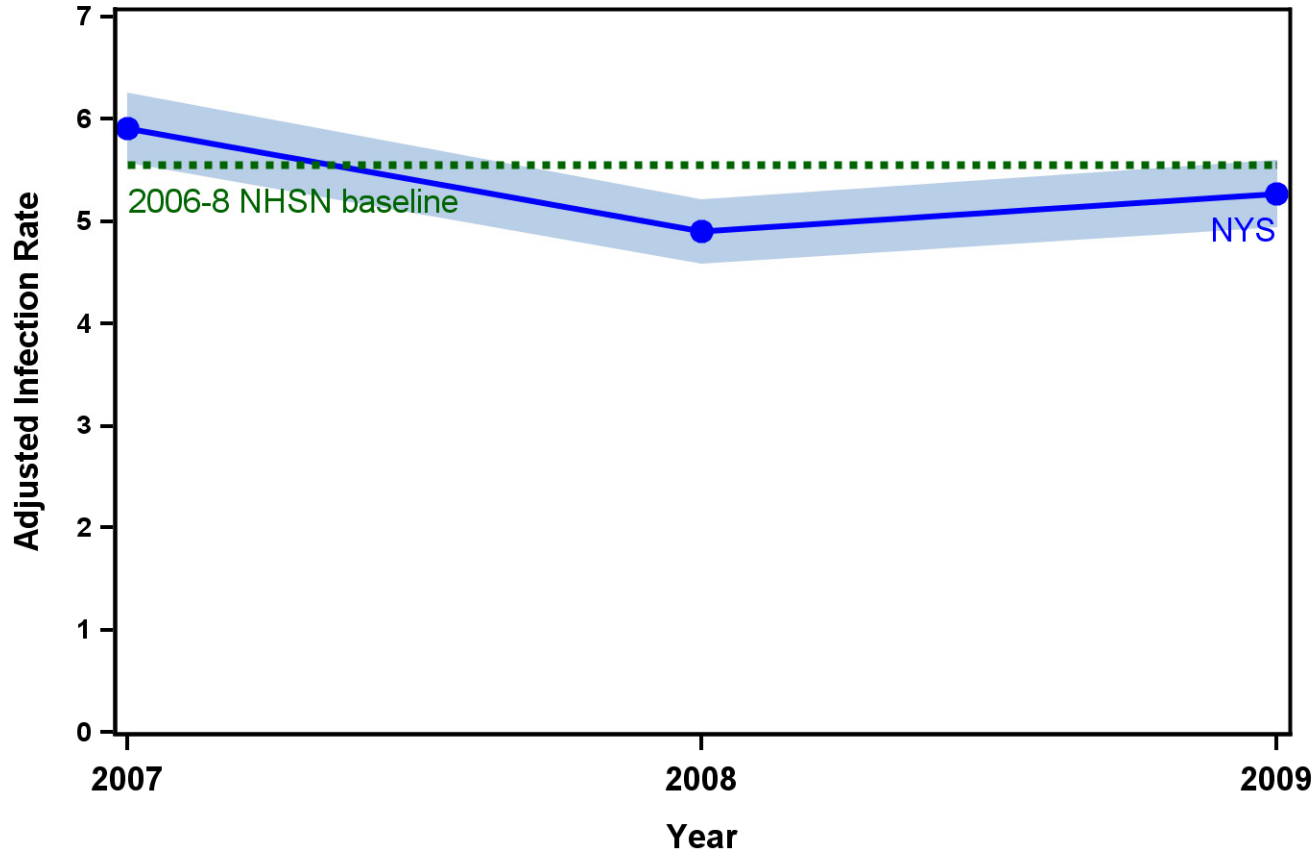
Colon Surgical Site Infection Rate Tables

Figure 3. Comparison of New York State and National Colon Surgical Site Infection Rates, 2007-2009



	Year	# Hospitals	# Infections[3]	# Procedures	Crude Rate[4]	Adjusted Rate[5] and 95% Confidence Interval	
New York State[1]	2007	183	1,067	17,965	5.9	5.9 (5.6, 6.3)	*H
	2008	179	894	18,135	4.9	4.9 (4.6, 5.2)	*L
	2009	174	929	17,475	5.3	5.3 (4.9, 5.6)	NS
NHSN Baseline[2]	2006-8	292	3,453	62,140	5.6	5. 6	

[1] New York State Data reported as of July 7, 2010.
[2] NHSN 2006-8 baseline data as of NHSN Report in *Am J Infect Control* 2009;37:783-805.
[3] NYS and NHSN data include non-readmitted cases identified using post-discharge surveillance.
[4,5] Rates are per 100 procedures.
[5]NYS Rates directly adjusted using NHSN risk categories.
"NS" indicates no significant difference between NYS and NHSN baseline.
*L indicates significantly lower than NHSN baseline.
*H indicates significantly higher than NHSN baseline.

Test for trend
Significant decrease in NYS rate between 2007 and 2009 (p=0.01 Cochran-Armitage Test for Trend)

Table 1. Method of Detection for Colon Surgical Site Infection by Depth of Infection, New York State 2009

Extent (Row%) (Column%)	When Detected				
	Initial Hospitalization	Readmitted to the Same Hospital	Readmitted to Another Hospital	Detected in Outpatient Settings	Total
Superficial Incisional	326 (66.3%) (55.4%)	89 (18.1%) (35.3%)	0 (0.0%) (0.0%)	77 (15.7%) (89.5%)	492 (53.0%)
Deep Incisional	99 (66.0%) (16.8%)	47 (31.3%) (18.7%)	0 (0.0%) (0.0%)	4 (2.7%) (4.7%)	150 (16.1%)
Organ Space	163 (56.8%) (27.7%)	116 (40.4%) (46.0%)	3 (1.0%) (100.0%)	5 (1.7%) (5.8%)	287 (30.9%)
Total	588 (63.3%)	252 (27.1%)	3 (0.3%)	86 (9.3%)	929

New York State data reported as of July 7, 2010.
Includes non-readmitted cases identified using post-discharge surveillance.

Table 2. Comparison of Regional Hospital-Acquired Infection Rates to State Average, New York State, 2007-2009

		Surgical Site Infections								Central Line-Associated Blood Stream Infections																					
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU Teaching		Medical ICU Other		Medical Surgical ICU Teaching		Medical Surgical ICU Other		Surgical ICU		Neurosurgical ICU		Pediatric ICU		RPC NICU		Level III NICU		Level II/III NICU	
Region	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	CLABSI/ CLDays	Adj rate	CLABSI/ CLDays	Adj rate
State average	**2008**	**4.4**		**1.1**		**2.2**		**1.0**		**2.2**		**1.4**		**2.7**		**2.7**		**2.4**		**2.0**		**2.8**		**2.3**		**3.3**		**3.1**		**2.2**		**5.9**	
	2009	**4.8**		**1.1**		**2.2**		**0.9**		**1.8**		**1.3**		**2.5**		**1.9**		**1.7**		**1.9**		**2.1**		**2.1**		**2.2**		**2.2**		**3.5**		**3.8**	
Buffalo	2008	67/1568	4.4	32/2395	1.3	36/1239	3.0	16/1101	1.5	5/3297	1.5	1/3160	0.3	12/5082	2.4	8/2218	3.6	5/1576	3.2	24/16433	1.5	3/4287	** 0.7	1/825	1.2	2/2579	** 0.8	18/4147	4.7	0/649	0.0		
	2009	84/1554	5.7	23/2723	0.9	46/1287	^^ 3.5	4/1150	0.4	8/4508	1.8	2/5753	0.3	16/5781	2.8	3/2787	1.1	12/2130	^^ 5.6	28/17200	1.6	14/2625	^^ 5.3	2/759	2.6	6/3128	1.9	7/3975	1.8	1/925	1.0		
Rochester	2008	73/1424	5.2	28/2167	1.4	30/1208	2.7	13/1163	1.3			12/7383	1.6	15/2999	^^ 5.0	10/4118	2.4	7/3266	2.1	12/11099	** 1.1	28/6479	^^ 4.3			18/2563	^^ 7.0	9/3416	2.7	3/442	6.1		
	2009	52/1329	4.0	20/2357	0.9	14/1204	** 1.3	8/1148	0.9			12/6254	1.9	6/3095	1.9	6/3733	1.6	1/3190	0.3	20/10716	1.9	10/5990	1.7			7/2359	3.0	10/3904	2.5	2/453	5.0		
Central	2008	52/1840	** 2.8	31/2766	1.1	22/1373	1.6	8/1219	0.7	4/4379	0.9	4/6235	0.6	12/3141	3.8	4/4148	** 1.0	6/726	^^ 8.3	19/16650	** 1.1	22/7592	2.9	3/1493	2.0	1/557	1.8	7/1704	4.0			1/175	7.2
	2009	77/1782	4.3	19/2793	** 0.7	29/1506	1.9	11/1303	1.0	4/5602	** 0.7	0/6598	** 0.0	4/3212	1.2	6/4283	1.4	0/624	0.0	11/17424	** 0.6	7/7541	** 0.9	1/1557	0.6	1/484	2.1	9/3167	2.8			4/303	13.0
Capital	2008	103/1943	^^ 5.5	33/2302	1.4	25/1563	1.6	3/1432	** 0.2	2/3173	0.6	9/5116	1.8	5/3321	1.5			4/3086	1.3	37/19266	1.9	11/4448	2.5	0/528	0.0	14/1972	^^ 7.1	4/3352	1.3	3/962	2.7		
	2009	85/2011	4.4	26/2509	1.0	22/1371	1.6	5/1269	0.4	4/3078	1.3	8/5056	1.6	5/2821	1.8			2/2641	0.8	33/18960	1.7	5/4111	1.2	0/1148	0.0	0/2039	** 0.0	1/4706	** 0.2	2/453	4.5		
New Rochelle	2008	68/1767	3.8	22/2366	0.9	14/1062	1.4	6/1002	0.6	2/2008	1.0	7/4676	1.5	8/2014	4.0	20/2346	^^ 8.5			66/26059	2.5	10/3693	2.7	1/1138	0.9	2/1600	1.3	14/3789	3.4	0/206	0.0	0/210	0.0
	2009	64/1722	** 3.7	32/2547	1.2	13/970	** 1.3	6/930	0.6	0/1995	** 0.0	5/4733	1.1	13/2910	4.5	10/2088	^^ 4.8			52/24989	2.1	7/3172	2.2	8/1399	^^ 5.7	3/1605	1.9	10/4485	2.2	1/191	5.6	0/206	0.0
NYC	2008	322/6540	4.8	89/9113	1.0	123/4947	2.3	51/4569	1.1	80/30781	2.6	61/35773	1.7	51/24868	2.1	43/20438	2.1	92/38432	2.4	125/47017	^^ 2.7	92/37141	2.5	28/10607	2.6	54/18830	2.9	77/23273	3.3	13/7342	1.8	39/6374	6.1
	2009	352/6115	^^ 5.6	113/9558	1.2	134/4639	^^ 2.9	57/4271	^^ 1.2	59/27987	2.1	47/34964	1.3	57/24850	2.3	42/20061	2.1	57/34617	1.6	117/43271	^^ 2.7	75/37550	2.0	24/10547	2.3	49/18878	2.6	60/23086	2.6	29/8360	3.4	21/6074	3.5
Long Island	2008	119/3053	3.9	38/3248	1.1	51/2575	2.1	31/2419	1.2	17/7220	2.4	11/11336	1.0	37/10869	3.4	12/2223	^^ 5.4	0/944	0.0	73/37612	1.9	44/11904	3.7	7/2986	2.3	8/1597	5.0	12/6041	2.0	4/950	4.3		
	2009	129/2962	4.3	51/3362	1.5	37/2460	** 1.5	18/2343	0.7	18/7537	2.4	20/11837	1.7	35/10699	3.3	12/7908	1.5	1/908	1.1	48/29591	1.6	38/14490	2.6	5/3388	1.5	2/2080	1.0	13/5882	2.2	5/1123	4.8		

Color key: *****Blue: significantly lower than state average*** ***^^Red: significantly higher than state average*** ***Grey: not statistically different from state average*** ****: Zero infections, not statistically significant***
NA: Fewer than 20 procedures or 50 line days reported ***Blank: No procedures or ICUs at hospital***

Colon and CABG data reported as of July 7, 2010; Hip data reported as of July 27, 2010; CLABSI data reported as of August 25, 2010.
SSI NOTES:

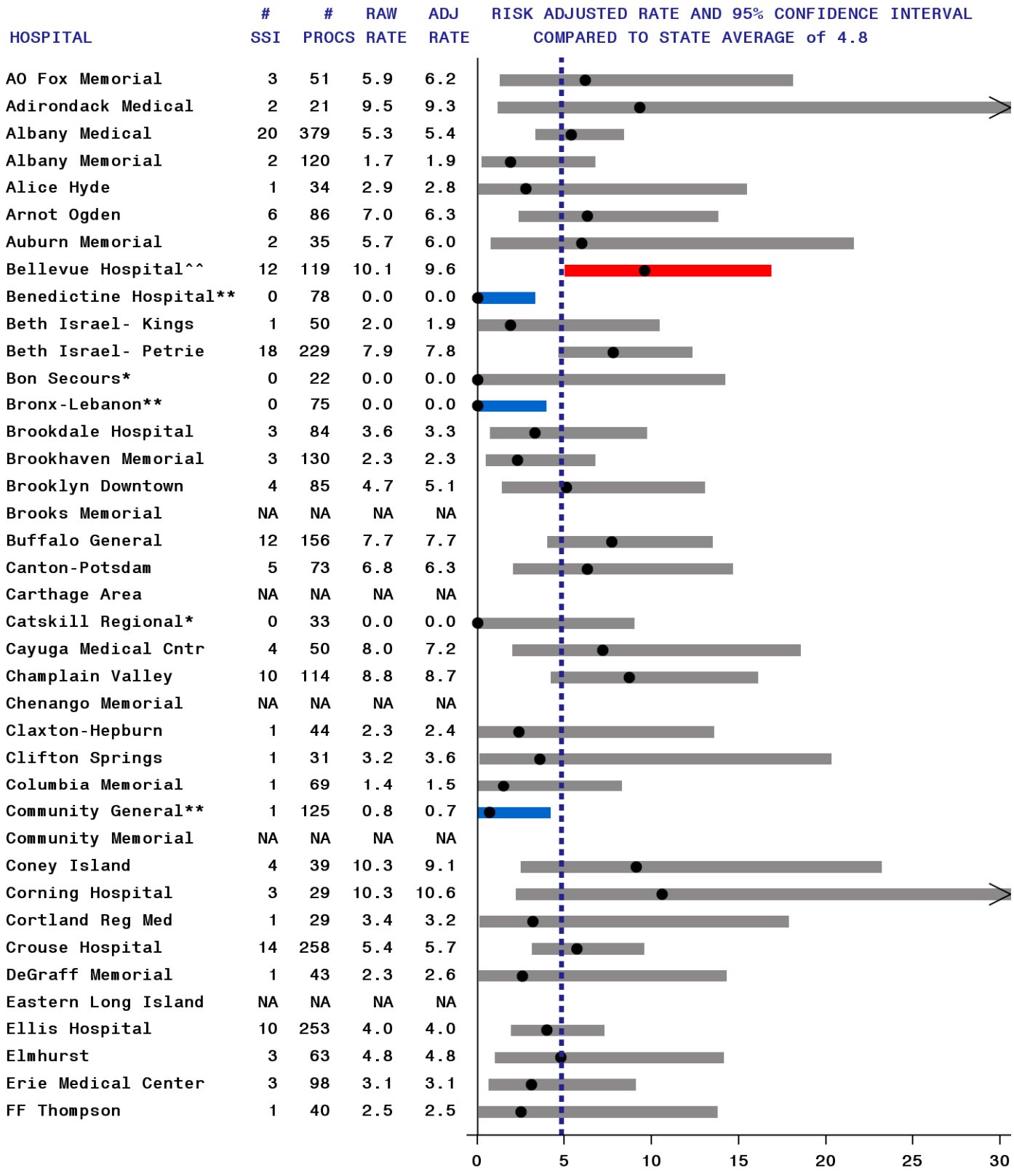
SSI=Surgical Site Infection; Procs=Procedures;
Adj. Rate= Risk Adjusted Rate = # infections per 100 procedures if the state had the same risk distribution as the hospital.
SSI data exclude non-readmitted cases identified using post discharge surveillance.
Colon data adjusted using NHSN risk categories.
CABG chest data adjusted using NHSN risk category, diabetes, body mass index, gender, end stage renal disease, COPD, medicaid.
CABG donor data adjusted using NHSN risk category, body mass index, gender, diabetes, COPD, congestive heart failure, age over 75, emergency/trauma.
Hip data adjusted using NHSN risk categories and type of procedure.

CLABSI NOTES:

CLABSI=Central Line-Associated Blood Stream Infection; CLDays=Central Line Days
CLABSI data exclude cases in which multiple blood cultures were obtained, only one specimen was positive, the one positive was considered a contaminant and no treatment was given.
Adult CLABSI rates are # infections per 1000 line days and no additional adjustment is performed since the data are stratified by ICU type.
Neonatal CLABSI rates are adjusted by birth weight.

Each region-specific adjusted rate should only be compared with the New York State average in that category in that year.

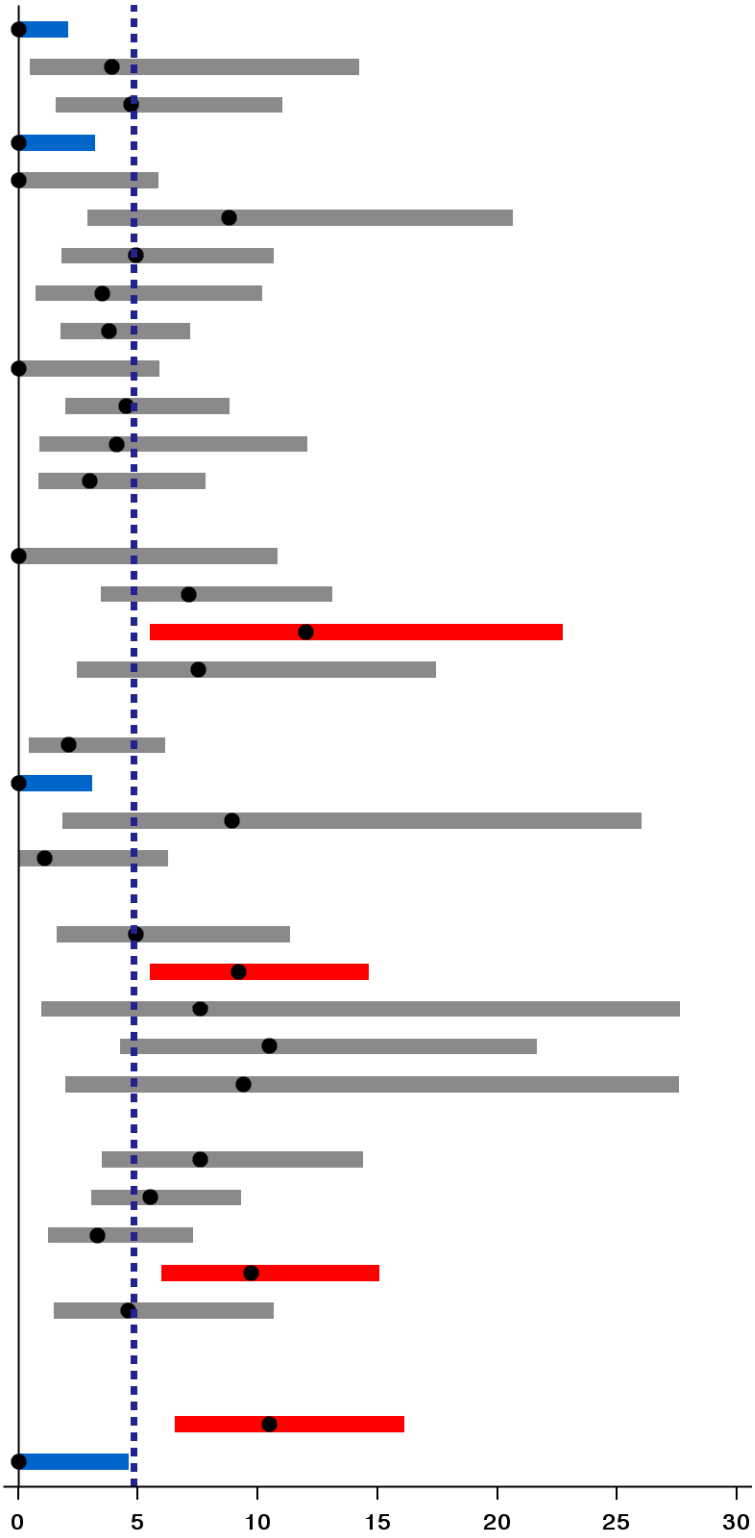
Figure 4. Colon Surgical Site Infection Rates, New York 2009 (page 1 of 5)



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data Reported as of July 7, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories. NA: Hospitals with less than 20 procedures.

Figure 4. Colon Surgical Site Infection Rates, New York 2009 (page 2 of 5)

HOSPITAL	# SSI	# PROCS	RAW RATE	ADJ RATE
Faxton St. Lukes**	0	141	0.0	0.0
Flushing Hospital	2	58	3.4	3.9
Forest Hills Hosp	5	111	4.5	4.7
Franklin**	0	96	0.0	0.0
Geneva General*	0	49	0.0	0.0
Glen Cove Hospital	5	52	9.6	8.8
Glens Falls	6	131	4.6	4.9
Good Samar. Suffern	3	90	3.3	3.5
Good Samar. W Islip	9	242	3.7	3.8
Harlem Hospital*	0	48	0.0	0.0
Highland Hospital	8	182	4.4	4.5
Hudson Valley	3	69	4.3	4.1
Huntington	4	129	3.1	3.0
Intercomm. Newfane	NA	NA	NA	NA
Interfaith Medical*	0	29	0.0	0.0
JT Mather	10	140	7.1	7.1
Jacobi Medical^^	9	66	13.6	12.0
Jamaica Hospital	5	66	7.6	7.5
Jones Memorial	NA	NA	NA	NA
Kenmore Mercy	3	157	1.9	2.1
Kings County**	0	89	0.0	0.0
Kingsbrook Jewish	3	30	10.0	8.9
Kingston Hospital	1	83	1.2	1.1
Lakeside Memorial	NA	NA	NA	NA
Lawrence	5	103	4.9	4.9
Lenox Hill^^	18	188	9.6	9.2
Lewis County	2	24	8.3	7.6
Lincoln Medical	7	60	11.7	10.5
Lockport Memorial	3	35	8.6	9.4
Long Beach	NA	NA	NA	NA
Long Island College	9	116	7.8	7.6
Long Island Jewish	14	248	5.6	5.5
Lutheran Medical	6	176	3.4	3.3
Maimonides^^	20	216	9.3	9.7
Mary Imogene Bassett	5	98	5.1	4.6
Massena Memorial	NA	NA	NA	NA
Medina Memorial	NA	NA	NA	NA
Mercy Buffalo^^	21	215	9.8	10.5
Mercy Medical**	0	65	0.0	0.0



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
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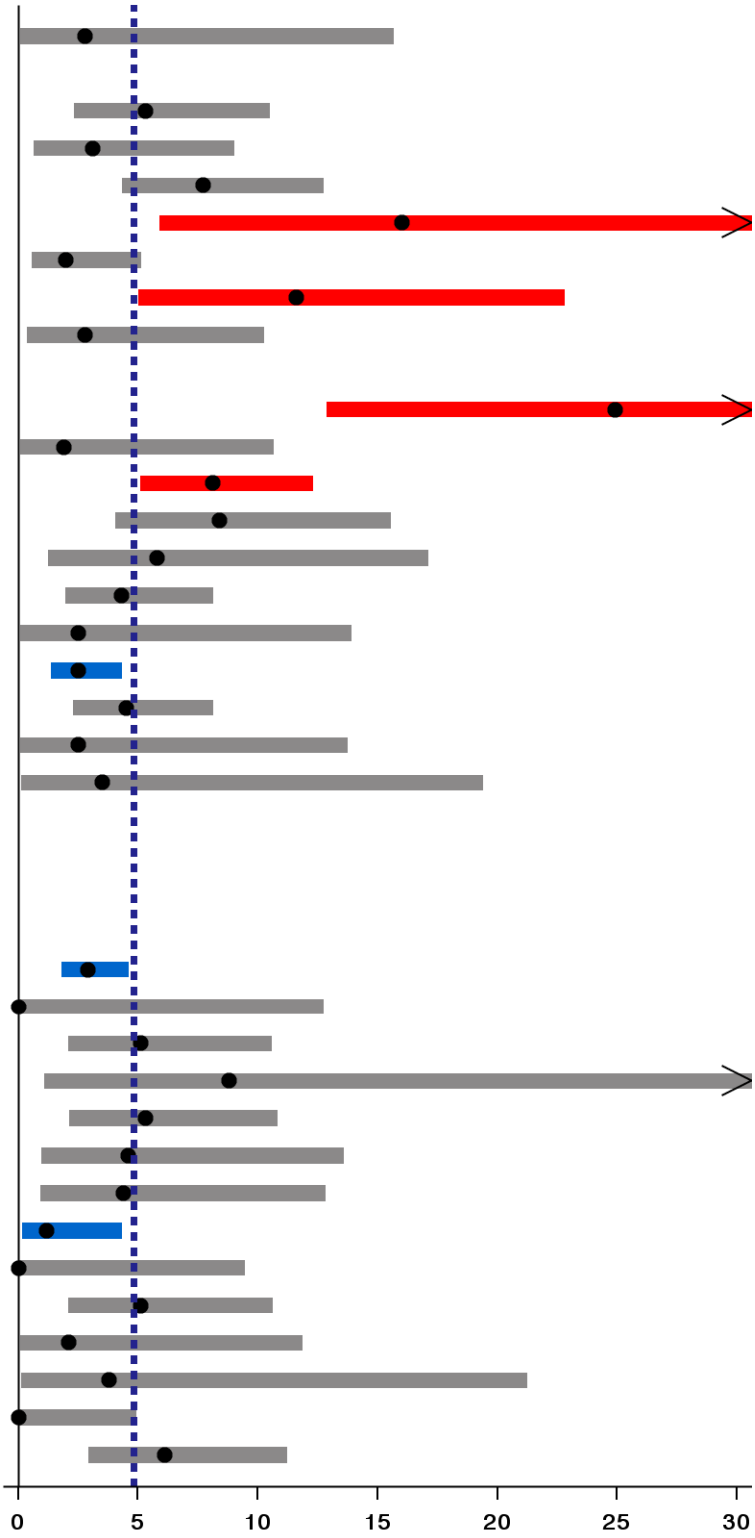
Data Reported as of July 7, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories. NA: Hospitals with less than 20 procedures.

Figure 4. Colon Surgical Site Infection Rates, New York 2009 (page 3 of 5)

HOSPITAL	# SSI	# PROCS	RAW RATE	ADJ RATE
Metropolitan	1	34	2.9	2.8
Millard Fill. Gates	NA	NA	NA	NA
Millard Fill. Suburb	8	156	5.1	5.3
Montefiore-Einstein	3	98	3.1	3.1
Montefiore-Moses	15	190	7.9	7.7
Montifiore North^^	6	36	16.7	16.0
Mount Sinai	4	197	2.0	2.0
Mount Sinai Queens^^	8	63	12.7	11.6
Mount St. Marys	2	71	2.8	2.8
Mount Vernon	NA	NA	NA	NA
NY Community Bklyn^^	12	45	26.7	24.9
NY Downtown	1	55	1.8	1.9
NY Med Ctr Queens^^	22	284	7.7	8.1
NY Methodist	10	122	8.2	8.4
NYP- Allen	3	47	6.4	5.8
NYP- Columbia	9	208	4.3	4.3
NYP- Morgan Stanley	1	39	2.6	2.5
NYP- Weill Cornell**	13	540	2.4	2.5
NYU Medical Center	11	219	5.0	4.5
Nassau University	1	39	2.6	2.5
Nathan Littauer	1	28	3.6	3.5
Newark Wayne	NA	NA	NA	NA
Niagara Falls	NA	NA	NA	NA
North Central Bronx	NA	NA	NA	NA
North General	NA	NA	NA	NA
North Shore**	19	617	3.1	2.9
Northern Dutchess*	0	23	0.0	0.0
Northern Westchester	7	143	4.9	5.1
Noyes Memorial	2	25	8.0	8.8
Nyack Hospital	7	125	5.6	5.3
Olean General	3	64	4.7	4.6
Oneida Healthcare	3	74	4.1	4.4
OrangeReg Goshen&Mid**	2	167	1.2	1.2
Oswego Hospital*	0	33	0.0	0.0
Our Lady of Lourdes	7	125	5.6	5.1
Peconic Bay Medical	1	46	2.2	2.1
Peninsula Hospital	1	24	4.2	3.8
Phelps Memorial*	0	72	0.0	0.0
Plainview Hospital	10	172	5.8	6.1



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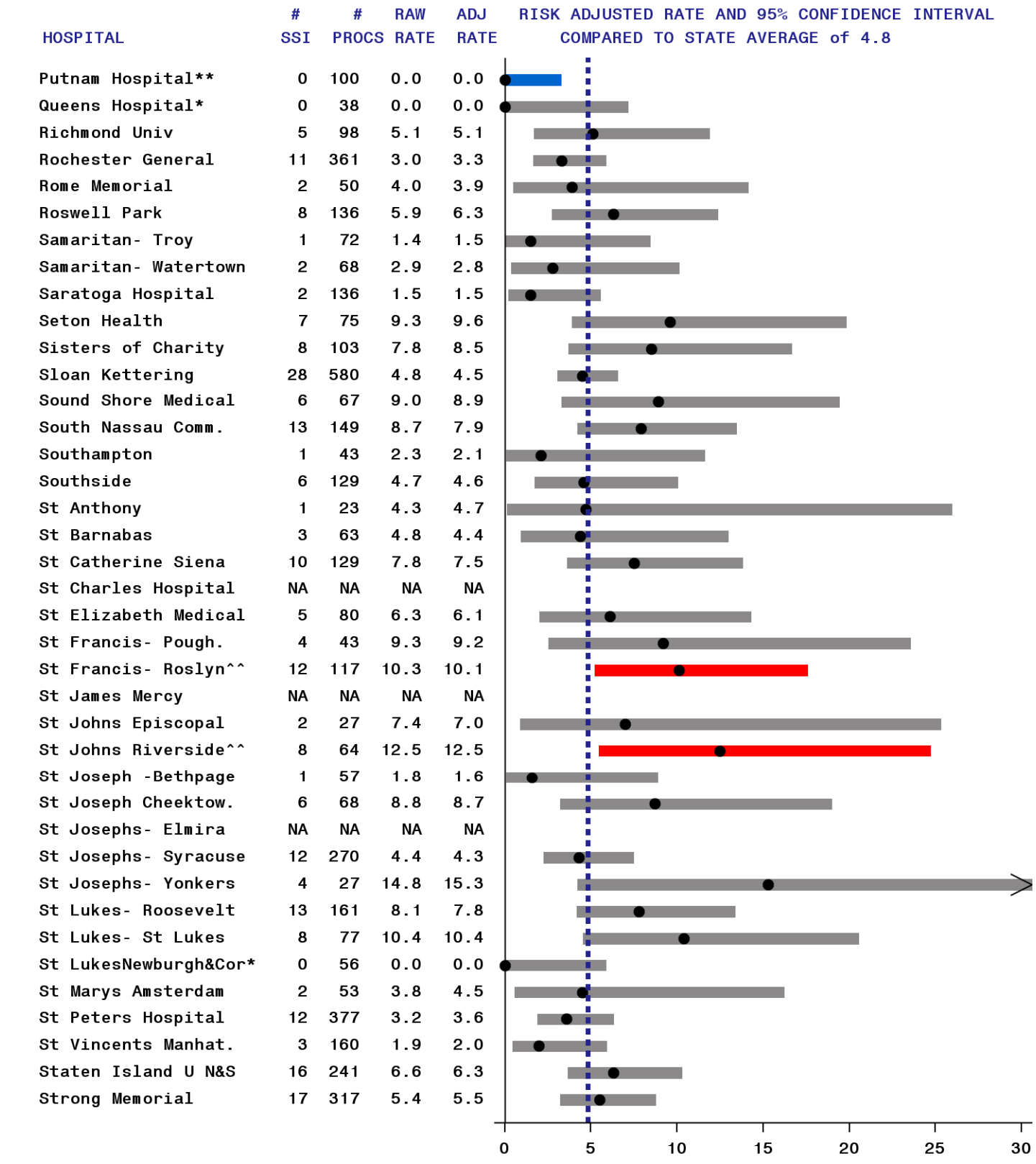
Data Reported as of July 7, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories. NA: Hospitals with less than 20 procedures.

Figure 4. Colon Surgical Site Infection Rates, New York 2009 (page 4 of 5)



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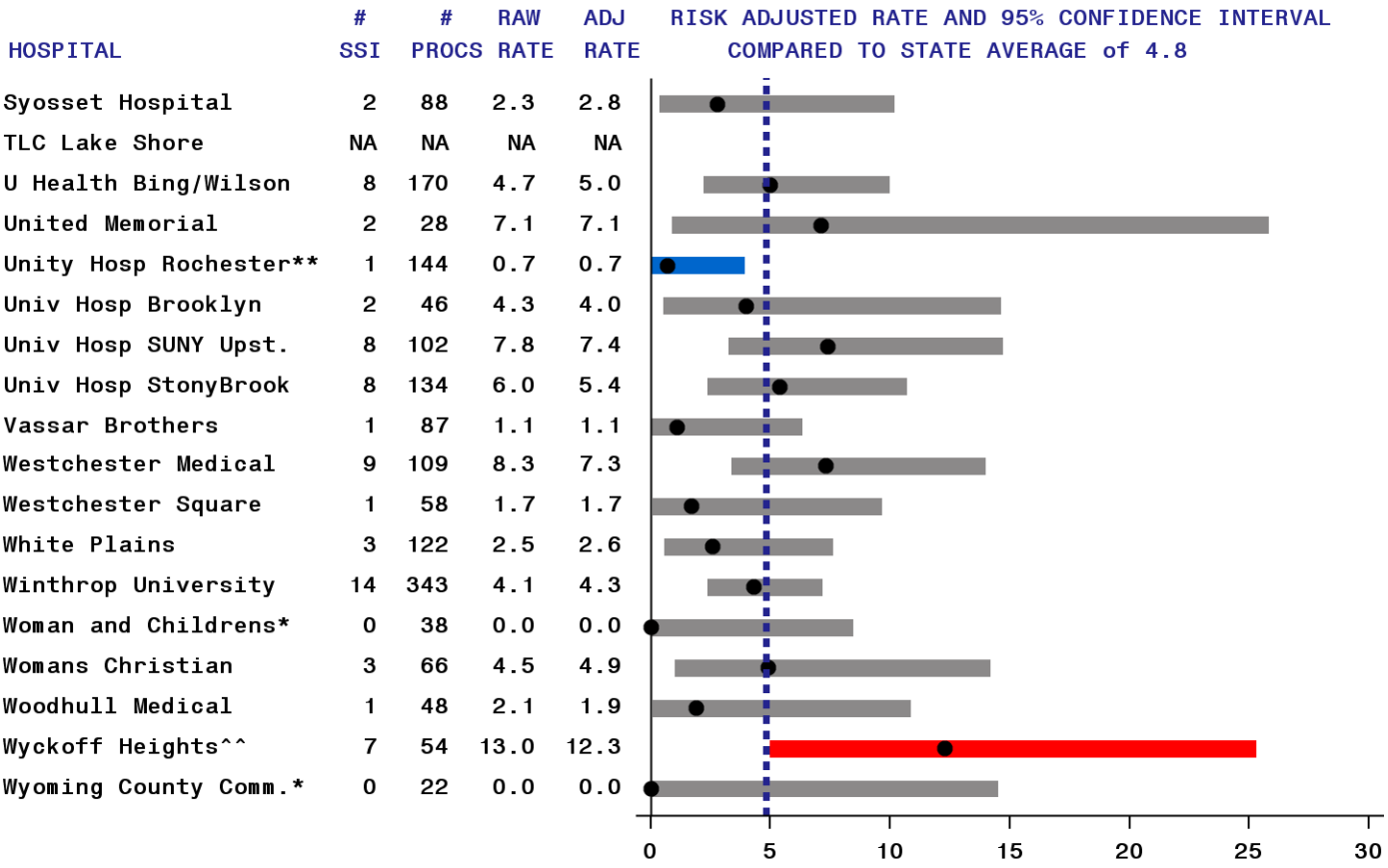
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.

Adjusted using NHSN risk categories. NA: Hospitals with less than 20 procedures.

Figure 4. Colon Surgical Site Infection Rates, New York 2009 (page 5 of 5)



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data Reported as of July 7, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories. NA: Hospitals with less than 20 procedures.

