

**State of New Hampshire**  
**HEALTHCARE-ASSOCIATED INFECTIONS**  
**Ambulatory Surgery Center**  
**2012 REPORT**

**Prepared by**  
New Hampshire Department of Health and Human Services  
Division of Public Health Services  
Infectious Disease Surveillance Section

**August 15th, 2013**

## TABLE OF CONTENTS

LIST OF DATA TABLES AND FIGURES	3
ABBREVIATIONS USED	5
CONTRIBUTORS AND ACKNOWLEDGEMENTS	6
EXECUTIVE SUMMARY	7
INTRODUCTION	9
Background on Healthcare-Associated Infections	9
Healthcare-Associated Infections in Outpatient Settings	9
New Hampshire Healthcare-Associated Infections Program	9
State of New Hampshire Healthcare-Associated Infections Plan	10
Overview of Healthcare-Associated Infections Prevention Efforts	10
Healthcare-Associated Infections Technical Advisory Workgroup	11
SURVEILLANCE METHODS	13
Healthcare-Associated Infections Reporting Requirements	13
Selection of Reporting Requirements	13
Accuracy of Reported Healthcare-Associated Infections Surveillance Data	14
National Healthcare Safety Network	14
Comparisons with National Data	15
Surgical Site Infections Surveillance	15
Surgical IV Antimicrobial Prophylaxis Administration Monitoring	17
Influenza Vaccination Rate Monitoring	17
STATEWIDE DATA	19
Statewide Standardized Infection Ratios	19
Surgical Site Infections	19
Surgical IV Antimicrobial Prophylaxis Administration	29
Influenza Vaccination Rates	31
Mandatory Vaccination Policies for Healthcare Personnel	34
CONCLUSIONS	35
INDIVIDUAL AMBULATORY SURGERY CENTER REPORTS	36
APPENDIX 1: Technical Notes	64
APPENDIX 2: Understanding the Healthcare-Associated Infections Rate and Standardized Infection Ratio Comparison Metrics	67
APPENDIX 3: Prevention Healthcare-Associated Infections	69
APPENDIX 4: Map of New Hampshire Ambulatory Surgical Centers (ASCs)	72

## LIST OF DATA TABLES

TABLE 1: Statewide ambulatory surgical center standardized infection ratios for surgical site infections, January 1, 2012 – December 31, 2013	20
TABLE 2: Overall surgical site infections standardized infection ratios by ASC, Jan 1–Dec 31, 2012	22
TABLE 3: Breast procedure-associated surgical site infections standardized infection ratios by ASC, Jan 1–Dec 31, 2012	22
TABLE 4: Hernia procedure-associated surgical site infections standardized infection ratios by ASC, Jan 1–Dec 31, 2012	23
TABLE 5: Open reduction of fracture procedure-associated surgical site infections standardized infection ratios by ASC, Jan 1–Dec 31, 2012	23
TABLE 6: Statewide ambulatory surgical center surgical site infection rates, January 1, 2012 – December 31, 2013	24
TABLE 7: Breast procedure-associated surgical site infections rates by risk category and ASC, January 1– December 31, 2012	26
TABLE 8: Hernia procedure-associated surgical site infections rates by risk category and ASC, January 1– December 31, 2012	27
TABLE 9: Open reduction of fracture procedure-associated surgical site infections rates by risk category and ASC, January 1– December 31, 2012	28
TABLE 10: Performance of Surgical IV Prophylactic Antibiotic by ASC, Jan 1–Dec 31, 2012	29
TABLE 11: Influenza vaccination rates for ASC staff by ASC, October 1, 2012–March 31, 2013	31
TABLE 12: Influenza vaccination policies and consequences for healthcare personnel (HCP) by ASC, 2012-2013 influenza season	34

## LIST OF FIGURES

FIGURE 1: Statewide Ambulatory Surgery Center (ASC) standardized infection ratios (SIR) for surgical site infections (SSI), Jan 1–Dec 31, 2012	21
FIGURE 2: Statewide rates for breast procedure-associated surgical site infections, January 1-December 31, 2012.	24
FIGURE 3: Statewide rates for hernia procedure-associated surgical site infections, January 1-December 31, 2012.	25
FIGURE 4: Statewide rates for open reduction of fracture procedure-associated surgical site infections, January 1-December 31, 2012.	25
FIGURE 5: Statewide Performance of Surgical IV Prophylactic Antibiotic, Jan 1–Dec 31, 2012	28
FIGURE 6: Statewide influenza vaccination rates for ASC staff by influenza season	30
FIGURE 7: Influenza vaccination rates for ASC staff by ASC, 2012–2013 influenza season	32
FIGURE 8: Influenza vaccination rates for ASCs with and without vaccination policies.	33

## INDIVIDUAL AMBULATORY SURGERY CENTER REPORTS

Ambulatory Surgical Center (ASC), Dartmouth Hitchcock (DH) Manchester	37
Atlantic Plastic Surgery	38
Barrington Surgical Care, LLC	39
Bedford Ambulatory Surgical Center (ASC)	40
Carroll County Endoscopy Center	41
Center for Outpatient Care	42
Centers for Pain Solutions	43
Concord Ambulatory Surgical Center (ASC)	44
Concord Endoscopy Center	45
Concord Eye Surgery LLC	46
Dartmouth-Hitchcock (DH) Nashua Endoscopy Center	47
Dr O'Connells Paincare Centers (PCC), INC, Merrimack	48
Dr O'Connells Paincare Centers (PCC), INC, Somerworth	49
Elliot 1-Day Surgery Center at Rivers Edge	50
Elliot Endoscopy at Rivers Edge	51
Hillside Surgical Center	52
Laconia Clinic Ambulatory Surgical Center (ASC)	53
Nashua Ambulatory Surgical Center (ASC)	54
Nashua Eye Surgery Center	55
NH Eye Surgicenter	56
Northeast Surgical Care	57
Orthopaedic Surgery Center	58
Orthopaedic Surgery Center Derry	59
Parkland Endoscopy Center	60
Portsmouth Regional Ambulatory Surgical Center (ASC)	61
Salem Surgery Center	62
Stratham Ambulatory Surgery Center (ASC)	63

## ABBREVIATIONS USED IN THIS DOCUMENT

ASA Score	American Society of Anesthesiologists (ASA) Classification of Physical Status, a scale used by an anesthesiologist to classify the patient's physical condition prior to surgery
ASC	Ambulatory surgical center
BRST	NHSN operative code for breast procedures
CABG	Coronary Artery Bypass Graft procedure
CAUTI	Catheter-associated urinary tract infection
CDC	U.S. Centers for Disease Control and Prevention
CLABSI	Central line-associated bloodstream infection
CLIP	Central line insertion practices
CMS	Centers for Medicare and Medicaid Services
COLO	NHSN operative code for colon procedures
CSTE	Council of State and Territorial Epidemiologists
DHHS	New Hampshire Department of Health and Human Services
DHMC	Dartmouth Hitchcock Medical Center
FX	NHSN operative code for open reduction of fracture procedures
HAI	Healthcare-associated infection
HER	NHSN operative code for hernia procedures
HICPAC	Healthcare Infection Control Practices Advisory Committee
HHS	U.S. Department of Health and Human Services
ICU	Intensive care unit
IV	Intravenous
NH	New Hampshire
NHSN	National Healthcare Safety Network
PICC	Peripheral Intravenous Catheter Insertion
SAP	Surgical antimicrobial prophylaxis
SCIP	Surgical Care Improvement Project
SIR	Standardized infection ratio
SSI	Surgical site infection
TAW	Healthcare-Associated Infections Technical Advisory Workgroup
VAP	Ventilator-associated pneumonia
WC	Surgical wound class

**Note:** In order to increase readability of tables and figures, Ambulatory Surgery Center names have been provided in an abbreviated format. In all tables and figures, DH refers to Dartmouth-Hitchcock, PCC refers to Paincare Centers, and ASC refers to Ambulatory Surgery Center.

## **CONTRIBUTORS AND ACKNOWLEDGEMENTS**

The following individuals contributed to analysis of data and other content provided in this report:

Christine Adamski, MS, Chief, Bureau of Infectious Disease Control

Sharon Alroy-Preis, MD, MPH, State Epidemiologist

Steffany J. Cavallo, MPH, CPH, Infectious Disease Epidemiologist

Elizabeth R. Daly, MPH, Chief, Infectious Disease Surveillance Section

Erin Metcalf, MPH, HIV/AIDS Surveillance Coordinator

Jodie Dionne-Odom, MD, Deputy State Epidemiologist

Katrina E. Hansen, MPH, Healthcare-Associated Infections Program Manager

Tylor Young, GIS Analyst, Infectious Disease Surveillance Section

The HAI Program would also like to thank the Infection Prevention, Quality, and Information Technology staff at New Hampshire ambulatory surgery centers for collaborating to provide the data presented in this report. Finally, the HAI Program acknowledges the review, comments, input, and other program contributions provided by the members of the HAI Technical Advisory Workgroup as listed on page 12.

### **For questions about this report, please contact:**

NH Healthcare-Associated Infections Program

Infectious Disease Surveillance Section

Division of Public Health Services

NH Department of Health and Human Services

29 Hazen Drive, Concord, NH 03301-6504

Phone: (603) 271-4496

Email: [haiprogram@dhhs.state.nh.us](mailto:haiprogram@dhhs.state.nh.us)

Website: <http://www.dhhs.nh.gov/dphs/cdcs/hai/index.htm>

## **EXECUTIVE SUMMARY**

A healthcare-associated infection (HAI) is an infection that a patient acquires during the course of receiving treatment for another condition within a healthcare setting. HAIs cause an estimated 1.7 million infections and 99,000 deaths each year in the United States, resulting in over \$30 billion in excess healthcare costs. During the 2011 legislative season, the New Hampshire Legislature passed a bill amending NH RSA 151:32-35, to require ambulatory surgery centers to identify, track, and report selected HAIs to the New Hampshire Department of Health and Human Services (DHHS). All licensed ambulatory surgery centers (ASC) began reporting data to DHHS on one infection and two process measures in July 2011. This report represents the first summary of HAI-related data reported by ASCs in New Hampshire for calendar year 2012.

### **Healthcare-Associated Infections in NH Ambulatory Surgery Centers**

Overall, statewide infection rates were lower than expected based on national data. A total of four surgical site infections (SSIs) were reported by the 12 ASCs that were licensed for the entire 2012 calendar year and were required to report these data. The overall observed number of SSIs in New Hampshire ASCs was 43% fewer than expected based on national data. Only two ASCs had robust enough data to present ASC-specific standardized infection ratios (SIR) in this report for selected procedures. Of these two facilities, both observed a similar number of infections as expected based on national data. However, 11 ASCs had robust enough data to present procedure-specific rate data. All ASCs had a similar rate to national data for all procedure categories presented.

### **Surgical Site Infections**

Twelve ASCs reported surgical site infections data for three surgical procedures.

- **Breast Procedures (BRST):** Eight ASCs performed breast procedures. Four surgical site infections were reported and considered similar to the expected number of infections based on national data.
- **Hernia Procedures (HER):** Seven ASCs performed hernia procedures though none had robust enough data to present a standardized infection ratio. No surgical site infections following hernia procedures were reported. Overall, surgical site infection rates were similar to national data.
- **Open Reduction of Fracture Procedures (FX):** Eight ASCs performed open reduction of fracture procedures though none had robust enough data to present a standardized infection ratio. No surgical site infections following open reduction were reported. Overall, surgical site infection rates were similar to national data.

### **Surgical Antimicrobial Prophylaxis Timing**

Seventeen ASCs that administer intravenous (IV) surgical antimicrobial prophylaxis were licensed for the entire 2012 calendar year and were required to report IV surgical antimicrobial prophylaxis timing data. Overall, ASCs provided IV surgical antimicrobial prophylaxis within the appropriate timeframe prior to the procedure for 98.4% of procedures. Four ASCs observed lower adherence, three ASCs observed higher adherence, and seven observed similar adherence compared to the state adherence percentage.

## **Influenza Vaccination Rates in ASC Staff**

Twenty-seven ASCs were licensed at any point during the 2012-13 influenza season and were required to report staff influenza vaccination rates. Vaccination rates by ASC ranged from 48% to 100%, and the overall State rate in ASCs was 84%. Sixteen ASCs had vaccination rates similar to the overall State ASC vaccination rate, eight ASCs reported vaccination rates that were significantly higher than the overall State ASC vaccination rate, and three ASCs reported vaccination rates that were significantly lower than the overall State ASC vaccination rate.

This first report of ASC HAI data marks an important milestone in moving toward the goal of eliminating HAIs in New Hampshire. Keeping in mind these data are not validated, this report provides an initial picture of select HAI data, which can be used by healthcare facilities in the State to identify areas for improvement and prevention as well as healthcare consumers to make informed healthcare decisions.

## INTRODUCTION

### Background on Healthcare-Associated Infections

A healthcare associated infection (HAI) is an infection that a patient acquires during the course of receiving treatment for another condition within a healthcare setting. HAIs cause an estimated 1.7 million infections and 99,000 deaths each year in the United States<sup>1</sup>. By these estimates, HAIs are among the top 10 leading causes of death in the United States, and 5–10% of all hospital admissions are complicated by HAI.<sup>2</sup> The economic burden of HAIs is substantial and increasing. The total cost of HAIs has been estimated at \$33 billion per year in US hospitals. The most common HAIs are catheter-associated urinary tract infections, surgical site infections, central line-associated bloodstream infections, and ventilator-associated pneumonia.<sup>3</sup> Surgical site infections (SSIs) are estimated to cause 244,385 infections and cost 3.45 to 10.07 billion dollars annually.<sup>1,3</sup> The recent HAI outbreaks of Hepatitis C at a New Hampshire hospital and fungal infections from contaminated injectable medications highlights the increasing burden of HAI in both inpatient and outpatient centers. This report acknowledges these outbreaks but is intended to provide information under the HAI reporting law RSA 151:32-33.