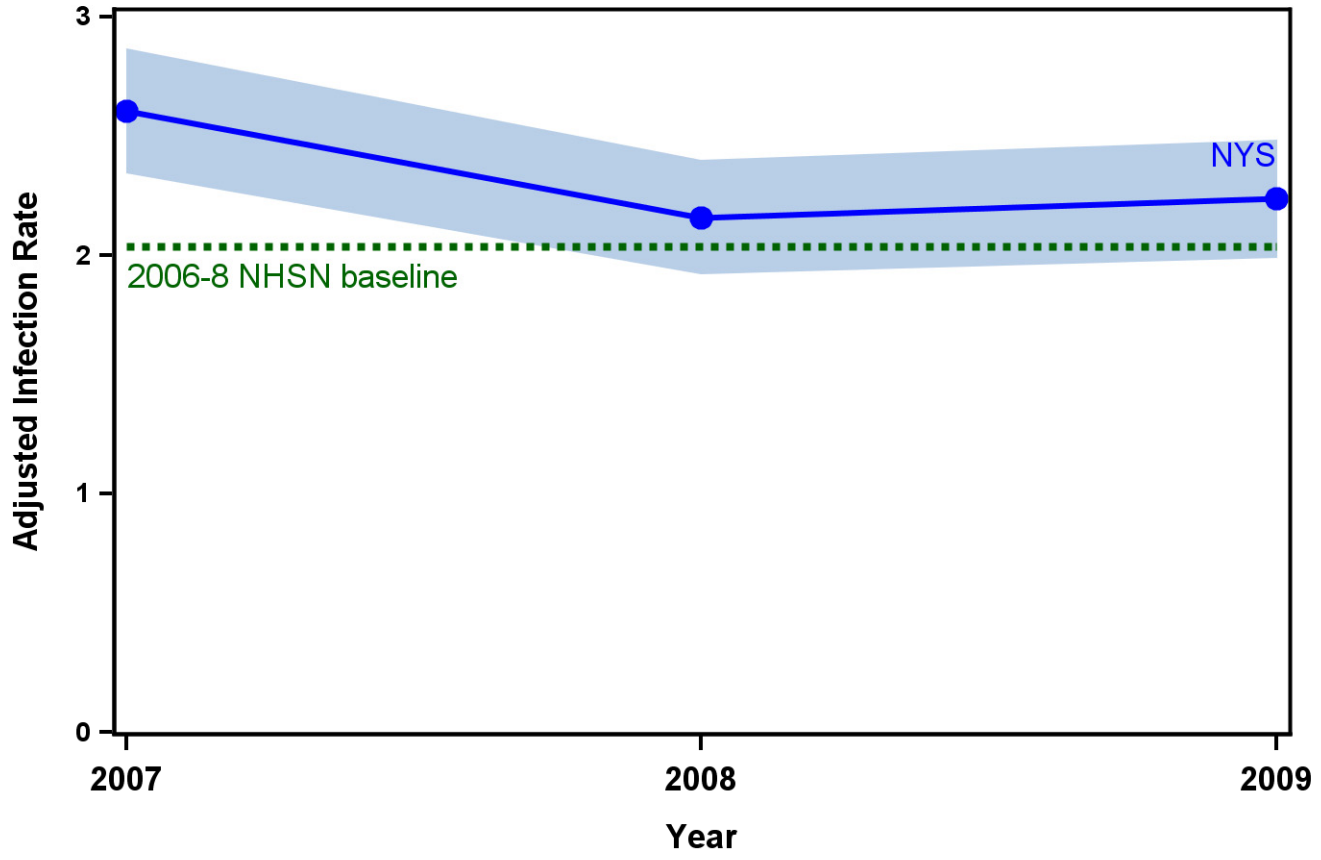
Table 3. Microorganisms Identified in Colon Surgical Site Infections, New York State 2009

Microorganism	Number of Isolates	Percent of Infections
Enterococci	277	29.8
(VRE)	(75)	(8.1)
Escherichia sp.	245	26.4
Staphylococcus aureus	102	11.0
(MRSA)	(64)	(6.9)
Coagulase negative staphylococci	76	8.2
Pseudomonas sp.	73	7.9
Bacteriodes	72	7.8
Klebsiella sp.	70	7.5
Streptococci	42	4.5
Enterobacter sp.	37	4.0
Yeast	30	3.2
Proteus sp.	25	2.7
Citrobacter sp.	20	2.2
Morganella morganii	10	1.1
Prevotella sp.	10	1.1
Clostridium sp.	8	0.9
Acinetobacter sp.	7	0.8
Diphtheroids	6	0.6
Serratia sp.	5	0.5
Other	29	3.1

New York State data reported as of July 7, 2010
Out of 929 infections (includes post-discharge surveillance).
No microorganisms identified for 214 infections

CABG Surgical Site Infection Tables – Chest Site Infections

Figure 5. Comparison of New York State and National Coronary Artery Bypass Graft Chest Site Infection Rates, 2007-2009



	Year	# Hospitals	# Infections[3]	# Procedures	Crude Rate[4]	Adjusted Rate[5] and 95% Confidence Interval
[1]New York State	2007	40	385	14,266	2.7	2.6 (2.3, 2.9) *H
	2008	40	311	13,967	2.2	2.2 (1.9, 2.4) NS
	2009	40	307	13,437	2.3	2.2 (2.0, 2.5) NS
[2]NHSN Baseline	2006-8	292	2,744	134,714	2.0	2.0

[1] New York State Data reported as of July 7, 2010.
[2] NHSN 2006-8 baseline data as of NHSN Report in Am J Infect Control 2009;37:783-805.
[3] NYS and NHSN procedure codes CBGB and CBGC, including non-readmitted cases identified using post-discharge surveillance
[4,5]Rates are per 100 procedures.
[5]NYS rates directly adjusted using NHSN Risk Categories;
"NS"= no significant difference between NYS and NHSN Baseline.
***H** indicates NYS rate significantly higher than NHSN Baseline.

Test for trend
Significant decrease in NYS rate between 2007 and 2009 (p=0.02 Cochran-Armitage Test for Trend)

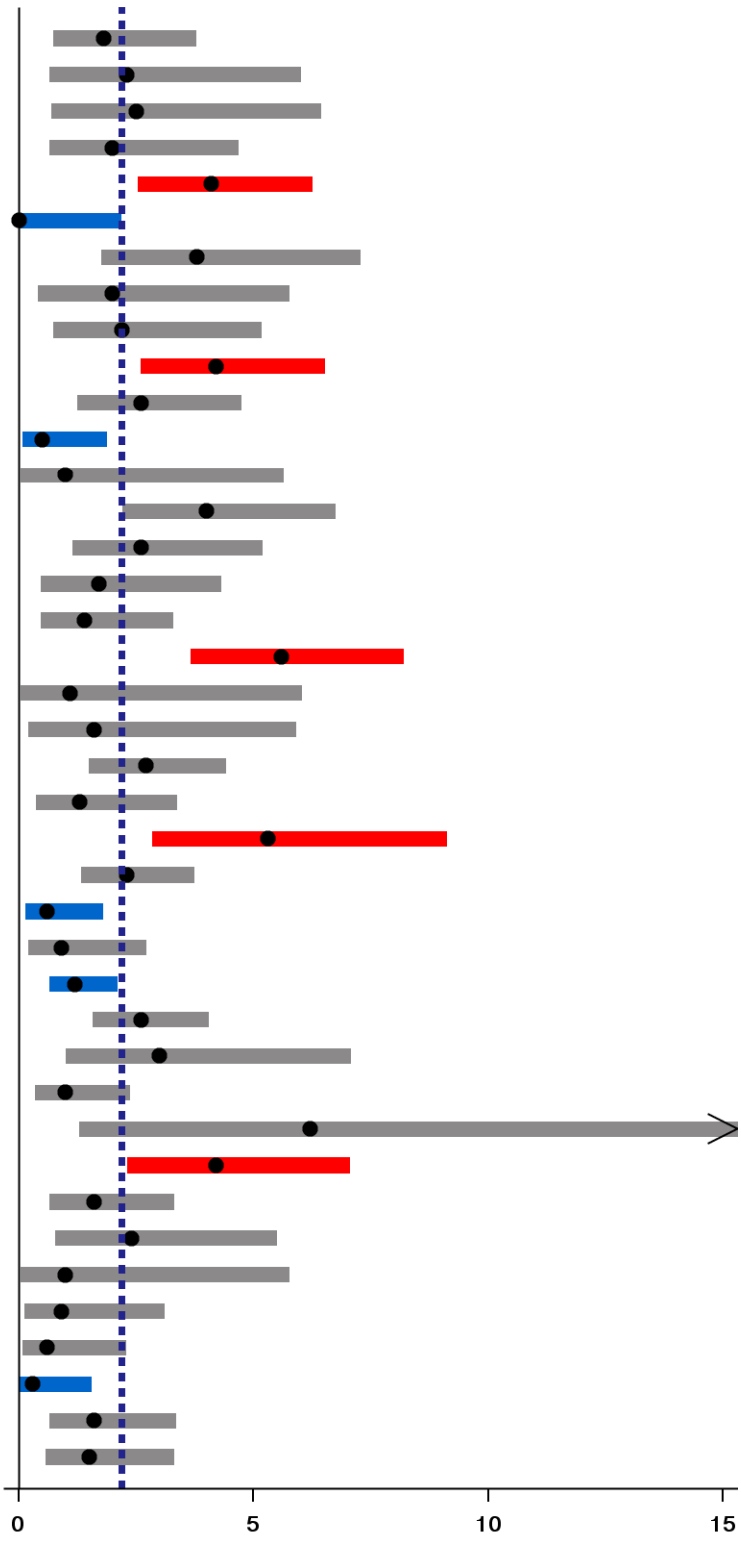
Table 4. Method of Detection for Coronary Artery Bypass Graft Chest Site Infection by Depth of Infection, New York State 2009

Extent (Row%) (Column%)	When Detected				
	Initial Hospitalization	Readmitted to the Same Hospital	Readmitted to Another Hospital	Detected in Outpatient Settings	Total
Superficial Incisional	23 (24.0%) (31.5%)	62 (64.6%) (28.1%)	1 (1.0%) (100.0%)	10 (10.4%) (83.3%)	96 (31.3%)
Deep Incisional	21 (21.4%) (28.8%)	75 (76.5%) (33.9%)	0 (0.0%) (0.0%)	2 (2.0%) (16.7%)	98 (31.9%)
Organ Space	29 (25.7%) (39.7%)	84 (74.3%) (38.0%)	0 (0.0%) (0.0%)	0 0.0%) (0.0%)	113 (36.8%)
Total	73 (23.8%)	221 (72.0%)	1 (0.3%)	12 (3.9%)	307

New York State data reported as of July 7, 2010.
Includes non-readmitted cases identified using post-discharge surveillance.

Figure 6. Coronary Artery Bypass Graft Chest Site Infection Rates, New York 2009

HOSPITAL	# SSI	# PROCS	RAW RATE	ADJ RATE
Albany Medical	7	367	1.9	1.8
Arnot Ogden	4	148	2.7	2.3
Bellevue Hospital	4	148	2.7	2.5
Beth Israel- Petrie	5	247	2.0	2.0
Buffalo General^^	21	468	4.5	4.1
Champlain Valley**	0	121	0.0	0.0
Ellis Hospital	9	254	3.5	3.8
Erie Medical Center	3	137	2.2	2.0
Good Samar. Suffern	5	206	2.4	2.2
Lenox Hill^^	20	468	4.3	4.2
Long Island Jewish	10	354	2.8	2.6
Maimonides**	2	334	0.6	0.5
Mary Imogene Bassett	1	98	1.0	1.0
Mercy Buffalo	14	368	3.8	4.0
Millard Fill. Gates	8	314	2.5	2.6
Montefiore-Einstein	4	210	1.9	1.7
Montefiore-Moses	5	301	1.7	1.4
Mount Sinai^^	26	464	5.6	5.6
NY Med Ctr Queens	1	101	1.0	1.1
NY Methodist	2	132	1.5	1.6
NYP- Columbia	15	562	2.7	2.7
NYP- Weill Cornell	4	378	1.1	1.3
NYU Medical Center^^	13	239	5.4	5.3
North Shore	16	684	2.3	2.3
Rochester General**	3	574	0.5	0.6
St Elizabeth Medical	3	365	0.8	0.9
St Francis- Roslyn**	13	1100	1.2	1.2
St Josephs- Syracuse	19	724	2.6	2.6
St Lukes- St Lukes	5	175	2.9	3.0
St Peters Hospital	5	531	0.9	1.0
St Vincents Manhat.	3	58	5.2	6.2
Staten Island U N&S^^	14	390	3.6	4.2
Strong Memorial	7	482	1.5	1.6
U Health Bing/Wilson	5	245	2.0	2.4
Univ Hosp Brooklyn	1	78	1.3	1.0
Univ Hosp SUNY Upst.	2	172	1.2	0.9
Univ Hosp StonyBrook	2	298	0.7	0.6
Vassar Brothers**	1	320	0.3	0.3
Westchester Medical	7	444	1.6	1.6
Winthrop University	6	378	1.6	1.5



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area.
—^^Significantly higher than state average.—**Significantly lower than state average. —Average. —*Zero infections, not significant.
Data Reported as of July 7, 2010. NHSN Procedure Codes CBGB and CBGC.
Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures. NA: Hospitals with less than 20 procedures.
Adjusted using NHSN risk category, diabetes, body mass index, gender, end stage renal disease, COPD, medicaid.

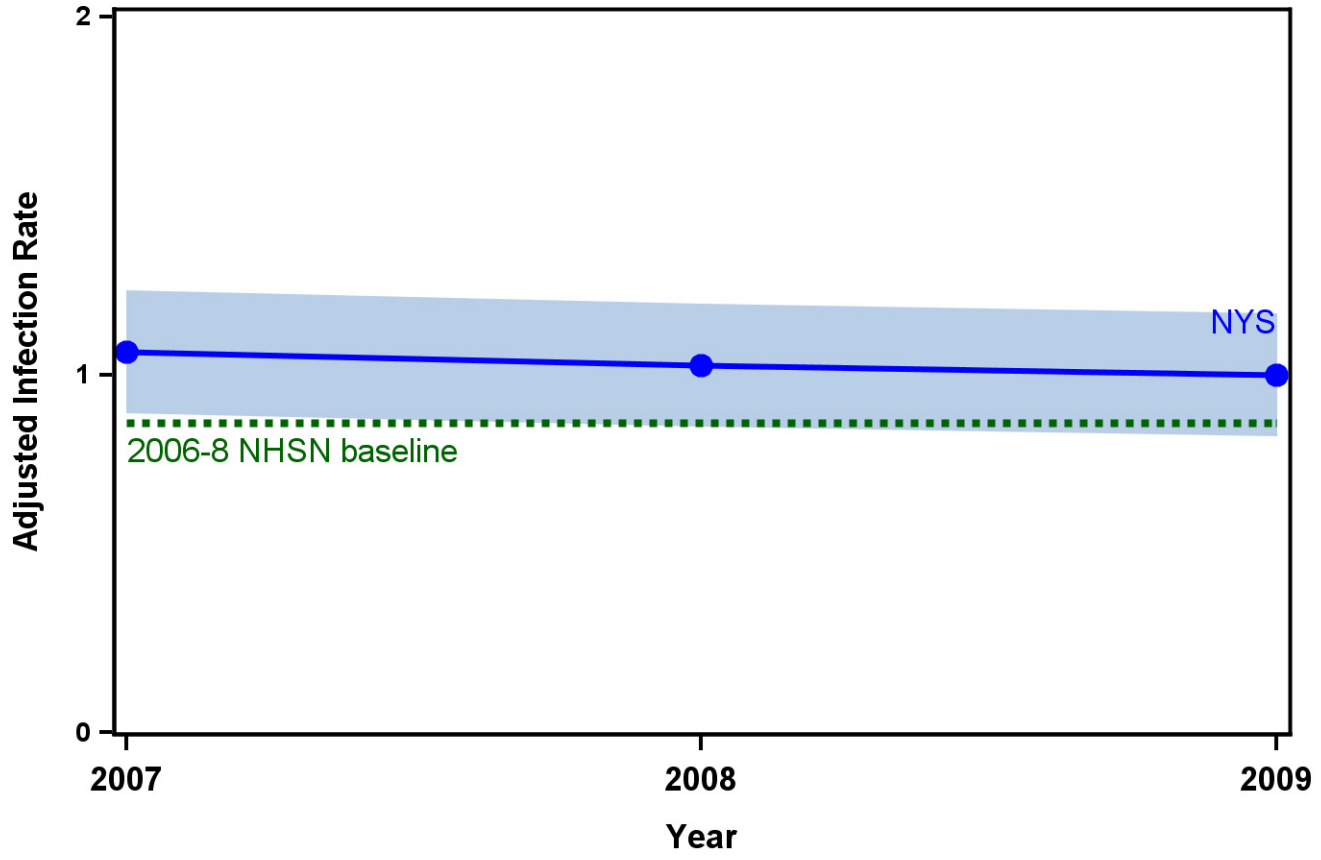
Table 5. Microorganisms Identified in Coronary Artery Bypass Chest Site Infections, New York State 2009

Microorganism	Number of Isolates	Percent of Infections
Staphylococcus aureus	111	36.2
(MRSA)	(40)	(13.0)
Coagulase negative staphylococci	73	23.8
Enterobacter sp.	29	9.4
Pseudomonas sp.	28	9.1
Klebsiella sp.	25	8.1
Escherichia sp.	24	7.8
Serratia	24	7.8
Enterococci	19	6.2
(VRE)	(8)	(2.6)
Proteus sp.	16	5.2
Streptococci	9	2.9
Yeast	6	2.0
Morganella morganii	5	1.6
Other	14	4.6

New York State data reported as of July 7, 2010
Out of 307 infections (includes post-discharge surveillance).
No microorganisms identified for 22 infections

CABG Surgical Site Infection Rate Tables – Donor Vessel Site Infections

Figure 7. Comparison of New York State and National Coronary Artery Bypass Graft Donor Site Infection Rates, New York State 2007-2009



	Year	# Hospitals	# Infections[3]	# Procedures	Crude Rate[4]	Adjusted Rate[5] and 95% Confidence Interval
New York State[1]	2007	40	149	13,203	1.1	1.1 (0. 9, 1.2) *H
	2008	40	139	12,905	1.1	1.0 (0.9, 1.2) NS
	2009	40	129	12,414	1.0	1.0 (0.8, 1.2) NS
NHSN Baseline[2]	2006-8	292	1,064	123,055	0.9	0.9

[1] New York State Data reported as of July 7, 2010.
[2] NHSN 2006-8 baseline data as of NHSN Report in *Am J Infect Control* 2009;37:783-805.
[3] NYS and NHSN data include non-readmitted cases identified using post-discharge surveillance.
[4,5] Rates are per 100 procedures.
[5]NYS rates directly adjusted using NHSN Risk Categories.
"NS"= no significant difference between NYS and NHSN Baseline.
*H indicates NYS rate significantly higher than NHSN Baseline.

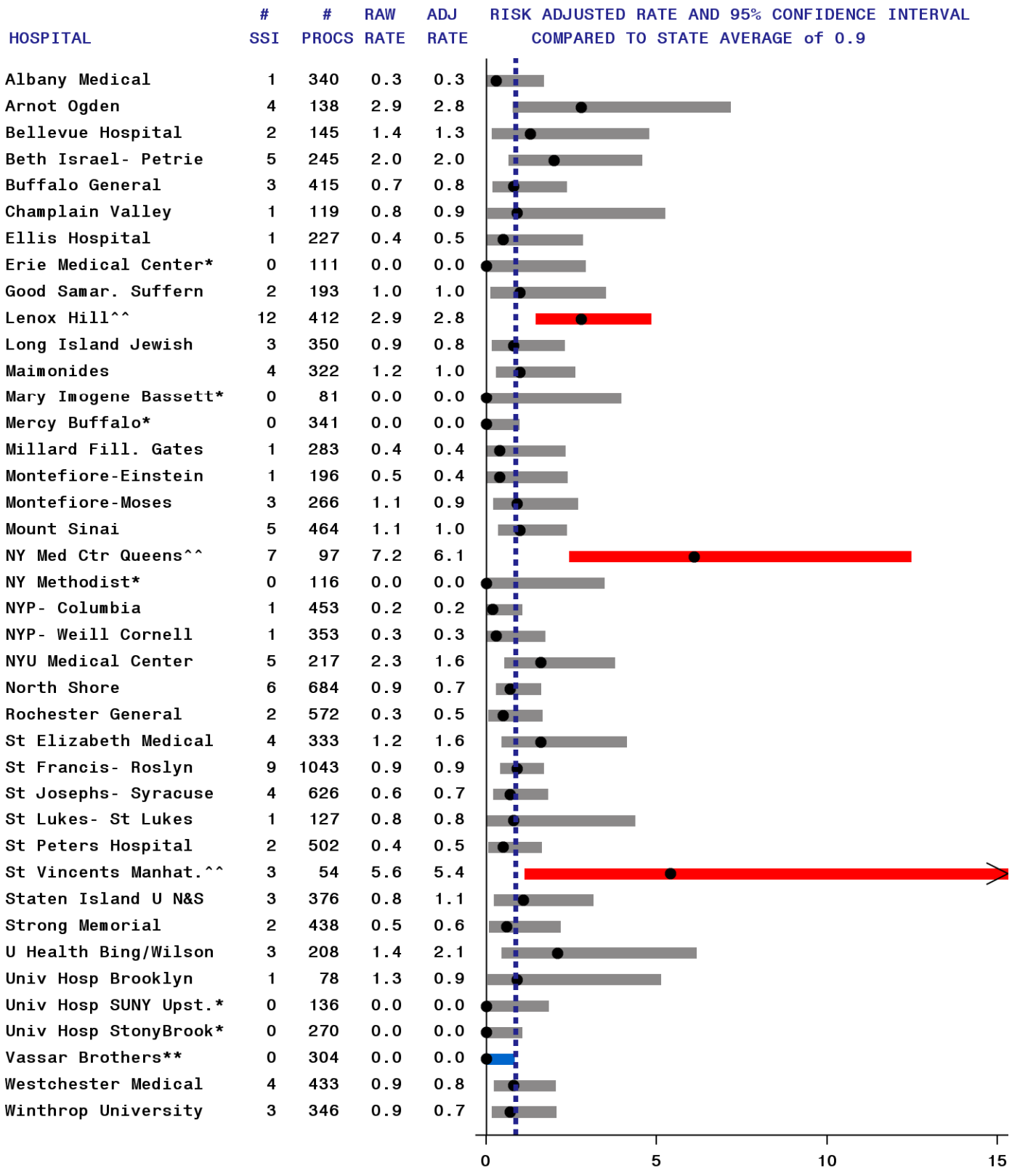
Test for trend
No significant change in NYS rate between 2007 and 2009 (p=0.48 Cochran-Armitage Test for Trend)

Table 6. Method of Detection for Coronary Artery Bypass Graft Donor Site Infection by Depth of Infection, New York State 2009

Extent Frequency (Row Pct) (Col Pct)	When Detected				
	Initial Hospitalization	Readmitted to the Same Hospital	Readmitted to a Different Hospital	Detected in Outpatient Settings	Total
Superficial Incisional	20 (19.8%) (74.1%)	65 (64.4%) (78.3%)	0 (0%) (0%)	16 (15.8%) (84.2%)	101 (78.3%)
Deep Incisional	7 (25.0%) (25.9%)	18 (64.3%) (21.7%)	0 (0%) (0%)	3 (10.7%) (15.8%)	28 (21.7%)
Total	27 (20.9%)	83 (64.3%)	0 (0.0%)	19 (14.7%)	129

New York State data reported as of July 7, 2010.
Includes non-readmitted cases identified using post-discharge surveillance.

Figure 8. Coronary Artery Bypass Graft Donor Site Infection Rates, New York 2009



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data Reported as of July 7, 2010. NHSN Code CBGB. Excludes non-readmitted cases identified using post discharge surveillance. Only one donor site infection per person is counted.

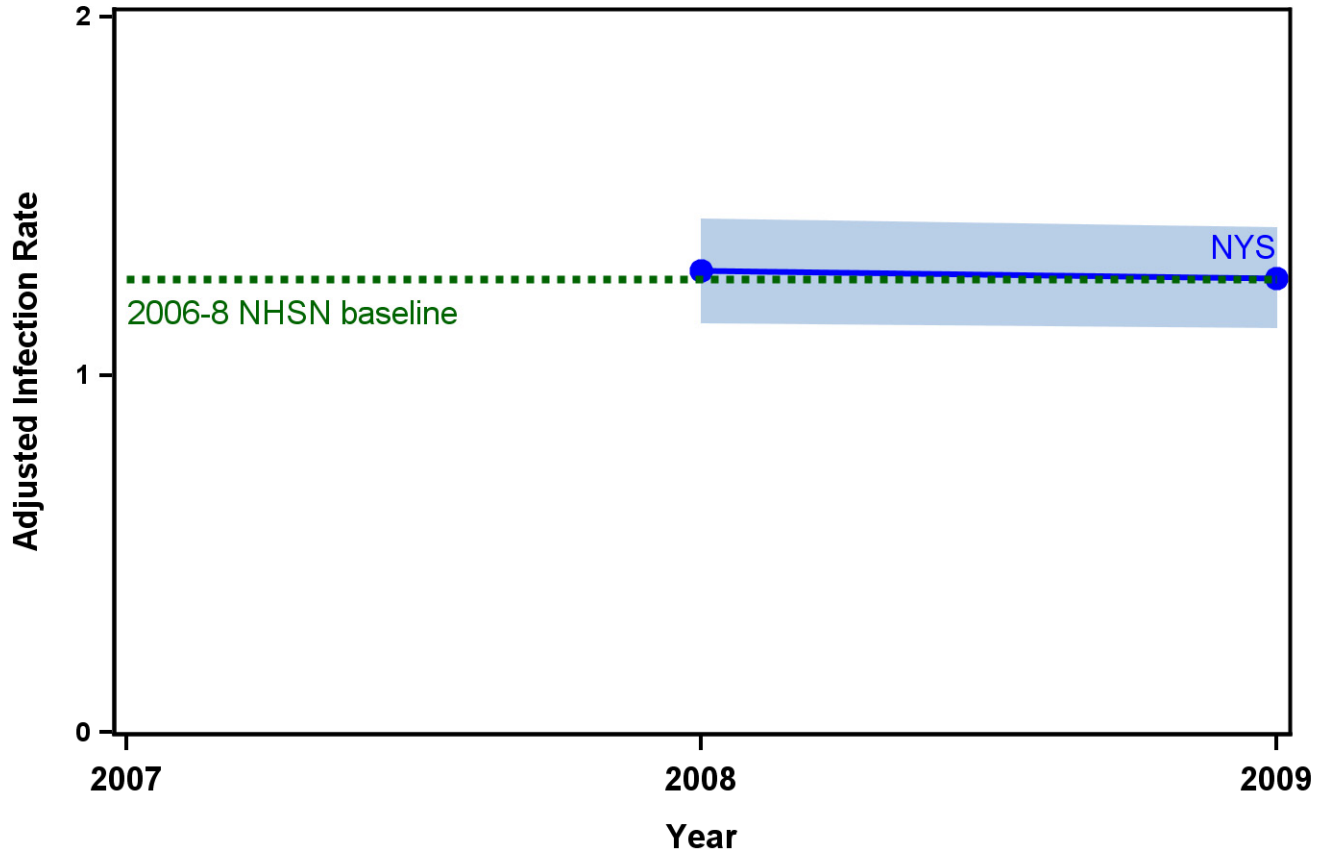
Table 7. Microorganisms Identified in Coronary Artery Bypass Donor Site Infections, New York State 2009

Microorganism	Number of Isolates	Percent of Infections
Staphylococcus aureus	29	22.5
(MRSA)	(12)	(9.3)
Escherichia sp.	23	17.8
Enterococci	19	14.7
(VRE)	(5)	(3.9)
Klebsiella sp.	16	12.4
Pseudomonas sp.	14	10.9
Coagulase negative staphylococci	13	10.1
Proteus sp.	8	6.2
Serratia sp.	8	6.2
Enterobacter sp.	5	3.9
Morganella morganii	5	3.9
Other	13	10.1

New York State data reported as of July 7, 2010
Out of 129 infections (includes post-discharge surveillance).
No microorganisms identified for 27 infections

Hip Replacement/Revision Surgical Site Infection Rate Tables

Figure 9. Comparison of New York State and National Hip Replacement Surgical Site Infection Rates, 2008-2009



	Year	# Hospitals	# Infections[3]	# Procedures	Crude Rate[4]	Adjusted Rate[5] and 95% Confidence Interval	
New York State[1]	2008	172	298	24,357	1.2	1.3 (1.1, 1.4)	NS
	2009	169	311	25,849	1.2	1.3 (1.1, 1.4)	NS
NHSN Baseline[2]	2006-8	665	1,651	130,391	1.3	1.3	

[1]New York State Data reported as of July 27, 2010.
[2]NHSN 2006-8 baseline data as of NHSN Report in Am J Infect Control 2009;37:783-805.
[3]NYS and NHSN data include non-readmitted cases identified using post-discharge surveillance.
[4,5]Rates are per 100 procedures.
[5]NYS rates directly adjusted using NHSN Risk Categories;
"NS"= no significant difference between NYS and NHSN Baseline.

Test for trend
No significant change in NYS rate between 2008 and 2009 (p=0.8353 Chi-Square test)

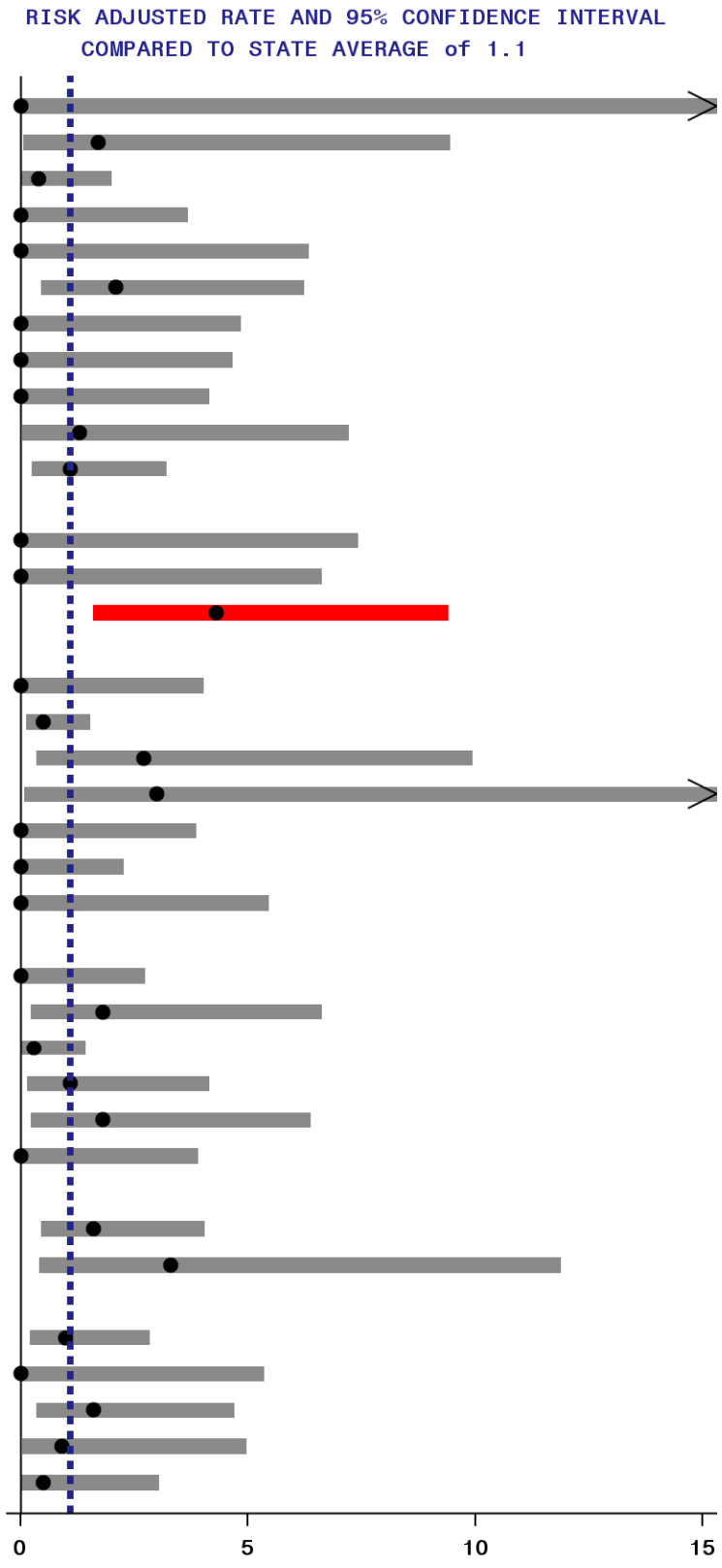
Table 8. Method of Detection for Hip Surgical Site Infection by Depth of Infection, New York State 2009

Extent (Row%) (Column%)	When Detected				
	Initial Hospitalization	Readmitted to the Same Hospital	Readmitted to Another Hospital	Detected in Outpatient Settings	Total
Superficial Incisional	14 (13.5%) (41.2%)	66 (63.5%) (27.2%)	0 (0.0%) (0.0%)	24 (23.1%) (88.9%)	104 (33.4%)
Deep Incisional	15 (11.5%) (44.1%)	109 (83.8%) (44.9%)	5 (3.8%) (71.4%)	1 (0.8%) (3.7%)	130 (41.8%)
Organ Space	5 (6.5%) (14.7%)	68 (88.3%) (28.0%)	2 (2.6%) (28.6%)	2 (2.6%) (7.4%)	77 (24.8%)
Total	34 (10.9%)	243 (78.1%)	7 (2.3%)	27 (8.7%)	311

New York State data reported as of July 27, 2010.
Includes non-readmitted cases identified using post-discharge surveillance.