### Healthcare-Associated Infections in Outpatient Settings

Ambulatory Surgery Centers (ASC) are a growing and important healthcare setting. They provide approximately 40% of all outpatient surgeries and perform more than 22 million procedures a year. There are more than 5,300 ASCs in the US and they most commonly perform cataract surgery, gastrointestinal endoscopies and pain management.<sup>4</sup> Medical care in outpatient settings has increased in recent years but past outbreak investigations by CDC and other states have identified poor infection control prevention practices including problems with injection safety, reprocessing, sterilization, and disinfection.<sup>5</sup> Furthermore, ASCs often have limited dedicated infection preventionists with specialized training, no standard method for identifying infections within 30 or 90 days following a procedure, and varying degree of electronic medical records and information technology support. With ASCs playing such an important role in the current healthcare delivery system, it is critical that they follow guidelines and take measures to minimize the risk of HAI.

### New Hampshire Healthcare-Associated Infections Program

The New Hampshire Department of Health and Human Services (DHHS) has been actively engaged in developing an HAI surveillance program since 2007. During the 2006 legislative season, the New Hampshire Legislature passed a bill creating NH RSA 151:32-35, which requires hospitals to identify, track, and report HAIs to DHHS. The passage of the 2006 bill did not include funding to carry out these activities, and therefore, mandatory reporting was not fully implemented until January 2009. The intent of the law is to provide HAI data by hospital or ASC in a publicly

---

<sup>1</sup> Klevens, RM, Edwards RJ, Richards CL, Jr, et al. Estimating health care-associated infections and deaths in U.S. Hospitals, 2002. *Public Health Rep* 2007;122(2):160-166.

[http://www.cdc.gov/ncidod/dhqp/pdf/hicpac/infections\\_deaths.pdf](http://www.cdc.gov/ncidod/dhqp/pdf/hicpac/infections_deaths.pdf)

<sup>2</sup> Humphreys, H, Newcombe RG, Enstone J et al. Four country healthcare associated infection prevalence survey 2006: risk factor analysis. *J Hosp Infect* 2008; 69(3) 249-257.

<sup>3</sup> Scott R, Douglas. The direct medical costs of healthcare-associated infections in US hospitals and the benefits of prevention. March 2009. [http://www.cdc.gov/ncidod/dhqp/pdf/Scott\\_CostPaper.pdf](http://www.cdc.gov/ncidod/dhqp/pdf/Scott_CostPaper.pdf)

<sup>4</sup> Ambulatory Surgery Center Association. <http://www.ascassociation.org/ASCA/AboutUs/WhatisanASC>

<sup>5</sup> Guidelines for Infection Control in Outpatient Settings: Minimum Expectations for Safe Care. Prepared by the Centers for Disease Control and Prevention (CDC). <http://www.cdc.gov/HAI/settings/outpatient/outpatient-settings.html>

accessible forum for facility comparison.

During the 2010 legislative season, the New Hampshire Legislature passed HB 1548 (2010) amending RSA 151:32-35 to require all licensed ambulatory surgical centers ASCs to report HAI to DHHS.

In 2010, DHHS notified the 26 ASCs in New Hampshire that they would be required to report the mandated HAI data beginning July 1, 2011. DHHS, with consideration of the law, required that ASCs report the following measures:

- Surgical site infections following breast, hernia, and open reduction of fracture procedures (via NHSN).
- Surgical IV antimicrobial prophylaxis timing (via DHHS template)
- Influenza vaccination in staff (via DHHS web survey)

Only those ASCs that performed the selected surgical procedures are required to enroll and report data to the National Healthcare Safety Network (NHSN). Only those ASCs that administered IV surgical antimicrobial prophylaxis are required to report timing data. All ASCs are required to report influenza vaccination in staff. All ASCs required to report SSI successfully enrolled in NHSN and began reporting the required data in July 2011. Other ASCs (endoscopy, ophthalmology, and pain centers) did not enroll in NHSN because they did not perform any of the required procedures and were required to report IV antibiotic timing and influenza vaccination rates as applicable.

### **State of New Hampshire Healthcare-Associated Infections Plan**

In response to increasing concerns about the public health impact of HAIs, the US Department of Health and Human Services (HHS) developed an Action Plan to Prevent Healthcare-Associated Infections (HHS Action Plan) in 2009. The HHS Action Plan includes recommendations for surveillance, research, communication, and metrics for measuring progress toward national goals.

In a concurrent development, the 2009 Omnibus bill required states receiving Preventive Health and Health Services Block Grant funds to certify that they would submit a plan to reduce HAIs to the Secretary of Health and Human Services not later than January 1, 2010. In order to assist states in responding within the short timeline required by that language and to facilitate coordination with national HAI prevention efforts, the CDC provided a template to assist state planning efforts in the prevention of HAI. The template targeted four areas: 1) Development or Enhancement of HAI Program Infrastructure, 2) Surveillance, Detection, Reporting, and Response, 3) Prevention, and 4) Evaluation, Oversight, and Communication. In 2009, DHHS drafted a State HAI plan and submitted it to HHS. New Hampshire's State HAI Plan is available on the DHHS HAI website at:

<http://www.dhhs.nh.gov/dphs/cdcs/hai/index.htm>.

### **Overview of Healthcare-Associated Infections Prevention Efforts**

DHHS participates in statewide prevention activities through the New Hampshire Health Care Quality Assurance Commission (NHHCQAC), on which the DHHS State Epidemiologist serves. Currently there are no specific prevention activities being coordinated directly by DHHS, however, DHHS remains an active partner in various projects coordinated by the NHHCQAC and the Northeast Health Care Quality Foundation. Major statewide initiatives through these organizations have included hand hygiene campaigns, patient safety checklists, and programs to prevent

bloodstream infections, antimicrobial resistance, and *Clostridium difficile* infections. Additionally, the Foundation for Healthy Communities received a large grant through the Partnership for Patients program to conduct additional large, statewide prevention initiatives. For additional information on these various efforts, the following websites may be helpful:

New Hampshire Health Care Quality Assurance Commission

<http://www.healthynh.com/fhc-initiatives/nh-health-care-quality-assurance-commission.html>

Foundation for Healthy Communities Partnership for Patients

<http://www.healthynh.com/partnership-for-patients.html>

Northeast Health Care Quality Foundation

<http://www.nhcqf.org/>

In addition to supporting and engaging in prevention activities with patient safety groups, the state HAI program provides many educational opportunities to healthcare facilities across the state in order to share best practices for infection prevention and ultimately reduce HAI. The program is involved in many infection prevention initiatives and continues to work with partners to improve healthcare quality across the continuum of care.

### **Healthcare-Associated Infections Technical Advisory Workgroup**

In the spring of 2009, DHHS formed an HAI Technical Advisory Workgroup. The purpose of the Technical Advisory Workgroup (TAW) is to provide scientific and infection prevention expertise to the DHHS HAI Program. The TAW is not intended to be an oversight group, but instead a forum for stakeholder participation in decision making around the New Hampshire HAI Program. The TAW is an 18-member group that includes representation from stakeholders across New Hampshire and includes representatives from various sizes and types of hospitals and ASCs, infection control associations, a consumer advocate, the New Hampshire Hospital Association, the New Hampshire Healthcare Quality Assurance Commission, and the Northeast Health Care Quality Foundation (see page 12 for a list of TAW members during the 2012 reporting year). The TAW currently meets quarterly.

## New Hampshire Healthcare-Associated Infections Technical Advisory Workgroup, 2012

Members	Organization Representation
Beth Daly, MPH	DHHS, Infectious Disease Surveillance Section Chief
Sharon Alroy-Preis, MD, MPH	DHHS, State Epidemiologist
Katrina Hansen, MPH	DHHS, HAI Program Coordinator
Michael Fleming	DHHS, Health Facilities Administration
Joe Conley, COO	Concord Hospital (New Hampshire Hospital Association)
Anne Diefendorf, MS,RD, LD	New Hampshire Health Care Quality Assurance Commission
Lynda Caine, RN, MPH, CIC	Concord Hospital (New Hampshire Infection Control and Epidemiology Professionals)
Kathy Kirkland, MD	Dartmouth-Hitchcock Medical Center (Society for Healthcare Epidemiology of America)
Jan Larmouth, MS, CIC	Southern New Hampshire Medical Center (Acute Care)
Elissa Malcolm, MS	Dartmouth-Hitchcock Medical Center (Acute Care)
Darlene Burrows, RN, BSN, CIC	Franklin Regional Hospital (Critical Access)
Charlie White, COO	Upper Connecticut Valley Hospital (Critical Access)
Cathy Martin, CPRN	Northeast Rehabilitation (Rehabilitation)
Terri Kangas-Feller, BS, RN, CIC	New Hampshire Hospital (Psychiatric)
Lori Nerbonne, RN, BSN	New Hampshire Patient Voices (Consumer)
Donna Quinn, RN, BSN, MBA	Orthopaedic Surgery Center (Ambulatory Surgical Center)
Robin Sheppard, RN	Bedford Ambulatory Surgical Center (Ambulatory Surgical Center)
Margaret Crowley, RN, PHD	Northeast Health Care Quality Foundation (QIO)

## **SURVEILLANCE METHODS**

### **2012 Healthcare-Associated Infections Reporting Requirements**

Reporting requirements are governed by RSA 151:33 with authority given to DHHS to develop administrative rules to provide specific reporting instructions and methodology. Administrative rules, He-P 309 Healthcare Associated Infections, were drafted in 2010 with stakeholder input and approved January 14, 2011 by the Joint Legislative Committee on Administrative Rules. Reporting requirements for 2011-2012 included the following required measures for ASCs:

- Surgical site infections following breast, hernia, and open reduction of fracture procedures.
- Surgical IV antimicrobial prophylaxis timing
- Influenza vaccination in staff

While all licensed ASCs are required to report the selected measures under RSA 151:33, some ASCs (endoscopy, ophthalmology, and pain centers), that do not perform the selected surgeries or provide IV antibiotic prophylaxis, do not report SSI or antibiotic prophylaxis measures. Eight ASCs (endoscopy and ophthalmology) are only required to report influenza vaccination rates for staff.

### **Selection of Reporting Requirements**

RSA 151:33 broadly requires reporting of all SSI in ASCs; however, it is not feasible to do surveillance for all of these infections using NHSN. In order to generate infection rates for ASCs and compare them with national data, infection reporting needed to be limited to the capabilities of NHSN and were selected in accordance with national recommendations for HAI surveillance in the context of public reporting.

In 2005, the CDC released a report titled “Guidance on Public Reporting of Healthcare-Associated Infections: Recommendations of the Healthcare Infection Control Practices Advisory Committee” (HICPAC).<sup>6</sup> The group recommended selecting outcome measures for reporting based on the frequency, severity, and preventability of the outcomes and the likelihood that they can be detected and reported accurately. Applicable to ASCs, the group recommended monitoring the following:

- Surgical site infections following selected operations
- Surgical antimicrobial prophylaxis
- Influenza vaccination of healthcare personnel

In 2008, the Healthcare-Associated Infection Working Group of the Joint Public Policy Committee released “Essentials of Public Reporting of Healthcare-Associated Infections: A Tool Kit.”<sup>7</sup> The Healthcare-Associated Infection Working Group of the Joint Public Policy Committee is a multi-organizational group represented by the Association for Professionals in Infection Control and

---

<sup>6</sup> Linda McKibben, MD,<sup>a</sup> Teresa Horan, MPH,<sup>b</sup> Jerome I. Tokars. Guidance on Public Reporting of Healthcare-Associated Infections: Recommendations of the Healthcare Infection Control Practices Advisory Committee (Am J Infect Control 2005;33:217-26.) <http://www.cdc.gov/ncidod/dhqp/pdf/hicpac/PublicReportingGuide.pdf>

<sup>7</sup> Essentials of Public Reporting of Healthcare-Associated Infections: A Tool Kit. Prepared by the Healthcare-Associated Infection Working Group of the Joint Public Policy Committee [http://www.cdc.gov/ncidod/dhqp/pdf/ar/06\\_107498\\_Essentials\\_Tool\\_Kit.pdf](http://www.cdc.gov/ncidod/dhqp/pdf/ar/06_107498_Essentials_Tool_Kit.pdf)

Epidemiology, CDC, Council of State and Territorial Epidemiologists, and Society for Healthcare Epidemiology of America. The toolkit recommends monitoring the following measures applicable to ASCs:

- Surgical site infections that are performed with adequate frequency to permit meaningful comparisons among institutions.
- The working group agreed with most of CDC/HICPAC document, “Guidance on Public Reporting of Healthcare-Associated Infections” (referenced above).
- Healthcare worker influenza vaccination rates

Within the context of RSA 151:33, NH DHHS surveyed ASCs and reviewed national guidelines, including National Quality Forum (NQF) endorsed measures, and capabilities of NHSN in selecting outcome and process measures. It is expected that these reporting requirements may change in the future as we learn from public reporting, as HAI epidemiology changes, and as new surveillance methods and reporting technologies become available.

### **Accuracy of Reported Healthcare-Associated Infections Surveillance Data**

DHHS conducted a validation study of 2009-2010 hospital data to assess the degree of under and over reporting and to provide additional training to address any common or systematic errors in reporting processes. DHHS has not been able to validate ASC data due to limited resources, including lack of a nationally developed plan to validate outpatient surgery data. The 2012 data presented in this report have not been validated and must be interpreted with the understanding that, in general, there are both under- and over-reporting of infections.

Despite the fact that no formal validation of data has occurred, there are several processes that are implemented to ensure that the data are as accurate as possible within the current resources and reporting processes available. First, DHHS selected NHSN for mandatory reporting, which requires the use of standardized infection definitions and reporting methodologies. Second, DHHS analyzed and reviewed all data reported for 2012 from each ASC. This review identified any obvious reporting errors or internal inconsistencies that suggested errors. Third, DHHS provided data reports to each ASC asking to confirm that the data reported to DHHS was accurate. This reconciliation process was iterative until all ASCs made corrections and agreed to the reported data. Despite these measures, there are several limitations to the reporting methods that then limit comparison of data across ASCs.

While definitions for classifying an infection as healthcare-associated are standardized through the use of NHSN, methods to identify the infection in each ASC are not. For SSI, identifying patients who develop infections after discharge from the ASC can be difficult, and each ASC may use a different method of post-discharge surveillance (e.g., letters to surgeons, conducting chart reviews for surgical patients, post-operative office visits, etc.). These different approaches may result in a more comprehensive capacity for detection of SSI. Therefore, a higher SSI rate at an ASC may not be a reflection of poorer infection prevention activities, but rather a more comprehensive system of identifying such infections after the patient is discharged.

## National Healthcare Safety Network

NHSN is a voluntary, secure, internet-based surveillance system for healthcare facilities to monitor patient safety and infection prevention measures. Enrollment is open to all types of healthcare facilities in the United States. DHHS has selected the use of NHSN as the method for New Hampshire hospitals and ASCs to report healthcare-associated infections surveillance data. NHSN was selected because it is widely used across the entire United States, it offers already developed and accepted surveillance definitions and methods, it provides national comparison data, and there is no cost to use or join the system.

More information about NHSN is available at: <http://www.cdc.gov/nhsn/index.html>

## Comparisons with National Data

All SSI comparisons with national data use 2006–2008 NHSN data published in the “National Healthcare Safety Network (NHSN) report: Data summary for 2006 through 2008, issued December 2009.”<sup>8</sup> This report is available at:

<http://www.cdc.gov/nhsn/PDFs/dataStat/2009NHSNReport.PDF>

## Surgical Site Infections Surveillance

In general terms, a SSI is an infection that develops at the site of a surgical procedure. There are different ways to classify an SSI, such as whether they develop superficially, in deep tissue, or in the organ/space. The infection must develop within 30 days of the procedure; however, if the procedure involved an implant or transplant, monitoring for an SSI must occur for 90 days following the procedure (e.g., breast augmentation or hernia procedures requiring mesh). In 2012, ASCs were required to monitor and report SSI for three procedures:

- Breast Surgery (excision of lesion or tissue of breast including radical, modified, or quadrant resection, lumpectomy, incisional biopsy, or mammoplasty)
  - NHSN Operative Procedure BRST (CPT codes: 19101, 19112, 19120, 19125, 19126, 19300-19307, 19316, 19318, 19324, 19325, 19328, 19330, 19340, 19342, 19350, 19355, 19357, 19361, 19364, 19366-19371, 19380)
- Hernia Surgery (repair of inguinal, femoral, umbilical, or anterior abdominal wall hernia; does not include repair of diaphragmatic or hiatal hernia or hernias at other body sites)
  - NHSN Operative Procedure HER (CPT codes: 49491, 49492, 49495, 49500, 49501, 49505, 49507, 49520, 49521, 49525, 49550, 49553, 49555, 49557, 49560, 49561, 49565, 49566, 49568, 49570, 49572, 49580, 49582, 49585, 49587, 49590, 49650-49657, 49659, 55540)
- Open Reduction of Fracture (Open reduction of fracture or dislocation of long bones that requires internal or external fixation; does not include placement of joint prosthesis)
  - NHSN Operative Procedure FX (CPT codes: 23615, 23616, 23630, 23670, 23680, 24515, 24516, 24538, 24545, 24546, 24575, 24579, 24586, 24587, 24635, 24665, 24666, 24685, 25337, 25515, 25525, 25526, 25545, 25574, 25575, 25607, 25608, 25609, 25652, 27236, 27244, 27245, 27248, 27254, 27269, 27283, 27506, 27507, 27511, 27513, 27514,

---

<sup>8</sup> Edwards JR, Peterson KD, Mu Y, et al. National Healthcare Safety Network (NHSN) report: Data summary for 2006 through 2008, issued December 2009. *Am J Infect Control* 2009; 37:783-805.

<http://www.cdc.gov/nhsn/PDFs/dataStat/2009NHSNReport.pdf>

7535, 27536, 27540, 27758, 27759, 27766, 27769, 27784, 27792, 27814, 27822, 27826, 27827, 27828)

SSI monitoring includes reporting information on each infection identified as well as patient-level information for all patients undergoing the same procedure. This allows for appropriate risk adjustment, because risk for developing an SSI can be influenced by patient- and procedure-specific factors. DHHS was unable to calculate the SIR in NSHN for ASCs and allow for robust risk factor adjustment. Therefore, only risk categories were considered when assessing SSI standardized infection ratios by ASC. The basic SSI risk index assigns surgical patients into categories based on the presence of three major risk factors:

- a. Operation lasting more than the duration of cut point hours
- b. Contaminated (Class III) or Dirty/infected (Class IV) wound class
- c. ASA classification of 3, 4, or 5 (see below)

The wound class is a way of determining how clean or dirty the operation body site was 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.

The ASA classification is the American Society of Anesthesiologists (ASA) Classification of Physical Status, a scale used by the anesthesiologist to classify the patient's physical condition prior to surgery. It is one of the factors that help determine a patient's risk of possibly developing an SSI.

The ASA scale is:

1. Normally healthy patient
2. Patient with mild systemic disease
3. Patient with severe systemic disease
4. Patient with an incapacitating systemic disease that is a constant threat to life
5. A patient who is not expected to survive with or without the operation

All SSI metrics are monitored following NHSN protocols and definitions and reported in NHSN. The NHSN SSI protocols are available at:

<http://www.cdc.gov/nhsn/PDFs/pscManual/9pscSSICurrent.pdf>

### Limitations for SSI surveillance:

- ASCs do not use a standard method of post-discharge surveillance to identify infections. This may make data interpretation difficult because a higher SSI rate at an ASC could be a reflection of poor infection prevention practices or perhaps a more comprehensive system for identifying infections.
- SSI reporting is only on a subset of procedures. Reporting in NHSN requires detailed information on every patient who underwent the procedure being monitored. This allows for risk adjustment. As such, DHHS has elected to monitor a subset of procedures based on national recommendations since it would not be feasible for ASCs to report information on every patient receiving a surgical procedure due to the burden of reporting.
- Some procedures required monitoring for SSI for 90 days after the procedure (in New Hampshire, this includes some breast, hernia, and open reduction of fracture procedures). This is difficult in the outpatient setting when ASCs rely on post-discharge surveillance. Most infections, however, occur within 30 days of the procedure.
- The SSI data presented in this report include all types of infections, including superficial surgical site infections, which can occur as a result of care in the ASC but also as a result of the patient's care of the surgical site once discharged.
- DHHS was not able to calculate the SIR in NHSN due to system limitations. The SIR was not calculated using SSI probabilities estimated from multivariate logistic regression models developed by NHSN and doesn't adjust for various patient or procedure risk factors. Instead, the SIR calculations only accounted for the presence of three major risk factors.
- The SSI data presented in this report have not been validated and must be interpreted with the understanding that in general there are both under- and over-reporting of infections.

### **Surgical Antimicrobial Prophylactic Administration**

New Hampshire ASCs reported surgical IV antimicrobial prophylaxis data following NQF endorsed protocols to DHHS, specifically:

- Procedure type, date and time of procedure, time of antibiotic administration, and antibiotic administered for all patients undergoing any procedure for which intravenous antibiotics were ordered. for the prevention of surgical site infections.

An antibiotic is considered administered on time when antibiotic infusion is initiated within one hour prior to the time of the initial surgical incision or the beginning of a procedure or two hours prior if vancomycin or flouoroquinolones are administered.

This process measure shows an ASCs adherence rate to best practices designed to reduce surgical infections. ASCs follow the National Quality Forum specification manual located at: <http://ascquality.org/documents/ASCQualityCollaborationImplementationGuide.1.7.pdf>.

### Limitations for antimicrobial prophylactic administration:

- Data collection and documentation techniques at ASCs vary, which may affect how necessary data elements are reported (example: antibiotic administration or procedure start time) and ultimately impact the facilities overall adherence percentage.

## **Influenza Vaccination Rate Monitoring**

All ASCs are required to report staff vaccination rates directly to DHHS via online survey that is provided to facilities prior to the influenza season. Data for the 2012–2013 influenza season were reported by ASCs on or before April 30, 2013. The 2012–2013 survey asked the following questions regarding influenza vaccination:

1. ASC demographics
2. How many healthcare personnel (HCP) worked or volunteered in your ASC at any time between 10/01/2011 and 03/31/2012?
3. How many HCP were immunized against seasonal influenza between 10/01/2012 and 03/31/2013? This includes healthcare workers (HCW) immunized at your facility or elsewhere.
4. How many HCP did not receive the seasonal influenza vaccine for the following reasons: medical contraindications/exemptions, declinations or refusal, or unknown?
5. Does your facility have a mandatory employee vaccination policy? Mandatory vaccination policy means that the institution requires vaccination of employees or else there is some consequence.
6. If YES, what exemptions (reasons not to be vaccinated) are accepted (medical, personal/philosophical, religious, any reason)?
7. If YES, what is the consequence for an employee that is not vaccinated and does not have an exemption (unvaccinated employees must wear a mask or unvaccinated employees are terminated)?
8. If YES, what is the alternative precaution for an employee that is not vaccinated and does have an accepted exemption (unvaccinated employees must wear a mask or unvaccinated employees are terminated)?
9. Please enter any comments or questions.

Staff influenza vaccination rates were then calculated by dividing the number of staff vaccinated and the total number of staff.

### Limitations for influenza vaccination monitoring:

- The survey asks for the total number of staff vaccinated. This may not reflect the number of staff to whom the vaccine was offered. ASCs may vary in the refusal rate for vaccination among staff and the reasons for such refusal. Additionally, some staff may not be eligible to receive the vaccine.
- The survey attempted to assess why unvaccinated staff did not receive the vaccine, however, not all ASCs can report this information.
- Data collection techniques at ASCs may vary from year-to-year, which may affect comparison of data from year-to-year and between ASCs (example: definition of staff including all paid and unpaid individuals that work in the ASC). DHHS continues to work each year on improving the validity and utility of this measure.
- Some ASCs have very few staff and may never be able to achieve a vaccination rate significantly higher than the state average due to sparse data.

## STATEWIDE DATA

HAI data are presented throughout this report as both standardized infection ratios and rates as appropriate. Presenting data as a standardized infection ratio (SIR) allows for aggregating data across risk group, procedures, and healthcare facility to gain a better understanding of the incidence of HAI while still adjusting for underlying patient or healthcare facility factors that may affect the occurrence of infections. The SIR does not give the infection rate, but rather a comparison between how many infections actually occurred and how many were expected to occur based on national data. Specific rate information is also provided where possible, which represents the number of infections that occurred taking into account the number of procedures that were performed. Rate data are limited by the requirement to only calculate rates that are broken down by certain factors. See technical notes for additional information on rates and the SIR.

Because an SIR is a comparison of the number of actual observed infections to the number expected based on national data, an SIR of 1.0 means that exactly the same number of infections were observed as were expected. An SIR of less than one means that fewer infections were observed than were expected (for example, SIR = 0.70 would be interpreted as 30% fewer infections observed than expected). An SIR of more than one means that more infections were observed than were expected (for example, SIR = 1.30 would be interpreted as 30% more infections observed than expected). A confidence interval is calculated to determine whether the difference between observed and expected infections is statistically significant. If the difference is not statistically significant, the observed and expected numbers of infections are considered similar. See technical notes for additional information on confidence intervals.

This report provides comparisons with national and state data where appropriate. Comparisons are color coded consistently throughout. For infections, yellow represents infection rates that are similar to national data, red represents infection rates that are significantly higher than national rates, and green represents infection rates that are significantly lower than national rates.

 fewer than expected     similar to expected     more than expected

For process measures, yellow represents rates that are similar to the state average, red represents rates that are significantly lower than the state average, and green represents rates that are significantly higher than the state average.

 higher than state     similar to state     lower than state

Statistical significance is affected by sample size. If a value is almost or just barely significant, just a few additional observations can push significance one way or the other (i.e., not significant or significant).

### Statewide Surgical Site Infections Standardized Infection Ratios

In general terms, a SSI is an infection that develops at the site of a surgical procedure. The tables below show the number of infections that were identified following the three monitored procedures at each ASC in New Hampshire. There were four surgical site infections (SSI) reported across 12 ambulatory surgery centers (ASCs) in New Hampshire that were licensed for the entire 2012 calendar year and were required to report these data. These infections represent SSI following breast, hernia, and open reduction of fracture procedures. Based on national data, 7.12 infections were expected. The overall observed number of SSI was 43% fewer than expected based on national data. Looking individually at the specific procedures, there were 9% fewer breast infections, 100% fewer hernia infections, and 100% fewer open reduction of fracture infections than

expected; however, the difference for all of these were not statistically significant and the number of infections observed is considered similar to national data.

The analysis presented in Table 2 shows that two ASCs with robust enough data observed a similar number of infections as expected. For breast procedures (Table 3), one ASC observed a similar number of infections as expected. For hernia and open reduction of fracture procedures (Tables 4 and 5), none of the ASCs had robust enough data to display the SIR.

**TABLE 1: Statewide Ambulatory Surgery Center (ASC) standardized infection ratios (SIR) for surgical site infections (SSI), Jan 1–Dec 31, 2012**

	<b>Observed Infections</b>	<b>Expected Infections</b>	<b>Standardized Infection Ratio (SIR)</b>	<b>95% Confidence Interval</b>	<b>Comparison to Expected Number of Infections</b>
<b>Overall SSI SIR</b>	4	7.05	0.57	0.15 , 1.45	Similar
	The overall observed number of SSI in New Hampshire ASCs was 43% fewer than expected based on national data. This difference is not statistically significant, which means the overall number of SSI in the state is SIMILAR to the number seen nationally.				
<b>BRST SIR</b>	4	4.41	0.91	0.24 , 2.32	Similar
	The overall observed number of BRST infections in New Hampshire ASCs was 9% fewer than expected based on national data. This difference is not statistically significant, which means the overall number of BRST infections in the state is SIMILAR to the number seen nationally.				
<b>HER SIR</b>	0	1.93	0.00	- , 1.90	Similar
	The overall observed number of HER infections in New Hampshire ASCs was 100% fewer than expected based on national data. This difference is not statistically significant, which means the overall number of HER infections in the state is SIMILAR to the number seen nationally.				
<b>FX SIR</b>	0	0.70	0.00	- , 5.26	Similar
	The overall observed number of FX infections in New Hampshire ASCs was 100% fewer than expected based on national data. This difference is not statistically significant, which means the overall number of FX infections in the state is SIMILAR to the number seen nationally.				