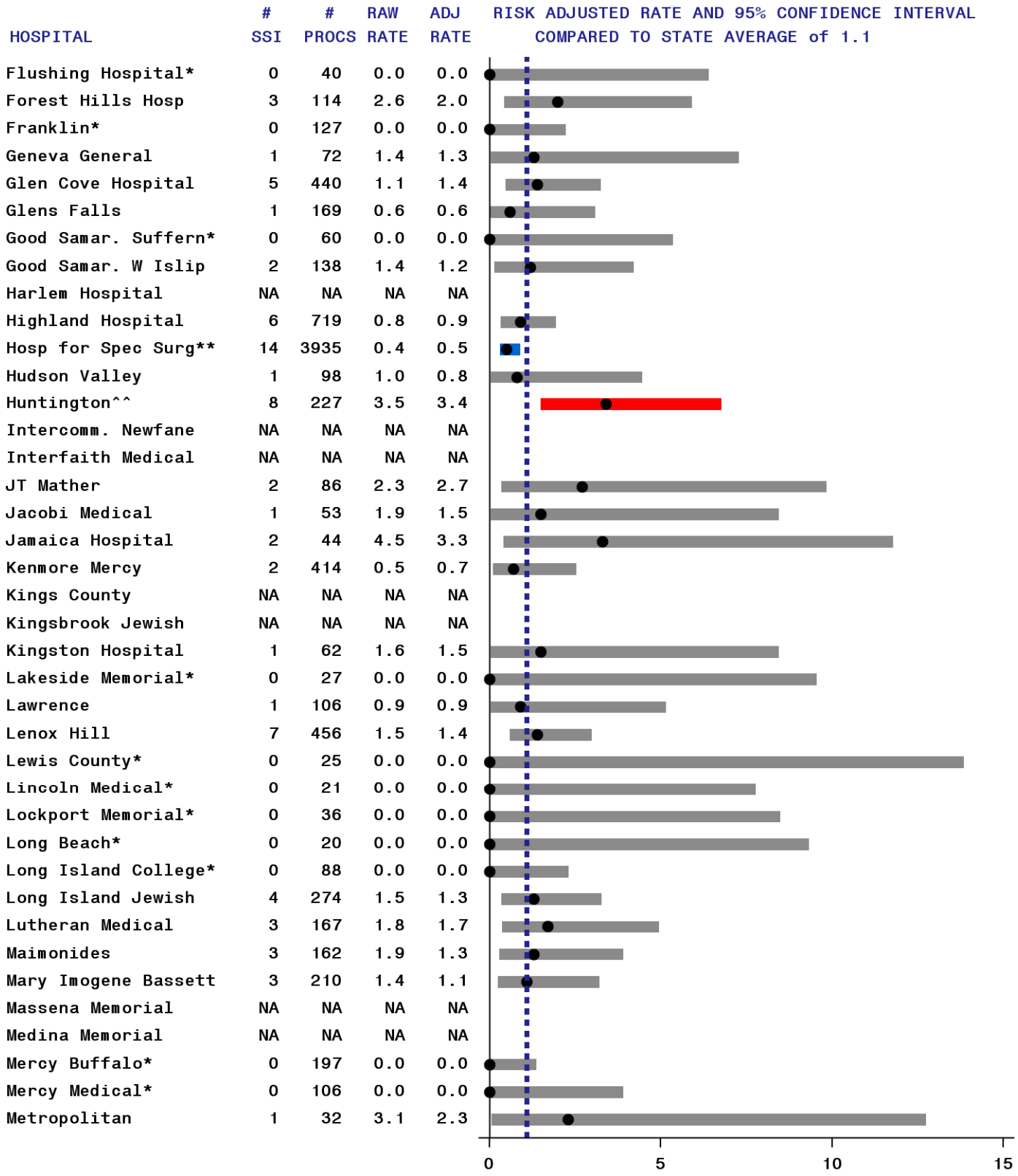
Figure 10. Hip Replacement Surgical Site Infection Rates, New York 2009 (page 1 of 5)

HOSPITAL	# SSI	# PROCS	RAW RATE	ADJ RATE
AO Fox Memorial*	0	25	0.0	0.0
Adirondack Medical	1	58	1.7	1.7
Albany Medical	1	270	0.4	0.4
Albany Memorial*	0	101	0.0	0.0
Alice Hyde*	0	44	0.0	0.0
Arnot Ogden	3	149	2.0	2.1
Auburn Memorial*	0	48	0.0	0.0
Bellevue Hospital*	0	48	0.0	0.0
Benedictine Hospital*	0	62	0.0	0.0
Beth Israel- Kings	1	56	1.8	1.3
Beth Israel- Petrie	3	296	1.0	1.1
Bon Secours	NA	NA	NA	NA
Bronx-Lebanon*	0	31	0.0	0.0
Brookdale Hospital*	0	31	0.0	0.0
Brookhaven Memorial^^	6	121	5.0	4.3
Brooklyn Downtown	NA	NA	NA	NA
Brooks Memorial*	0	96	0.0	0.0
Buffalo General	3	568	0.5	0.5
Canton-Potsdam	2	74	2.7	2.7
Catskill Regional	1	30	3.3	3.0
Cayuga Medical Cntr*	0	66	0.0	0.0
Champlain Valley*	0	113	0.0	0.0
Chenango Memorial*	0	45	0.0	0.0
Claxton-Hepburn	NA	NA	NA	NA
Clifton Springs*	0	100	0.0	0.0
Columbia Memorial	2	80	2.5	1.8
Community General	1	498	0.2	0.3
Community Memorial	2	214	0.9	1.1
Coney Island	2	69	2.9	1.8
Corning Hospital*	0	52	0.0	0.0
Cortland Reg Med	NA	NA	NA	NA
Crouse Hospital	4	269	1.5	1.6
DeGraff Memorial	2	49	4.1	3.3
Eastern Long Island	NA	NA	NA	NA
Ellis Hospital	3	265	1.1	1.0
Elmhurst*	0	42	0.0	0.0
Erie Medical Center	3	137	2.2	1.6
FF Thompson	1	155	0.6	0.9
Faxton St. Lukes	1	138	0.7	0.5



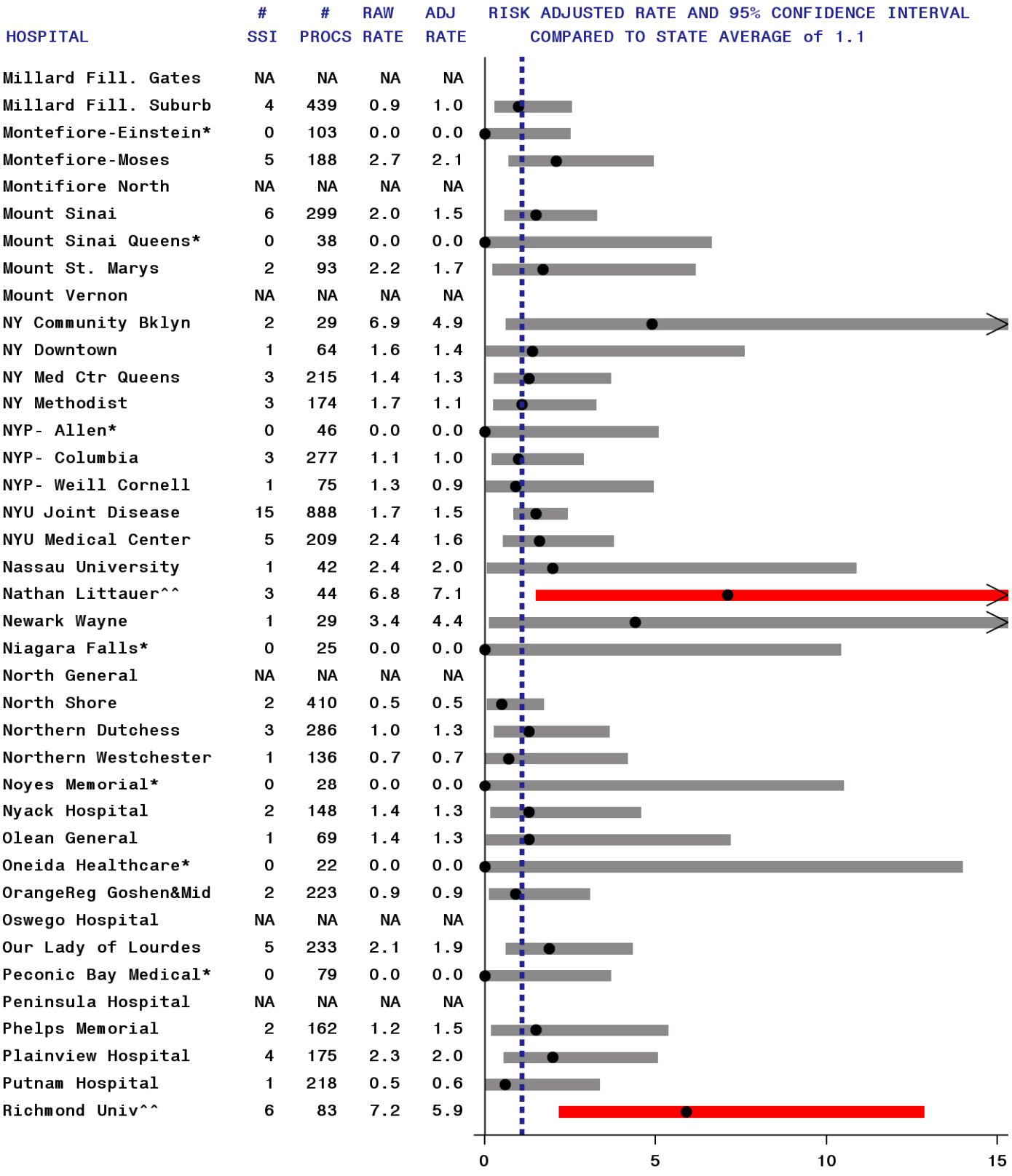
State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data Reported as of July 27, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories and type of procedure (initial/revision,total/partial). NA: Hospitals with less than 20 procedures.

Figure 10. Hip Replacement Surgical Site Infection Rates, New York 2009 (page 2 of 5)



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
—^^Significantly higher than state average.—**Significantly lower than state average. —Average. —*Zero Infections,not significant.
Data Reported as of July 27, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories and type of procedure (initial/revision,total/partial). NA: Hospitals with less than 20 procedures.

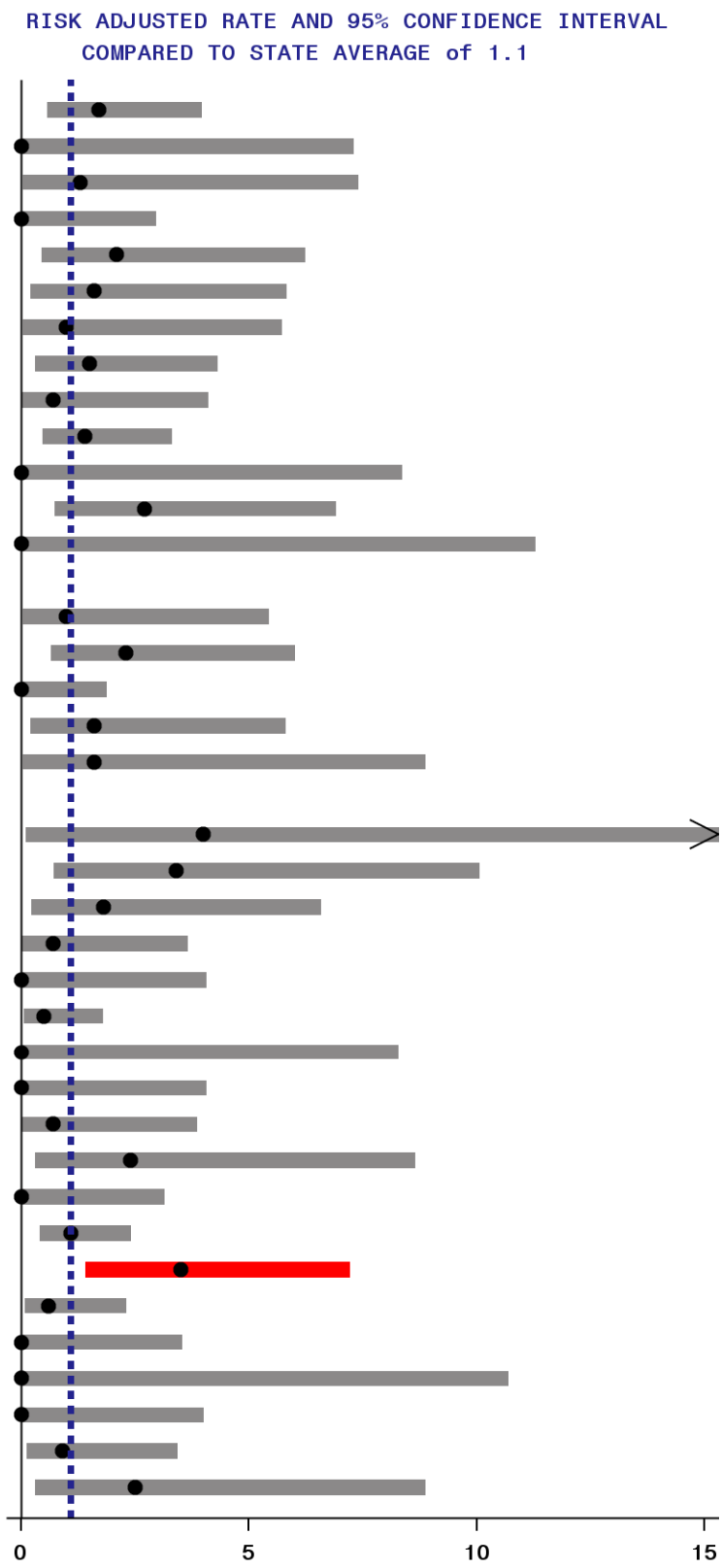
Figure 10. Hip Replacement Surgical Site Infection Rates, New York 2009 (page 3 of 5)



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
—^^Significantly higher than state average.—**Significantly lower than state average. —Average. —*Zero Infections,not significant.
Data Reported as of July 27, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories and type of procedure (initial/revision,total/partial). NA: Hospitals with less than 20 procedures.

Figure 10. Hip Replacement Surgical Site Infection Rates, New York 2009 (page 4 of 5)

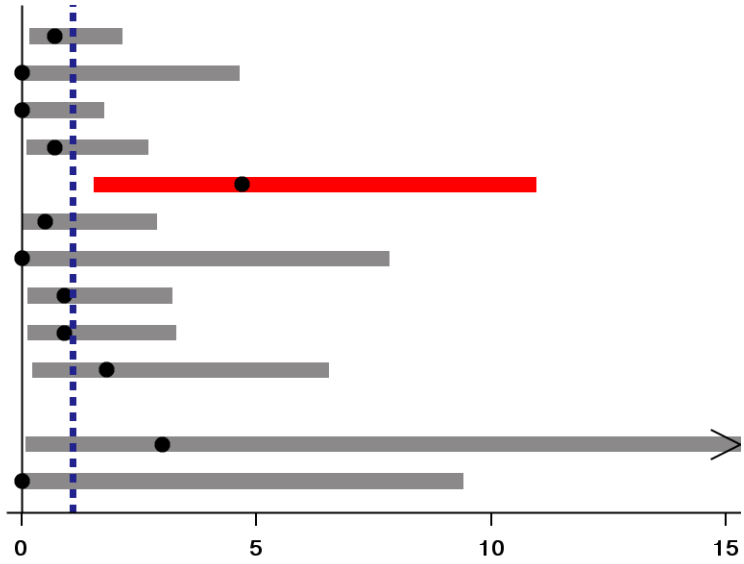
HOSPITAL	# SSI	# PROCS	RAW RATE	ADJ RATE
Rochester General	5	383	1.3	1.7
Rome Memorial*	0	34	0.0	0.0
Samaritan- Troy	1	72	1.4	1.3
Samaritan- Watertown*	0	124	0.0	0.0
Saratoga Hospital	3	157	1.9	2.1
Seton Health	2	114	1.8	1.6
Sisters of Charity	1	133	0.8	1.0
Sloan Kettering	3	91	3.3	1.5
Sound Shore Medical	1	120	0.8	0.7
South Nassau Comm.	5	294	1.7	1.4
Southampton*	0	31	0.0	0.0
Southside	4	134	3.0	2.7
St Anthony*	0	23	0.0	0.0
St Barnabas	NA	NA	NA	NA
St Catherine Siena	1	98	1.0	1.0
St Charles Hospital	4	243	1.6	2.3
St Elizabeth Medical*	0	159	0.0	0.0
St Francis- Pough.	2	175	1.1	1.6
St Francis- Roslyn	1	57	1.8	1.6
St James Mercy	NA	NA	NA	NA
St Johns Episcopal	1	21	4.8	4.0
St Johns Riverside	3	67	4.5	3.4
St Joseph -Bethpage	2	123	1.6	1.8
St Joseph Cheektow.	1	144	0.7	0.7
St Josephs- Elmira*	0	61	0.0	0.0
St Josephs- Syracuse	2	438	0.5	0.5
St Josephs- Yonkers*	0	28	0.0	0.0
St Lukes- Roosevelt*	0	78	0.0	0.0
St Lukes- St Lukes	1	156	0.6	0.7
St LukesNewburgh&Cor	2	84	2.4	2.4
St Marys Amsterdam*	0	110	0.0	0.0
St Peters Hospital	6	677	0.9	1.1
St Vincents Manhat.^^	7	136	5.1	3.5
Staten Island U N&S	2	208	1.0	0.6
Strong Memorial*	0	60	0.0	0.0
Syosset Hospital*	0	26	0.0	0.0
TLC Lake Shore*	0	71	0.0	0.0
U Health Bing/Wilson	2	225	0.9	0.9
United Memorial	2	84	2.4	2.5



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data Reported as of July 27, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories and type of procedure (initial/revision,total/partial). NA: Hospitals with less than 20 procedures.

Figure 10. Hip Replacement Surgical Site Infection Rates, New York 2009 (page 5 of 5)

HOSPITAL	# SSI	# PROCS	RAW RATE	ADJ RATE
Unity Hosp Rochester	3	503	0.6	0.7
Univ Hosp Brooklyn*	0	58	0.0	0.0
Univ Hosp SUNY Upst.*	0	129	0.0	0.0
Univ Hosp StonyBrook	2	205	1.0	0.7
Vassar Brothers^^	5	88	5.7	4.7
Westchester Medical	1	128	0.8	0.5
Westchester Square*	0	29	0.0	0.0
White Plains	2	213	0.9	0.9
Winthrop University	2	171	1.2	0.9
Womans Christian	2	108	1.9	1.8
Woodhull Medical	NA	NA	NA	NA
Wyckoff Heights	1	24	4.2	3.0
Wyoming County Comm.*	0	25	0.0	0.0



State Average. ●Risk-adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data Reported as of July 27, 2010. Excludes non-readmitted cases identified using post discharge surveillance.
SSI=surgical site infections, Procs=procedures, Rates are per 100 procedures.
Adjusted using NHSN risk categories and type of procedure (initial/revision,total/partial). NA: Hospitals with less than 20 procedures.

Table 9. Microorganisms Identified in Hip Replacement Surgical Site Infections, New York State 2009

Microorganism	Number of Isolates	Percent of Infections
Staphylococcus aureus	186	59.8
(MRSA)	(102)	(32.8)
Coagulase negative staphylococci	33	10.6
Enterococci	31	10.0
(VRE)	(5)	(1.6)
Escherichia sp.	21	6.8
Pseudomonas sp.	20	6.4
Enterobacter sp.	11	3.5
Klebsiella sp.	11	3.5
Proteus sp.	9	2.9
Streptococci	9	2.9
Corynebacteria	8	2.6
Acinetobacter sp.	7	2.3
Other	17	5.5

New York State data reported as of July 27, 2010
Out of 311 infections (includes post-discharge surveillance).
No microorganisms identified for 20 infections

CLABSI Rate Tables – Adult/Pediatric Intensive Care Units

Table 10. Comparison of New York State and National Central Line-Associated Blood Stream Infection Rates by Type of Adult/Pediatric Intensive Care Unit, 2007-2009

	New York State 2007[1]				New York State 2008[1]				New York State 2009[1]				National 2006-8[2]		
	# CLABSI	# CL Days	Rate	2007 vs. Nat	# CLABSI	# CL Days	Rate	2008 vs. Nat	# CLABSI	# CL Days	Rate	2009 vs. Nat	# CLABSI	# CL Days	Rate
Cardiothoracic	109	62,962	1.7	*H	108	73,679	1.5	NS	97	75,195	1.3	NS	879	632,769	1.4
Coronary	74	39,344	1.9	NS	110	50,858	2.2	NS	94	50,707	1.9	NS	876	436,409	2.0
Medical (Major Teaching)	120	41,612	2.9	NS	145	52,294	2.8	NS	138	53,368	2.6	NS	1,410	549,088	2.6
Medical (All other)	71	28,545	2.5	*H	99	35,491	2.8	*H	79	40,860	1.9	NS	687	362,388	1.9
Medical Surgical (Major Teaching)	100	47,447	2.1	NS	117	48,030	2.4	NS	75	44,110	1.7	NS	1,474	699,300	2.1
Medical Surgical (All Other)	339	164,104	2.1	*H	360	174,136	2.1	*H	313	162,151	1.9	*H	2,579	1,742,419	1.5
Neuro-Surgical	37	14,580	2.5	NS	42	17,577	2.4	NS	40	18,798	2.1	NS	396	160,879	2.5
Pediatric	90	28,173	3.2	NS	99	29,698	3.3	NS	69	30,573	2.3	*L	1,147	390,253	2.9
Surgical	221	66,400	3.3	*H	219	75,544	2.9	*H	161	75,479	2.1	NS	1,683	729,989	2.3

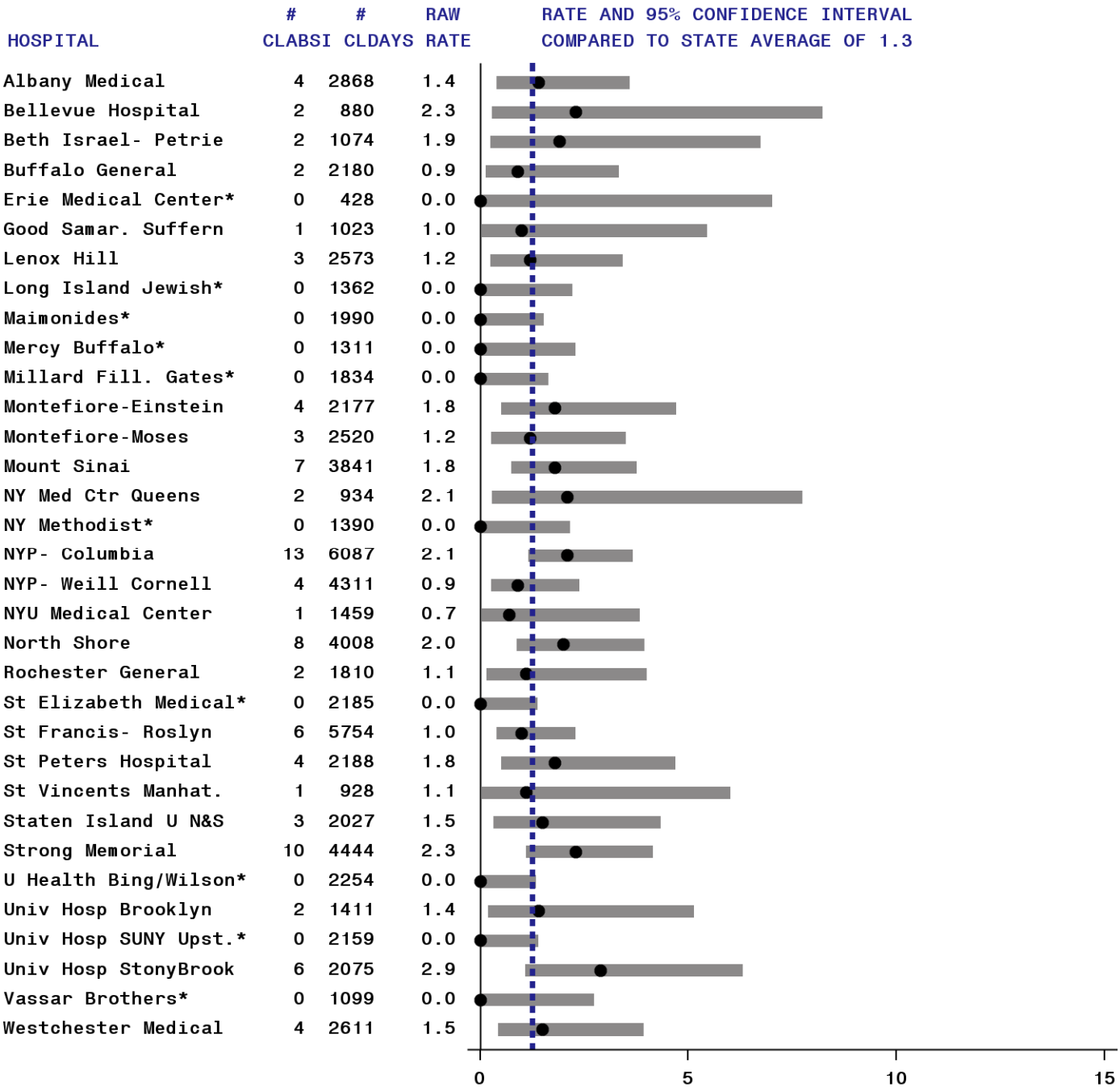
[1] New York State data reported as of August 25, 2010.
[2] NHSN 2006-8 baseline data as of NHSN Report in *Am J Infect Control* 2009;37:783-805.
Includes untreated events with single pathogen contaminated specimen.
CL Days = Central Line Days, Nat = National, Rates are per 1000 CL Days
*H indicates New York State rate is significantly higher than National 2006-8 rate.
*L indicates New York State rate is significantly lower than National 2006-8 rate.

Table 11. Trends in Central Line-Associated Blood Stream Infection Rates by Type of Adult/Pediatric Intensive Care Unit, New York State 2007-2009

	2007	2008			2009		
Location	**SIR**	**Obs**	**Exp**	**SIR (95% CI)**	**Obs**	**Exp**	**SIR (95% CI)**
Cardiothoracic	1.0	108	127.6	0.85 (0.69, 1.02)	97	130.2	0.75 (0.60, 0.91)
Coronary	1.0	110	95.7	1.15 (0.95, 1.39)	94	95.4	0.99 (0.80, 1.21)
Medical (major teaching)	1.0	145	150.8	0.96 (0.81, 1.13)	138	153.9	0.90 (0.75, 1.06)
Medical (other)	1.0	99	88.3	1.12 (0.91, 1.37)	79	101.6	0.78 (0.62, 0.97)
Medical surgical (major teaching)	1.0	117	101.2	1.16 (0.96, 1.39)	75	93.0	0.81 (0.63, 1.01)
Medical surgical (other)	1.0	360	359.7	1.00 (0.90, 1.11)	313	335.0	0.93 (0.83, 1.04)
Neurosurgical	1.0	42	44.6	0.94 (0.68, 1.27)	40	47.7	0.84 (0.60, 1.14)
Pediatric	1.0	99	94.9	1.04 (0.85, 1.27)	69	97.7	0.71 (0.55, 0.89)
Surgical	1.0	219	251.4	0.87 (0.76, 0.99)	161	251.2	0.64 (0.55, 0.75)
Adult/Pediatric TOTAL	1.0	1299	1314.2	0.99 (0.94, 1.04)	1066	1305.6	0.82 (0.77, 0.87)

Obs - Number of Observed Central Line-Associated Blood Stream Infections (CLABSI)
Exp - Number of Expected CLABSI, if infection rate was the same as in 2007.
SIR – Standardized Incidence Ratio, using New York State 2007 as standard.
CI – Confidence Interval
Data downloaded 8/25/2010. Excludes Criteria 2b/3b and clinical sepsis.
2008 and 2009 data were indirectly standardized based on NYS 2007 rates.

Figure 11. Central Line –Associated Blood Stream Infection (CLABSI) Rates Cardiothoracic Intensive Care Units, New York 2009



State Average. ●Infection rate. > Upper confidence limit exceeds graph area

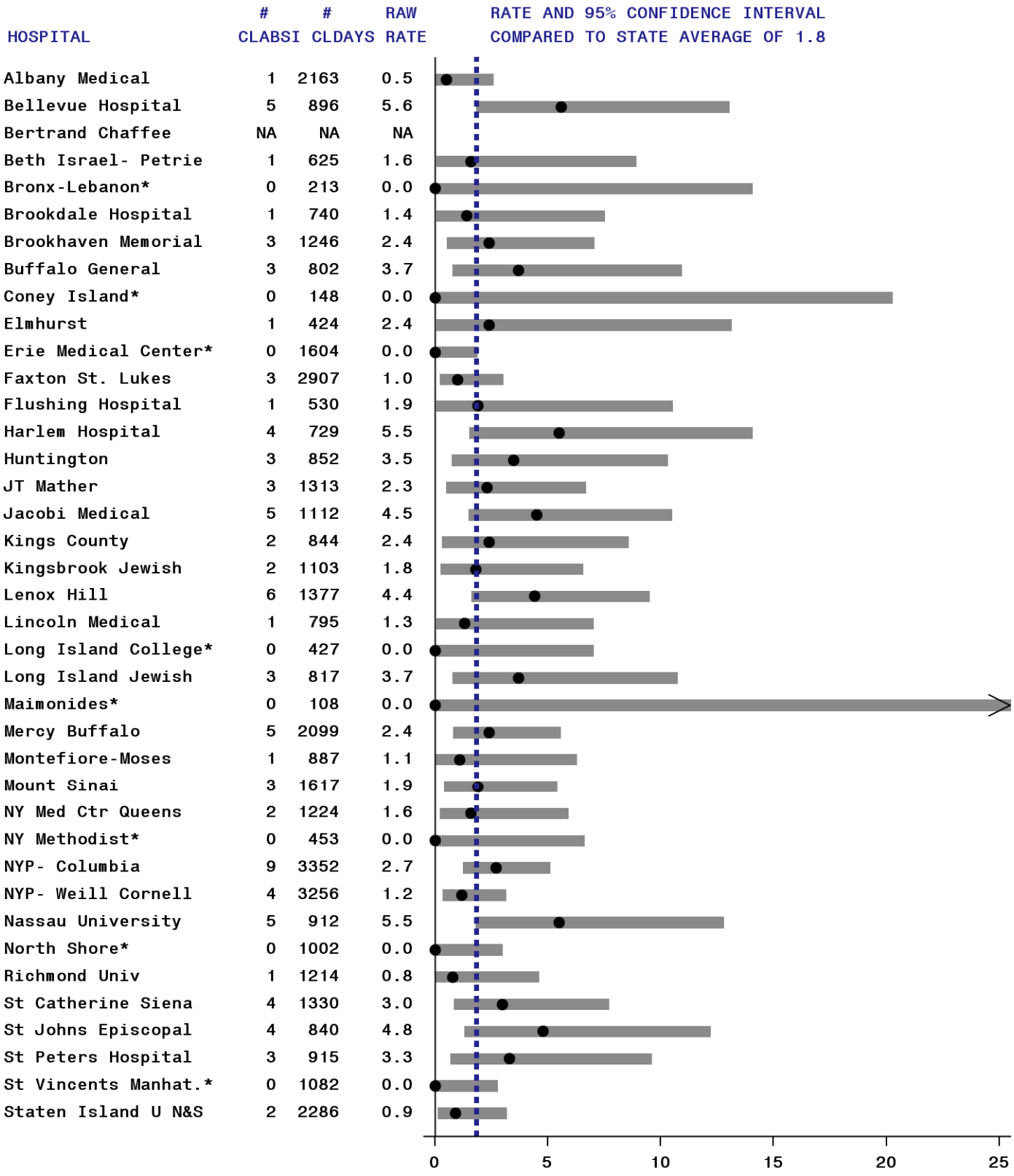
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.

Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).

NA: Hospitals with less than 50 central line days.

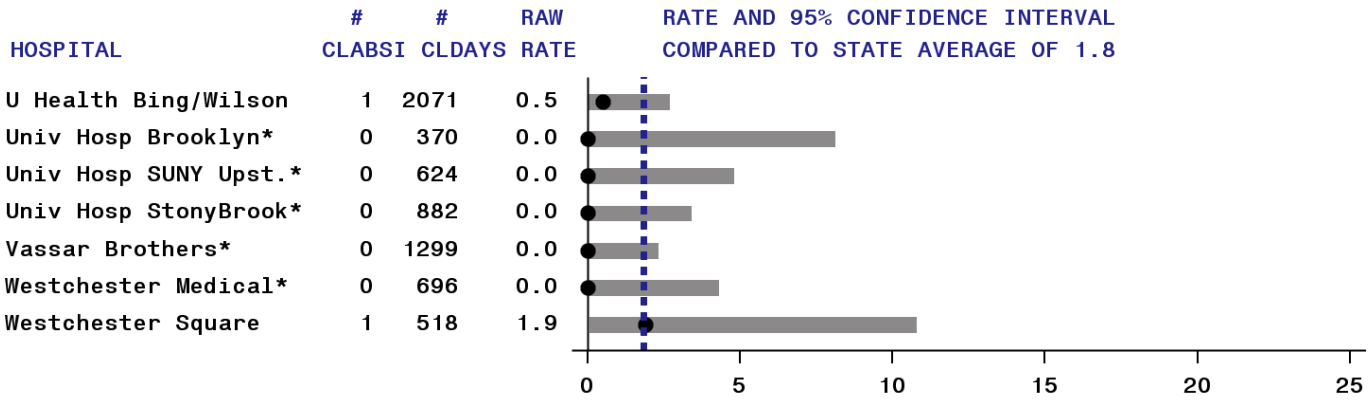
Excludes untreated event with single pathogen contaminated specimen.

Figure 12. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Coronary Intensive Care Units, New York 2009 (page 1 of 2)



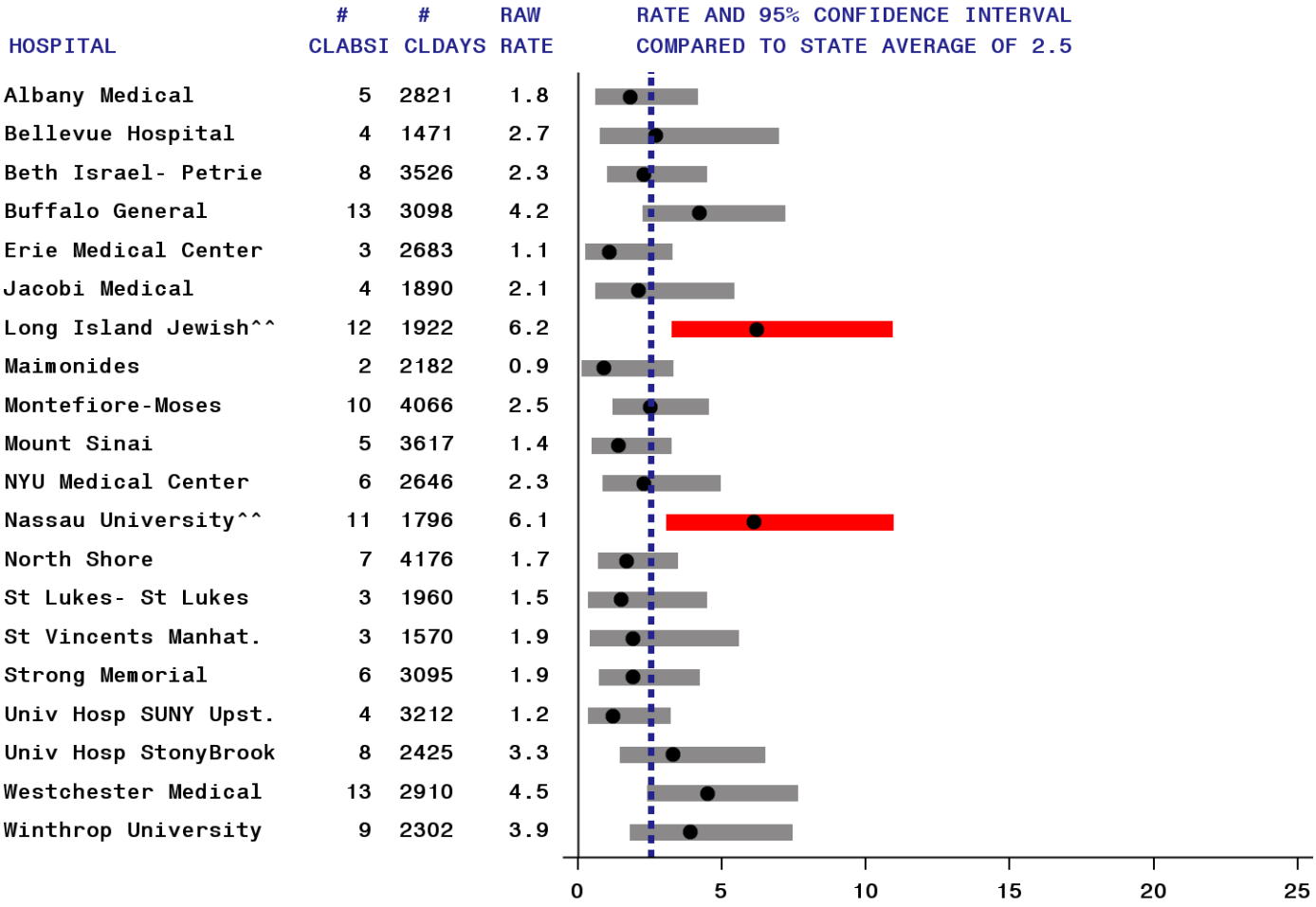
State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days. Excludes untreated event with single pathogen contaminated specimen.