HAI: Healthcare-associated infection

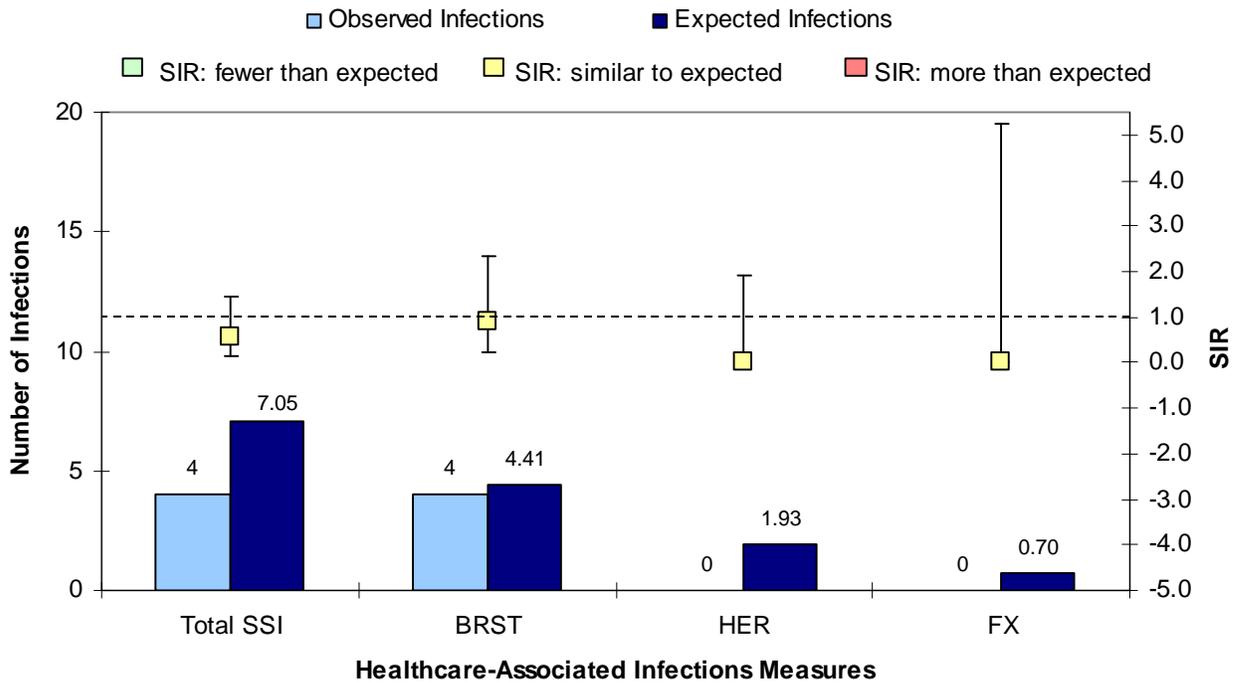
SSI: Surgical site infections

BRST: Surgical site infections associated with breast procedures

HER: Surgical site infections associated with hernia procedures

FX: Surgical site infections associated with open reduction of fracture procedures

**FIGURE 1: Statewide Ambulatory Surgery Center (ASC) standardized infection ratios (SIR) for surgical site infections (SSI), Jan 1–Dec 31, 2012**



SSI: Surgical Site Infections

BRST: Surgical site infections associated with breast procedures

HER: Surgical site infections associated with hernia procedures

FX: Surgical site infections associated with open reduction of fracture procedures procedure

**TABLE 2: Overall surgical site infections standardized infection ratios by ASC, Jan 1–Dec 31, 2012**

ASC	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected Number of Infections
ASC, DH Manchester	†	†	†	†	†
Atlantic Plastic Surgery	1	1.00	1.00	0.01 , 5.55	Similar
Bedford ASC	†	†	†	†	†
Center for Outpatient Care	0	1.82	0.00	- , 2.02	Similar
Concord ASC	†	†	†	†	†
Elliot 1-Day Surgery Center	†	†	†	†	†
Hillside Surgical Center	†	†	†	†	†
Northeast Surgical Care	†	†	†	†	†
Orthopaedic Surgery Center	†	†	†	†	†
Portsmouth Regional ASC	†	†	†	†	†
Salem Surgery Center	†	†	†	†	†
Stratham ASC	†	†	†	†	†
<b>State Total</b>	4	7.05	0.57	0.15 , 1.45	Similar

† Data are not shown for ASCs with less than one expected infection.

**TABLE 3: Breast procedure-associated surgical site infections standardized infection ratios by ASC, Jan 1–Dec 31, 2012**

ASC	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected Number of Infections
ASC, DH Manchester	†	†	†	†	†
Atlantic Plastic Surgery	1	1.00	1.00	0.01 , 5.54	Similar
Bedford ASC	†	†	†	†	†
Center for Outpatient Care	†	†	†	†	†
Concord ASC	†	†	†	†	†
Elliot 1-Day Surgery Center	†	†	†	†	†
Salem Surgery Center	†	†	†	†	†
Stratham ASC	†	†	†	†	†
<b>State Total</b>	4	4.41	0.91	0.24 , 2.32	Similar

† Data are not shown for ASCs with less than one expected infection.

**TABLE 4: Hernia procedure-associated surgical site infections standardized infection ratios by ASC, Jan 1–Dec 31, 2012**

ASC	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected Number of Infections
ASC, DH Manchester	†	†	†	†	†
Bedford ASC	†	†	†	†	†
Center for Outpatient Care	†	†	†	†	†
Concord ASC	†	†	†	†	†
Elliot 1-Day Surgery Center	†	†	†	†	†
Salem Surgery Center	†	†	†	†	†
Stratham ASC	†	†	†	†	†
<b>State Total</b>	0	1.93	0.00	- , 1.90	Similar

† Data are not shown for ASCs with less than one expected infection.

**TABLE 5: Open reduction of fracture procedure-associated surgical site infections standardized infection ratios by ASC, Jan 1–Dec 31, 2012**

ASC	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected Number of Infections
Bedford ASC	†	†	†	†	†
Center for Outpatient Care	†	†	†	†	†
Elliot 1-Day Surgery Center	†	†	†	†	†
Hillside Surgical Center	†	†	†	†	†
Northeast Surgical Care	†	†	†	†	†
Orthopaedic Surgery Center	†	†	†	†	†
Portsmouth Regional ASC	†	†	†	†	†
Salem Surgery Center	†	†	†	†	†
<b>State Total</b>	0	0.70	0.00	- , 5.26	Similar

† Data are not shown for ASCs with less than one expected infection.

### Surgical Site Infection Rates

The statewide rates for infections following breast, hernia, and open reduction of fracture procedures for patients in respective risk categories were similar to national rates (Table 6, Figures 4-6). Tables 7–9 provide rates of surgical site infections per 100 procedures by ASC. All ASCs had a rate similar to national data for all procedure categories presented. Note that rates are calculated individually for type of procedure and risk category of patient. This ensures that data are risk-adjusted. Because data are sparse when broken down into categories, interpretation of rate data can be unclear. For risk adjustment, surgical patients are assigned into categories based on presence of

three major risk factors, although there may be other risk factors for infection. The patient’s risk category is the number of the following risk factors present at the time of the operation:

- a. Operation lasting more than the duration cut point hours
- b. Contaminated or Dirty/infected wound class
- c. ASA classification of 3, 4, or 5

See methods section for more information on SSI risk adjustment.

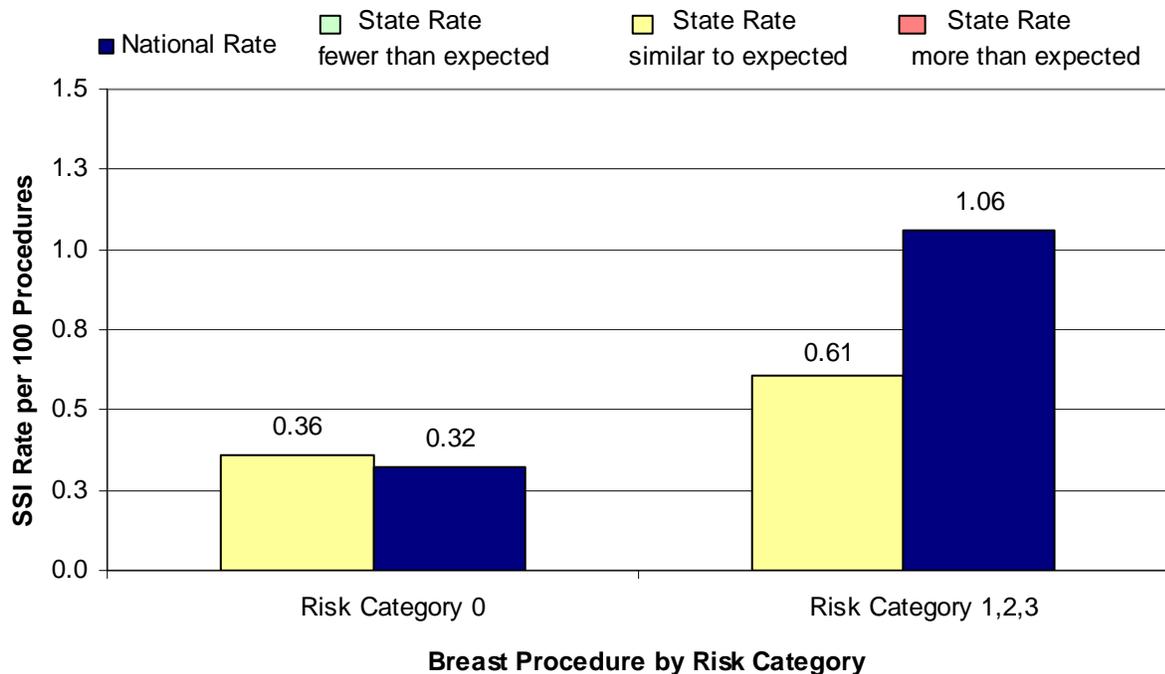
**TABLE 6: Statewide infection rates, Jan 1–Dec 31, 2012**

Infection Outcome Measure	Infections	Denominator*	State Rate*	National Rate	P-value	State Rate Compared to National Rate
BRST SSI Rate						
Risk Category 0	3	833	0.36	0.32	0.500	Similar
Risk Category 1,2,3	1	165	0.61	1.06	0.464	Similar
HER SSI Rate						
Risk Category 0,1	0	412	0.00	0.46	0.160	Similar
Risk Category 2,3	†	†	†	†	†	†
FX SSI Rate						
Risk Category 0,1,2,3	0	249	0.00	0.28	0.550	Similar

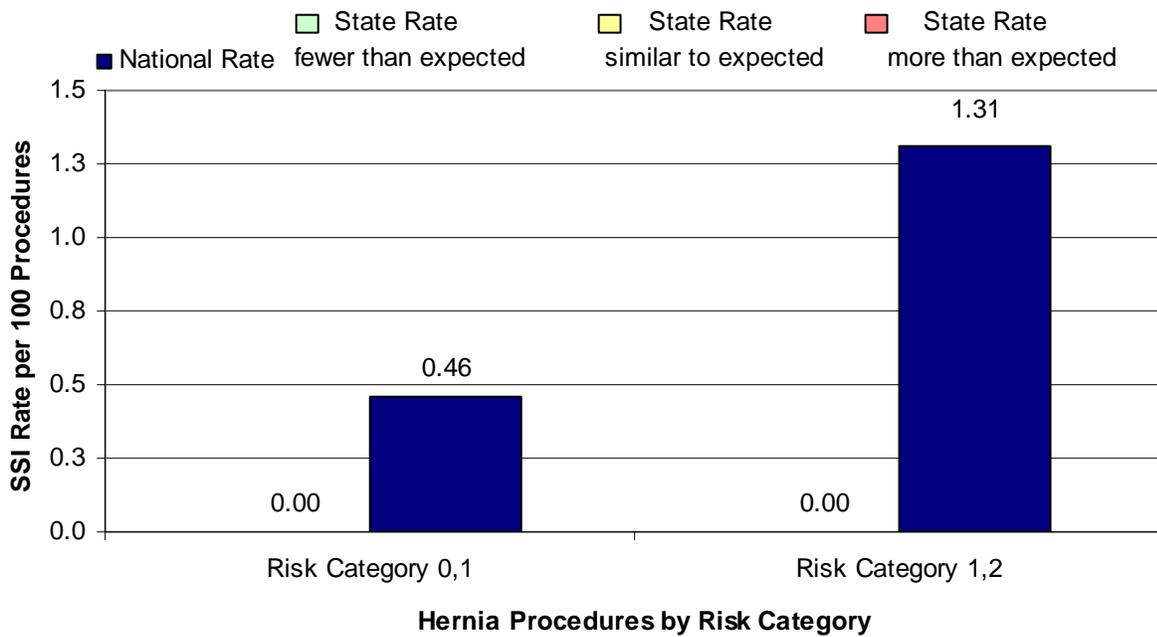
\* Denominator is number of total procedures performed. SSI rate is the number of infections per 100 procedures.

† Data are not shown when fewer than 20 procedures were performed

**Figure 2: Statewide rates for breast procedure-associated surgical site infections, January 1-December 31, 2012.**

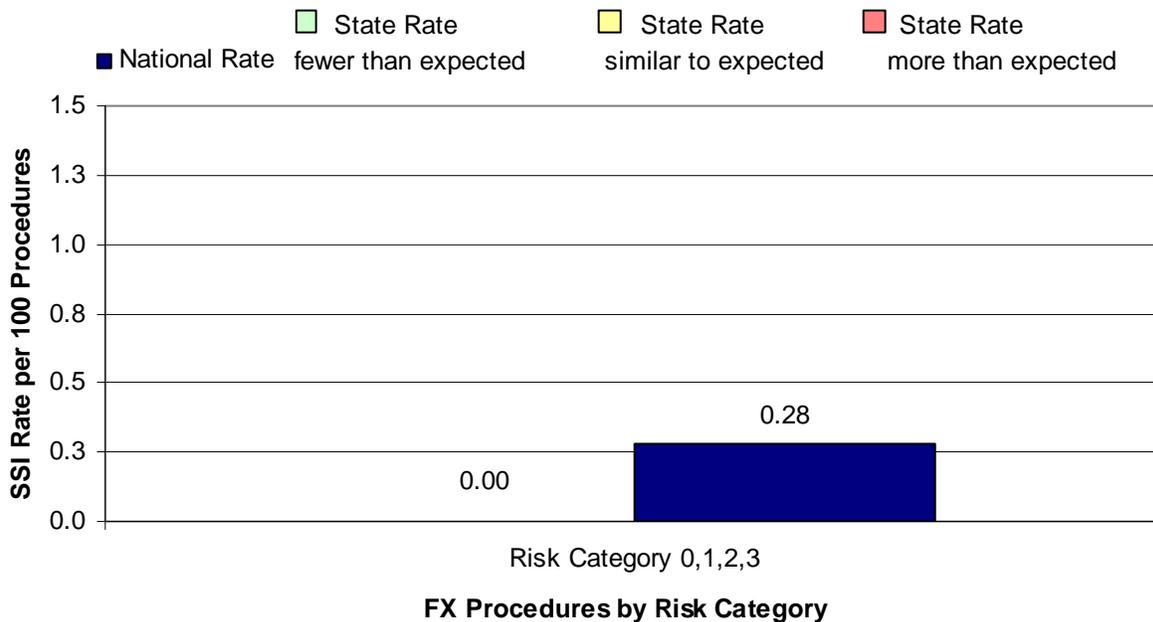


**Figure 3: Statewide rates for hernia procedure-associated surgical site infections, January 1-December 31, 2012.**



† Data are not shown when fewer than 20 procedures were performed

**Figure 4: Statewide rates for open reduction of fracture procedure-associated surgical site infections, January 1-December 31, 2012.**



**TABLE 7: Breast procedure-associated surgical site infections rates by risk category and ASC, January 1– December 31, 2012**

ASC	Infections	Procedures	Facility Rate	National Rate	p-value	ASC rate Compared to National Rate
<b>Risk Category 0</b>						
ASC, DH Manchester	0	49	0.00	0.32	0.859	Similar
Atlantic Plastic Surgery	0	224	0.00	0.32	0.528	Similar
Bedford ASC	0	32	0.00	0.32	0.905	Similar
Center for Outpatient Care	0	139	0.00	0.32	0.662	Similar
Concord ASC	0	79	0.00	0.32	0.786	Similar
Elliot 1-Day Surgery Center	2	91	2.20	0.32	0.059	Similar
Salem Surgery Center	1	145	0.69	0.32	0.436	Similar
Stratham ASC	0	74	0.00	0.32	0.797	Similar
<b>State Total</b>	3	833	0.36	0.32	0.500	Similar
<b>Risk Category 1, 2, 3</b>						
ASC, DH Manchester	†	†	†	†	†	†
Atlantic Plastic Surgery	1	27	3.70	1.06	0.276	Similar
Bedford ASC	†	†	†	†	†	†
Center for Outpatient Care	0	43	0.00	1.06	0.641	Similar
Concord ASC	0	40	0.00	1.06	0.661	Similar
Elliot 1-Day Surgery Center	†	†	†	†	†	†
Salem Surgery Center	†	†	†	†	†	†
Stratham ASC	†	†	†	†	†	†
<b>State Total</b>	1	165	0.61	1.06	0.464	Similar

† Data are not shown when fewer than 20 procedures were performed.

**TABLE 8: Hernia procedure-associated surgical site infections rates by risk category and ASC, January 1– December 31, 2012**

ASC	Infections	Procedures	ASC Rate	National Rate	p-value	ASC rate Compared to National Rate
<b>Risk Category 0, 1</b>						
ASC, DH Manchester	0	119	0.00	0.46	0.582	Similar
Bedford ASC	†	†	†	†	†	†
Center for Outpatient Care	0	175	0.00	0.46	0.452	Similar
Concord ASC	†	†	†	†	†	†
Elliot 1-Day Surgery Center	0	34	0.00	0.46	0.856	Similar
Salem Surgery Center	0	34	0.00	0.46	0.856	Similar
Stratham ASC	†	†	†	†	†	†
<b>State Total</b>	0	412	0.00	0.46	0.160	Similar
<b>Risk Category 2, 3</b>						
ASC, DH Manchester	-	-	-	-	-	-
Bedford ASC	-	-	-	-	-	-
Center for Outpatient Care	†	†	†	†	†	†
Concord ASC	-	-	-	-	-	-
Elliot 1-Day Surgery Center	-	-	-	-	-	-
Salem Surgery Center	-	-	-	-	-	-
Stratham ASC	-	-	-	-	-	-
<b>State Total</b>	†	†	†	†	†	†

† Data are not shown when fewer than 20 procedures were performed.

- Facility did not perform this procedure for patients in the risk group

**TABLE 9: Open reduction of fracture procedure-associated surgical site infections rates by risk category and ASC, January 1– December 31, 2012**

ASC	Infections	Procedures	ASC Rate	National Rate	p-value	ASC rate Compared to National Rate
<b>Risk Category 0 , 1, 2, 3</b>						
Bedford ASC	0	44	0.00	0.28	0.887	Similar
Center for Outpatient Care	0	27	0.00	0.28	0.929	Similar
Elliot 1-Day Surgery Center	†	†	†	†	†	†
Hillside Surgical Center	0	29	0.00	0.28	0.924	Similar
Northeast Surgical Care	0	49	0.00	0.28	0.876	Similar
Orthopaedic Surgery Center	0	75	0.00	0.28	0.819	Similar
Portsmouth Regional ASC	†	†	†	†	†	†
Salem Surgery Center	†	†	†	†	†	†
<b>State Total</b>	0	249	0.00	0.28	0.550	Similar

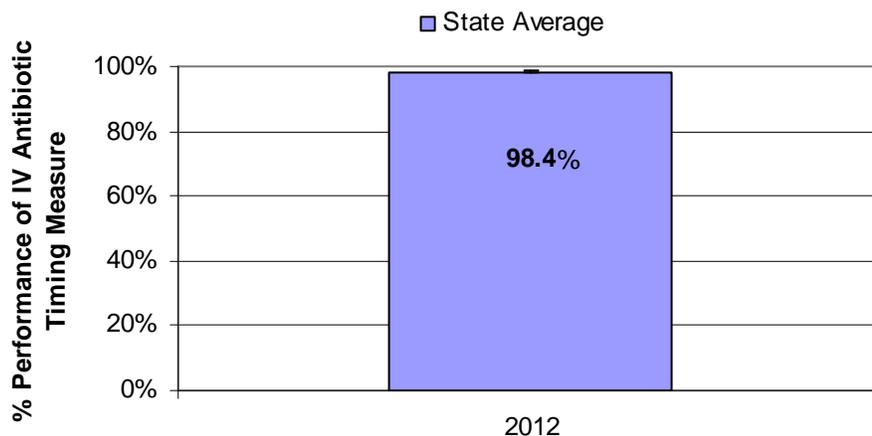
† Data are not shown when fewer than 20 procedures were performed.

### Surgical Antimicrobial Prophylaxis Administration

Seventeen ASCs that administer intravenous (IV) surgical antimicrobial prophylaxis were licensed for the entire 2012 calendar year and were required to report timing data. In NH ASCs, 98.4% of 12,439 patients with a preoperative order for IV antibiotic received their antibiotic on time. The analysis presented in Table 10 shows that four ASCs observed lower adherence, three ASCs observed higher adherence, and seven observed similar adherence compared to the state adherence percentage. See methods section for additional information on how this information is collected.

Surgical Antimicrobial prophylaxis data by ASC for January 1–December 31, 2012 are provided in the following tables with comparisons to the state average.

**Figure 5: Statewide Performance of Surgical IV Prophylactic Antibiotic, Jan 1–Dec 31, 2012**



**TABLE 10: Performance of Surgical IV Prophylactic Antibiotic by ASC, Jan 1–Dec 31, 2012**

ASC	Number of Patients that Received IV Antibiotic on Time*	Total Number of Patients that Received IV Antibiotic	% Adherence	95% Confidence Interval	ASC % Compared to State %
ASC, DH Manchester	763	787	97.0	95.6 , 98.0	Lower
Atlantic Plastic Surgery	355	356	99.7	98.6 , -	Similar
Barrington Surgical Care	†	†	†	†	†
Bedford ASC	2,061	2,070	99.6	99.2 , 99.8	Higher
Center for Outpatient Care	1,747	1,804	96.8	96.0, 97.58	Lower
Centers for Pain Solutions	†	†	†	†	†
Concord ASC	851	877	97.0	95.8 , 98.0	Lower
Dr O'Connells PCC Merrimack	20	22	90.9	73.1 , 98.5	Similar
Dr O'Connells PCC Somersworth	85	85	100.0	96.5 , -	Similar
Elliot 1-Day Surgery Center	1,277	1,285	99.4	98.8 , 99.7	Higher
Hillside Surgical Center	272	274	99.3	97.6 , 99.9	Similar
Laconia Clinic ASC	†	†	†	†	†
Northeast Surgical Care	979	980	99.9	99.5 , -	Higher
Orthopaedic Surgery Center	2,257	2,284	98.8	98.3 , 99.2	Similar
Portsmouth Regional ASC	553	573	96.5	94.8 , 97.8	Lower
Salem Surgery Center	599	604	99.2	98.2 , 99.7	Similar
Stratham ASC	399	412	96.8	94.8 , 98.2	Similar
<b>State Total</b>	12,241	12,439	98.4	98.2 , 98.6	

\* Antibiotic administered on time: antibiotic infusion is initiated within one hour prior to the time of the initial surgical incision or the beginning of a procedure or two hours prior if vancomycin or flouroquinolones are administered.

† Data are not shown when fewer than 20 procedures were performed.

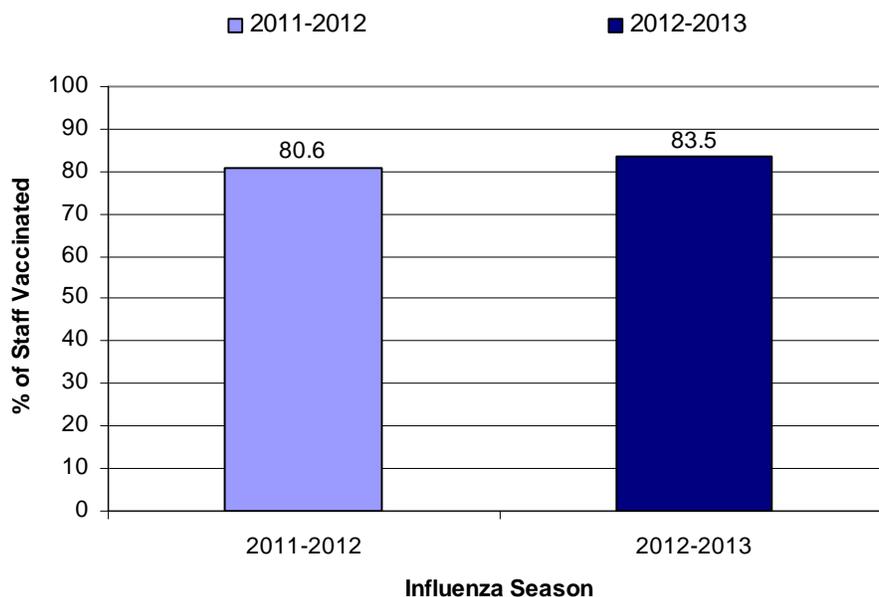
Note: Statistics cannot be calculated for ASCs with 0 number of patients administered prophylaxis. Nashua ASC and the Orthopaedic Surgery Center in Derry were not licensed for the full calendar year of 2012 and are not included in this table.

## Influenza Vaccination Rates

Healthcare workers can become infected with the influenza virus through contact with infected patients and can transmit influenza to patients and other staff. Despite documented benefits of healthcare worker influenza vaccination on patient outcomes and healthcare worker absenteeism nationally, vaccination coverage among healthcare workers remains low. In a CDC survey, influenza vaccination coverage in healthcare workers nationally was 67% during the 2011-2012 influenza season.<sup>9</sup> Because healthcare workers provide care to patients at high risk for complications of influenza, they should be offered influenza vaccine each year. Currently there are no regulations requiring vaccination in New Hampshire, and healthcare workers are free to decline vaccination for any reason. However, some ASCs do have policies requiring mandatory staff vaccination. Vaccination rates in hospital staff have been monitored in New Hampshire for several years. However, vaccination rates in ASCs have only been monitored for two influenza seasons. See methods section for additional information on data collection.

Table 11 below shows the total number of staff and the number of staff vaccinated against seasonal influenza at each ASC during the 2012–2013 influenza season. Vaccination rates by ASC ranged from 48.1% to 100.0%, and the overall State rate was 83.5% (Figure 6). A confidence interval is provided to assess any statistically significant differences in staff vaccination between ASCs. The analysis presented in Table 11 and Figure 7 shows that 16 ASCs had vaccination percentages similar to the overall State vaccination percentage, eight ASCs reported vaccination percentages that were significantly higher than the overall State vaccination percentage, and three ASCs reported vaccination percentages that were significantly lower than the overall State vaccination percentage. There was no significant difference between the 2011-2012 and 2012-2013 season.