Figure 12. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Coronary Intensive Care Units, New York 2009 (page 2 of 2)



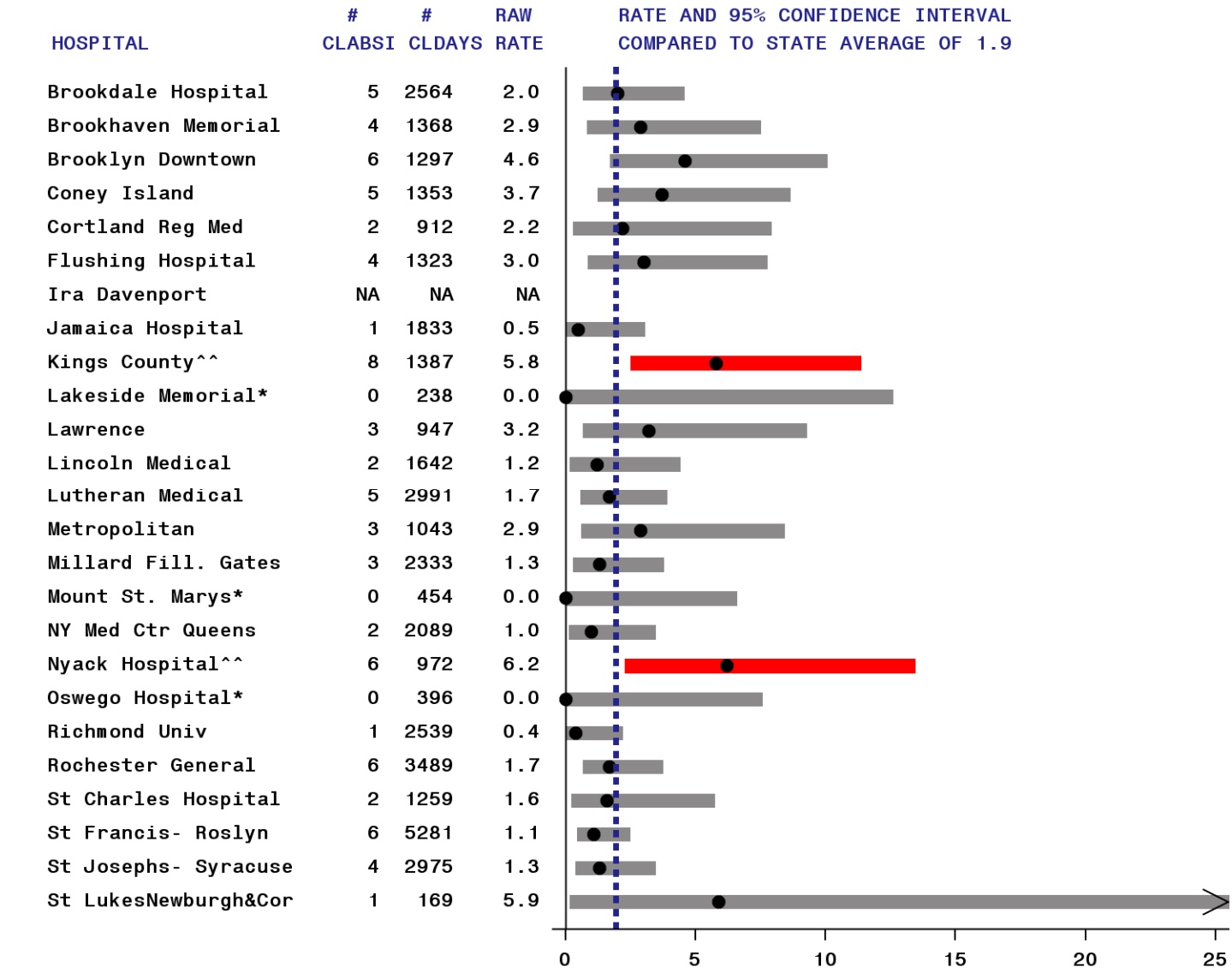
State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

Figure 13. Central Line-Associated Blood Stream Infection (CLABSI) Rates Medical Intensive Care Units in Major Teaching Hospitals, New York 2009



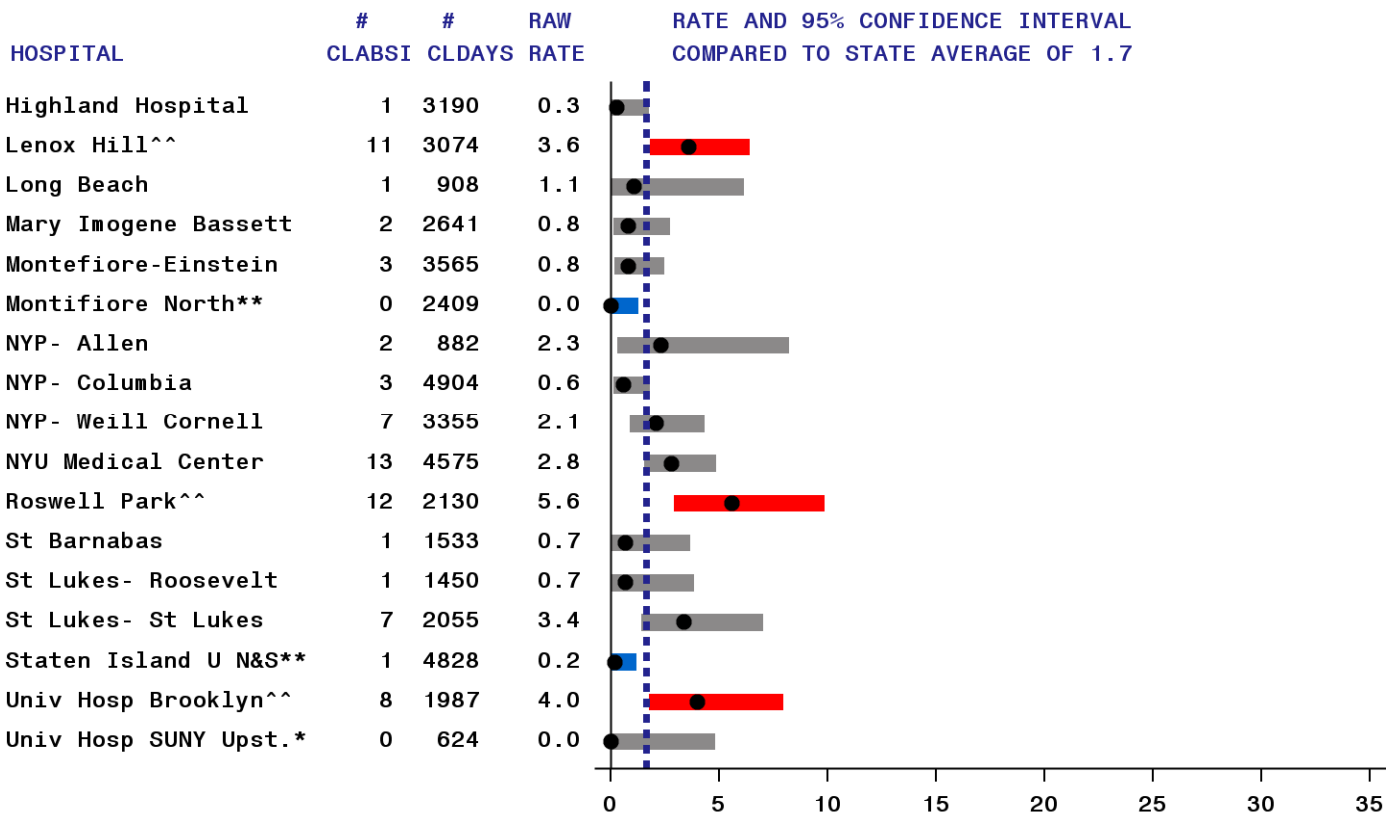
State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

Figure 14. Central Line-Associated Blood Stream Infection (CLABSI) Rates Medical Intensive Care Units (Non-Teaching Hospitals), New York 2009



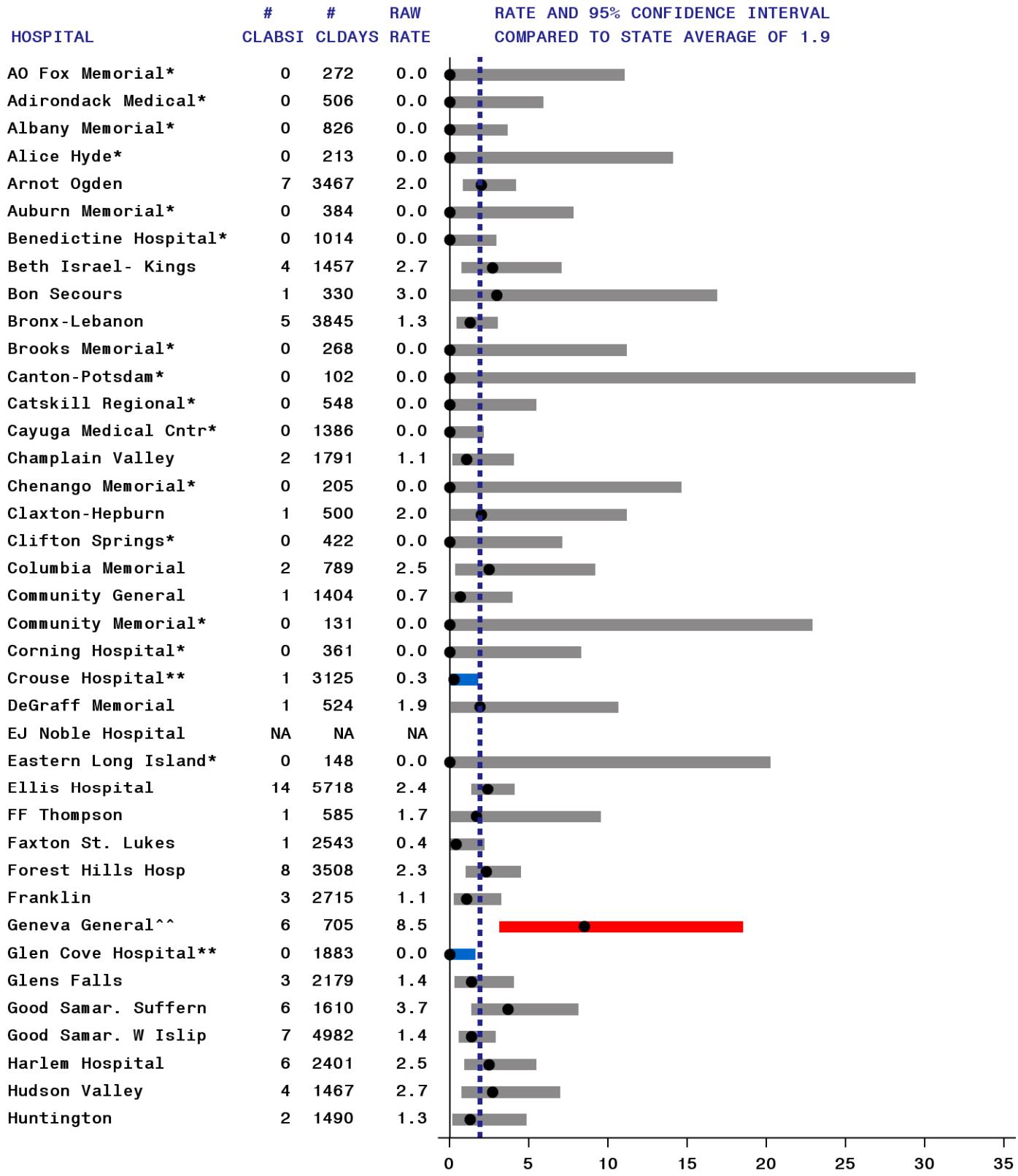
State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

Figure 15. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Medical-Surgical Intensive Care Units in Major Teaching Hospitals, New York 2009



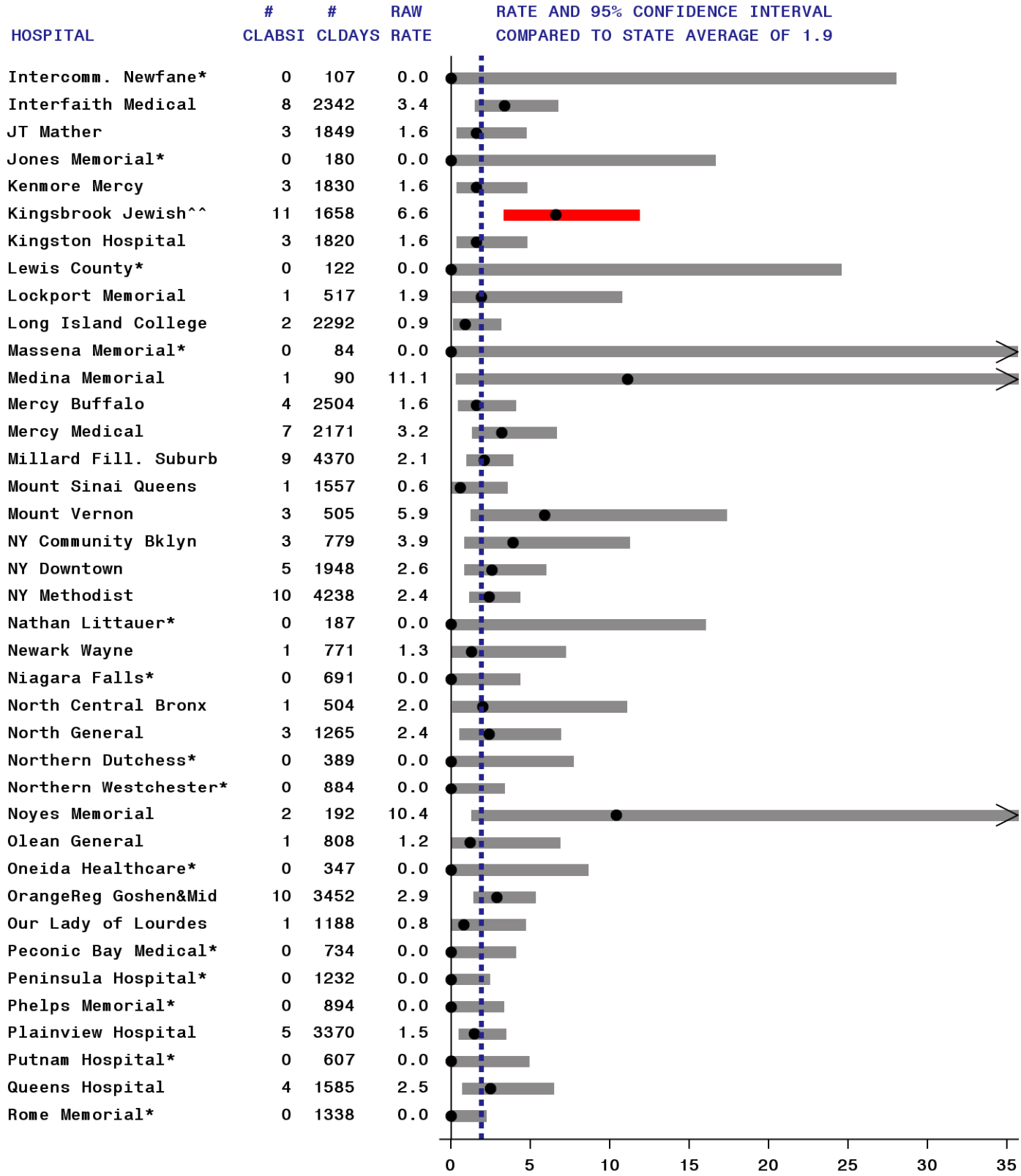
State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

Figure 16. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Medical-Surgical Intensive Care Units in Non-Major Teaching Hospitals, New York 2009 (page 1 of 3)



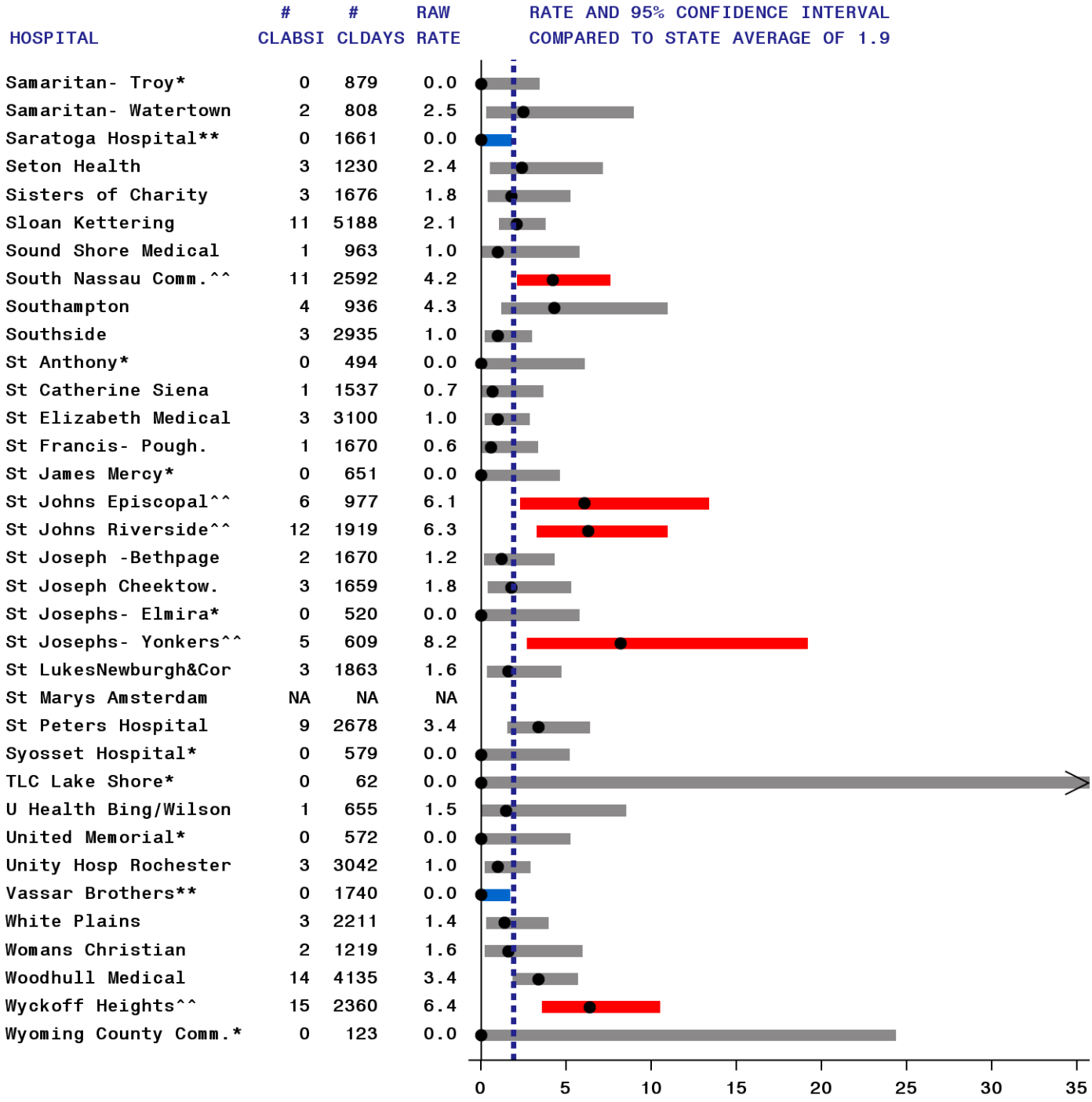
State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

Figure 16. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Medical-Surgical Intensive Care Units in Non-Major Teaching Hospitals, New York 2009 (page 2 of 3)



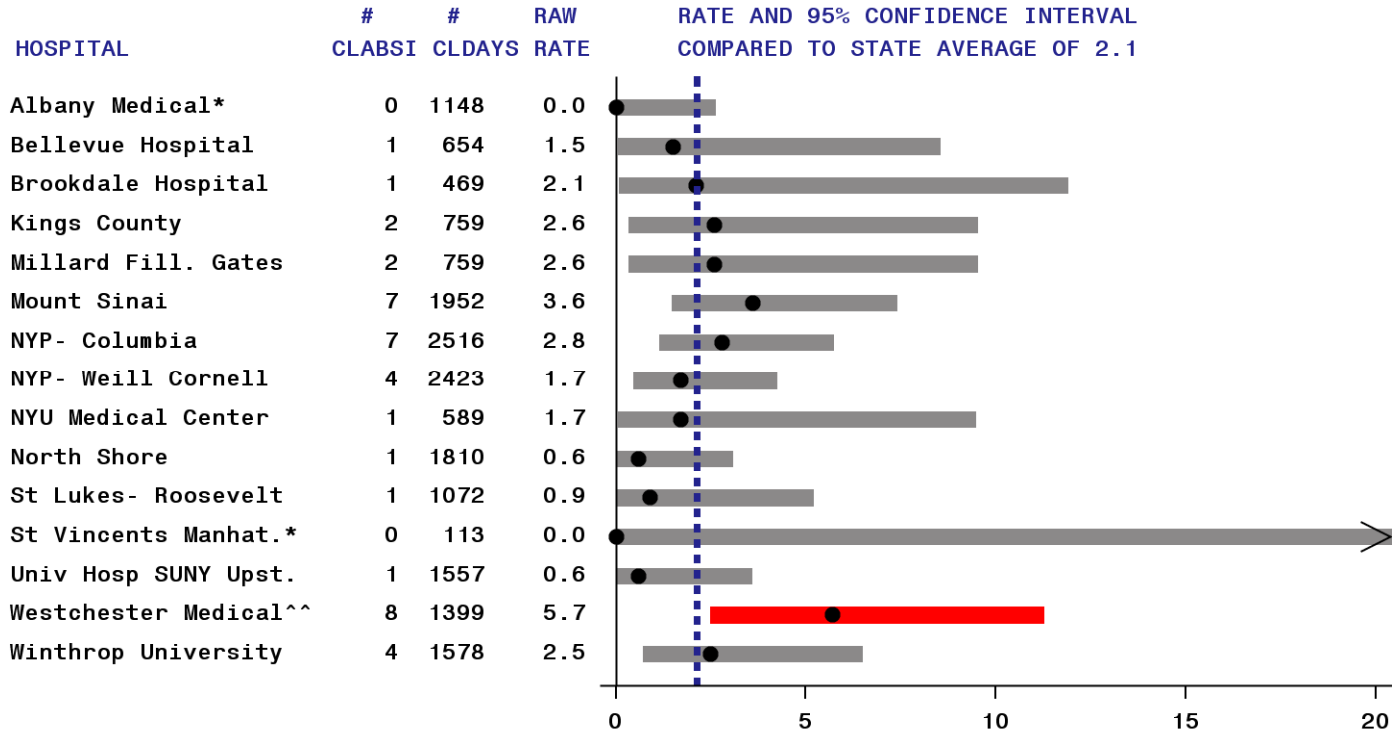
State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

Figure 16. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Medical-Surgical Intensive Care Units in Non-Major Teaching Hospitals, New York 2009 (page 3 of 3)



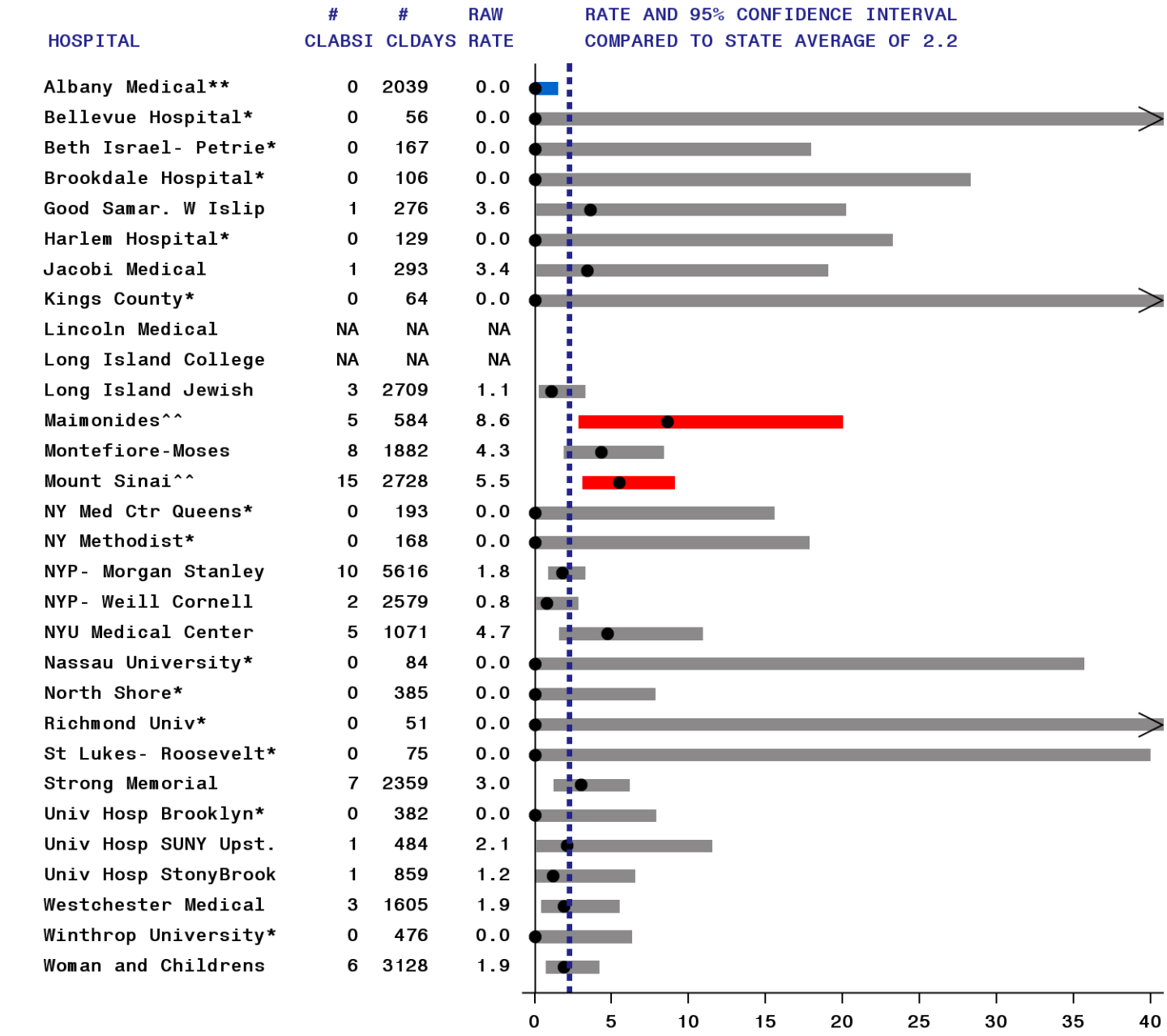
State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

Figure 17. Central Line-Associated Blood Stream Infection (CLABSI) Rates Neurosurgical Intensive Care Units, New York 2009



State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

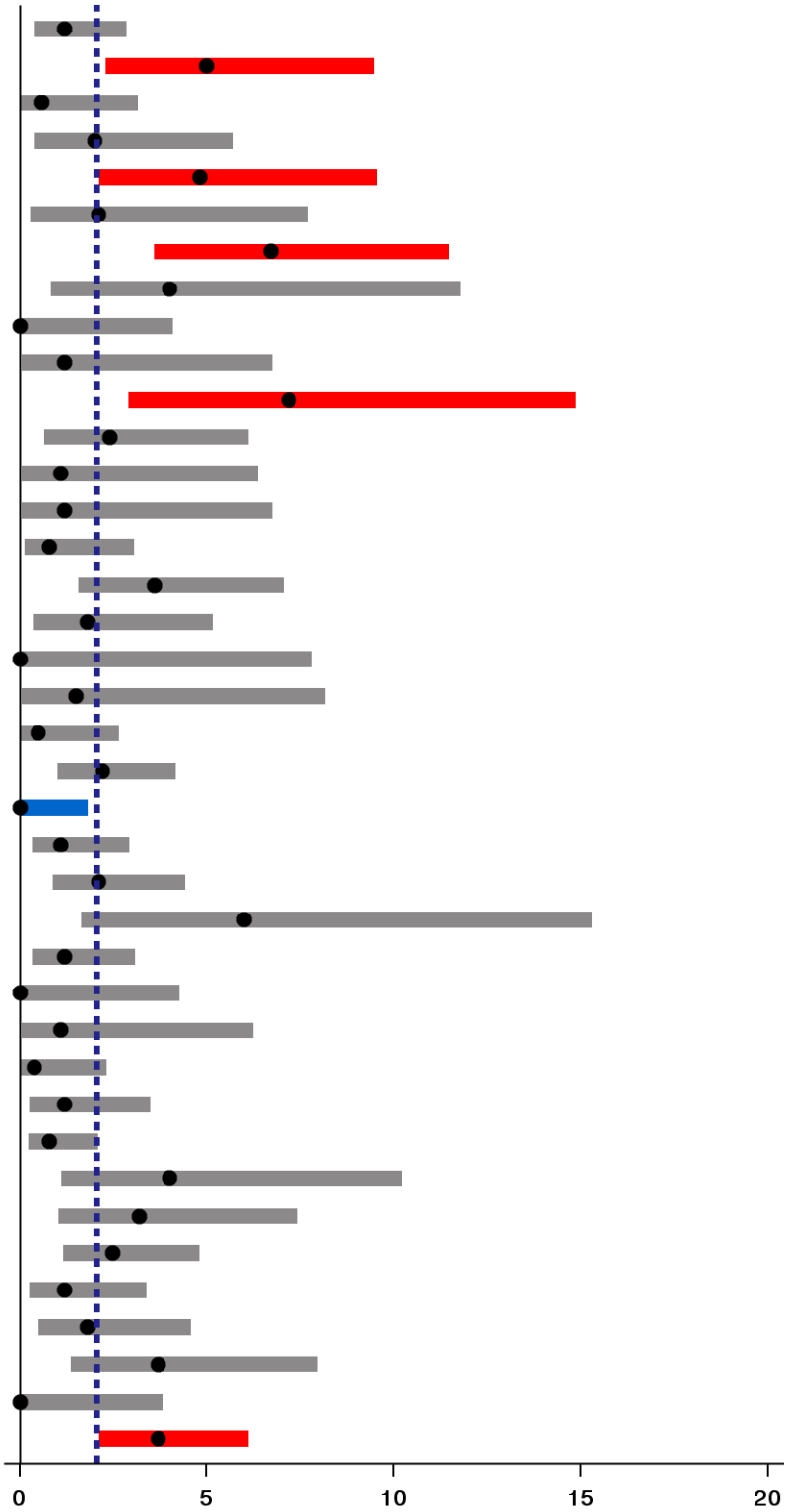
Figure 18. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Pediatric Intensive Care Units, New York 2009



State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

Figure 19. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Surgical Intensive Care Units, New York 2009

HOSPITAL	# CLABSI	# CLDAYS	RAW RATE
Albany Medical	5	4111	1.2
Bellevue Hospital^^	9	1806	5.0
Beth Israel- Petrie	1	1776	0.6
Brookdale Hospital	3	1538	2.0
Brookhaven Memorial^^	8	1653	4.8
Brooklyn Downtown	2	939	2.1
Buffalo General^^	13	1942	6.7
Coney Island	3	746	4.0
Flushing Hospital*	0	736	0.0
Good Samar. Suffern	1	828	1.2
Jacobi Medical^^	7	971	7.2
Jamaica Hospital	4	1678	2.4
Kings County	1	876	1.1
Lincoln Medical	1	826	1.2
Long Island Jewish	2	2378	0.8
Lutheran Medical	8	2238	3.6
Maimonides	3	1703	1.8
Metropolitan*	0	384	0.0
Millard Fill. Gates	1	683	1.5
Montefiore-Moses	1	2118	0.5
Mount Sinai	9	4123	2.2
NY Med Ctr Queens**	0	1671	0.0
NYP- Columbia	4	3511	1.1
NYP- Weill Cornell	7	3275	2.1
Nassau University	4	670	6.0
North Shore	4	3341	1.2
Nyack Hospital*	0	703	0.0
Richmond Univ	1	894	1.1
Rochester General	1	2413	0.4
St Francis- Roslyn	3	2533	1.2
St Josephs- Syracuse	4	4948	0.8
St Lukes- St Lukes	4	1004	4.0
St Vincents Manhat.	5	1573	3.2
Strong Memorial	9	3577	2.5
Univ Hosp SUNY Upst.	3	2593	1.2
Univ Hosp StonyBrook	4	2244	1.8
Westchester Medical	6	1641	3.7
Westchester Square*	0	786	0.0
Winthrop University^^	15	4049	3.7



State Average. ●Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days.
Excludes untreated event with single pathogen contaminated specimen.

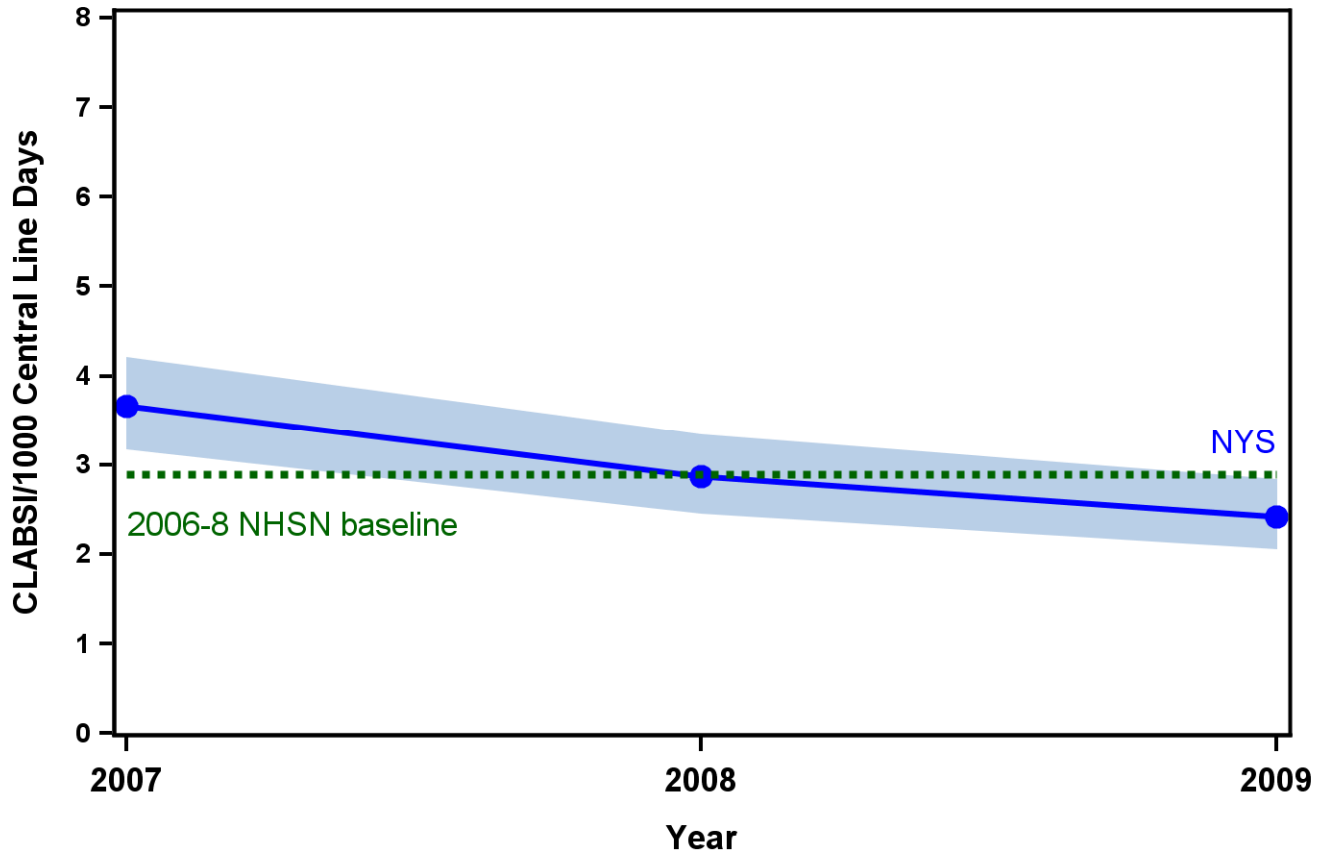
Table 12. Microorganisms Identified in Central-Line Associated Blood Stream Infections, Adult and Pediatric Intensive Care Units, New York State 2009

Microorganism	Number of Isolates	Percent of Infections
Enterococci	269	25.2
(VRE)	(151)	(14.2)
Coagulase negative staphylococci	212	19.9
Yeast	184	17.3
Klebsiella sp.	104	9.8
Staphylococcus aureus	86	8.1
(MRSA)	(46)	(4.3)
Acinetobacter sp.	64	6.0
Pseudomonas sp.	58	5.4
Escherichia sp.	49	4.6
Enterobacter sp.	33	3.1
Serratia sp.	27	2.5
Proteus sp.	12	1.1
Stenotrophomonas maltophilia	9	0.8
Streptococci	9	0.8
Citrobacter	6	0.6
Burkholderia cepacia	5	0.5
Other	24	2.3

New York State data reported as of August 25, 2010
Out of 1066 infections.