**Figure 6: Statewide influenza vaccination rates for ASC staff by influenza season**



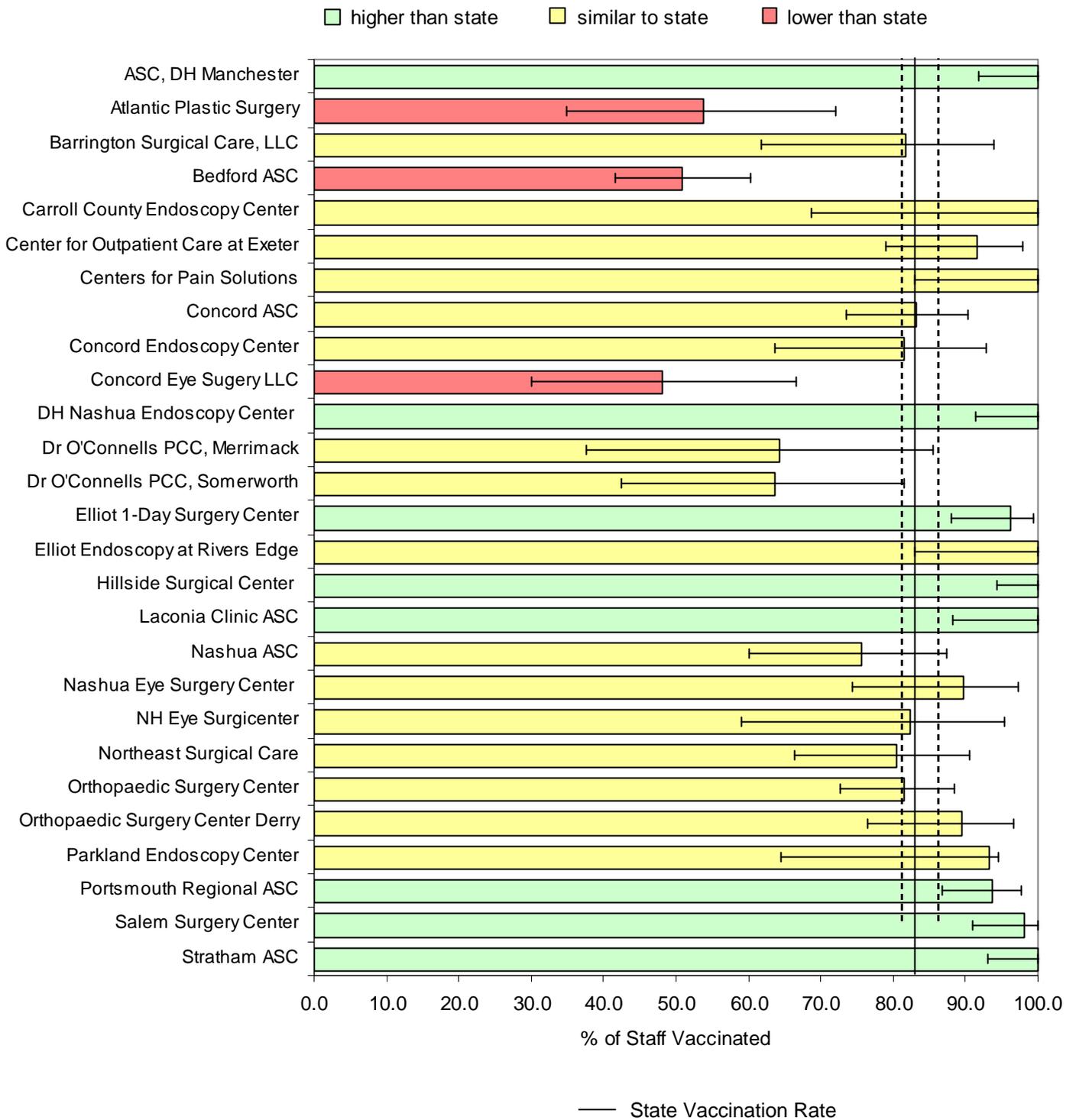
2011-2012 season reports on staff between October 1<sup>st</sup>, 2011 and April 30<sup>th</sup> 2012  
2012-2013 season reports on staff between October 1<sup>st</sup>, 2012 and April 30<sup>th</sup> 2013

<sup>9</sup> CDC. Influenza Vaccination Coverage Among Health-Care Personnel — 2011–12 Influenza Season, United States. Morbidity and Mortality Weekly Report; 61(38);753-757.  
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6138a1.htm>

**TABLE 11: Influenza vaccination rates for ASC staff by ASC, October 1, 2012–March 31, 2013**

ASC	Staff Vaccinated	Total Staff	% Vaccinated	95% Confidence Interval	ASC % Compared to State %
ASC, DH Manchester	35	35	100.0	91.8 , -	Higher
Atlantic Plastic Surgery	14	26	53.8	34.8 , 72.1	Lower
Barrington Surgical Care, LLC	18	22	81.8	61.8 , 93.9	Similar
Bedford ASC	55	108	50.9	51.5 , 60.3	Lower
Carroll County Endoscopy	8	8	100.0	68.8 , -	Similar
Center for Outpatient Care	33	36	91.7	79.0 , 97.8	Similar
Centers for Pain Solutions	16	16	100.0	82.9 , -	Similar
Concord ASC	64	77	83.1	73.5 , 90.3	Similar
Concord Endoscopy Center	22	27	81.5	63.6 , 92.9	Similar
Concord Eye Surgery LLC	13	27	48.1	30.0 , 66.7	Lower
DH Nashua Endoscopy Center	33	33	100.0	91.3 , -	Higher
Dr O'Connells PCC, Merrimack	9	14	64.3	37.6 , 85.6	Similar
Dr O'Connells PCC, Somersworth	14	22	63.6	42.4 , 81.5	Similar
Elliot 1-Day Surgery Center	51	53	96.2	88.1 , 99.4	Higher
Elliot Endoscopy	16	16	100.0	82.9 , -	Similar
Hillside Surgical Center	52	52	100.0	94.4 , -	Higher
Laconia Clinic ASC	24	24	100.0	88.3 , -	Higher
Nashua ASC	28	37	75.7	60.0 , 87.4	Similar
Nashua Eye Surgery Center	26	29	89.7	74.4 , 97.3	Similar
NH Eye Surgicenter	14	17	82.4	59.1 , 95.3	Similar
Northeast Surgical Care	33	41	80.5	66.3 , 90.5	Similar
Orthopaedic Surgery Center	75	92	81.5	72.6 , 88.5	Similar
Orthopaedic Surgery Center, Derry	34	38	89.5	76.5 , 96.6	Similar
Parkland Endoscopy Center	20	24	93.3	64.5 , 94.5	Similar
Portsmouth Regional ASC	76	81	93.8	86.9 , 97.7	Higher
Salem Surgery Center	51	52	98.1	90.9 , 99.9	Higher
Stratham ASC	42	42	100.0	93.1 , -	Higher
<b>State Total</b>	876	1,049	83.5	81.2 , 85.7	

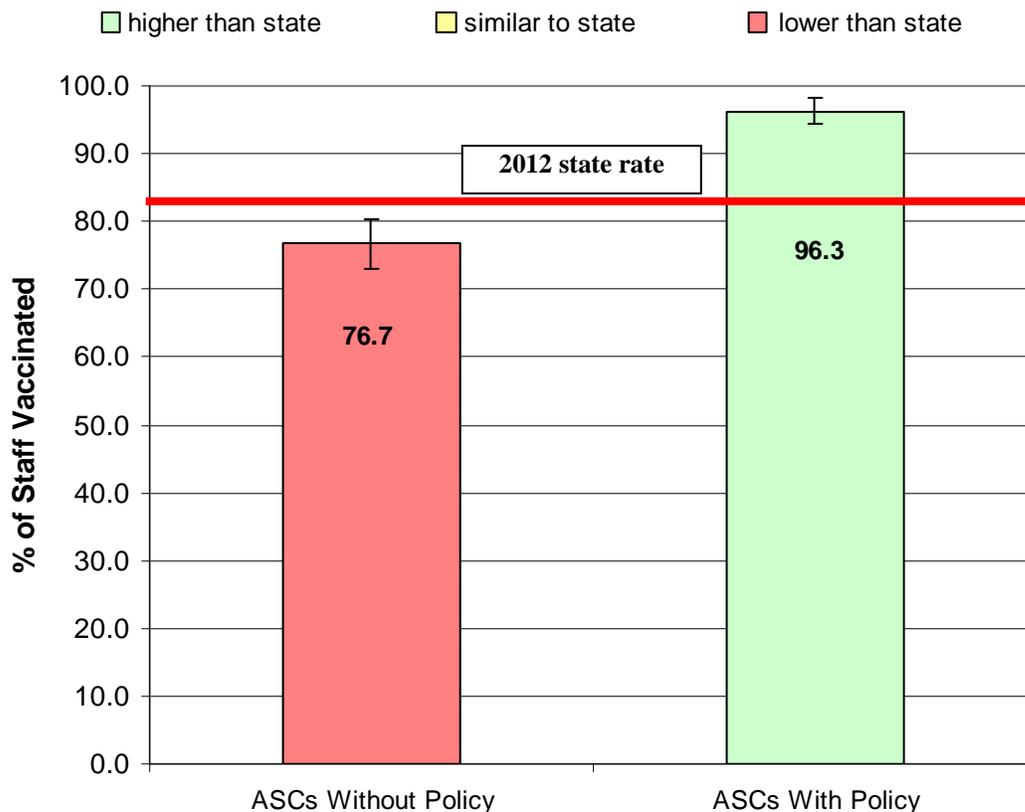
**FIGURE 7: Influenza vaccination rates for ASC staff by ASC, 2012–2013 influenza season**



## Influenza Vaccination Policies for Healthcare Personnel

During the 2012-2013 influenza season, 10 (37%) of 27 ASCs had a healthcare personnel (HCP) vaccination policy in place, 15 (56%) did not have one, and 2 (7%) were considering one. Among 10 ASCs with a policy, 6 (60%) allowed for only medical and religious exemptions and one additional ASC also accepted philosophical exemptions; the remaining 3 (30%) allowed exemption for any reason. All 10 (100%) ASCs required unvaccinated HCP with an approved exemption to wear a mask and 4 (40%) terminated unvaccinated HCP without an approved medical or religious exemption. ASCs with vaccination policies had significantly higher rates of influenza vaccination as a whole (96%) than ASCs without policies (77%). ASCs that terminated unvaccinated employees without an exemption had a higher vaccination rate (99%) than ASCs that required unvaccinated employees to wear a mask (95%), however this was not statistically significant.

**FIGURE 8: Influenza vaccination rates for ASCs with and without vaccination policies.**



**TABLE 12: Influenza vaccination policies and consequences for healthcare personnel (HCP) by ASC, 2012-2013 influenza season**

ASC	Exemptions Allowed in Policy*	Consequences for Unvaccinated HCP <u>Without</u> Accepted Exemption	Precautions for Unvaccinated HCP <u>With</u> Accepted Exemption
ASC, DH Manchester	Medical, Religious	Termination	Wear a mask
Center for Outpatient Care Exeter	Personal / philosophical	Wear a mask	Wear a mask
DH Nashua Endoscopy Center	Medical, Religious	Termination	Wear a mask
Elliot 1-Day Surgery Center	Medical, Religious	Termination	Wear a mask
Elliot Endoscopy at Rivers Edge	Medical, Religious	Termination	Wear a mask
Hillside Surgical Center	Any reason	Wear a mask	Wear a mask
Laconia Clinic ASC	Any reason	Wear a mask	Wear a mask
Parkland Endoscopy Center	Medical, Religious	Wear a mask, education	Wear a mask
Portsmouth Regional ASC	Any reason	Wear a mask	Wear a mask
Salem Surgery Center	Medical, Religious	Wear a mask	Wear a mask

\*Exemptions include Medical, Religious, Philosophical, or Any Reason.

Note: Two ASCs (Barrington Surgical Care, LLC and Stratham ASC) did not have mandatory vaccination policies during the 2012-2013 influenza season but were considering mandatory vaccination policies at the time of the survey. Fifteen ASCs (Atlantic Plastic Surgery, Bedford Ambulatory Surgery, Carroll County Endoscopy Center, Centers for Pain Solutions, Concord ASC, Concord Endoscopy Center, Concord Eye Surgery, Dr. O'Connells PCC-Somersworth, Dr. O'Connells PCC-Merrimack, Nashua Eye Surgery Center, NH Eye Surgicenter, Northeast Surgical Care, Orthopaedic Surgery Center, and Orthopaedic Surgery Center Derry) did not have mandatory vaccination policies during 2012-2013 season or were considering policies at the time of the survey

## CONCLUSIONS

This first report on HAI surveillance data in Ambulatory Surgery Centers displays progress toward the goal of eliminating HAIs in New Hampshire. This report provides a picture of selected HAI data that can be used by healthcare facilities to identify areas for improvement and prevention, as well as healthcare consumers to make informed healthcare decisions.

Key findings described in this report include the following:

- All licensed ASCs in New Hampshire complied with the HAI mandatory reporting law in 2012.
- Overall, New Hampshire ASCs reported fewer surgical site infections following selected surgeries (hernia and open reduction of fracture) than expected based on national data; this difference was not statistically significant. Infections following breast procedures were higher than expected based on national data, this was also not statistically significant but highlights the importance of SSI surveillance and prevention.
- All of the 12 ASCs reporting surgical site infections have rates that are similar to national rates. However, this report highlights a few facilities that may need to focus more on SSI prevention efforts.
- The percentage of patients who received IV prophylactic antibiotic within the appropriate timeframe prior to surgery was 98.4%. Four ASCs had a significantly higher adherence rate for this measure ranging from 99.6% to 99.9%.
- Vaccination rates by ASC during the 2012–2013 influenza season ranged from 48.1% to 100.0%. The overall State rate was 83.5%, which represents a slight but insignificant increase from the 2011–2012 influenza season when the statewide vaccination rate was 80.6%.
- Ten NH ASCs had mandatory influenza vaccination policies for healthcare personnel during the 2012-2013 season. Overall, ASCs with vaccination policies had significantly higher rates of influenza vaccination as a whole (96.3%) than ASCs without mandatory policies (76.7%).

While this report only includes information on a subset of HAIs, the information provided can be used as an important indicator of healthcare quality and infection prevention efforts in New Hampshire ambulatory surgery centers. Although data in this report have not been independently validated to assess reporting accuracy, this process is ongoing.

Healthcare consumers can discuss the information provided in this report with their healthcare provider and should review Appendix 3 for information on what individual patients can do to prevent healthcare-associated infections.

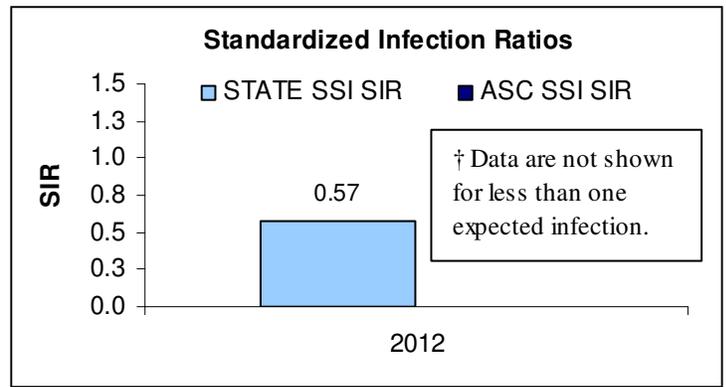
## **AMBULATORY SURGERY CENTER INDIVIDUAL REPORTS**

Because data must be broken down into categories for risk adjustment and because rates must be suppressed if data are too sparse, data that can be presented for New Hampshire facilities may be limited. Due to restrictions on presenting data if not enough procedures were performed, there are several ASCs for which facility-specific infections data cannot be presented. See technical notes for additional information on data restriction and presentation.



**ASC, DH MANCHESTER**  
 Manchester, NH  
 Not-for-profit  
 Free standing  
 # of Procedures: 5,579

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

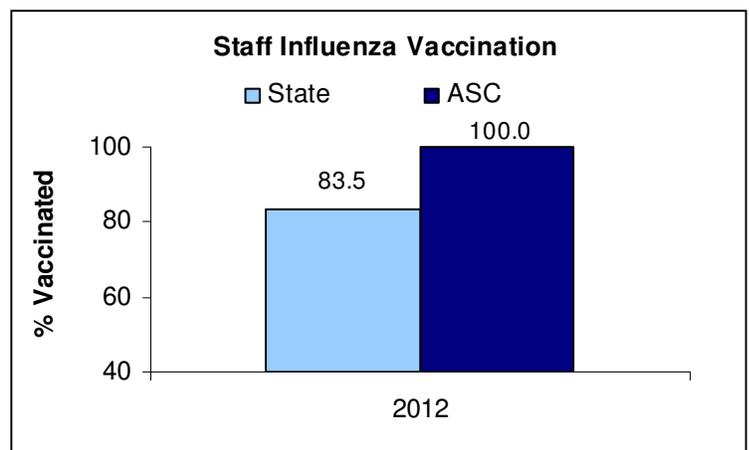
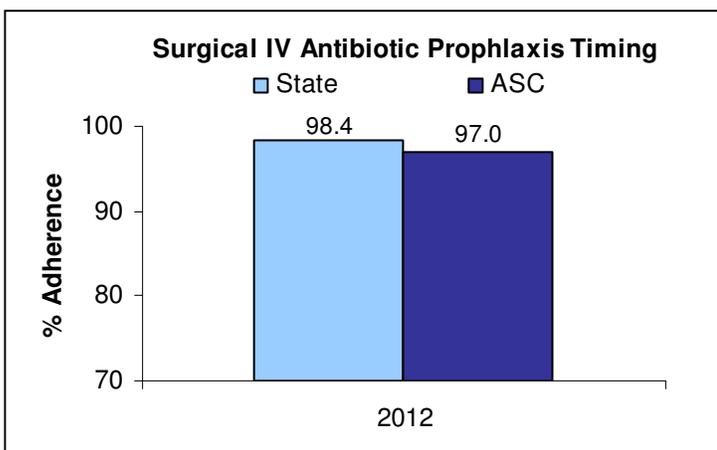
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	0	49	0.00	0.32	0.859	Similar
Risk Category 1, 2, 3	†	†	†	†	†	†
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	1	119	0.00	0.46	0.582	Similar
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	97.0	98.4	Lower
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	100.0	83.5	Higher

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# ATLANTIC PLASTIC SURGERY

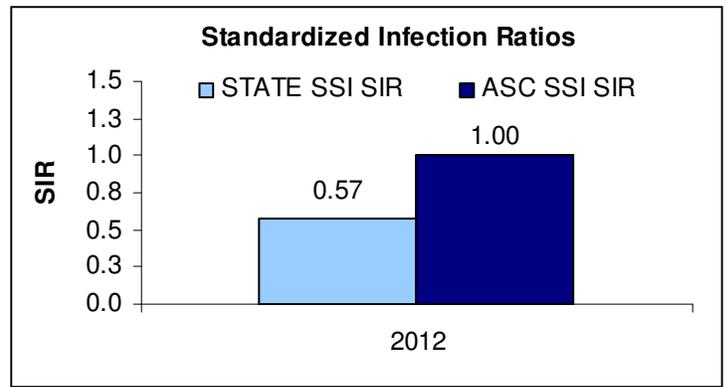
Portsmouth, NH

For-profit

Free standing

# of Procedures: 524

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	1	1.00	1.00	0.01 , 5.55	Similar

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

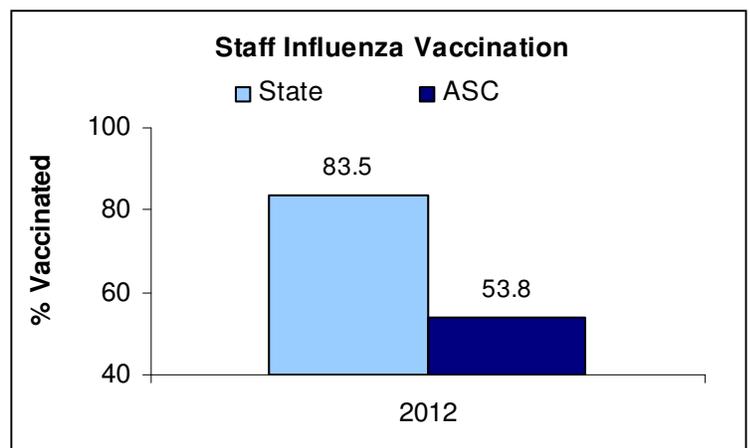
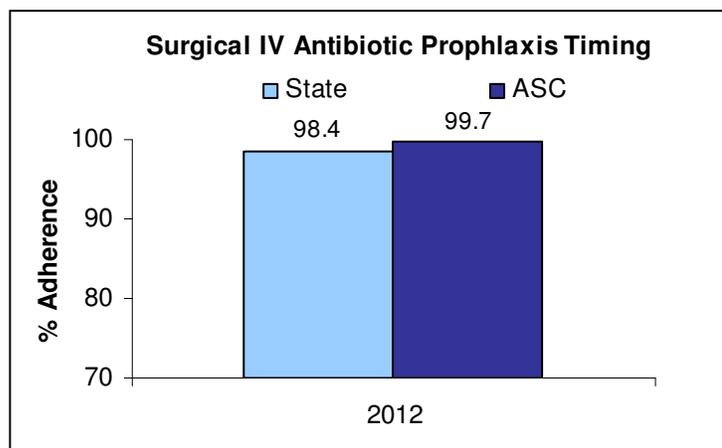
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	0	224	0.00	0.32	0.528	Similar
Risk Category 1, 2, 3	1	27	3.70	1.06	0.276	Similar
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	99.7	98.4	Similar
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	53.8	83.5	Lower

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



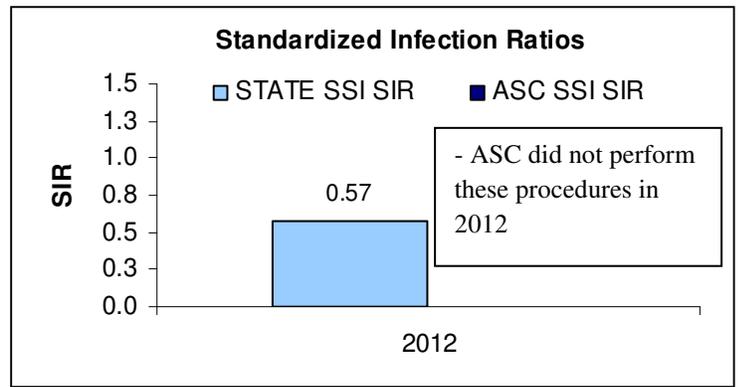
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# BARRINGTON SURGICAL CARE

Barrington, NH  
Private  
Free standing  
# of Procedures: 1125

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

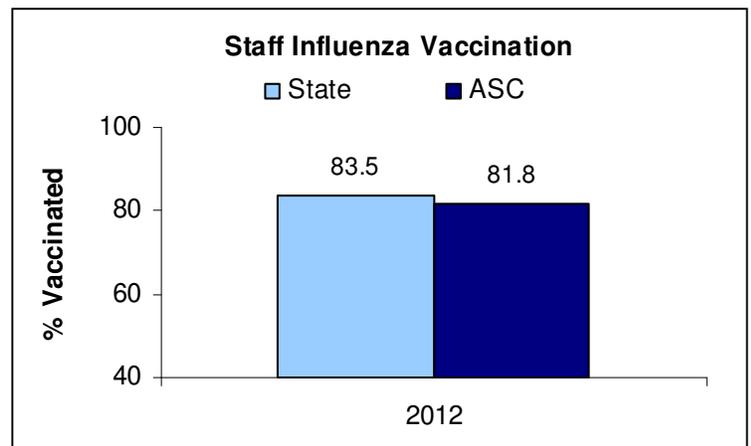
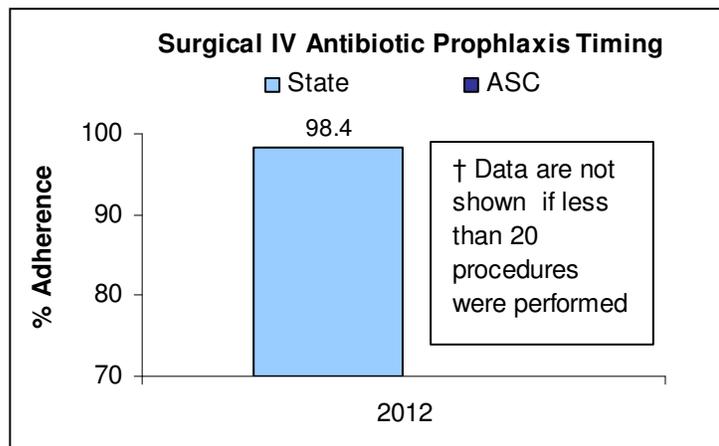
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	†	98.4	†
Measure	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	81.8	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012

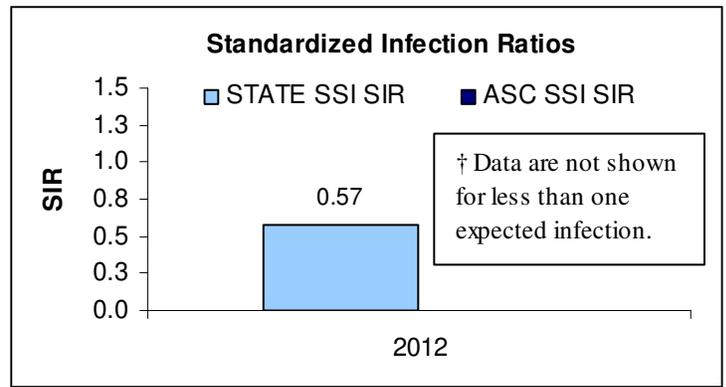


ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**BEDFORD ASC**  
 Bedford, NH  
 Physician owned  
 Free standing  
 # of Procedures: 6240

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

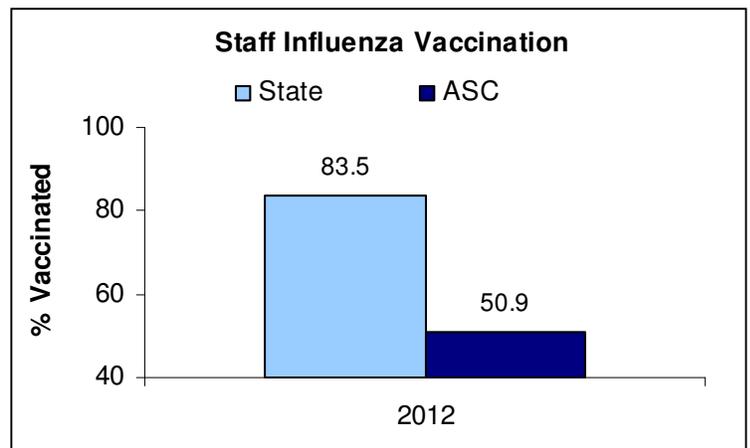
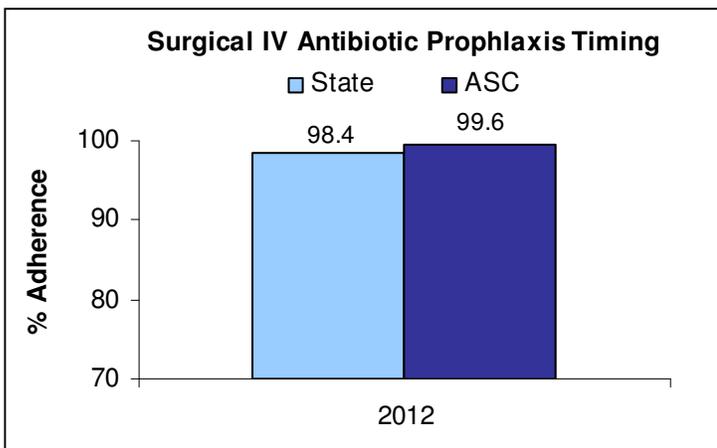
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	0	32	0.00	0.32	0.905	Similar
Risk Category 1, 2, 3	†	†	†	†	†	†
Hernia Procedures (HER)						
Risk Category 0, 1	†	†	†	†	†	†
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	0	44	0.00	0.28	0.887	Similar

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	99.6	98.4	Higher
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	50.9	83.5	Lower

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



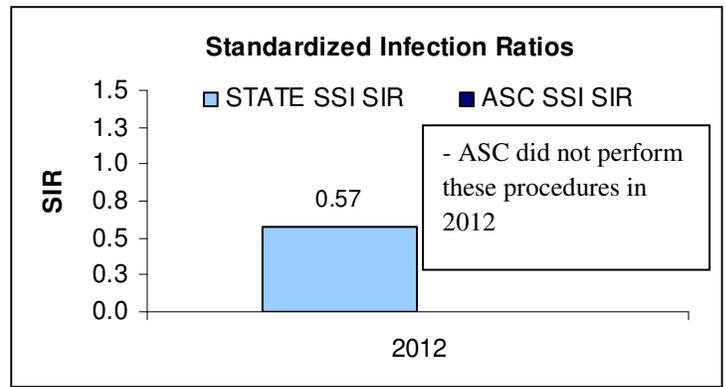
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**CARROLL COUNTY  
ENDOSCOPY**