CLABSI and UCABSI Rate Tables – Neonatal Intensive Care Units

Figure 20. Comparison of New York State and National Central Line-Associated Blood Stream Infection Rates, Level III and RPC Neonatal Intensive Care Units, 2007-2009

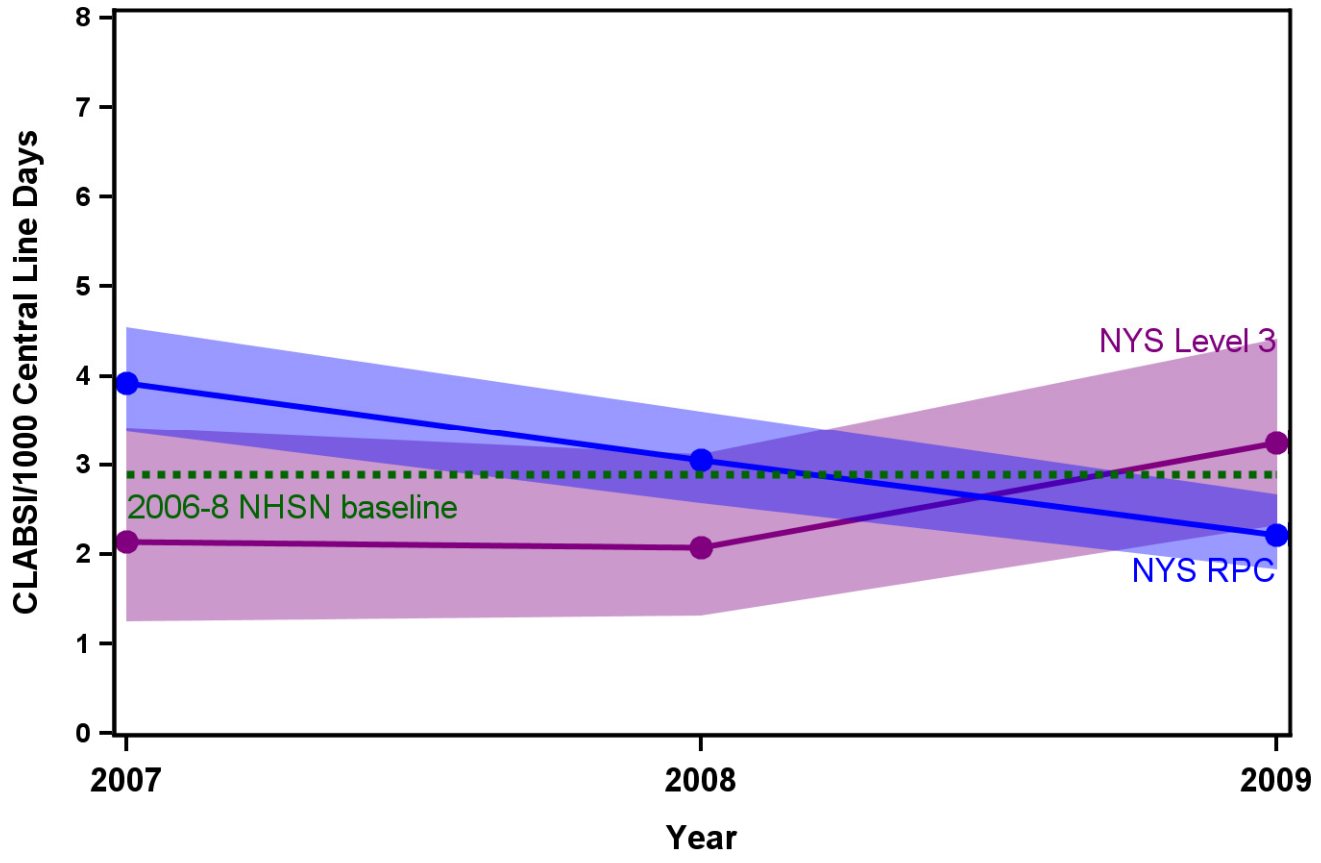


	Year	# Hospitals	# Infections[3]	# Line Days	Raw[4] Rate	Adjusted Rate[5] and 95% Confidence Interval
[1]New York State	2007	39	197	52,547	3.7	3.7 (3.2, 4.2) *H
	2008	40	165	56,273	2.9	2.9 (2.4, 3.3) NS
	2009	40	151	60,710	2.5	2.4 (2.0, 2.8) *L
[2]NHSN Baseline	2006-8	154	1,503	519,552	2.9	2. 9

[1] New York State data reported as of August 25, 2010.
[2] NHSN 2006-8 baseline data as of NHSN Report in *Am J Infect Control* 2009;37:783-805.
[3] NYS and NHSN data include clinical sepsis and untreated events with single pathogen contaminated specimen.
[4,5]Rates are per 1000 line days.
[5] NYS Rates indirectly adjusted using NHSN birth weight categories.
*H indicates significantly higher than NHSN baseline.
*L indicates significantly lower than NHSN baseline.
"NS" indicates no significant difference.

Test for trend
Significant decrease in NYS CLABSI rate between 2007 and 2009 ($p<0.01$ Poisson Trend Test)

Figure 21. Central Line-Associated Blood Stream Infection Rates, Level III and RPC Neonatal Intensive Care Units, New York State 2007-2009



Regional Perinatal Center Neonatal Intensive Care Units

	Year	# Hospitals	# Infections	# Line Days	Raw Rate	Adjusted Rate and 95% Confidence Interval
New York State	2007	18	180	44,989	4.0	3.9 (3.4, 4.5) *H
	2008	18	142	45,722	3.1	3.1 (2.6, 3.6) NS
	2009	18	111	49,205	2.3	2.2 (1.8, 2.7) *L
NHSN Baseline	2006-8	154	1,503	519,552	2.9	2.9

Level III Neonatal Intensive Care Units

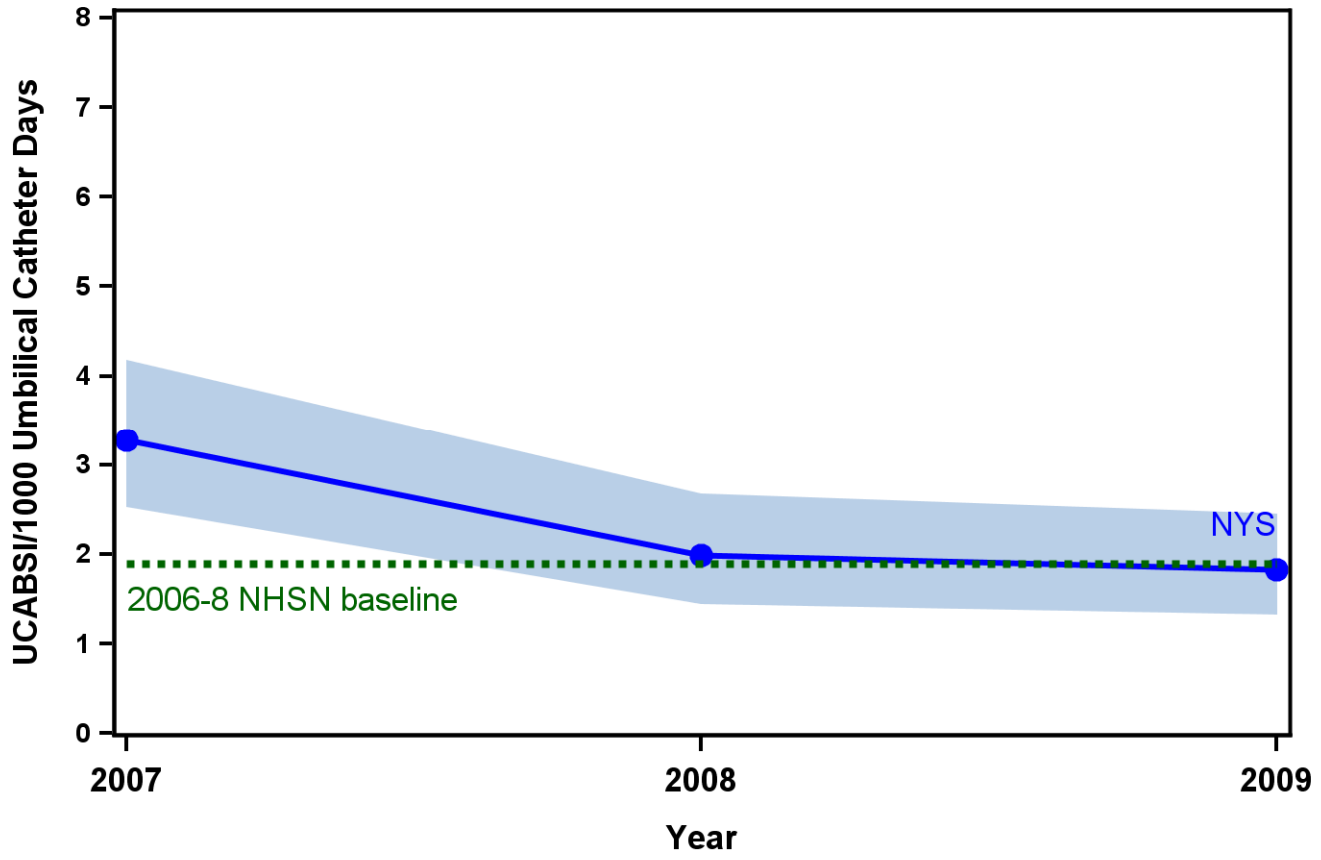
	Year	# Hospitals	# Infections	# Line Days	Raw Rate	Adjusted Rate and 95% Confidence Interval
New York State	2007	21	17	7,558	2.2	2.1 (1.2, 3.4) NS
	2008	22	23	10,551	2.2	2.1 (1.3, 3.1) NS
	2009	22	40	11,505	3.5	3.2 (2.3, 4.4) NS
NHSN Baseline	2006-8	154	1,503	519,552	2.9	2.9

Test for trend

Significant decrease in CLABSI rate at RPCs between 2007 and 2009 ($p<0.01$ Poisson Trend Test)

No significant change in CLABSI rate in Level 3 NICUs between 2007 and 2009 ($p=0.08$ Poisson Trend Test)

Figure 22. Comparison of New York State and National Umbilical Catheter-Associated Blood Stream Infection Rates, Level III and RPC Neonatal Intensive Care Units, 2007-2009



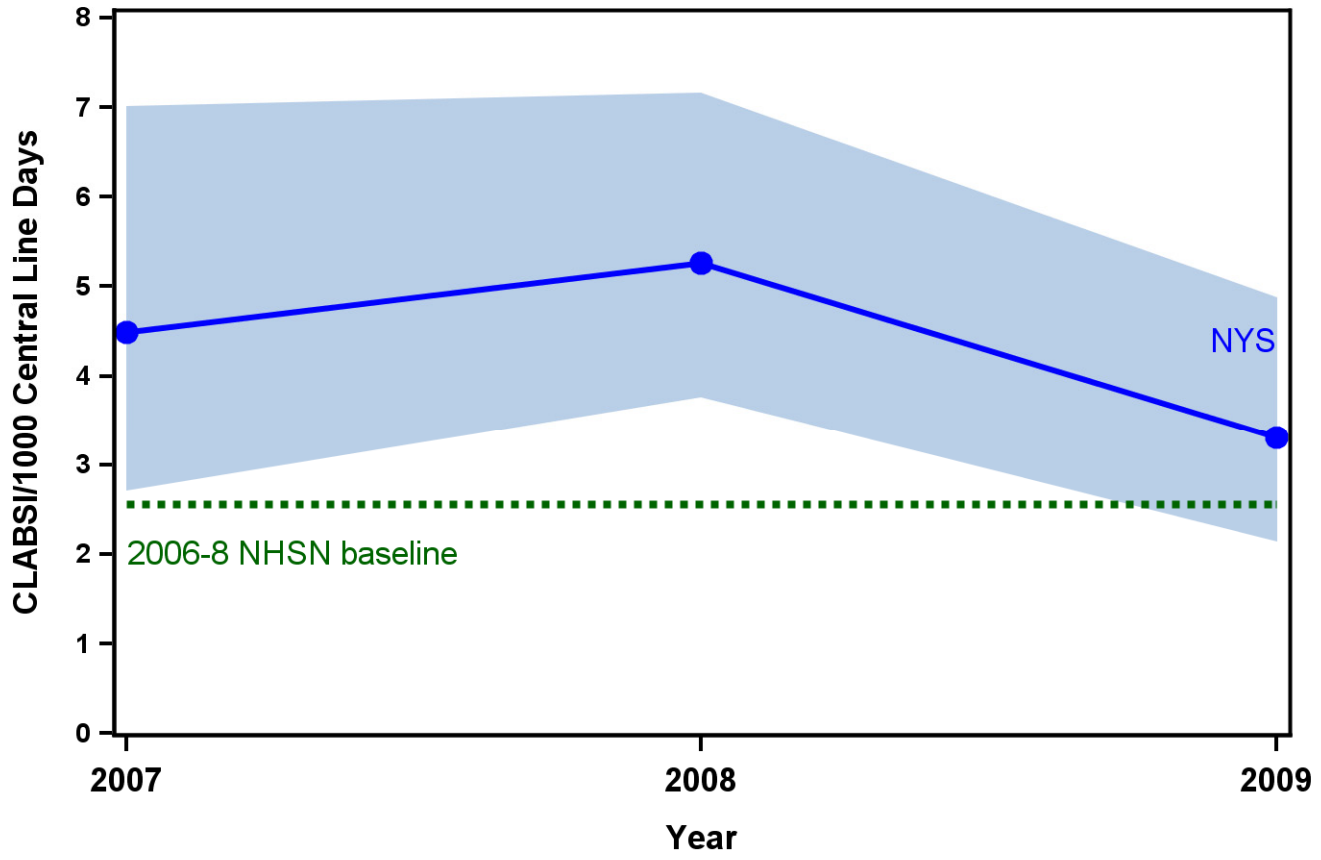
	Year	# Hospitals	# Infections[3]	# Line Days	Raw Rate[4]	Adjusted Rate[5] and 95% Confidence Interval
[1]New York State	2007	39	65	20,227	3.2	3.3 (2.5, 4.2) *H
	2008	40	43	21,289	2.0	2.0 (1.4, 2. 7) NS
	2009	40	44	23,235	1.9	1.8 (1.3, 2.5) NS
[2]NHSN Baseline	2006-8	150	331	174,886	1.9	1. 9

[1] New York State data reported as of August 25, 2010.
[2] NHSN 2006-8 baseline data as of NHSN Report in *Am J Infect Control* 2009;37:783-805.
[3] NYS and NHSN data include clinical sepsis and untreated events with single pathogen contaminated specimen.
[4,5]Rates are per 1000 line days.
[5] NYS Rates indirectly adjusted using NHSN birth weight categories.
*H indicates significantly higher than NHSN baseline.
"NS" indicates no significant difference.

Test for trend

Significant decrease in NYS Umbilical Catheter-Associated BSI rate between 2007 and 2009 ($p<0.01$ Poisson Trend Test)

Figure 23. Comparison of New York State and National Central Line-Associated Blood Stream Infection Rates, Level II/III Neonatal Intensive Care Units, 2007-2009



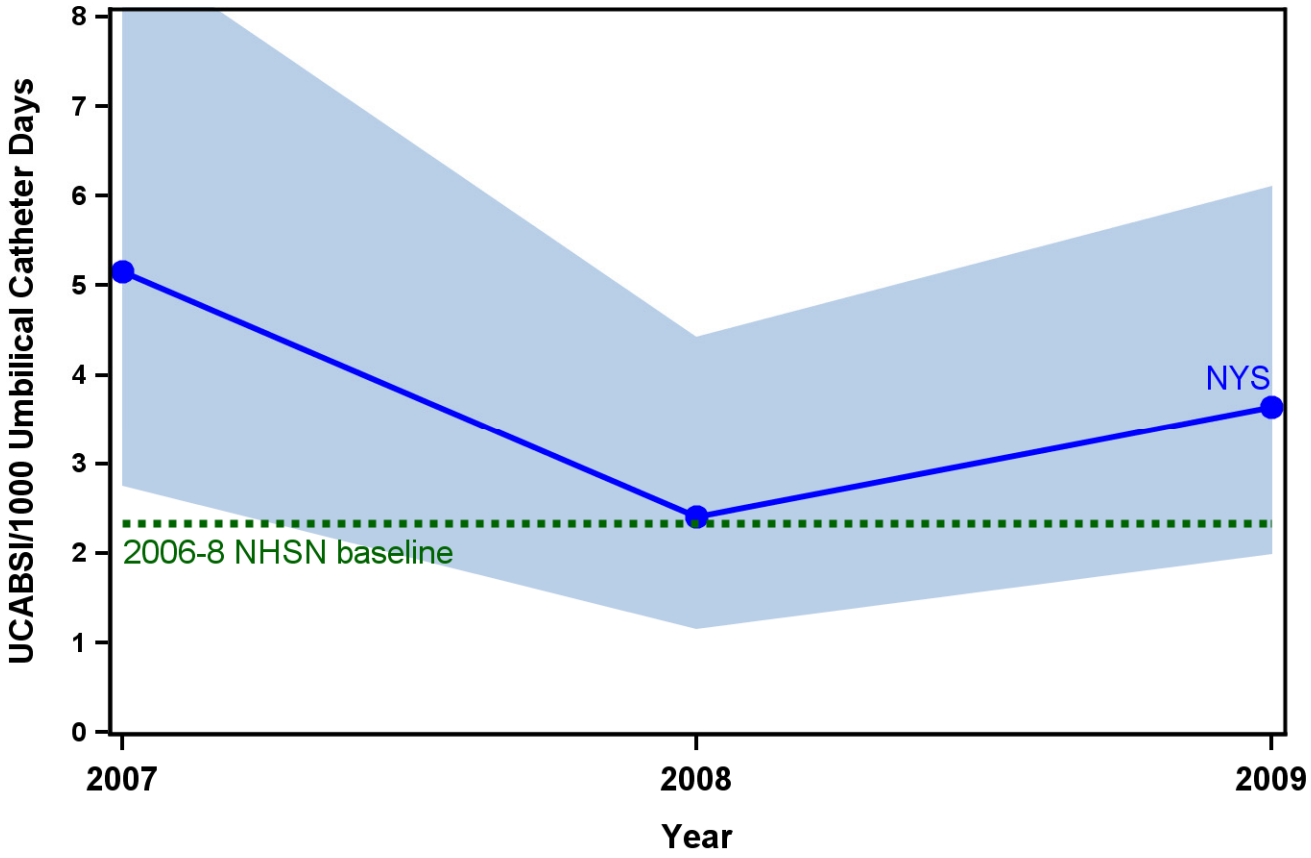
	Year	# Hospitals	# Infections[3]	# Line Days	Raw Rate[4]	Adjusted Rate[5] and 95% Confidence Interval
[1]New York State	2007	13	19	3,826	5.0	4.5 (2.7, 7.0) *H
	2008	14	40	6,759	5.9	5.3 (3.8, 7.2) *H
	2009	14	25	6,583	3.8	3.3 (2.1, 4.9) NS
[2]NHSN Baseline	2006-8	125	643	251,978	2.6	2.6

[1] New York State data reported as of August 25, 2010.
[2] NHSN 2006-8 baseline data as of NHSN Report in *Am J Infect Control* 2009;37:783-805.
[3] NYS and NHSN data include clinical sepsis and untreated events with single pathogen contaminated specimen.
[4,5]Rates are per 1000 line days.
[5]NYS Rates indirectly adjusted using NHSN birth weight categories.
*H indicates significantly higher than NHSN baseline.
"NS" indicates no significant difference.

Test for trend

No significant change in NYS CLABSI rate between 2007 and 2009 (p=0.28 Poisson Trend Test)

Figure 24. Comparison of New York State and National Umbilical Catheter-Associated Blood Stream Infection Rates, Level II/III Neonatal Intensive Care Units, 2007-2009



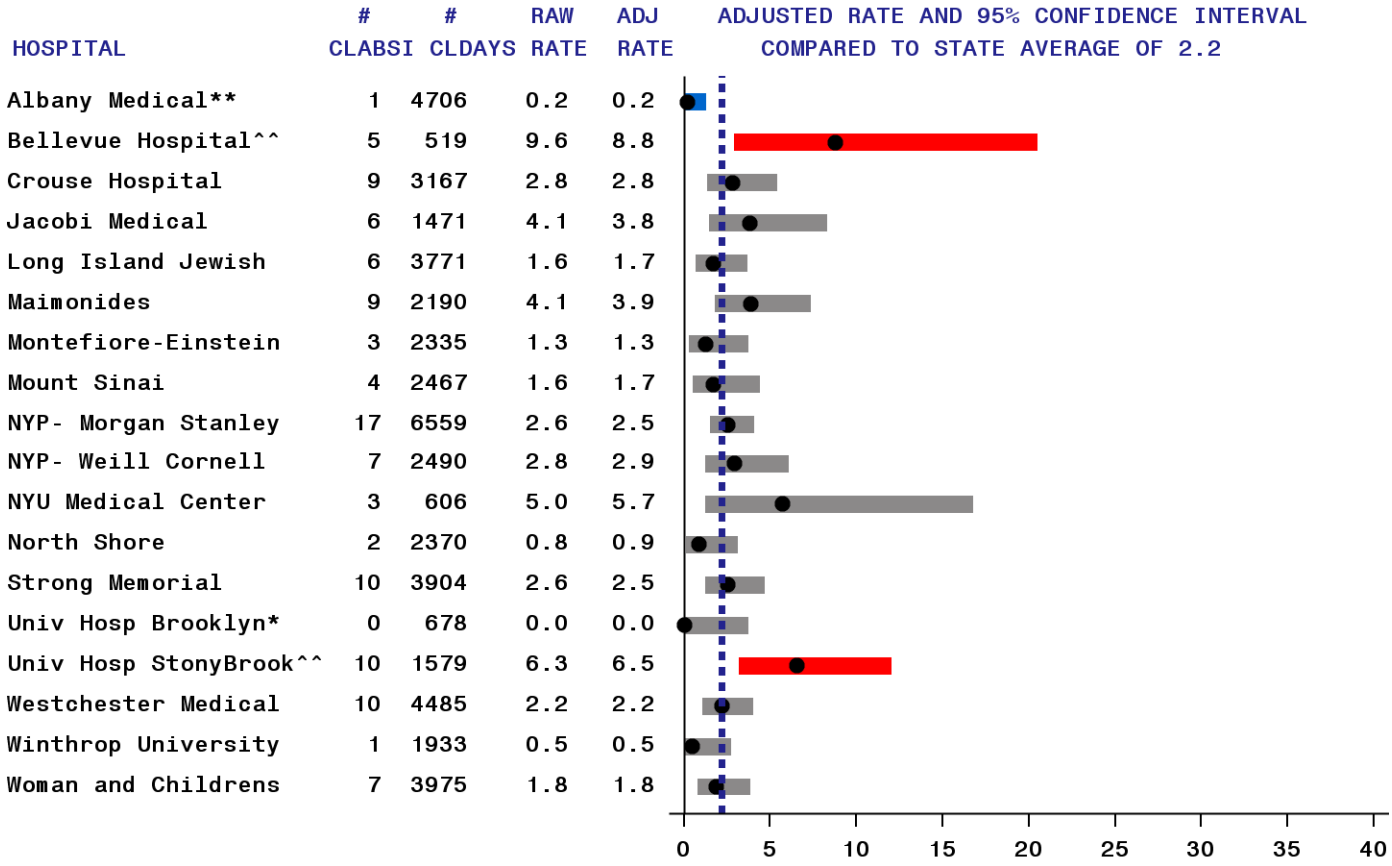
	Year	# Hospitals	# Infections[3]	# Line Days	Raw Rate[4]	Adjusted Rate[5] and 95% Confidence Interval
[1]New York State	2007	13	13	2,132	6.1	5.2 (2.7, 8.8) *H
	2008	14	10	3,627	2.8	2.4 (1.2, 4.4) NS
	2009	14	14	3,539	4.0	3.6 (2.0, 6.1) NS
[2]NHSN Baseline	2006-8	127	227	97,285	2.3	2.3

[1] New York State data reported as of August 25, 2010.
[2] NHSN 2006-8 baseline data as of NHSN Report in *Am J Infect Control* 2009;37:783-805.
[3] NYS and NHSN data include clinical sepsis and untreated events with single pathogen contaminated specimen.
[4,5] Rates are per 1000 line days.
[5] NYS Rates indirectly adjusted using NHSN birth weight categories.
*H indicates significantly higher than NHSN baseline.
"NS" indicates no significant difference.

Test for trend

No significant change in NYS CLABSI rate between 2007 and 2009 ($p<0.32$ Poisson Trend Test)

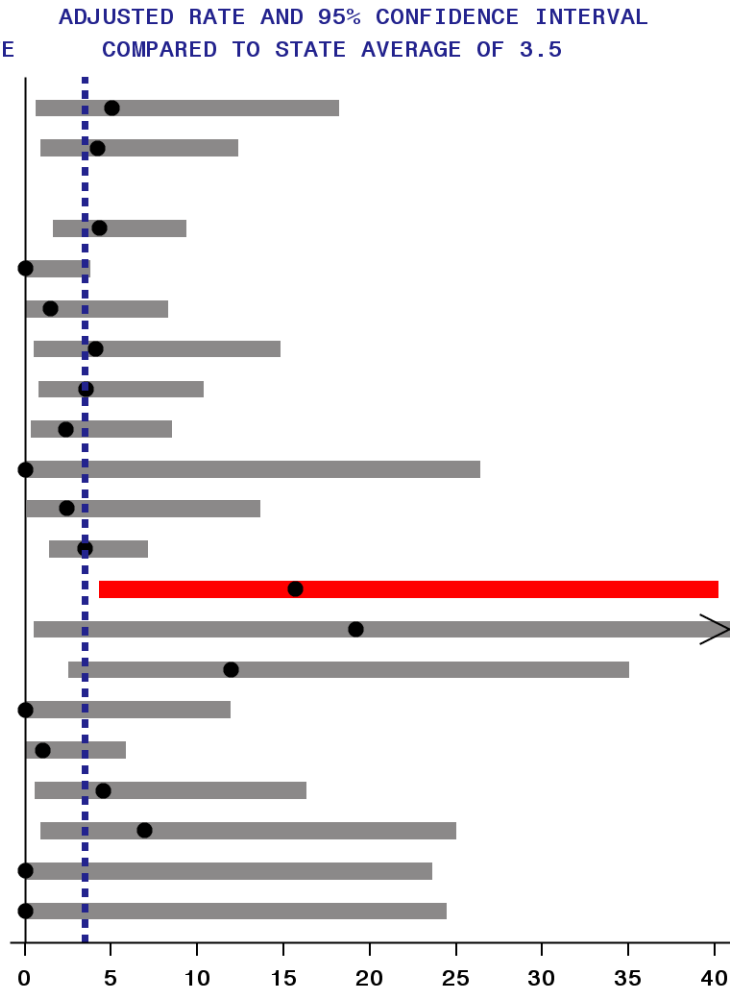
Figure 25. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Regional Perinatal Center Intensive Care Units, New York 2009



State Average. ●Risk-Adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days. Adj Rate =Adjusted by NHSN Birth Weight Category.
Excludes clinical sepsis and untreated event with single contaminated specimen.

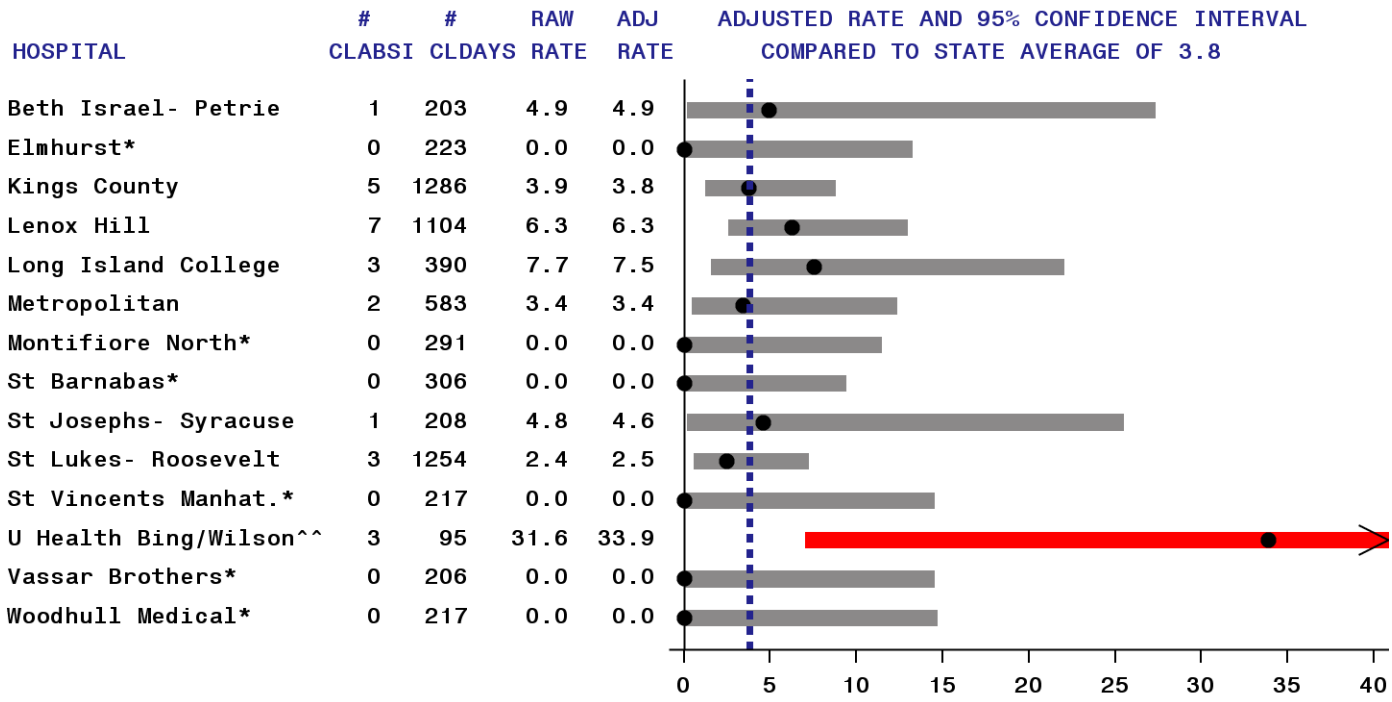
Figure 26. Central Line-Associated Blood Stream Infection (CLABSI) Rates
Level III Neonatal Intensive Care Units, New York 2009

HOSPITAL	# CLABSI	# CLDAYS	RAW RATE	ADJ RATE
Arnot Ogden	2	453	4.4	5.0
Bronx-Lebanon	3	616	4.9	4.2
Brookdale Hospital	NA	NA	NA	NA
Brooklyn Downtown	6	1517	4.0	4.3
Flushing Hospital*	0	969	0.0	0.0
Good Samar. W Islip	1	762	1.3	1.5
Harlem Hospital	2	472	4.2	4.1
Jamaica Hospital	3	812	3.7	3.5
Lincoln Medical	2	735	2.7	2.4
Mercy Medical*	0	115	0.0	0.0
NY Med Ctr Queens	1	469	2.1	2.4
NY Methodist	7	1829	3.8	3.5
Nassau University^^	4	246	16.3	15.7
Northern Westchester	1	52	19.2	19.2
Queens Hospital	3	210	14.3	12.0
Richmond Univ*	0	258	0.0	0.0
Sisters of Charity	1	925	1.1	1.0
St Peters Hospital	2	453	4.4	4.5
Staten Island U N&S	2	234	8.5	6.9
White Plains*	0	139	0.0	0.0
Wyckoff Heights*	0	209	0.0	0.0



State Average. ●Risk-Adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days. Adj Rate =Adjusted by NHSN Birth Weight Category.
Excludes clinical sepsis and untreated event with single contaminated specimen.

Figure 27. Central Line-Associated Blood Stream Infection (CLABSI) Rates Level II/III Neonatal Intensive Care Units, New York 2009



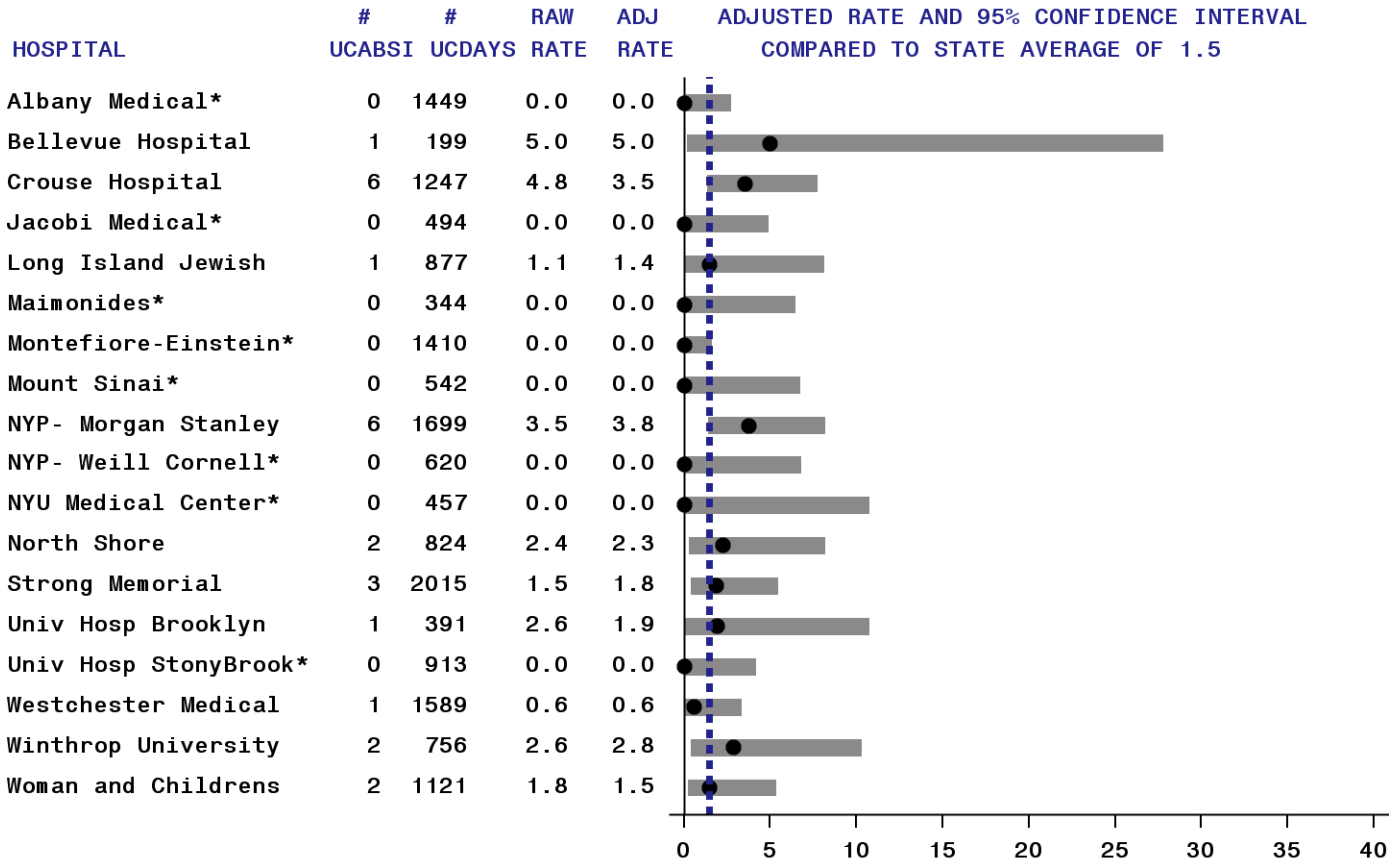
State Average. ●Risk-Adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 central line days (CLDAYS).
NA: Hospitals with less than 50 central line days. Adj Rate =Adjusted by NHSN Birth Weight Category.
Excludes clinical sepsis and untreated event with single contaminated specimen.

Table 13. Microorganisms Identified with Central Line-Associated Blood Stream Infections, Neonatal Intensive Care Units, New York State 2009

Microorganism	Number of Isolates	Percent of Infections
Coagulase negative staphylococci	72	40.9
Staphylococcus aureus	37	21.0
(MRSA)	(8)	(4.5)
Yeast	21	11.9
Enterococci	19	10.8
(VRE)	(1)	(0.6)
Escherichia sp.	11	6.3
Klebsiella sp.	10	5.7
Enterobacter sp.	6	3.4
Pseudomonas sp.	6	3.4
Other	12	6.8

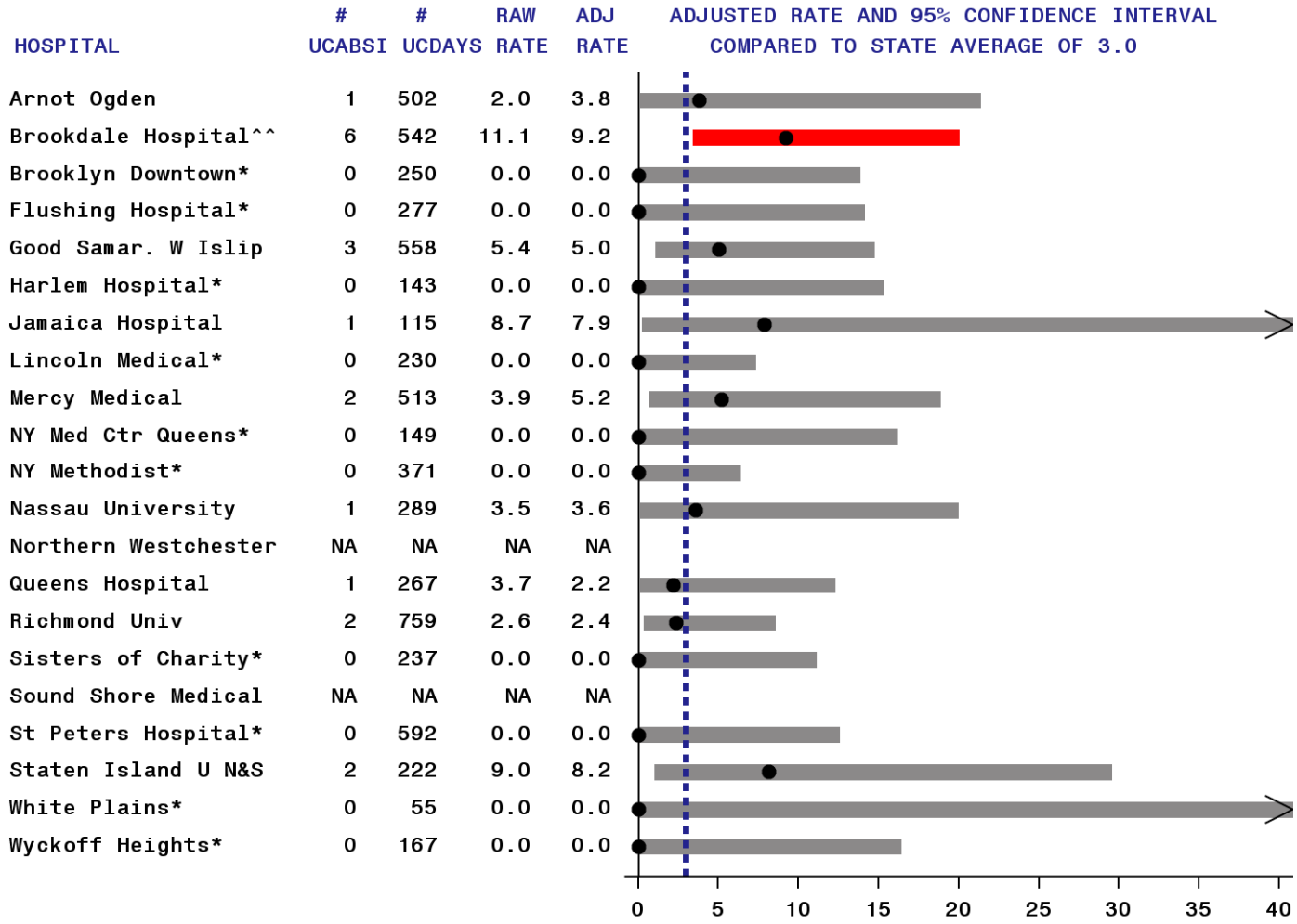
New York State data reported as of August 25, 2010
Out of 176 infections.

Figure 28. Umbilical Catheter-Associated Blood Stream Infection (UCABSI) Rates
Regional Perinatal Center Neonatal Intensive Care Units, New York 2009



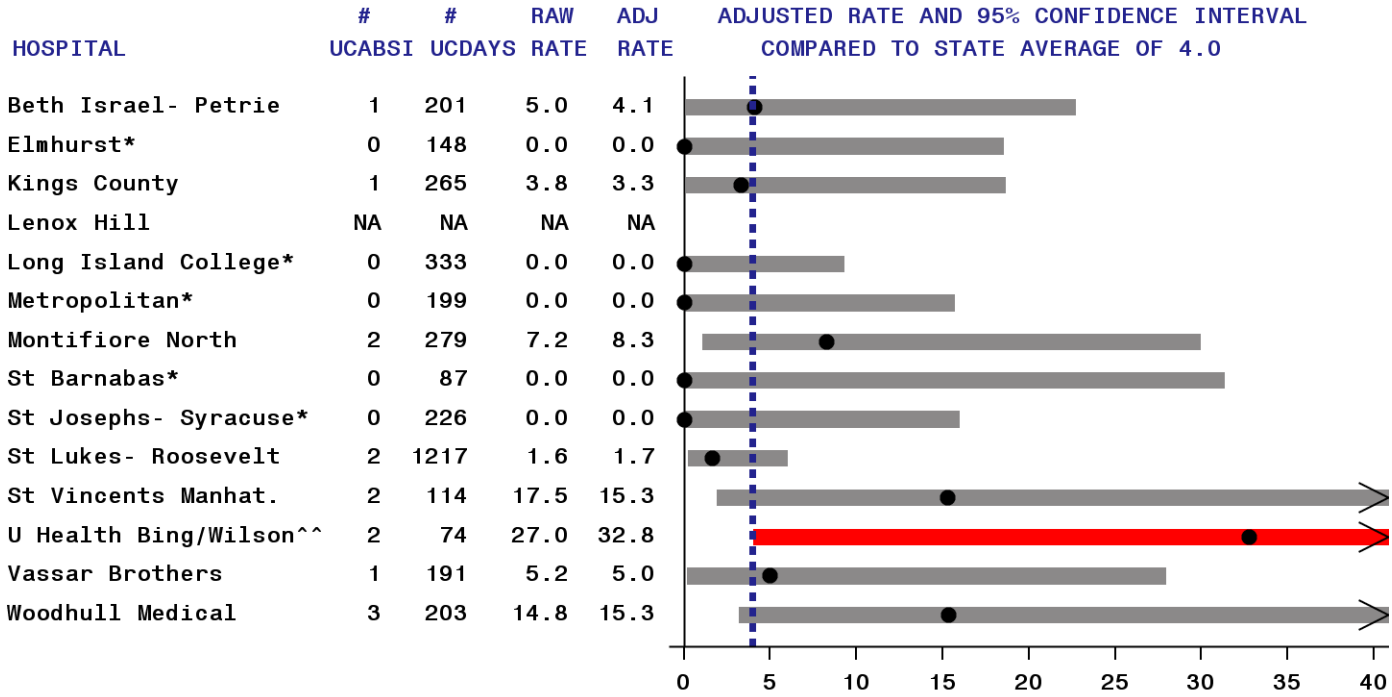
State Average. ●Risk-Adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 umbilical catheter days (UCDAYS).
NA: Hospitals with less than 50 central line days. Adj Rate =Adjusted by NHSN Birth Weight Category
Excludes clinical sepsis and untreated event with single contaminated specimen.

Figure 29. Umbilical Catheter-Associated Blood Stream Infection (UCABSI) Rates
Level III Neonatal Intensive Care Units, New York 2009



State Average. ●Risk-Adjusted Infection rate. > Upper confidence limit exceeds graph area
^^Significantly higher than state average. **Significantly lower than state average. Average. *Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 umbilical catheter days (UCDAYS).
NA: Hospitals with less than 50 central line days. Adj Rate =Adjusted by NHSN Birth Weight Category
Excludes clinical sepsis and untreated event with single contaminated specimen.

Figure 30. Umbilical Catheter-Associated Blood Stream Infection (UCABSI) Rates Level II/III Neonatal Intensive Care Units, New York 2009



State Average. ●Risk-Adjusted Infection rate. > Upper confidence limit exceeds graph area
—^^Significantly higher than state average.—**Significantly lower than state average. —Average. —*Zero Infections,not significant.
Data reported as of August 25, 2010. Rates are per 1000 umbilical catheter days (UCDAYS).
NA: Hospitals with less than 50 central line days. Adj Rate =Adjusted by NHSN Birth Weight Category
Excludes clinical sepsis and untreated event with single contaminated specimen.

Table 14. Microorganisms Identified in Umbilical Catheter-Associated Blood Stream Infections, Neonatal Intensive Care Units, New York State 2009

Microorganism	Number of Isolates	Percent of Infections
Coagulase negative staphylococci	24	41.4
Staphylococcus aureus	10	17.2
(MRSA)	(6)	(10.3)
Yeast	6	10.3
Enterococci	2	3.4
Other	17	29.3

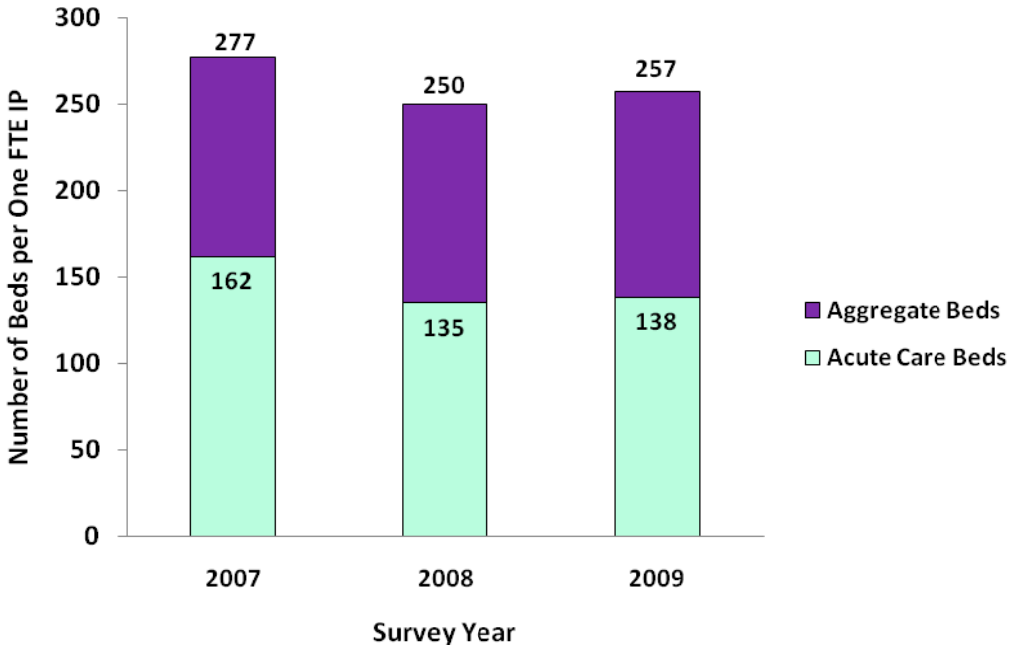
New York State data reported as of August 25, 2010
Out of 58 infections.

Table 15. Trends in Blood Stream Infection Rates by Type of Neonatal Intensive Care Unit, New York State 2007-2009

Location	2007	2008			2009		
	SIR	Obs	Exp	SIR (95% CI)	Obs	Exp	SIR (95% CI)
Level 2/3 NICU - CLABSI	1.0	40	33.9	1.18 (0.84, 1.61)	25	33.7	0.74 (0.48, 1.09)
Level 2/3 NICU - UCABSI	1.0	10	21.1	0.47 (0.23, 0.87)	14	19.8	0.71 (0.39, 1.19)
Level 3 NICU - CLABSI	1.0	23	23.3	0.99 (0.63, 1.48)	40	27.0	1.48 (1.06, 2.02)
Level 3 NICU - UCABSI	1.0	10	22.2	0.45 (0.22, 0.83)	19	21.2	0.90 (0.54, 1.40)
RPC NICU - CLABSI	1.0	142	172.2	0.82 (0.69, 0.97)	111	184.4	0.60 (0.50, 0.72)
RPC NICU - UCABSI	1.0	33	44.4	0.74 (0.51, 1.04)	25	52.9	0.47 (0.31, 0.70)
Neonatal TOTAL	1.0	258	317.1	0.81 (0.72, 0.92)	234	339.0	0.69 (0.60, 0.78)

Obs- Number of Observed Central Line-Associated (CLABSI) or Umbilical Line-Associated Blood Stream Infections (UCABSI)
Exp - Number of Expected CLABSI or UCABSI, if infection rate was the same as in 2007.
SIR – Standardized Incidence Ratio, using New York State 2007 as standard.
CI – Confidence Interval
Data downloaded 8/25/2010. Excludes Criteria 2b/3b and clinical sepsis.
2008 and 2009 data were indirectly standardized based on NYS 2007 rates.

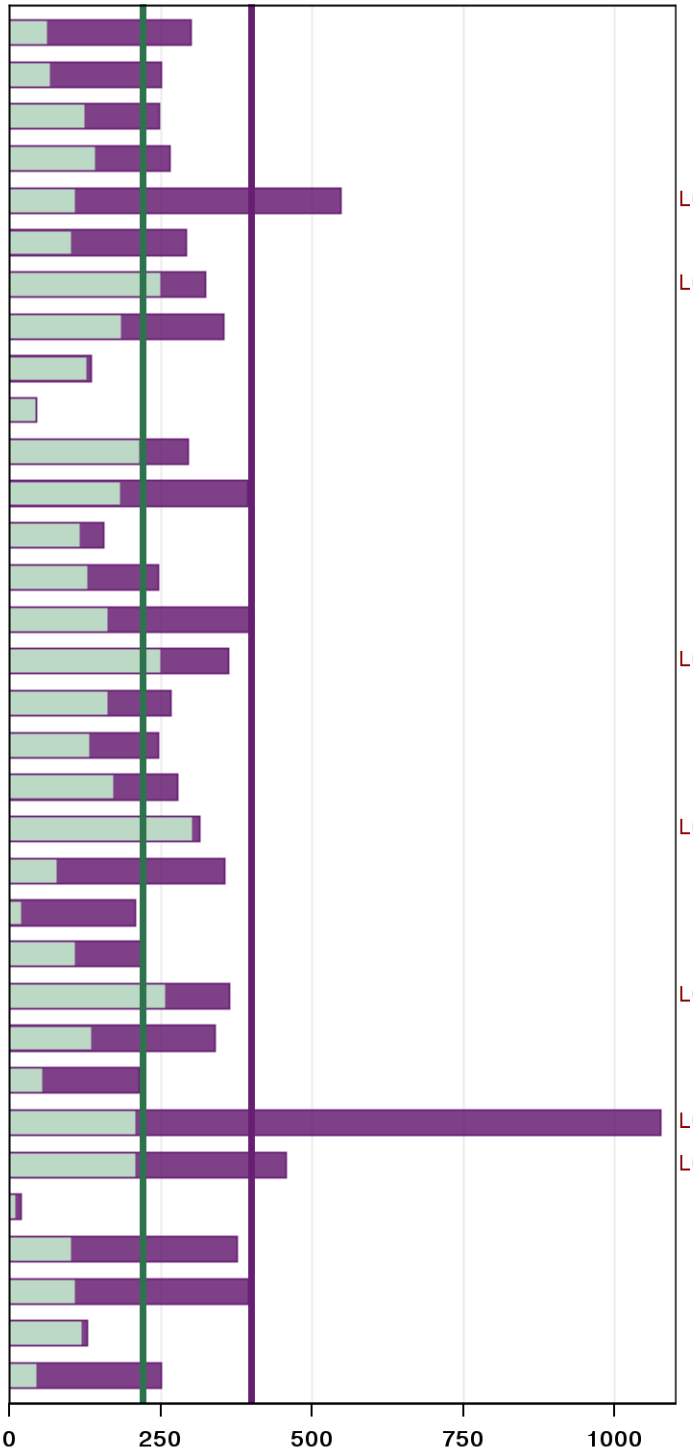
Figure 31. Hospital Beds per One Full Time Equivalent Infection Preventionist in New York State, 2007-2009



Acute care beds per One FTE Infection Preventionist
Aggregate (acute and other) beds per One FTE Infection Preventionist
FTE = Full Time Equivalent; Add. Bed EQ = Additional Bed Equivalent; IP = Infection Preventionist; AC = Acute Care
The following equivalents were used: ICU bed = 2 AC beds; long term care bed = ½ an AC bed; dialysis facility = 50 AC beds; ambulatory surgery center = 50 AC beds; ambulatory clinic = 10 AC beds; and a private physician's office = 5 AC beds.

Figure 32. Infection Preventionist Personnel Resources in NYS Hospitals, 2009 (page 1 of 6)

Hospital	FTE for IPs	Acute Care Beds	Acute Beds Per IP	Add. Bed EQ	Add. Bed EQ Per IP	LOW Resources Flag
AO Fox Memorial	1.0	60	60	240	240	
Adirondack Medical	0.8	52	65	148	185	
Albany Medical	5.0	608	122	625	125	
Albany Memorial	0.7	90	138	82	126	
Alice Hyde	0.5	53	106	221	442	LOW
Arnot Ogden	2.2	219	100	423	192	
Auburn Memorial	0.4	99	248	30	75	LOW
Bellevue Hospital	4.8	875	182	819	171	
Benedictine Hospital	1.0	125	125	10	10	
Bertrand Chaffee	0.6	24	40	2	3	
Beth Israel- Kings	1.0	212	212	82	82	
Beth Israel- Petrie	5.0	899	180	1066	213	
Bon Secours	0.7	80	114	28	40	
Bronx-Lebanon	4.0	504	126	477	119	
Brookdale Hospital	2.5	400	160	599	240	
Brookhaven Memorial	1.3	321	247	149	115	LOW
Brooklyn Downtown	2.2	350	159	235	107	
Brooks Memorial	0.5	65	130	58	116	
Buffalo General	2.0	339	170	214	107	
Calvary Hospital	0.8	225	300	10	13	LOW
Canton-Potsdam	0.8	60	75	224	280	
Carthage Area	1.3	20	16	239	191	
Catskill Regional	1.2	127	106	140	117	
Cayuga Medical Center	0.8	204	255	86	108	LOW
Champlain Valley	1.4	185	132	289	206	
Chenango Memorial	1.0	52	52	162	162	
Claxton-Hepburn	0.4	82	205	349	871	LOW
Clifton Springs	0.5	103	206	125	250	LOW
Clifton-Fine Hospital	0.5	3	7	6	12	
Cobleskill Regional	0.4	40	100	110	275	
Columbia Memorial	1.0	105	105	289	289	
Community General	1.5	175	117	16	11	
Community Memorial	0.6	25	42	125	208	



Acute care beds per One FTE Infection Preventionist, state average is 138
Aggregate (acute and other) beds per One FTE Infection Preventionist, state average is 257
FTE = Full Time Equivalent; Add. Bed EQ = Additional Bed Equivalent; IP = Infection Preventionist; AC = Acute Care
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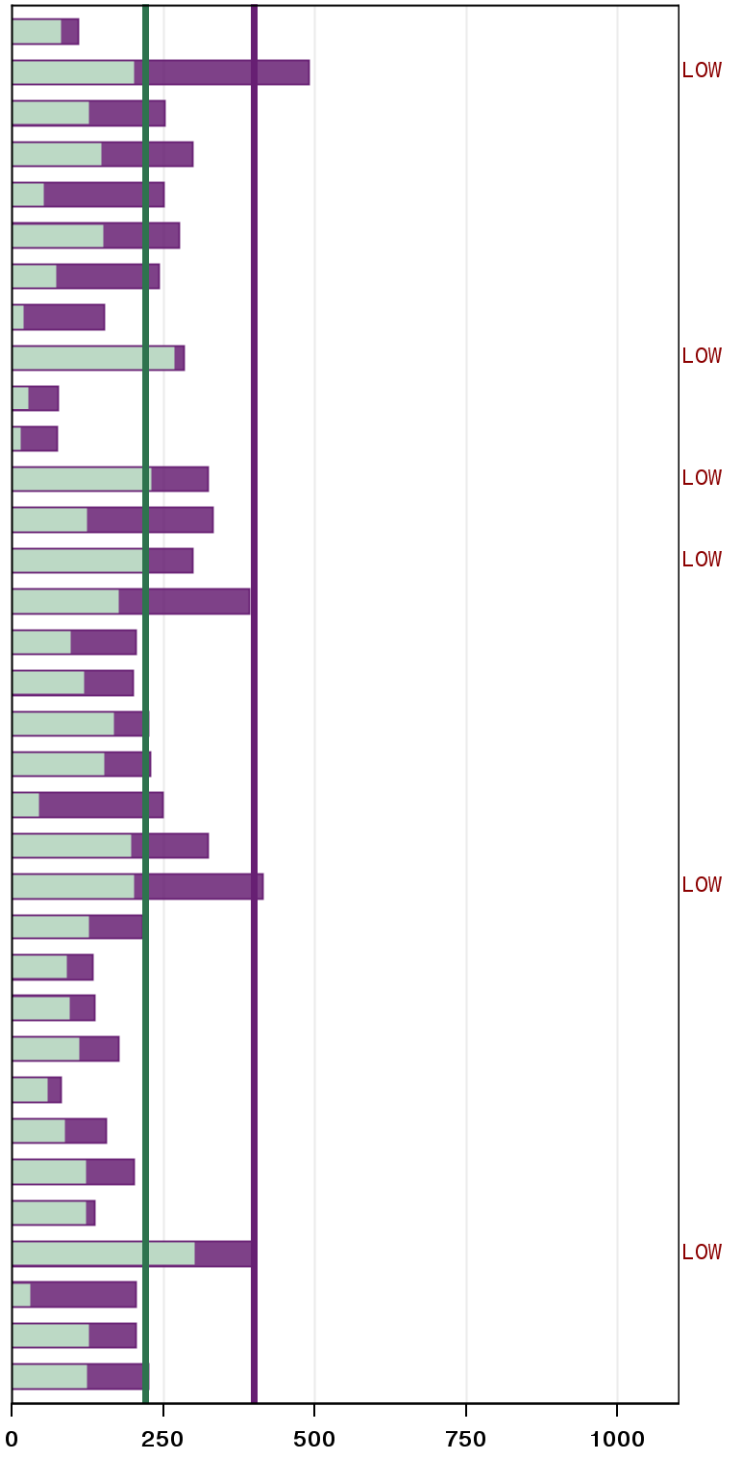
Vertical reference lines indicate low resources: below the 15th percentile in either Acute- or Aggregate- Beds Per FTE Measure.

Figure 32. Infection Preventionist Personnel Resources in NYS Hospitals, 2009 (page 2 of 6)

Hospital	FTE for IPs	Acute Care Beds	Acute Beds Per IP	Add. Bed EQ	Add. Bed EQ Per IP	LOW Resources Flag
Coney Island Hospital	4.6	363	79	137	30	
Corning Hospital	0.2	40	200	58	290	LOW
Cortland Reg Med	0.8	100	125	102	128	
Crouse Hospital	2.0	290	145	307	154	
Cuba Memorial	0.2	10	50	40	200	
DeGraff Memorial	0.5	74	148	64	128	
Delaware Valley	0.4	25	71	60	171	
EJ Noble Hospital	0.9	15	17	122	136	
Eastern Long Island	0.3	80	267	5	17	LOW
Elizabethtown	0.6	15	25	30	50	
Ellenville Regional	0.7	8	12	40	62	
Ellis Hospital	2.0	455	228	192	96	LOW
Elmhurst	4.5	545	121	943	210	
Erie Medical Center	1.9	425	224	140	74	LOW
FF Thompson Hospital	0.7	113	174	142	218	
Faxton - St. Lukes	2.7	250	94	292	110	
Flushing Hospital	2.5	293	117	205	82	
Forest Hills Hospital	1.5	249	166	88	59	
Franklin Hospital	1.5	225	150	118	79	
Geneva General	1.5	64	43	310	207	
Glen Cove Hospital	1.0	195	195	128	128	
Glens Falls Hospital	2.0	400	200	427	214	LOW
Good Samaritan Suffern	2.0	250	125	179	90	
Good Samaritan W Islip	4.0	355	89	175	44	
Harlem Hospital Center	3.1	286	92	136	44	
Highland Hospital	2.4	261	109	162	68	
Hosp for Special Surg	2.9	162	56	70	24	
Hudson Valley	1.0	85	85	70	70	
Huntington Hospital	2.3	275	120	186	81	
Intercomm. Newfane	0.3	30	120	4	16	
Interfaith Medical	1.0	299	299	103	103	LOW
Ira Davenport	0.5	14	28	88	176	
JT Mather	2.0	248	124	160	80	
Jacobi Medical	3.8	457	122	385	103	



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Vertical reference lines indicate low resources: below the 15th percentile in either Acute- or Aggregate- Beds Per FTE Measure.

Figure 32. Infection Preventionist Personnel Resources in NYS Hospitals, 2009 (page 3 of 6)

Hospital	FTE for IPs	Acute Care Beds	Acute Beds Per IP	Add. Bed EQ	Add. Bed EQ Per IP	LOW Resources Flag
Jamaica Hospital	2.5	387	155	417	167	
Jones Memorial	1.0	23	23	116	116	
Kenmore Mercy	1.0	152	152	156	156	
Kings County Hospital	3.0	534	178	1159	386	LOW
Kingsbrook Jewish	3.0	326	111	398	135	
Kingston Hospital	1.0	120	120	165	165	
Lakeside Memorial	0.9	35	39	87	96	
Lawrence Hospital	2.0	189	95	18	9	
Lenox Hill	2.0	498	249	216	108	LOW
Lewis County General	0.7	40	57	131	187	
Lincoln Medical	3.0	369	123	910	303	LOW
Little Falls Hospital	0.6	25	42	20	33	
Lockport Memorial	0.3	65	260	6	24	LOW
Long Beach Medical	1.0	100	100	48	48	
Long Island College	2.0	200	100	795	398	LOW
Long Island Jewish	5.0	880	176	170	34	
Lutheran Medical	2.0	407	204	32	16	
Maimonides	4.0	666	167	319	80	
Margaretville Hospital	0.3	8	27	60	200	
Mary Imogene Bassett	2.0	138	69	524	262	
Massena Memorial	0.8	50	67	144	192	
Medina Memorial	0.3	70	280	22	88	LOW
Mercy Hospital-Buffalo	1.0	344	344	170	170	LOW
Mercy Medical Center	1.5	220	147	123	82	
Metropolitan	2.0	256	128	336	168	
Millard Fill. Gates	1.0	189	189	98	98	
Millard Fill. Suburban	1.5	270	180	20	13	
Montefiore-Einstein	2.4	390	166	303	129	
Montefiore-Moses	4.4	890	205	503	116	
Montifiore-North	2.3	400	174	268	117	
Moses-Ludington	0.7	7	10	100	143	
Mount Sinai Hospital	7.0	1002	144	511	74	
Mount Sinai Queens	2.0	180	90	128	64	

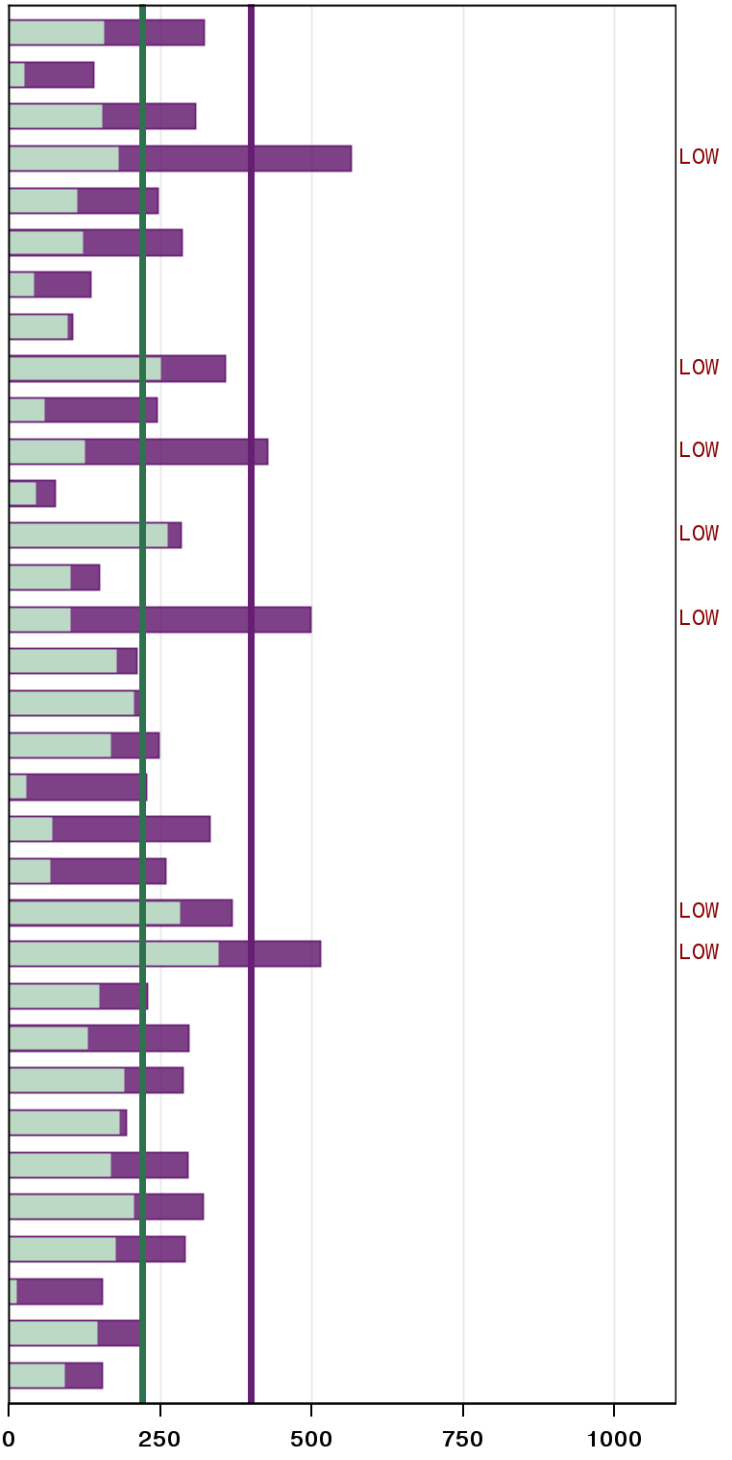

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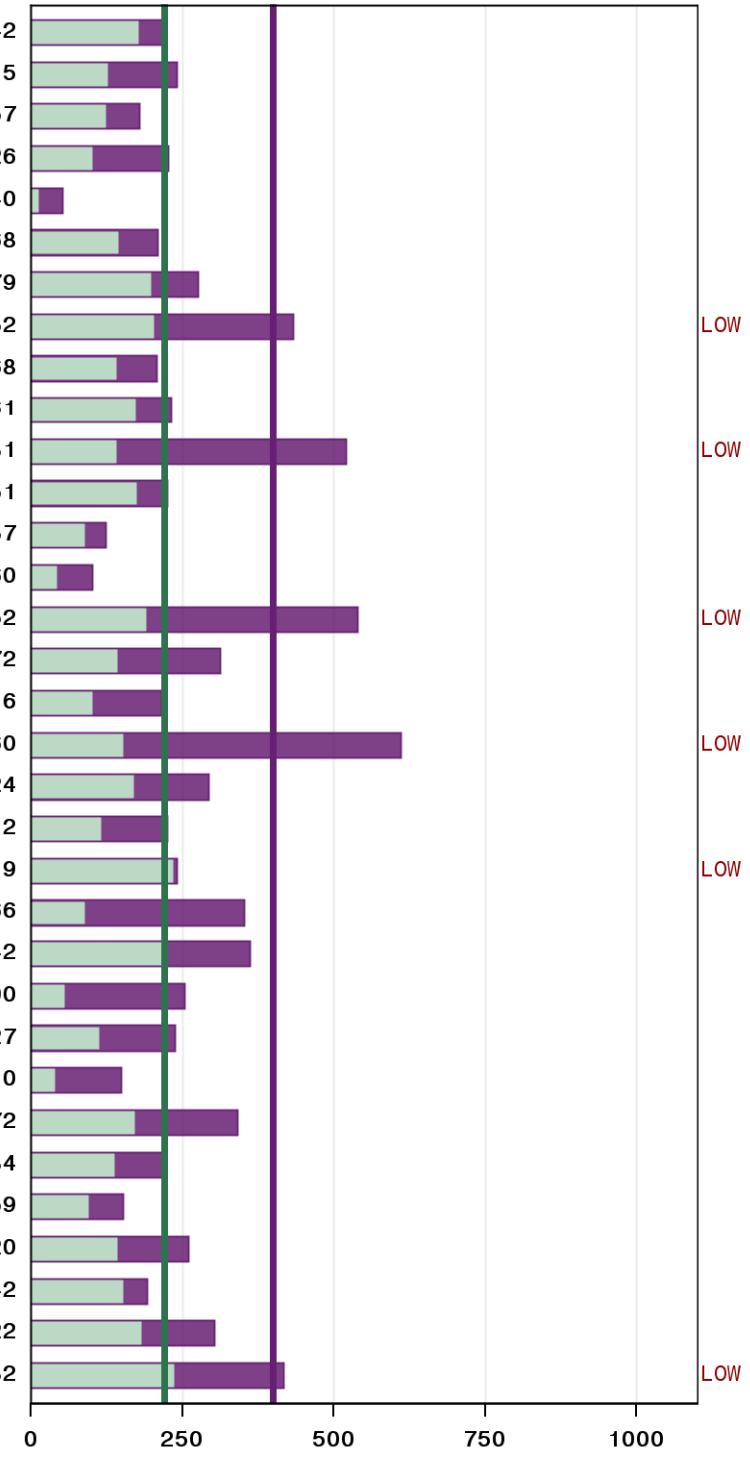
Figure 32. Infection Preventionist Personnel Resources in NYS Hospitals, 2009 (page 4 of 6)

Hospital	FTE for IPs	Acute Care Beds	Acute Beds Per IP	Add. Bed EQ	Add. Bed EQ Per IP	LOW Resources Flag
Mount St. Marys	1.0	175	175	42	42	
Mount Vernon	1.0	125	125	115	115	
NY Community Brooklyn	1.0	122	122	57	57	
NY Downtown	1.0	100	100	126	126	
NY Eye And Ear	1.0	11	11	40	40	
NY Med Ctr Queens	3.1	439	142	211	68	
NY Methodist	3.0	591	197	236	79	
NYP- Allen	1.0	201	201	232	232	LOW
NYP- Columbia	7.0	973	139	474	68	
NYP- Weill Cornell	5.0	855	171	303	61	
NYU Joint Diseases	1.1	146	139	400	381	LOW
NYU Medical Center	4.0	684	173	201	51	
Nassau University	5.0	430	86	184	37	
Nathan Littauer	1.8	74	41	108	60	
Newark Wayne	0.3	47	188	88	352	LOW
Niagara Falls	1.0	140	140	172	172	
North Central Bronx	2.3	223	99	262	116	
North General	1.0	150	150	460	460	LOW
North Shore	4.9	815	168	603	124	
Northern Dutchess	0.6	68	113	67	112	
Northern Westchester	1.0	232	232	9	9	LOW
Noyes Memorial	0.5	43	86	133	266	
Nyack Hospital	1.0	220	220	142	142	
O'Connor Hospital	0.3	16	53	60	200	
Olean General	0.9	100	111	114	127	
Oneida Healthcare	1.1	40	38	116	110	
Orange Reg- Goshen	0.7	110	169	112	172	
Orange Reg- Middletown	1.4	183	136	114	84	
Oswego Hospital	1.5	140	93	88	59	
Our Lady of Lourdes	1.0	140	140	120	120	
Peconic Bay Medical	1.0	150	150	42	42	
Peninsula Hospital	1.0	180	180	122	122	
Phelps Memorial	1.0	235	235	182	182	LOW



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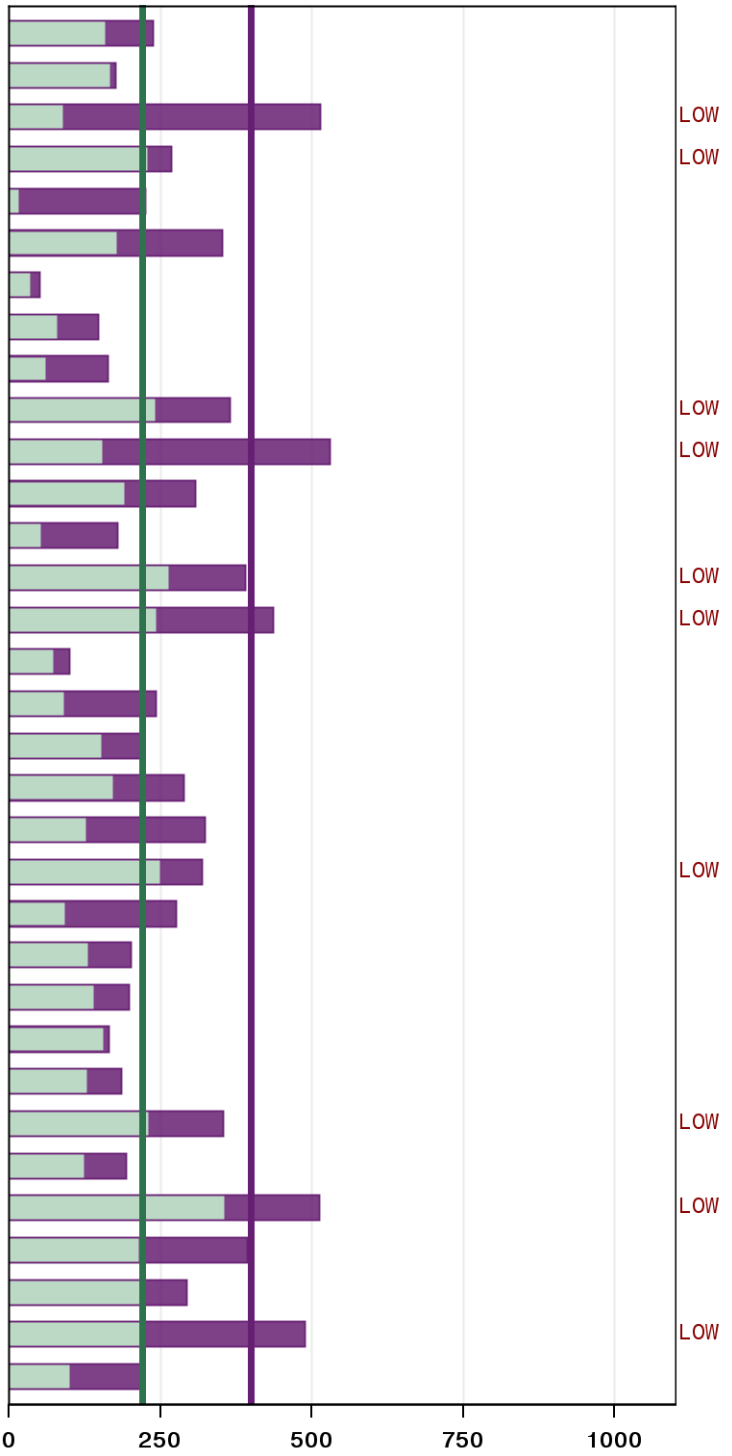
Vertical reference lines indicate low resources: below the 15th percentile in either Acute- or Aggregate- Beds Per FTE Measure.

Figure 32. Infection Preventionist Personnel Resources in NYS Hospitals, 2009 (page 5 of 6)

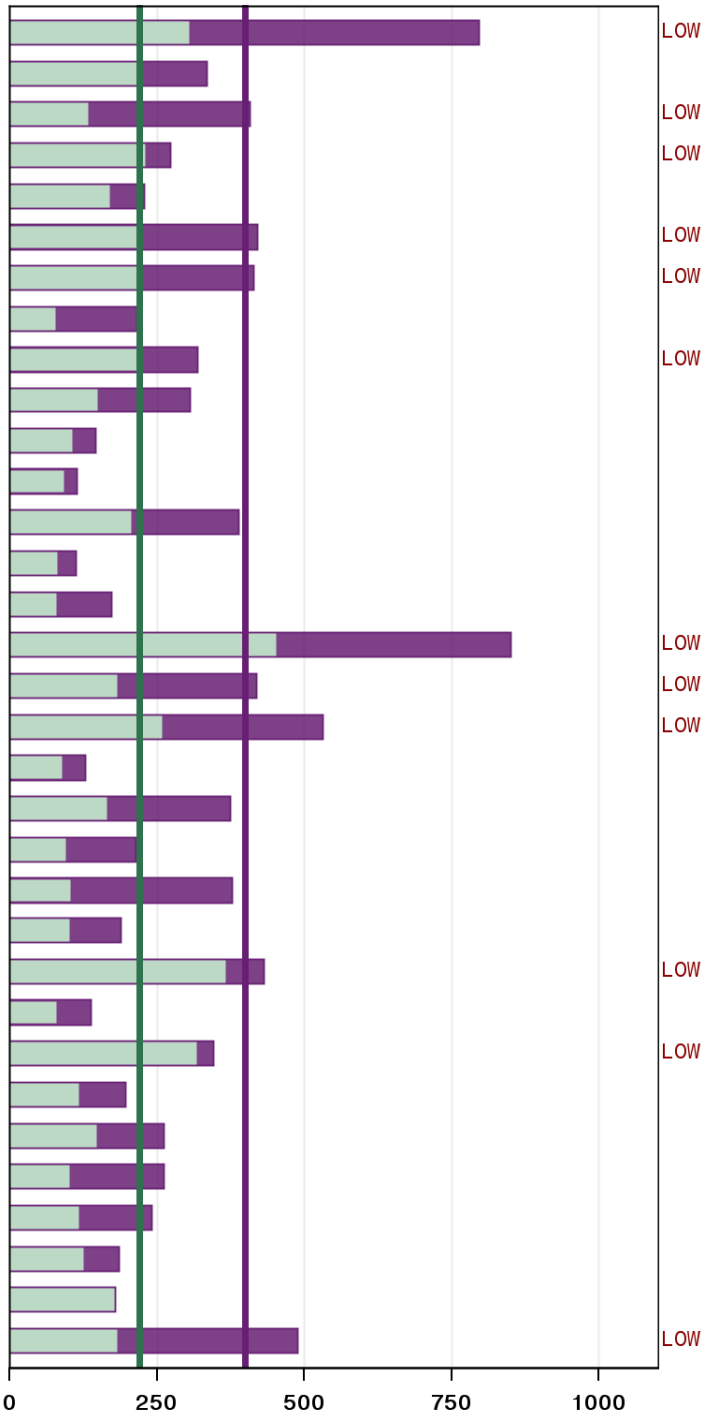
Hospital	FTE for IPs	Acute Care Beds	Acute Beds Per IP	Add. Bed EQ	Add. Bed EQ Per IP	LOW Resources Flag
Plainview Hospital	1.5	235	157	121	81	
Putnam Hospital	1.0	165	165	10	10	
Queens Hospital	3.0	261	87	1280	427	LOW
Richmond Univ	2.0	453	227	81	41	LOW
River Hospital	0.4	5	14	74	210	
Rochester General	3.0	525	175	533	178	
Rockefeller University	0.6	20	33	10	17	
Rome Memorial	1.7	126	76	117	71	
Roswell Park	2.0	116	58	210	105	
Samaritan- Troy	0.7	155	238	82	126	LOW
Samaritan- Watertown	1.0	152	152	378	378	LOW
Saratoga Hospital	1.0	188	188	119	119	
Schyuler Hospital	0.5	25	50	64	128	
Seton Hlth- St Mary's	0.8	196	261	97	129	LOW
Sisters of Charity	1.0	240	240	196	196	LOW
Sloan Kettering	7.0	490	70	200	29	
Soldiers And Sailors	0.4	35	88	62	155	
Sound Shore Medical	1.0	150	150	70	70	
South Nassau Comm.	2.0	340	170	237	119	
Southampton Hospital	1.0	125	125	198	198	
Southside Hospital	1.5	371	247	106	71	LOW
St Anthony Community	0.5	45	90	93	186	
St Barnabas Hospital	3.5	450	129	256	73	
St Catherine of Siena	2.3	311	138	133	59	
St Charles Hospital	1.5	231	154	16	11	
St Elizabeth Medical	1.6	201	126	95	59	
St Francis-Poughkeeps.	1.0	228	228	125	125	LOW
St Francis-Roslyn	2.6	318	122	185	71	
St James Mercy	0.5	177	354	79	158	LOW
St Johns Episcopal	1.0	212	212	181	181	
St Johns Riverside	1.9	407	220	136	74	
St Joseph- Bethpage	0.5	100	222	120	267	LOW
St Joseph- Cheektowaga	1.0	98	98	124	124	



Acute care beds per One FTE Infection Preventionist, state average is 138
Aggregate (acute and other) beds per One FTE Infection Preventionist, state average is 257
FTE = Full Time Equivalent; Add. Bed EQ = Additional Bed Equivalent; IP = Infection Preventionist; AC = Acute Care
The following equivalents were used: ICU bed = 2 AC beds; long term care bed = ½ an AC bed; dialysis facility = 50 AC beds; ambulatory surgery center = 50 AC beds; ambulatory clinic = 10 AC beds; and a private physician's office = 5 AC beds.
Vertical reference lines indicate low resources: below the 15th percentile in either Acute- or Aggregate- Beds Per FTE Measure.

Figure 32. Infection Preventionist Personnel Resources in NYS Hospitals, 2009 (page 6 of 6)

Hospital	FTE for IPs	Acute Care Beds	Acute Beds Per IP	Add. Bed EQ	Add. Bed EQ Per IP	LOW Resources Flag
St Josephs- Elmira	0.3	91	303	148	493	LOW
St Josephs- Syracuse	2.0	431	216	238	119	
St Josephs- Yonkers	1.0	131	131	276	276	LOW
St Lukes - Cornwall	0.6	125	227	25	45	LOW
St Lukes - Newburgh	1.5	242	167	88	61	
St Lukes- Roosevelt	1.5	320	213	310	207	LOW
St Lukes- St Lukes	1.5	330	220	290	193	LOW
St Marys Amsterdam	1.1	80	76	146	139	
St Peters Hospital	2.0	442	221	195	98	LOW
St Vincents Manhat.	3.0	440	147	479	160	
Staten Island U-North	5.0	522	104	201	40	
Staten Island U-South	2.0	181	91	46	23	
Strong Memorial	3.6	735	204	666	185	
Syosset Hospital	1.0	79	79	33	33	
TLC Lake Shore	0.6	42	76	53	96	
TLC- Tri-County	0.1	45	450	40	400	LOW
U Health- Binghamton	1.0	181	181	238	238	LOW
U Health- Wilson	1.0	256	256	276	276	LOW
United Memorial- North	1.5	131	87	60	40	
Unity Hosp Rochester	2.0	327	164	420	210	
Univ Hosp Brooklyn	4.0	365	92	480	122	
Univ Hosp SUNY Upst.	3.0	305	102	829	276	
Univ Hosp StonyBrook	5.6	556	99	502	90	
Vassar Brothers	1.0	365	365	67	67	LOW
Westchester Medical	7.1	549	77	424	60	
Westchester Square	0.7	205	315	20	31	LOW
White Plains Hospital	2.0	230	115	161	81	
Winthrop University	4.0	581	145	464	116	
Woman and Childrens	2.0	200	100	324	162	
Womans Christian Assoc	1.0	115	115	125	125	
Woodhull Medical	3.0	368	123	188	63	
Wyckoff Heights	2.0	350	175	8	4	
Wyoming County Comm.	0.3	45	180	77	308	LOW



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Vertical reference lines indicate low resources: below the 15th percentile in either Acute- or Aggregate- Beds Per FTE Measure.

Summary Table

Table 16. Summary of Hospital-Acquired Infection Data, New York State 2008-2009

		Surgical Site Infections								Central Line-Associated Blood Stream Infections																Umbilical Inf.	
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	**2008**	**4.4**		**1.1**		**2.2**		**1.0**		**2.2**		**1.4**		**Teaching/Non 2.7/2.7**		**Teaching/Non 2.4/2.0**		**2.8**		**2.3**		**3.3**		**RPC/Lev3/Lev2-3 3.1/2.2/5.9**		**RPC/Lev3/Lev2-3 2.2/1.6/2.8**	
	2009	**4.8**		**1.1**		**2.2**		**0.9**		**1.8**		**1.3**		**Teaching/Non 2.5/1.9**		**Teaching/Non 1.7/1.9**		**2.1**		**2.1**		**2.2**		**RPC/Lev3/Lev2-3 2.2/3.5/3.8**		**RPC/Lev3/Lev2-3 1.5/3.0/4.0**	
AO Fox Memorial	2008	2/ 44	4.8	0/ 25	* 0.0											0/ 286	* 0.0										
	2009	3/ 51	6.2	0/ 25	* 0.0											0/ 272	* 0.0										
Adirondack Medical	2008	1/ 20	5.4	1/ 66	1.3											2/ 595	3.4										
	2009	2/ 21	9.3	1/ 58	1.7											0/ 506	* 0.0										
Albany Medical	2008	22/360	6.3	0/ 209	* 0.0	5/ 398	1.2	0/ 350	** 0.0	1/2197	0.5	7/2882	2.4	5/3321	1.5			11/4448	2.5	0/ 528	* 0.0	14/1972	^^ 7.1	4/3352	1.3	1/1768	0.6
	2009	20/379	5.4	1/ 270	0.4	7/ 367	1.8	1/ 340	0.3	1/2163	0.5	4/2868	1.4	5/2821	1.8			5/4111	1.2	0/1148	* 0.0	0/2039	** 0.0	1/4706	** 0.2	0/1449	* 0.0
Albany Memorial	2008	5/ 81	6.7	3/ 139	2.4											1/ 797	1.3										
	2009	2/120	1.9	0/ 101	* 0.0											0/ 826	* 0.0										
Alice Hyde	2008	0/ 27	* 0.0	1/ 40	2.0											0/ 149	* 0.0										
	2009	1/ 34	2.8	0/ 44	* 0.0											0/ 213	* 0.0										
Arnot Ogden	2008	7/ 57	^^12.0	6/ 165	^^ 3.5	11/ 154	^^ 5.6	2/ 144	1.1							5/3914	1.3							3/ 442	6.1	2/ 444	4.6
	2009	6/ 86	6.3	3/ 149	2.1	4/ 148	2.3	4/ 138	2.8							7/3467	2.0							2/ 453	5.0	1/ 502	3.8
Auburn Memorial	2008	0/ 44	* 0.0	1/ 50	1.3											0/ 260	* 0.0										
	2009	2/ 35	6.0	0/ 48	* 0.0											0/ 384	* 0.0										
Bellevue Hospital	2008	6/129	4.5	1/ 51	1.1	11/ 158	^^ 5.7	2/ 157	1.3	6/1057	5.7	0/ 908	* 0.0	9/1910	4.7			5/2156	2.3	3/ 571	5.3	0/ 51	* 0.0	4/ 553	7.2	2/ 161	10.9
	2009	12/119	^^ 9.6	0/ 48	* 0.0	4/ 148	2.5	2/ 145	1.3	5/ 896	5.6	2/ 880	2.3	4/1471	2.7			9/1806	^^ 5.0	1/ 654	1.5	0/ 56	* 0.0	5/ 519	^^ 8.8	1/ 199	5.0
Benedictine Hospital	2008	0/ 59	* 0.0	NA	NA											3/1199	2.5										
	2009	0/ 78	** 0.0	0/ 62	* 0.0											0/1014	* 0.0										
Bertrand Chaffee	2008	NA	NA																								
	2009									NA	NA																
Beth Israel- Kings	2008	0/ 56	* 0.0	0/ 54	* 0.0											2/1758	1.1										
	2009	1/ 50	1.9	1/ 56	1.3											4/1457	2.7										
Beth Israel- Petrie	2008	23/230	^^ 9.8	2/ 248	0.9	12/ 314	3.5	8/ 298	^^ 2.8	0/ 667	* 0.0	3/1437	2.1	3/3605	** 0.8			4/1405	2.8			0/ 157	* 0.0	3/ 292	13.0	0/ 188	* 0.0
	2009	18/229	7.8	3/ 296	1.1	5/ 247	2.0	5/ 245	2.0	1/ 625	1.6	2/1074	1.9	8/3526	2.3			1/1776	0.6			0/ 167	* 0.0	1/ 203	4.9	1/ 201	4.1

Color key: *****Blue: significantly lower than state average*** ***^^Red: significantly higher than state average*** *Grey: not statistically different from state average* ********: Zero infections, not statistically significant*

NA: Fewer than 20 procedures or 50 line days reported Blank: No procedures or ICUs at hospital

Table 16. Summary of Hospital-Acquired Infection Data, New York State 2008-2009 (continued)

		Surgical Site Infections								Central Line-Associated Blood Stream Infections														Umbilical Inf.	
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	2008	4.4		1.1		2.2		1.0		2.2		1.4		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		2.8		2.3		3.3		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	4.8		1.1		2.2		0.9		1.8		1.3		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		2.1		2.1		2.2		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Bon Secours	2008	1/ 32	3.1	NA	NA											2/ 536	3.7										
	2009	0/ 22	* 0.0	NA	NA											1/ 330	3.0										
Bronx-Lebanon	2008	0/ 52	* 0.0	0/ 31	* 0.0					0/ 295	* 0.0					6/3082	1.9							0/ 405	* 0.0	NA	NA
	2009	0/ 75	** 0.0	0/ 31	* 0.0					0/ 213	* 0.0					5/3845	1.3							3/ 616	4.2		
Brookdale Hospital	2008	3/ 98	2.9	0/ 24	* 0.0					3/ 614	4.9			10/3073	3.3			5/1590	3.1	1/ 639	1.6	2/ 122	16.4	0/ 184	* 0.0	3/ 399	7.3
	2009	3/ 84	3.3	0/ 31	* 0.0					1/ 740	1.4			5/2564	2.0			3/1538	2.0	1/ 469	2.1	0/ 106	* 0.0	NA	NA	6/ 542	^^ 9.2
Brookhaven Memorial	2008	3/144	2.0	3/ 125	1.9					6/1044	5.7			11/1191	^^ 9.2			11/1829	^^ 6.0								
	2009	3/130	2.3	6/ 121	^^ 4.3					3/1246	2.4			4/1368	2.9			8/1653	^^ 4.8								
Brooklyn Downtown	2008	6/108	5.6	1/ 23	1.8									6/1170	5.1			1/1285	0.8					1/1314	0.8	0/ 362	* 0.0
	2009	4/ 85	5.1	NA	NA									6/1297	4.6			2/ 939	2.1					6/1517	4.3	0/ 250	* 0.0
Brooks Memorial	2008	1/ 20	5.5	2/ 75	3.4											0/ 436	* 0.0										
	2009	NA	NA	0/ 96	* 0.0											0/ 268	* 0.0										
Buffalo General	2008	11/153	7.0	7/ 544	1.2	23/ 423	^^ 5.3	14/ 394	^^ 3.5	2/ 600	3.3			8/2748	2.9			3/3806	** 0.8								
	2009	12/156	7.7	3/ 568	0.5	21/ 468	^^ 4.1	3/ 415	0.8	3/ 802	3.7	2/2180	0.9	13/3098	4.2			13/1942	^^ 6.7								
Canton-Potsdam	2008	1/ 36	2.7	1/ 66	1.3											0/ 197	* 0.0										
	2009	5/ 73	6.3	2/ 74	2.7											0/ 102	* 0.0										
Carthage Area	2008	NA	NA																								
	2009	NA	NA																								
Catskill Regional	2008	1/ 39	2.7	1/ 36	2.6											3/ 549	5.5										
	2009	0/ 33	* 0.0	1/ 30	3.0											0/ 548	* 0.0										
Cayuga Medical Cntr	2008	5/ 76	6.6	2/ 83	2.5											0/1184	* 0.0										
	2009	4/ 50	7.2	0/ 66	* 0.0											0/1386	* 0.0										
Champlain Valley	2008	9/ 93	^^10.2	0/ 96	* 0.0	2/ 135	1.1	1/ 130	0.8							4/2442	1.6										
	2009	10/114	8.7	0/ 113	* 0.0	0/ 121	** 0.0	1/ 119	0.9							2/1791	1.1										
Chenango Memorial	2008	NA	NA	1/ 36	2.1											1/ 274	3.6										
	2009	NA	NA	0/ 45	* 0.0											0/ 205	* 0.0										

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		Surgical Site Infections								Central Line-Associated Blood Stream Infections														Umbilical Inf.	
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Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	**2008**	**4.4**		**1.1**		**2.2**		**1.0**		**2.2**		**1.4**		**Teaching/Non 2.7/2.7**		**Teaching/Non 2.4/2.0**		**2.8**		**2.3**		**3.3**		**RPC/Lev3/Lev2-3 3.1/2.2/5.9**		**RPC/Lev3/Lev2-3 2.2/1.6/2.8**	
	2009	**4.8**		**1.1**		**2.2**		**0.9**		**1.8**		**1.3**		**Teaching/Non 2.5/1.9**		**Teaching/Non 1.7/1.9**		**2.1**		**2.1**		**2.2**		**RPC/Lev3/Lev2-3 2.2/3.5/3.8**		**RPC/Lev3/Lev2-3 1.5/3.0/4.0**	
Claxton-Hepburn	2008	1/ 28	3.7	NA	NA											0/ 382	* 0.0										
	2009	1/ 44	2.4	NA	NA											1/ 500	2.0										
Clifton Springs	2008	5/ 38	^^13.8	2/ 83	3.1											0/ 352	* 0.0										
	2009	1/ 31	3.6	0/ 100	* 0.0											0/ 422	* 0.0										
Columbia Memorial	2008	1/ 59	1.7	1/ 48	1.3											3/ 691	4.3										
	2009	1/ 69	1.5	2/ 80	1.8											2/ 789	2.5										
Community General	2008	2/142	1.4	4/ 525	1.0											0/1215	* 0.0										
	2009	1/125	** 0.7	1/ 498	0.3											1/1404	0.7										
Community Memorial	2008	NA	NA	0/ 189	* 0.0											0/ 82	* 0.0										
	2009	NA	NA	2/ 214	1.1											0/ 131	* 0.0										
Coney Island	2008	4/ 36	10.4	4/ 60	3.8					0/ 241	* 0.0			1/1245	0.8			1/ 723	1.4								
	2009	4/ 39	9.1	2/ 69	1.8					0/ 148	* 0.0			5/1353	3.7			3/ 746	4.0								
Corning Hospital	2008	0/ 32	* 0.0	1/ 60	1.4											0/ 397	* 0.0										
	2009	3/ 29	10.6	0/ 52	* 0.0											0/ 361	* 0.0										
Cortland Reg Med	2008	0/ 22	* 0.0	0/ 28	* 0.0									1/ 691	1.4												
	2009	1/ 29	3.2	NA	NA									2/ 912	2.2												
Crouse Hospital	2008	2/239	** 0.9	4/ 253	2.0											2/3129	0.6							7/1704	4.0	4/1156	2.9
	2009	14/258	5.7	4/ 269	1.6											1/3125	** 0.3							9/3167	2.8	6/1247	3.5
DeGraff Memorial	2008	0/ 39	* 0.0	2/ 43	3.9											0/ 570	* 0.0										
	2009	1/ 43	2.6	2/ 49	3.3											1/ 524	1.9										
EJ Noble Hospital	2008	NA	NA													NA	NA										
	2009															NA	NA										
Eastern Long Island	2008	NA	NA	NA	NA											0/ 87	* 0.0										
	2009	NA	NA	NA	NA											0/ 148	* 0.0										
Ellis Hospital	2008	17/237	7.2	1/ 238	0.3	8/ 314	3.3	1/ 270	0.5							12/5290	2.3										
	2009	10/253	4.0	3/ 265	1.0	9/ 254	3.8	1/ 227	0.5							14/5718	2.4										

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Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	2008	4.4		1.1		2.2		1.0		2.2		1.4		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		2.8		2.3		3.3		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	4.8		1.1		2.2		0.9		1.8		1.3		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		2.1		2.1		2.2		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Elmhurst	2008	1/ 72	1.5	0/ 30	* 0.0					0/ 474	* 0.0													1/ 289	3.9	0/ 112	* 0.0
	2009	3/ 63	4.8	0/ 42	* 0.0					1/ 424	2.4													0/ 223	* 0.0	0/ 148	* 0.0
Erie Medical Center	2008	3/ 86	3.4	0/ 114	* 0.0	3/ 128	2.2	1/ 71	1.3	0/ 779	* 0.0	0/ 206	* 0.0	4/2334	1.7												
	2009	3/ 98	3.1	3/ 137	1.6	3/ 137	2.0	0/ 111	* 0.0	0/1604	* 0.0	0/ 428	* 0.0	3/2683	1.1												
FF Thompson	2008	1/ 48	2.0	0/ 92	* 0.0											1/ 390	2.6										
	2009	1/ 40	2.5	1/ 155	0.9											1/ 585	1.7										
Faxton St. Lukes	2008	1/129	** 0.8	1/ 143	0.6					4/1756	2.3					7/2234	3.1										
	2009	0/141	** 0.0	1/ 138	0.5					3/2907	1.0					1/2543	0.4										
Flushing Hospital	2008	3/ 48	6.4	0/ 32	* 0.0					3/ 411	7.3			6/1156	5.2			2/ 405	4.9					2/1012	2.3	2/ 279	7.4
	2009	2/ 58	3.9	0/ 40	* 0.0					1/ 530	1.9			4/1323	3.0			0/ 736	* 0.0					0/ 969	* 0.0	0/ 277	* 0.0
Forest Hills Hosp	2008	9/132	6.9	0/ 103	* 0.0											4/2657	1.5										
	2009	5/111	4.7	3/ 114	2.0											8/3508	2.3										
Franklin	2008	1/114	0.9	3/ 105	2.9											2/2759	0.7										
	2009	0/ 96	** 0.0	0/ 127	* 0.0											3/2715	1.1										
Geneva General	2008	1/ 47	2.0	0/ 91	* 0.0											0/ 478	* 0.0										
	2009	0/ 49	* 0.0	1/ 72	1.3											6/ 705	^^ 8.5										
Glen Cove Hospital	2008	1/ 52	1.7	1/ 418	0.3											0/1731	** 0.0										
	2009	5/ 52	8.8	5/ 440	1.4											0/1883	** 0.0										
Glens Falls	2008	8/139	5.9	1/ 176	0.5											6/2409	2.5										
	2009	6/131	4.9	1/ 169	0.6											3/2179	1.4										
Good Samar. Suffern	2008	5/105	4.9	1/ 57	1.6	1/ 241	0.4	0/ 225	* 0.0			1/1003	1.0			2/2007	1.0	1/1007	1.0								
	2009	3/ 90	3.5	0/ 60	* 0.0	5/ 206	2.2	2/ 193	1.0			1/1023	1.0			6/1610	3.7	1/ 828	1.2								
Good Samar. W Islip	2008	13/281	4.8	2/ 147	1.2											3/4198	0.7					2/ 141	14.2	0/ 496	* 0.0	0/ 475	* 0.0
	2009	9/242	3.8	2/ 138	1.2											7/4982	1.4					1/ 276	3.6	1/ 762	1.5	3/ 558	5.0
Harlem Hospital	2008	1/ 49	1.9	NA	NA					3/ 502	6.0					4/1986	2.0					NA	NA	0/ 206	* 0.0	0/ 119	* 0.0
	2009	0/ 48	* 0.0	NA	NA					4/ 729	5.5					6/2401	2.5					0/ 129	* 0.0	2/ 472	4.1	0/ 143	* 0.0

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Table 16. Summary of Hospital-Acquired Infection Data, New York State 2008-2009 (continued)

		Surgical Site Infections								Central Line-Associated Blood Stream Infections														Umbilical Inf.	
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	**2008**	**4.4**		**1.1**		**2.2**		**1.0**		**2.2**		**1.4**		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		**2.8**		**2.3**		**3.3**		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	**4.8**		**1.1**		**2.2**		**0.9**		**1.8**		**1.3**		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		**2.1**		**2.1**		**2.2**		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Highland Hospital	2008	13/216	6.0	7/ 649	1.2											7/3266	2.1										
	2009	8/182	4.5	6/ 719	0.9											1/3190	0.3										
Hosp for Spec Surg	2008			4/3617	** 0.2																						
	2009			14/3935	** 0.5																						
Hudson Valley	2008	4/ 72	5.4	0/ 85	* 0.0											6/1483	4.0										
	2009	3/ 69	4.1	1/ 98	0.8											4/1467	2.7										
Huntington	2008	6/147	4.1	6/ 212	2.7					2/ 964	2.1					1/1703	0.6										
	2009	4/129	3.0	8/ 227	^^ 3.4					3/ 852	3.5					2/1490	1.3										
Intercomm. Newfane	2008	NA	NA	NA	NA											1/ 118	8.5										
	2009	NA	NA	NA	NA											0/ 107	* 0.0										
Interfaith Medical	2008	NA	NA	NA	NA											5/2507	2.0										
	2009	0/ 29	* 0.0	NA	NA											8/2342	3.4										
Ira Davenport	2008													0/ 56	* 0.0												
	2009													NA	NA												
JT Mather	2008	10/144	7.2	0/ 61	* 0.0					2/1092	1.8					5/1947	2.6										
	2009	10/140	7.1	2/ 86	2.7					3/1313	2.3					3/1849	1.6										
Jacobi Medical	2008	7/ 71	9.3	1/ 38	1.4					6/1076	5.6			6/2180	2.8			12/1472	^^ 8.2			0/ 145	* 0.0	4/1123	3.1	1/ 342	2.5
	2009	9/ 66	^^12.0	1/ 53	1.5					5/1112	4.5			4/1890	2.1			7/ 971	^^ 7.2			1/ 293	3.4	6/1471	3.8	0/ 494	* 0.0
Jamaica Hospital	2008	5/ 65	7.5	1/ 42	1.5									1/1698	0.6			2/1328	1.5					4/ 734	5.2	0/ 207	* 0.0
	2009	5/ 66	7.5	2/ 44	3.3									1/1833	0.5			4/1678	2.4					3/ 812	3.5	1/ 115	7.9
Jones Memorial	2008	1/ 22	5.1													0/ 140	* 0.0										
	2009	NA	NA													0/ 180	* 0.0										
Kenmore Mercy	2008	1/137	0.8	7/ 379	^^ 2.9											1/1677	0.6										
	2009	3/157	2.1	2/ 414	0.7											3/1830	1.6										
Kings County	2008	2/ 82	2.3	NA	NA					3/1143	2.6			2/1213	1.6			0/ 838	* 0.0	1/ 739	1.4	1/ 258	3.9	7/1341	4.1	2/ 593	3.1
	2009	0/ 89	** 0.0	NA	NA					2/ 844	2.4			8/1387	^^ 5.8			1/ 876	1.1	2/ 759	2.6	0/ 64	* 0.0	5/1286	3.8	1/ 265	3.3

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NA: Fewer than 20 procedures or 50 line days reported Blank: No procedures or ICUs at hospital

Table 16. Summary of Hospital-Acquired Infection Data, New York State 2008-2009 (continued)

		Surgical Site Infections								Central Line-Associated Blood Stream Infections														Umbilical Inf.	
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	2008	4.4		1.1		2.2		1.0		2.2		1.4		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		2.8		2.3		3.3		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	4.8		1.1		2.2		0.9		1.8		1.3		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		2.1		2.1		2.2		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Kingsbrook Jewish	2008	6/ 52	10.4	1/ 24	2.2					4/1166	3.4					4/1404	2.8										
	2009	3/ 30	8.9	NA	NA					2/1103	1.8					11/1658	^^ 6.6										
Kingston Hospital	2008	0/ 69	** 0.0	0/ 55	* 0.0											0/1754	** 0.0										
	2009	1/ 83	1.1	1/ 62	1.5											3/1820	1.6										
Lakeside Memorial	2008	NA	NA	1/ 31	2.4									0/ 206	* 0.0												
	2009	NA	NA	0/ 27	* 0.0									0/ 238	* 0.0												
Lawrence	2008	2/ 77	2.6	0/ 87	* 0.0									14/ 856	^^16.4												
	2009	5/103	4.9	1/ 106	0.9									3/ 947	3.2												
Lenox Hill	2008	11/190	5.6	11/ 519	2.2	9/ 552	1.7	1/ 488	0.2	7/1268	^^ 5.5	8/2225	^^ 3.6			14/3285	4.3							8/ 977	8.3	0/ 55	* 0.0
	2009	18/188	^^ 9.2	7/ 456	1.4	20/ 468	^^ 4.2	12/ 412	^^ 2.8	6/1377	4.4	3/2573	1.2			11/3074	^^ 3.6							7/1104	6.3	NA	NA
Lewis County	2008	2/ 21	9.2	0/ 24	* 0.0											0/ 135	* 0.0										
	2009	2/ 24	7.6	0/ 25	* 0.0											0/ 122	* 0.0										
Lincoln Medical	2008	2/ 73	2.6	1/ 25	2.0					0/ 775	* 0.0			0/1675	** 0.0			4/ 750	5.3			NA	NA	1/ 593	1.5	0/ 230	* 0.0
	2009	7/ 60	10.5	0/ 21	* 0.0					1/ 795	1.3			2/1642	1.2			1/ 826	1.2			NA	NA	2/ 735	2.4	0/ 230	* 0.0
Lockport Memorial	2008	1/ 27	3.9	0/ 26	* 0.0											1/ 526	1.9										
	2009	3/ 35	9.4	0/ 36	* 0.0											1/ 517	1.9										
Long Beach	2008	2/ 25	7.5	NA	NA											0/ 944	* 0.0										
	2009	NA	NA	0/ 20	* 0.0											1/ 908	1.1										
Long Island College	2008	12/101	^^11.7	4/ 75	3.5					1/ 524	1.9					9/2582	3.5					1/ 54	18.5	2/ 711	2.7	2/ 369	5.6
	2009	9/116	7.6	0/ 88	* 0.0					0/ 427	* 0.0					2/2292	0.9					NA	NA	3/ 390	7.5	0/ 333	* 0.0
Long Island Jewish	2008	4/331	** 1.2	3/ 353	0.8	5/ 391	1.1	3/ 391	0.7	0/ 744	* 0.0	2/2297	0.9	4/1379	2.9							8/2714	2.9	22/4298	^^ 5.0	0/ 835	* 0.0
	2009	14/248	5.5	4/ 274	1.3	10/ 354	2.6	3/ 350	0.8	3/ 817	3.7	0/1362	* 0.0	12/1922	^^ 6.2			2/2378	0.8			3/2709	1.1	6/3771	1.7	1/ 877	1.4
Lutheran Medical	2008	4/208	2.0	0/ 169	* 0.0									7/3065	2.3			5/2223	2.2								
	2009	6/176	3.3	3/ 167	1.7									5/2991	1.7			8/2238	3.6								
Maimonides	2008	16/235	6.8	2/ 167	0.9	6/ 412	1.3	4/ 399	0.9	1/ 446	2.2	8/2626	3.0	2/3875	** 0.5			9/1991	4.5			1/ 725	1.4	11/2425	4.6	2/ 237	8.8
	2009	20/216	^^ 9.7	3/ 162	1.3	2/ 334	** 0.5	4/ 322	1.0	0/ 108	* 0.0	0/1990	* 0.0	2/2182	0.9			3/1703	1.8			5/ 584	^^ 8.6	9/2190	3.9	0/ 344	* 0.0

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		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	2008	4.4		1.1		2.2		1.0		2.2		1.4		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		2.8		2.3		3.3		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	4.8		1.1		2.2		0.9		1.8		1.3		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		2.1		2.1		2.2		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Mary Imogene Bassett	2008	9/104	8.2	9/ 187	^^ 4.4	0/ 89	* 0.0	0/ 84	* 0.0							4/3086	1.3										
	2009	5/ 98	4.6	3/ 210	1.1	1/ 98	1.0	0/ 81	* 0.0							2/2641	0.8										
Massena Memorial	2008	NA	NA	NA	NA											0/ 80	* 0.0										
	2009	NA	NA	NA	NA											0/ 84	* 0.0										
Medina Memorial	2008	0/ 24	* 0.0	NA	NA											0/ 138	* 0.0										
	2009	NA	NA	NA	NA											1/ 90	11.1										
Mercy Buffalo	2008	11/204	5.8	3/ 161	1.5	7/ 386	2.1	0/ 358	* 0.0	3/1918	1.6	0/1291	* 0.0			4/2233	1.8										
	2009	21/215	^^10.5	0/ 197	* 0.0	14/ 368	4.0	0/ 341	* 0.0	5/2099	2.4	0/1311	* 0.0			4/2504	1.6										
Mercy Medical	2008	1/ 65	1.6	0/ 114	* 0.0											7/1731	4.0							1/ 99	9.2	0/ 530	* 0.0
	2009	0/ 65	** 0.0	0/ 106	* 0.0											7/2171	3.2							0/ 115	* 0.0	2/ 513	5.2
Metropolitan	2008	5/ 42	11.8	0/ 22	* 0.0									7/1388	5.0			2/ 694	2.9					5/ 560	9.4	0/ 230	* 0.0
	2009	1/ 34	2.8	1/ 32	2.3									3/1043	2.9			0/ 384	* 0.0					2/ 583	3.4	0/ 199	* 0.0
Millard Fill. Gates	2008	3/ 26	10.3	0/ 22	* 0.0	3/ 302	1.0	1/ 278	0.4			1/1663	0.6	8/1605	5.0			0/ 481	* 0.0	1/ 825	1.2						
	2009	NA	NA	NA	NA	8/ 314	2.6	1/ 283	0.4			0/1834	* 0.0	3/2333	1.3			1/ 683	1.5	2/ 759	2.6						
Millard Fill. Suburb	2008	9/159	5.6	2/ 280	0.8											6/3535	1.7										
	2009	8/156	5.3	4/ 439	1.0											9/4370	2.1										
Montefiore-Einstein	2008	3/129	2.3	1/ 161	0.4	4/ 204	1.4	1/ 176	0.5			2/1919	1.0			8/3656	2.2							3/2195	1.3	1/ 796	1.2
	2009	3/ 98	3.1	0/ 103	* 0.0	4/ 210	1.7	1/ 196	0.4			4/2177	1.8			3/3565	0.8							3/2335	1.3	0/1410	* 0.0
Montefiore-Moses	2008	11/212	5.2	3/ 194	1.1	13/ 341	3.0	1/ 290	0.3	6/ 997	^^ 6.0	3/2896	1.0	8/4183	1.9			4/2378	1.7			6/1834	3.3				
	2009	15/190	7.7	5/ 188	2.1	5/ 301	1.4	3/ 266	0.9	1/ 887	1.1	3/2520	1.2	10/4066	2.5			1/2118	0.5			8/1882	4.3				
Montifiore North	2008	2/ 36	5.0	NA	NA											1/2289	0.4							8/ 367	^^24.9	1/ 232	4.1
	2009	6/ 36	^^16.0	NA	NA											0/2409	** 0.0							0/ 291	* 0.0	2/ 279	8.3
Mount Sinai	2008	12/207	5.9	6/ 253	1.9	20/ 457	^^ 4.0	7/ 457	1.4	4/1524	2.6	6/3796	1.6	6/3271	1.8			6/3858	1.6	7/1889	3.7	11/2334	4.7	2/1672	1.2	2/ 444	4.3
	2009	4/197	2.0	6/ 299	1.5	26/ 464	^^ 5.6	5/ 464	1.0	3/1617	1.9	7/3841	1.8	5/3617	1.4			9/4123	2.2	7/1952	3.6	15/2728	^^ 5.5	4/2467	1.7	0/ 542	* 0.0
Mount Sinai Queens	2008	4/ 65	5.9	1/ 52	1.9											1/1517	0.7										
	2009	8/ 63	^^11.6	0/ 38	* 0.0											1/1557	0.6										

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		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	**2008**	**4.4**		**1.1**		**2.2**		**1.0**		**2.2**		**1.4**		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		**2.8**		**2.3**		**3.3**		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	**4.8**		**1.1**		**2.2**		**0.9**		**1.8**		**1.3**		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		**2.1**		**2.1**		**2.2**		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Mount St. Marys	2008	9/ 71	^^12.7	1/ 77	1.0									0/ 613	* 0.0												
	2009	2/ 71	2.8	2/ 93	1.7									0/ 454	* 0.0												
Mount Vernon	2008	NA	NA	NA	NA											2/ 312	6.4										
	2009	NA	NA	NA	NA											3/ 505	5.9										
NY Community Bklyn	2008	3/ 45	6.2	NA	NA											3/ 852	3.5										
	2009	12/ 45	^^24.9	2/ 29	4.9											3/ 779	3.9										
NY Downtown	2008	2/ 39	5.2	2/ 46	3.9											4/2384	1.7										
	2009	1/ 55	1.9	1/ 64	1.4											5/1948	2.6										
NY Med Ctr Queens	2008	8/258	3.1	11/ 227	^^ 4.5	1/ 62	2.0	1/ 57	2.4	3/1337	2.2	1/ 673	1.5	1/2213	** 0.5			4/1532	2.6			0/ 148	* 0.0	0/ 580	* 0.0	0/ 108	* 0.0
	2009	22/284	^^ 8.1	3/ 215	1.3	1/ 101	1.1	7/ 97	^^ 6.1	2/1224	1.6	2/ 934	2.1	2/2089	1.0			0/1671	** 0.0			0/ 193	* 0.0	1/ 469	2.4	0/ 149	* 0.0
NY Methodist	2008	1/102	1.0	0/ 132	* 0.0	2/ 117	1.6	2/ 111	2.6	0/ 463	* 0.0	2/1143	1.7			13/4550	2.9					0/ 64	* 0.0	3/1383	2.1	1/ 431	2.3
	2009	10/122	8.4	3/ 174	1.1	2/ 132	1.6	0/ 116	* 0.0	0/ 453	* 0.0	0/1390	* 0.0			10/4238	2.4					0/ 168	* 0.0	7/1829	3.5	0/ 371	* 0.0
NYP- Allen	2008	0/ 30	* 0.0	0/ 38	* 0.0											6/1129	5.3										
	2009	3/ 47	5.8	0/ 46	* 0.0											2/ 882	2.3										
NYP- Columbia	2008	19/301	6.2	3/ 281	1.2	14/ 598	2.4	1/ 494	0.2	14/3761	3.7	11/6300	1.7			14/5286	2.6	8/3986	2.0	6/2742	2.2						
	2009	9/208	4.3	3/ 277	1.0	15/ 562	2.7	1/ 453	0.2	9/3352	2.7	13/6087	2.1			3/4904	0.6	4/3511	1.1	7/2516	2.8						
NYP- Morgan Stanley	2008	1/ 32	3.1																			14/5939	2.4	18/6689	2.7	3/1669	1.9
	2009	1/ 39	2.5																			10/5616	1.8	17/6559	2.5	6/1699	3.8
NYP- Weill Cornell	2008	25/545	4.7	1/ 108	0.6	5/ 425	1.5	1/ 397	0.3	6/2537	2.4	4/3956	1.0			8/3220	2.5	12/3314	3.6	7/2261	3.1	5/2597	1.9	10/2665	3.9	1/ 664	1.6
	2009	13/540	** 2.5	1/ 75	0.9	4/ 378	1.3	1/ 353	0.3	4/3256	1.2	4/4311	0.9			7/3355	2.1	7/3275	2.1	4/2423	1.7	2/2579	0.8	7/2490	2.9	0/ 620	* 0.0
NYU Joint Disease	2008			8/ 707	1.1																						
	2009			15/ 888	1.5																						
NYU Medical Center	2008	10/260	3.6	2/ 190	0.7	5/ 190	3.0	11/ 169	^^ 5.3			6/1034	^^ 5.8			28/7545	^^ 3.7			1/ 556	1.8	3/ 984	3.0	2/ 793	2.6	0/ 418	* 0.0
	2009	11/219	4.5	5/ 209	1.6	13/ 239	^^ 5.3	5/ 217	1.6			1/1459	0.7	6/2646	2.3	13/4575	2.8			1/ 589	1.7	5/1071	4.7	3/ 606	5.7	0/ 457	* 0.0
Nassau University	2008	2/ 31	6.2	2/ 33	4.9					6/ 822	^^ 7.3			11/1918	^^ 5.7			7/ 787	^^ 8.9			0/ 73	* 0.0	3/ 355	6.9	1/ 251	4.1
	2009	1/ 39	2.5	1/ 42	2.0					5/ 912	5.5			11/1796	^^ 6.1			4/ 670	6.0			0/ 84	* 0.0	4/ 246	^^15.7	1/ 289	3.6

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NA: Fewer than 20 procedures or 50 line days reported Blank: No procedures or ICUs at hospital

Table 16. Summary of Hospital-Acquired Infection Data, New York State 2008-2009 (continued)

		Surgical Site Infections								Central Line-Associated Blood Stream Infections																Umbilical Inf.	
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	**2008**	**4.4**		**1.1**		**2.2**		**1.0**		**2.2**		**1.4**		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		**2.8**		**2.3**		**3.3**		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	**4.8**		**1.1**		**2.2**		**0.9**		**1.8**		**1.3**		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		**2.1**		**2.1**		**2.2**		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Nathan Littauer	2008	3/ 33	9.4	1/ 45	2.1											0/ 133	* 0.0										
	2009	1/ 28	3.5	3/ 44	^^ 7.1											0/ 187	* 0.0										
Newark Wayne	2008	NA	NA	0/ 20	* 0.0											2/ 592	3.4										
	2009	NA	NA	1/ 29	4.4											1/ 771	1.3										
Niagara Falls	2008	0/ 23	* 0.0	NA	NA											0/ 915	* 0.0										
	2009	NA	NA	0/ 25	* 0.0											0/ 691	* 0.0										
North Central Bronx	2008	NA	NA													6/ 769	^^ 7.8										
	2009	NA	NA													1/ 504	2.0										
North General	2008	4/ 26	14.6	NA	NA											12/1462	^^ 8.2										
	2009	NA	NA	NA	NA											3/1265	2.4										
North Shore	2008	22/576	3.7	2/ 410	0.5	18/ 640	3.0	5/ 640	0.8	0/1269	* 0.0	5/3521	1.4	2/4530	** 0.4			4/3233	1.2	3/2138	1.4	2/ 487	4.1	8/2569	3.1	2/ 565	3.4
	2009	19/617	** 2.9	2/ 410	0.5	16/ 684	2.3	6/ 684	0.7	0/1002	* 0.0	8/4008	2.0	7/4176	1.7			4/3341	1.2	1/1810	0.6	0/ 385	* 0.0	2/2370	0.9	2/ 824	2.3
Northern Dutchess	2008	0/ 20	* 0.0	0/ 224	* 0.0											0/ 358	* 0.0										
	2009	0/ 23	* 0.0	3/ 286	1.3											0/ 389	* 0.0										
Northern Westchester	2008	5/110	4.8	0/ 129	* 0.0											0/1179	* 0.0							0/ 68	* 0.0	NA	NA
	2009	7/143	5.1	1/ 136	0.7											0/ 884	* 0.0							1/ 52	19.2	NA	NA
Noyes Memorial	2008	2/ 52	4.0	2/ 51	3.7											0/ 303	* 0.0										
	2009	2/ 25	8.8	0/ 28	* 0.0											2/ 192	10.4										
Nyack Hospital	2008	7/125	5.1	2/ 142	1.3									6/1187	5.1			0/ 825	* 0.0								
	2009	7/125	5.3	2/ 148	1.3									6/ 972	^^ 6.2			0/ 703	* 0.0								
Olean General	2008	2/ 71	2.8	0/ 85	* 0.0											0/ 843	* 0.0										
	2009	3/ 64	4.6	1/ 69	1.3											1/ 808	1.2										
Oneida Healthcare	2008	4/ 68	6.0	1/ 35	2.7											2/ 351	5.7										
	2009	3/ 74	4.4	0/ 22	* 0.0											0/ 347	* 0.0										
Orange Regional Goshen&Mid	2008	7/188	3.7	4/ 222	1.6											18/3762	^^ 4.8										
	2009	2/167	** 1.2	2/ 223	0.9											10/3452	2.9										

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NA: Fewer than 20 procedures or 50 line days reported Blank: No procedures or ICUs at hospital

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		Surgical Site Infections								Central Line-Associated Blood Stream Infections														Umbilical Inf.	
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	2008	4.4		1.1		2.2		1.0		2.2		1.4		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		2.8		2.3		3.3		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	4.8		1.1		2.2		0.9		1.8		1.3		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		2.1		2.1		2.2		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Oswego Hospital	2008	0/ 31	* 0.0	NA	NA									0/ 376	* 0.0												
	2009	0/ 33	* 0.0	NA	NA									0/ 396	* 0.0												
Our Lady of Lourdes	2008	2/126	1.5	0/ 226	* 0.0											2/1025	2.0										
	2009	7/125	5.1	5/ 233	1.9											1/1188	0.8										
Peconic Bay Medical	2008	1/ 75	1.3	2/ 88	1.9											1/ 751	1.3										
	2009	1/ 46	2.1	0/ 79	* 0.0											0/ 734	* 0.0										
Peninsula Hospital	2008	2/ 31	6.4	NA	NA											1/1239	0.8										
	2009	1/ 24	3.8	NA	NA											0/1232	* 0.0										
Phelps Memorial	2008	1/ 68	1.6	0/ 140	* 0.0											3/ 896	3.3										
	2009	0/ 72	* 0.0	2/ 162	1.5											0/ 894	* 0.0										
Plainview Hospital	2008	6/169	3.7	2/ 129	1.5											8/4664	1.7										
	2009	10/172	6.1	4/ 175	2.0											5/3370	1.5										
Putnam Hospital	2008	1/ 77	1.4	0/ 201	* 0.0											2/ 585	3.4										
	2009	0/100	** 0.0	1/ 218	0.6											0/ 607	* 0.0										
Queens Hospital	2008	3/ 38	7.7													8/1614	^^ 5.0							0/ 55	* 0.0	0/ 158	* 0.0
	2009	0/ 38	* 0.0													4/1585	2.5							3/ 210	12.0	1/ 267	2.2
Richmond Univ	2008	3/118	2.6	1/ 66	1.2					0/1202	* 0.0			2/2542	0.8			0/1118	** 0.0			NA	NA	0/ 323	* 0.0	0/ 833	* 0.0
	2009	5/ 98	5.1	6/ 83	^^ 5.9					1/1214	0.8			1/2539	0.4			1/ 894	1.1			0/ 51	* 0.0	0/ 258	* 0.0	2/ 759	2.4
Rochester General	2008	22/340	7.0	7/ 357	2.3	3/ 660	** 0.5	2/ 654	0.4			4/2762	1.4	10/3856	2.6			8/2590	3.1								
	2009	11/361	3.3	5/ 383	1.7	3/ 574	** 0.6	2/ 572	0.5			2/1810	1.1	6/3489	1.7			1/2413	0.4								
Rome Memorial	2008	4/ 60	6.9	1/ 34	2.9											0/1368	* 0.0										
	2009	2/ 50	3.9	0/ 34	* 0.0											0/1338	* 0.0										
Roswell Park	2008	5/128	4.1													5/1576	3.2										
	2009	8/136	6.3													12/2130	^^ 5.6										
Samaritan- Troy	2008	6/ 91	6.8	2/ 93	1.8											0/ 888	* 0.0										
	2009	1/ 72	1.5	1/ 72	1.3											0/ 879	* 0.0										

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		Surgical Site Infections								Central Line-Associated Blood Stream Infections														Umbilical Inf.	
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	2008	4.4		1.1		2.2		1.0		2.2		1.4		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		2.8		2.3		3.3		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	4.8		1.1		2.2		0.9		1.8		1.3		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		2.1		2.1		2.2		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Samaritan- Watertown	2008	1/ 64	1.5	2/ 137	1.8											0/ 627	* 0.0										
	2009	2/ 68	2.8	0/ 124	* 0.0											2/ 808	2.5										
Saratoga Hospital	2008	1/130	** 0.8	2/ 151	1.2											1/1609	0.6										
	2009	2/136	1.5	3/ 157	2.1											0/1661	** 0.0										
Seton Health	2008	5/ 81	6.3	0/ 75	* 0.0											3/1092	2.7										
	2009	7/ 75	9.6	2/ 114	1.6											3/1230	2.4										
Sisters of Charity	2008	2/109	2.0	0/ 153	* 0.0											3/1717	1.7							0/ 649	* 0.0	0/ 209	* 0.0
	2009	8/103	8.5	1/ 133	1.0											3/1676	1.8							1/ 925	1.0	0/ 237	* 0.0
Sloan Kettering	2008	17/549	3.0	2/ 60	1.4											4/4551	0.9										
	2009	28/580	4.5	3/ 91	1.5											11/5188	2.1										
Sound Shore Medical	2008	4/ 66	6.1	2/ 149	1.1											7/ 987	^^ 7.1							NA	NA	NA	NA
	2009	6/ 67	8.9	1/ 120	0.7											1/ 963	1.0									NA	NA
South Nassau Comm.	2008	12/201	5.6	3/ 244	1.0											1/2719	0.4										
	2009	13/149	7.9	5/ 294	1.4											11/2592	^^ 4.2										
Southampton	2008	2/ 38	5.0	0/ 46	* 0.0											3/ 745	4.0										
	2009	1/ 43	2.1	0/ 31	* 0.0											4/ 936	4.3										
Southside	2008	5/109	4.4	5/ 146	3.1											0/2565	** 0.0										
	2009	6/129	4.6	4/ 134	2.7											3/2935	1.0										
St Anthony	2008	0/ 21	* 0.0	1/ 32	4.0											1/ 648	1.5										
	2009	1/ 23	4.7	0/ 23	* 0.0											0/ 494	* 0.0										
St Barnabas	2008	2/ 47	3.9	NA	NA											2/1544	1.3							2/ 247	10.9	3/ 111	^^28.0
	2009	3/ 63	4.4	NA	NA											1/1533	0.7							0/ 306	* 0.0	0/ 87	* 0.0
St Catherine Siena	2008	0/ 91	** 0.0	0/ 114	* 0.0					1/1118	0.9					1/1268	0.8										
	2009	10/129	7.5	1/ 98	1.0					4/1330	3.0					1/1537	0.7										
St Charles Hospital	2008	2/ 37	5.8	2/ 244	1.1									1/1032	1.0												
	2009	NA	NA	4/ 243	2.3									2/1259	1.6												

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		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	2008	4.4		1.1		2.2		1.0		2.2		1.4		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		2.8		2.3		3.3		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	4.8		1.1		2.2		0.9		1.8		1.3		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		2.1		2.1		2.2		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
St Elizabeth Medical	2008	7/101	6.8	0/ 149	* 0.0	1/ 277	0.4	0/ 249	* 0.0			2/2164	0.9			3/2916	1.0										
	2009	5/ 80	6.1	0/ 159	* 0.0	3/ 365	0.9	4/ 333	1.6			0/2185	* 0.0			3/3100	1.0										
St Francis- Pough.	2008	3/ 67	4.7	1/ 152	0.7											2/1688	1.2										
	2009	4/ 43	9.2	2/ 175	1.6											1/1670	0.6										
St Francis- Roslyn	2008	12/114	^^10.2	1/ 58	1.3	20/1156	1.8	16/1088	1.5			3/6084	0.5			39/8088	^^ 4.8										
	2009	12/117	^^10.1	1/ 57	1.6	13/1100	** 1.2	9/1043	0.9			6/5754	1.0	6/5281	1.1			3/2533	1.2								
St James Mercy	2008	2/ 27	7.0	0/ 40	* 0.0											0/ 932	* 0.0										
	2009	NA	NA	NA	NA											0/ 651	* 0.0										
St Johns Episcopal	2008	1/ 23	4.0	0/ 22	* 0.0					4/1106	3.6					3/1227	2.4										
	2009	2/ 27	7.0	1/ 21	4.0					4/ 840	4.8					6/ 977	^^ 6.1										
St Johns Riverside	2008	5/ 68	7.0	1/ 66	1.2											5/1552	3.2										
	2009	8/ 64	^^12.5	3/ 67	3.4											12/1919	^^ 6.3										
St Joseph -Bethpage	2008	1/ 87	1.1	0/ 126	* 0.0											2/2127	0.9										
	2009	1/ 57	1.6	2/ 123	1.8											2/1670	1.2										
St Joseph Cheektow.	2008	5/ 76	6.4	1/ 140	0.7											3/1721	1.7										
	2009	6/ 68	8.7	1/ 144	0.7											3/1659	1.8										
St Josephs- Elmira	2008	NA	NA	0/ 52	* 0.0											1/ 696	1.4										
	2009	NA	NA	0/ 61	* 0.0											0/ 520	* 0.0										
St Josephs- Syracuse	2008	14/317	4.4	1/ 412	0.2	16/ 712	2.2	6/ 642	1.0					3/3081	1.0			9/5030	1.8					1/ 161	7.6	0/ 195	* 0.0
	2009	12/270	4.3	2/ 438	0.5	19/ 724	2.6	4/ 626	0.7					4/2975	1.3			4/4948	0.8					1/ 208	4.6	0/ 226	* 0.0
St Josephs- Yonkers	2008	0/ 30	* 0.0	1/ 36	2.5											5/ 754	^^ 6.6										
	2009	4/ 27	15.3	0/ 28	* 0.0											5/ 609	^^ 8.2										
St Lukes- Roosevelt	2008	10/128	7.8	0/ 124	* 0.0											2/1562	1.3			2/ 801	2.5	0/ 211	* 0.0	0/1163	** 0.0	2/1000	2.1
	2009	13/161	7.8	0/ 78	* 0.0											1/1450	0.7			1/1072	0.9	0/ 75	* 0.0	3/1254	2.5	2/1217	1.7
St Lukes- St Lukes	2008	16/ 96	^^16.5	1/ 128	0.7	5/ 163	3.1	1/ 148	0.6					9/2600	3.5	2/1771	1.1	4/1155	3.5								
	2009	8/ 77	10.4	1/ 156	0.7	5/ 175	3.0	1/ 127	0.8					3/1960	1.5	7/2055	3.4	4/1004	4.0								

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		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	**2008**	**4.4**		**1.1**		**2.2**		**1.0**		**2.2**		**1.4**		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		**2.8**		**2.3**		**3.3**		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	**4.8**		**1.1**		**2.2**		**0.9**		**1.8**		**1.3**		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		**2.1**		**2.1**		**2.2**		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
St LukesNewburgh&Cor	2008	0/ 85	** 0.0	3/ 86	4.1									0/ 303	* 0.0	3/1895	1.6										
	2009	0/ 56	* 0.0	2/ 84	2.4									1/ 169	5.9	3/1863	1.6										
St Marys Amsterdam	2008	1/ 61	1.9	1/ 73	1.6											0/ 177	* 0.0										
	2009	2/ 53	4.5	0/ 110	* 0.0											NA	NA										
St Peters Hospital	2008	13/383	3.7	10/ 641	1.9	10/ 627	1.6	1/ 598	0.2	1/ 976	1.0	2/2234	0.9			5/2708	1.8							3/ 962	2.7	0/ 707	* 0.0
	2009	12/377	3.6	6/ 677	1.1	5/ 531	1.0	2/ 502	0.5	3/ 915	3.3	4/2188	1.8			9/2678	3.4							2/ 453	4.5	0/ 592	* 0.0
St Vincents Manhat.	2008	7/154	4.7	3/ 136	1.6	2/ 106	1.9	6/ 99	^^ 5.3	1/1409	0.7	3/1362	2.2	4/1865	2.1			1/1973	0.5	0/ 409	* 0.0			1/ 328	3.1	0/ 105	* 0.0
	2009	3/160	2.0	7/ 136	^^ 3.5	3/ 58	6.2	3/ 54	^^ 5.4	0/1082	* 0.0	1/ 928	1.1	3/1570	1.9			5/1573	3.2	0/ 113	* 0.0			0/ 217	* 0.0	2/ 114	15.3
Staten Island U N&S	2008	8/214	3.5	4/ 222	1.0	8/ 361	2.1	1/ 342	0.3	1/2435	0.4	0/1801	* 0.0			3/4816	** 0.6							1/ 361	2.5	1/ 368	2.7
	2009	16/241	6.3	2/ 208	0.6	14/ 390	^^ 4.2	3/ 376	1.1	2/2286	0.9	3/2027	1.5			1/4828	** 0.2							2/ 234	6.9	2/ 222	8.2
Strong Memorial	2008	16/327	4.8	0/ 50	* 0.0	16/ 394	^^ 4.2	9/ 365	^^ 3.0			8/4621	1.7	15/2999	^^ 5.0			20/3889	^^ 5.1			18/2563	^^ 7.0	9/3416	2.7	4/1807	2.3
	2009	17/317	5.5	0/ 60	* 0.0	7/ 482	1.6	2/ 438	0.6			10/4444	2.3	6/3095	1.9			9/3577	2.5			7/2359	3.0	10/3904	2.5	3/2015	1.8
Syosset Hospital	2008	2/ 79	2.7	0/ 37	* 0.0											0/ 529	* 0.0										
	2009	2/ 88	2.8	0/ 26	* 0.0											0/ 579	* 0.0										
TLC Lake Shore	2008	NA	NA	0/ 52	* 0.0											1/ 138	7.2										
	2009	NA	NA	0/ 71	* 0.0											0/ 62	* 0.0										
U Health Bing/Wilson	2008	2/181	** 1.2	4/ 211	2.0	3/ 204	1.5	2/ 187	1.3	0/2049	** 0.0	2/2353	0.8			1/ 804	1.2							NA	NA	0/ 81	* 0.0
	2009	8/170	5.0	2/ 225	0.9	5/ 245	2.4	3/ 208	2.1	1/2071	0.5	0/2254	* 0.0			1/ 655	1.5							3/ 95	^^33.9	2/ 74	^^32.8
United Memorial	2008	2/ 32	6.4	3/ 81	3.1											1/ 470	2.1										
	2009	2/ 28	7.1	2/ 84	2.5											0/ 572	* 0.0										
Unity Hosp Rochester	2008	4/192	2.1	2/ 426	0.6											3/3045	1.0										
	2009	1/144	** 0.7	3/ 503	0.7											3/3042	1.0										
Univ Hosp Brooklyn	2008	2/ 76	2.4	2/ 48	4.2	1/ 96	0.6	0/ 96	* 0.0	0/ 252	* 0.0	2/1400	1.4			4/2329	1.7					1/ 387	2.6	1/ 860	1.0	2/ 480	3.6
	2009	2/ 46	4.0	0/ 58	* 0.0	1/ 78	1.0	1/ 78	0.9	0/ 370	* 0.0	2/1411	1.4			8/1987	^^ 4.0					0/ 382	* 0.0	0/ 678	* 0.0	1/ 391	1.9
Univ Hosp SUNY Upst.	2008	4/105	3.7	4/ 119	2.3	2/ 180	0.9	0/ 141	* 0.0	0/ 574	* 0.0	0/1718	* 0.0	12/3141	3.8	6/ 726	^^ 8.3	13/2562	5.1	3/1493	2.0	1/ 557	1.8				
	2009	8/102	7.4	0/ 129	* 0.0	2/ 172	0.9	0/ 136	* 0.0	0/ 624	* 0.0	0/2159	* 0.0	4/3212	1.2	0/ 624	* 0.0	3/2593	1.2	1/1557	0.6	1/ 484	2.1				

Color key: *****Blue: significantly lower than state average*** ***^^Red: significantly higher than state average*** *Grey: not statistically different from state average* ****:*** *Zero infections, not statistically significant*
NA: Fewer than 20 procedures or 50 line days reported Blank: No procedures or ICUs at hospital

Table 16. Summary of Hospital-Acquired Infection Data, New York State 2008-2009 (continued)

		Surgical Site Infections								Central Line-Associated Blood Stream Infections														Umbilical Inf.	
		Colon		Hip		Coronary Artery Bypass Chest		Coronary Artery Bypass Donor		Coronary ICU		Cardiothoracic ICU		Medical ICU		Medical Surgical ICU		Surgical ICU		Neurosurgical ICU		Pediatric ICU		Neonatal ICU		Neonatal ICU	
Hospital	Year	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	SSI/ procs	Adj. Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Rate	CLABSI/ CLDays	Adj rate	UCABSI/ UCDays	Adj rate
State Average	2008	4.4		1.1		2.2		1.0		2.2		1.4		Teaching/Non 2.7/2.7		Teaching/Non 2.4/2.0		2.8		2.3		3.3		RPC/Lev3/Lev2-3 3.1/2.2/5.9		RPC/Lev3/Lev2-3 2.2/1.6/2.8	
	2009	4.8		1.1		2.2		0.9		1.8		1.3		Teaching/Non 2.5/1.9		Teaching/Non 1.7/1.9		2.1		2.1		2.2		RPC/Lev3/Lev2-3 2.2/3.5/3.8		RPC/Lev3/Lev2-3 1.5/3.0/4.0	
Univ Hosp StonyBrook	2008	4/148	2.6	2/ 193	0.7	4/ 386	1.2	0/ 337	** 0.0	0/ 911	* 0.0	3/1731	1.7	19/2202	^^ 8.6			8/2461	3.3			3/ 662	4.5	2/1704	1.2	2/ 771	2.9
	2009	8/134	5.4	2/ 205	0.7	2/ 298	0.6	0/ 270	* 0.0	0/ 882	* 0.0	6/2075	2.9	8/2425	3.3			4/2244	1.8			1/ 859	1.2	10/1579	^^ 6.5	0/ 913	* 0.0
Vassar Brothers	2008	5/147	3.3	0/ 90	* 0.0	2/ 311	0.6	0/ 292	** 0.0	0/1291	* 0.0	0/1073	* 0.0			0/1911	** 0.0							0/ 210	* 0.0	0/ 215	* 0.0
	2009	1/ 87	1.1	5/ 88	^^ 4.7	1/ 320	** 0.3	0/ 304	** 0.0	0/1299	* 0.0	0/1099	* 0.0			0/1740	** 0.0							0/ 206	* 0.0	1/ 191	5.0
Westchester Medical	2008	4/102	3.7	3/ 134	1.3	11/ 510	2.3	6/ 485	1.2	2/ 717	2.8	6/2600	2.3	8/2014	4.0			9/1861	4.8	1/1138	0.9	2/1600	1.3	14/3789	3.4	2/1253	1.5
	2009	9/109	7.3	1/ 128	0.5	7/ 444	1.6	4/ 433	0.8	0/ 696	* 0.0	4/2611	1.5	13/2910	4.5			6/1641	3.7	8/1399	^^ 5.7	3/1605	1.9	10/4485	2.2	1/1589	0.6
Westchester Square	2008	1/ 69	1.4	1/ 28	1.7					2/ 825	2.4							1/ 967	1.0								
	2009	1/ 58	1.7	0/ 29	* 0.0					1/ 518	1.9							0/ 786	* 0.0								
White Plains	2008	13/121	^^10.9	0/ 201	* 0.0											2/2004	1.0							0/ 134	* 0.0	0/ 65	* 0.0
	2009	3/122	2.6	2/ 213	0.9											3/2211	1.4							0/ 139	* 0.0	0/ 55	* 0.0
Winthrop University	2008	11/317	3.5	1/ 173	0.5	9/ 393	2.2	10/ 354	1.6					5/2219	2.3			14/3594	3.9	4/ 848	4.7	1/ 234	4.3	2/1768	1.2	0/ 617	* 0.0
	2009	14/343	4.3	2/ 171	0.9	6/ 378	1.5	3/ 346	0.7					9/2302	3.9			15/4049	^^ 3.7	4/1578	2.5	0/ 476	* 0.0	1/1933	0.5	2/ 756	2.8
Woman and Childrens	2008	0/ 40	* 0.0																			2/2579	** 0.8	18/4147	4.7	4/ 965	4.3
	2009	0/ 38	* 0.0																			6/3128	1.9	7/3975	1.8	2/1121	1.5
Womans Christian	2008	0/ 73	** 0.0	0/ 110	* 0.0											3/1118	2.7										
	2009	3/ 66	4.9	2/ 108	1.8											2/1219	1.6										
Woodhull Medical	2008	2/ 40	4.8	NA	NA											12/4730	2.5							2/ 99	16.8	0/ 141	* 0.0
	2009	1/ 48	1.9	NA	NA											14/4135	3.4							0/ 217	* 0.0	3/ 203	15.3
Wyckoff Heights	2008	3/ 47	6.1	NA	NA											21/3149	^^ 6.7							1/ 192	6.3	0/ 125	* 0.0
	2009	7/ 54	^^12.3	1/ 24	3.0											15/2360	^^ 6.4							0/ 209	* 0.0	0/ 167	* 0.0
Wyoming County Comm.	2008	NA	NA	NA	NA											0/ 138	* 0.0										
	2009	0/ 22	* 0.0	0/ 25	* 0.0											0/ 123	* 0.0										

Color key: *****Blue: significantly lower than state average*** ***^^Red: significantly higher than state average*** *Grey: not statistically different from state average* ****:*** *Zero infections, not statistically significant*
NA: Fewer than 20 procedures or 50 line days reported Blank: No procedures or ICUs at hospital

FOOTNOTES FOR Summary Table:

Color key:** **Blue: significantly lower than state average** ^^**Red: significantly higher than state average** Grey: not statistically different from state average* ***: Zero infections, not statistically significant
NA: Fewer than 20 procedures or 50 line days reported Blank: No procedures or ICUs at hospital

Colon and CABG data reported as of July 7, 2010; Hip data reported as of July 27, 2010; CLABSI data reported as of August 25, 2010.
SSI NOTES:

SSI=Surgical Site Infection; Procs=Procedures;
Adj. Rate= Risk Adjusted Rate = # infections per 100 procedures if the state had the same risk distribution as the hospital.
SSI data exclude non-readmitted cases identified using post discharge surveillance.
Colon data adjusted using NHSN risk categories.
CABG chest data adjusted using NHSN risk category, diabetes, body mass index, gender, end stage renal disease, COPD, medicaid.
CABG donor data adjusted using NHSN risk category, body mass index, gender, diabetes, COPD, congestive heart failure, age over 75, emergency/trauma.
Hip data adjusted using NHSN risk categories and type of procedure.

CLABSI NOTES:

CLABSI=Central Line-Associated Blood Stream Infection
CLDays=Central Line Days
CLABSI data exclude cases in which multiple blood cultures were obtained, only one specimen was positive, the one positive was considered a contaminant and no treatment was given.
Adult CLABSI rates are # infections per 1000 line days and no additional adjustment is performed since the data are stratified by ICU type.
Neonatal CLABSI rates are adjusted by birth weight.
UCABSI=Umbilical Catheter-Associated Blood Stream Infections
UC Days=Umbilical Catheter Days

Each hospital-specific adjusted rate should only be compared with the New York State average in that category in that year.

§ 2819. Hospital acquired infection reporting. 1. For the purposes of this section, "hospital acquired infection" shall mean any localized or systemic patient condition that:

(a) resulted from the presence of an infectious agent or agents, or its toxin or toxins as determined by clinical examination or by laboratory testing; and

* (b) was not found to be present or incubating at the time of admission unless the infection was related to a previous admission to the same setting.

* NB Effective until January 1, 2008

* (b) was not found to be present or incubating at the time of admission unless the infection was related to a previous admission.

* NB Effective January 1, 2008

2. (a) Each general hospital shall maintain a program capable of identifying and tracking hospital acquired infections for the purpose of public reporting under this section and quality improvement.

(b) Such programs shall have the capacity to identify the following elements: the specific infectious agents or toxins and site of each infection; the clinical department or unit within the facility where the patient first became infected; and the patient's diagnoses and any relevant specific surgical, medical or diagnostic procedure performed during the current admission.

(c) The department shall establish guidelines, definitions, criteria, standards and coding for hospital identification, tracking and reporting of hospital acquired infections which shall be consistent with the recommendations of recognized centers of expertise in the identification and prevention of hospital acquired infections including, but not limited to the National Health Care Safety Network of the Centers for Disease Control and Prevention or its successor. The department shall solicit and consider public comment prior to such establishment.

(d) Hospitals shall be initially required to identify, track and report hospital acquired infections that occur in critical care units to include surgical wound infections and central line related bloodstream infections.

* (e) Subsequent to the initial requirements identified in paragraph (d) of this subdivision the department may, from time to time, require the tracking and reporting of other types of hospital acquired infections (for example, ventilator-associated pneumonias) that occur in hospitals in consultation with technical advisors who are regionally or nationally-recognized experts in the prevention, identification and control of hospital acquired infection and the public reporting of performance data.

* NB Effective until January 1, 2008

* (e) For hospital acquired infections for which the department requires tracking and reporting as permitted in this section, hospitals shall be required to report a suspected or confirmed hospital-acquired infection associated with another hospital to the originating hospital. Documentation of reporting should be maintained for a minimum of six years.

* NB Effective January 1, 2008

* (f) Subsequent to the initial requirements identified in paragraph (d) of this subdivision the department may, from time to time, require the tracking and reporting of other types of hospital acquired infections (for example, ventilator-associated pneumonias) that occur in hospitals in consultation with technical advisors who are regionally or nationally-recognized experts in the prevention, identification and control of hospital acquired infection and the public reporting of performance data.

* NB Effective January 1, 2008

* 3. Each hospital shall regularly report to the department the hospital infection data it has collected. The department shall establish data collection and analytical methodologies that meet accepted standards for validity and reliability. In no case shall the frequency of reporting be

required to be more frequently than once every six months, and reports shall be submitted not more than sixty days after the close of the reporting period.

* NB Effective until January 1, 2008

* 3. Each hospital shall regularly report to the department the hospital infection data it has collected. The department shall establish data collection and analytical methodologies that meet accepted standards for validity and reliability. The frequency of reporting shall be monthly, and reports shall be submitted not more than sixty days after the close of the reporting period.

* NB Effective January 1, 2008

4. The commissioner shall establish a state-wide database of all reported hospital acquired infection information for the purpose of supporting quality improvement and infection control activities in hospitals. The database shall be organized so that consumers, hospitals, healthcare professionals, purchasers and payers may compare individual hospital experience with that of other individual hospitals as well as regional and state-wide averages and, where available, national data.

5. (a) Subject to paragraph (c) of this subdivision, on or before September first [Effective April 1, 2010] of each year the commissioner shall submit a report to the governor and the legislature, which shall simultaneously be published in its entirety on the department's web site, that includes, but is not limited to, hospital acquired infection rates adjusted for the potential differences in risk factors for each reporting hospital, an analysis of trends in the prevention and control of hospital acquired infection rates in hospitals across the state, regional and, if available, national comparisons for the purpose of comparing individual hospital performance, and a narrative describing lessons for safety and quality improvement that can be learned from leadership hospitals and programs.

(b) The commissioner shall consult with technical advisors who have regionally or nationally acknowledged expertise in the prevention and control of hospital acquired infection and infectious disease in order to develop the adjustment for potential differences in risk factors to be used for public reporting.

(c)(i) No later than July first, two thousand six, the department shall establish a hospital acquired infection reporting system capable of receiving electronically transmitted reports from hospitals. Hospitals shall begin to submit such reports as directed by the commissioner but in no case later than January first, two thousand seven.

(ii) The first year of data submission under this section shall be considered the "pilot phase" of the statewide hospital- acquired infection reporting system. The purpose of the pilot phase is to ensure, by various means, including any audit process referred to in subdivision seven of this section, the completeness and accuracy of hospital acquired infection reporting by hospitals. For data reported during the pilot phase, hospital identifiers shall be encrypted by the department in any and all public databases and reports. The department shall provide each hospital with an encryption key for that hospital only to permit access to its own performance data for internal quality improvement purposes.

(iii) No later than one hundred eighty days after the conclusion of the pilot phase, the department shall issue a report to hospitals assessing the overall accuracy of the data submitted in the pilot phase and provide guidance for improving the accuracy of hospital acquired infection reporting. The department shall issue a report to the governor and the legislature assessing the overall completeness and accuracy of the data submitted by hospitals during the pilot phase and make recommendations for the improvement or modification of hospital acquired infection data reporting based on the pilot phase as well as share lessons learned in prevention of hospital acquired infections. No hospital identifiable data shall be included in the pilot phase report, but aggregate or otherwise de-identified data may be included.

(iv) After the pilot phase is completed, all data submitted under this section and compiled in the statewide hospital acquired infection database established herein and all public reports derived therefrom shall include hospital identifiers.

6. Subject to subdivision five of this section, a summary table, in a format designed to be easily understood by lay consumers, that includes individual facility hospital acquired infection rates adjusted for potential differences in risk factors and comparisons with regional and/or state averages shall be developed and posted on the department's web site. The commissioner shall consult with consumer and patient advocates and representatives of reporting facilities for the purpose of ensuring that such summary table report format is easily understandable by the public, and clearly and accurately portrays comparative hospital performance in the prevention and control of hospital acquired infections.

7. To assure the accuracy of the self-reported hospital acquired infection data and to assure that public reporting fairly reflects what actually is occurring in each hospital, the department shall develop and implement an audit process.

8. For the purpose of ensuring that hospitals have the resources needed for ongoing staff education and training in hospital acquired infection prevention and control, the department may make such grants to hospitals within amounts appropriated therefor.

9. Individual patient identifying information reported to the department under this section shall be subject to paragraph (j) of subdivision one of section two hundred six of this chapter. Regulations under this section shall include standards to assure the protection of patient privacy in data collected and released under this section and standards for the publication and release of data reported under this section.