Wolfeboro, NH  
Physician owned  
Free standing  
# of Procedures: 603

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

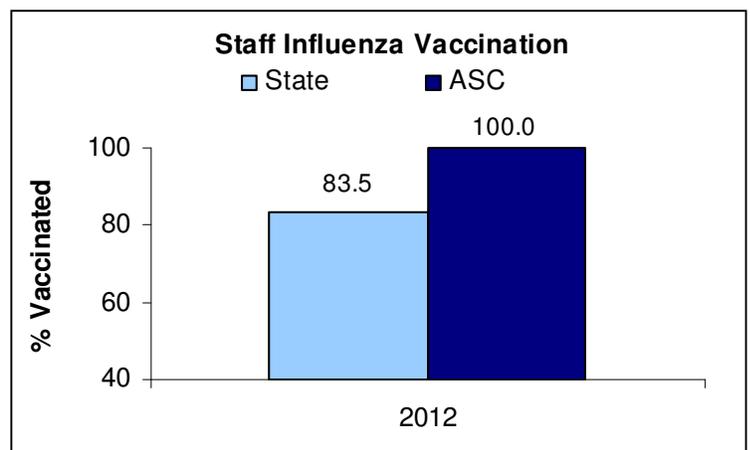
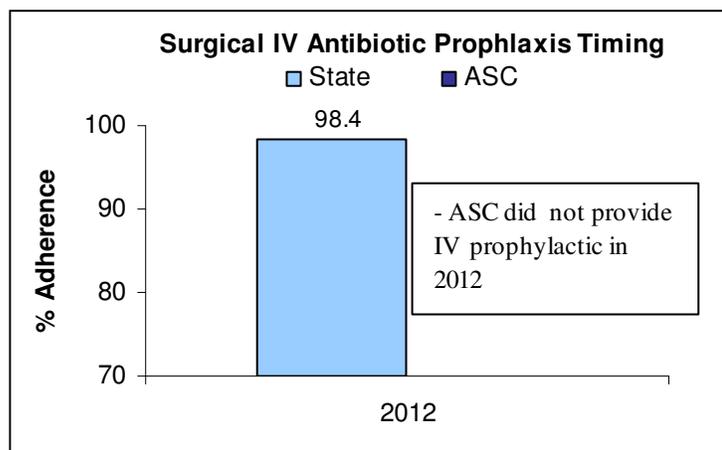
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	100	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



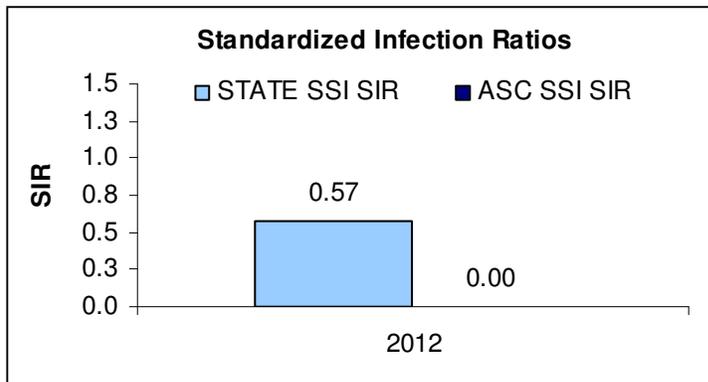
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# CENTER FOR OUTPATIENT CARE

Exeter, NH  
 Not-for-profit  
 Within a hospital  
 # of Procedures: 2700

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	0	1.82	0.00	-, 2.02	Similar

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

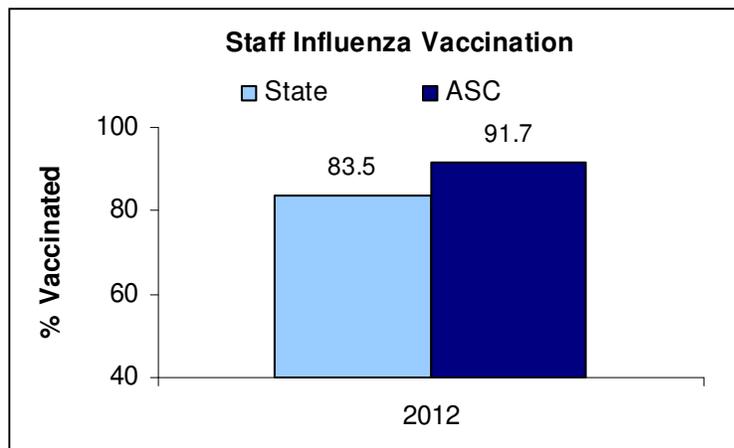
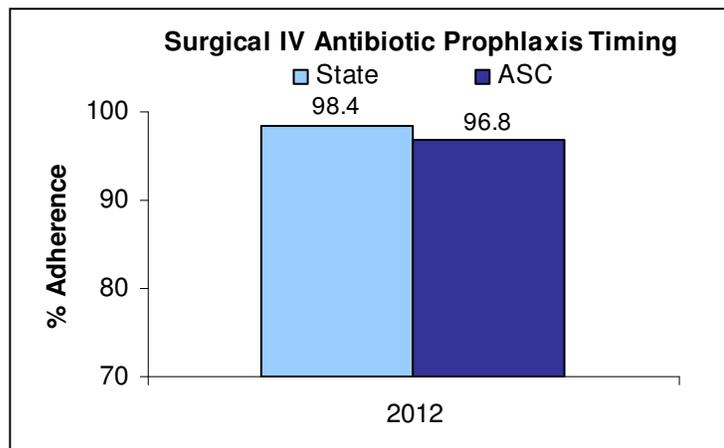
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	0	139	0.00	0.32	0.662	Similar
Risk Category 1, 2, 3	0	43	0.00	1.06	0.641	Similar
Hernia Procedures (HER)						
Risk Category 0, 1	0	175	0.00	0.46	0.452	Similar
Risk Category 1, 2	†	†	†	†	†	†
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	0	27	0.00	0.28	0.929	Similar

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	96.8	98.4	Lower
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	91.7	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



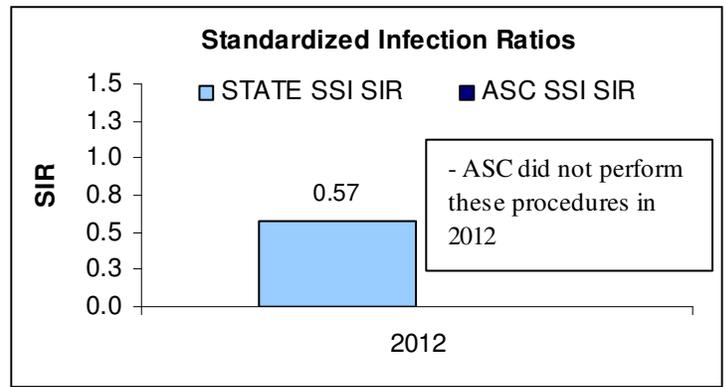
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# CENTER FOR PAIN SOLUTIONS

Nashua, NH  
 Physician owned  
 Free standing  
 # of Procedures: 2164

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

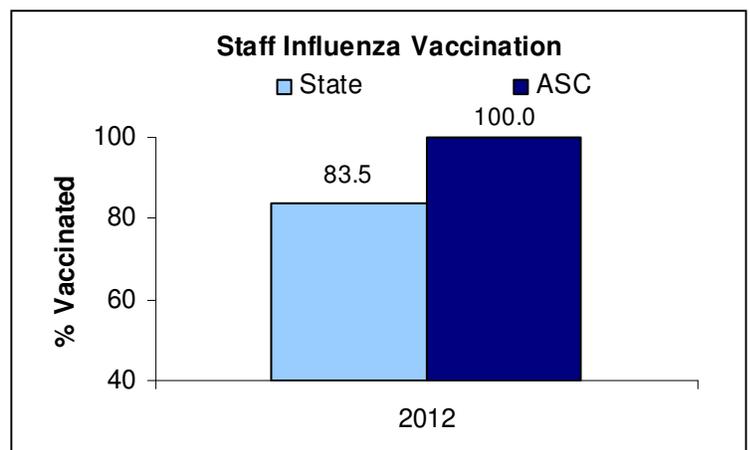
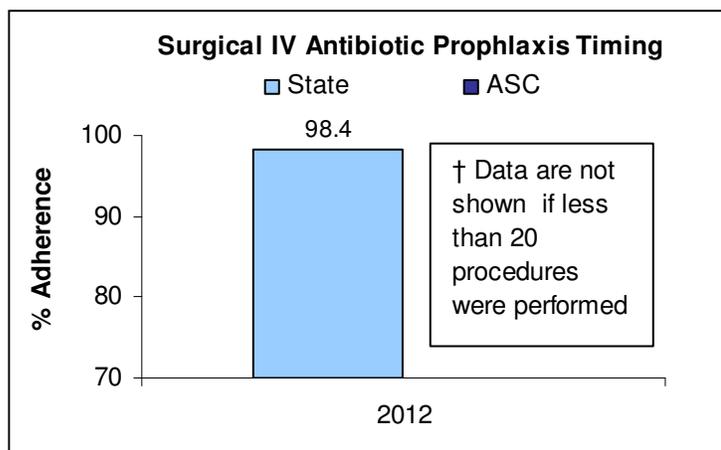
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	†	98.4	†
Measure	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	100.0	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012

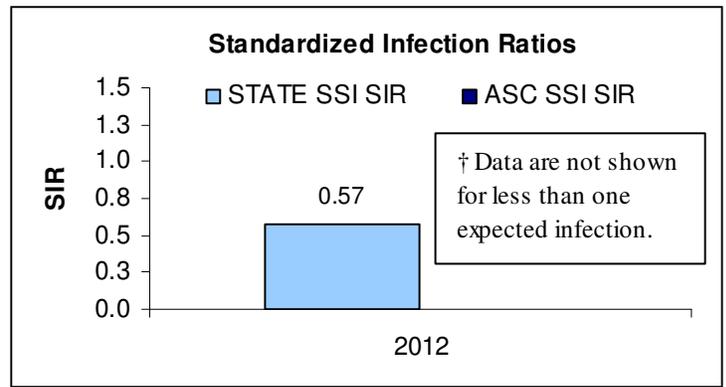


ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**CONCORD ASC**  
 Concord, NH  
 Not-for-profit  
 Free standing  
 # of Procedures: 2325

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

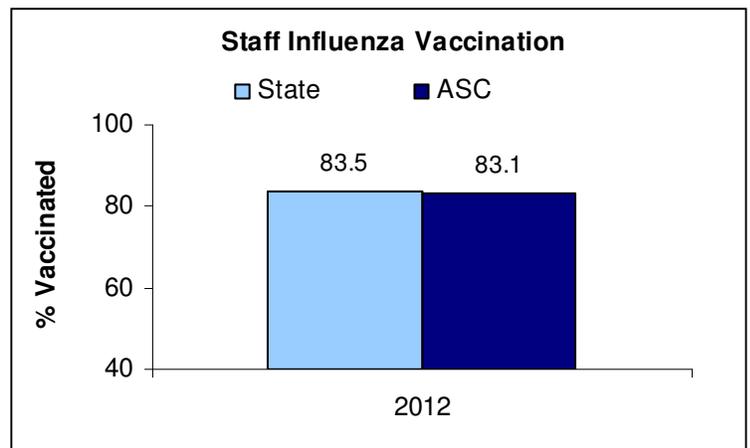
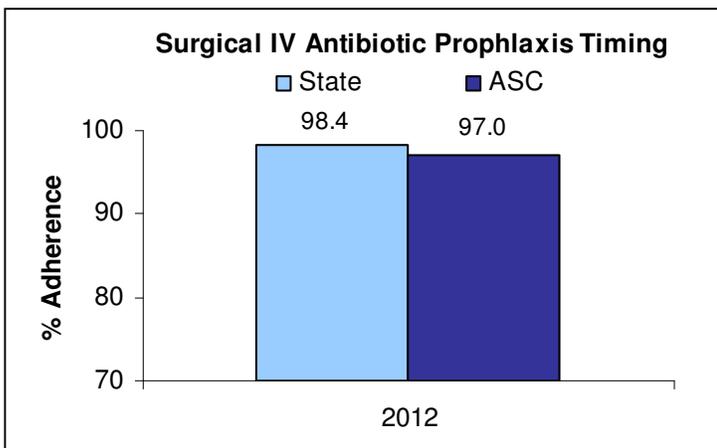
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	0	79	0	0.32	0.786	Similar
Risk Category 1, 2, 3	0	40	0	1.06	0.661	Similar
Hernia Procedures (HER)						
Risk Category 0, 1	†	†	†	†	†	†
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	97.0	98.4	Lower
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	83.1	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# CONCORD ENDOSCOPY

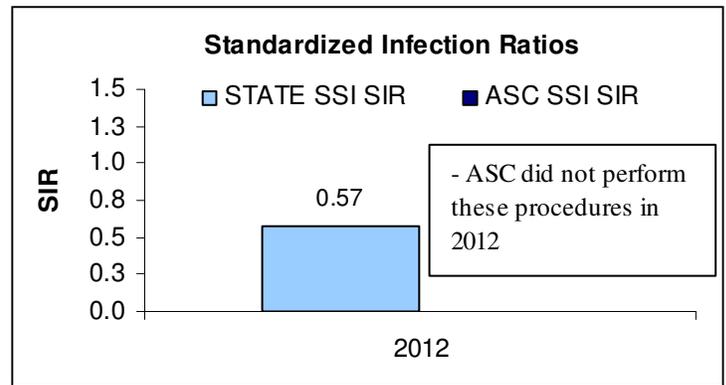
Concord, NH

Joint venture

Free standing

# of Procedures: 5832

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

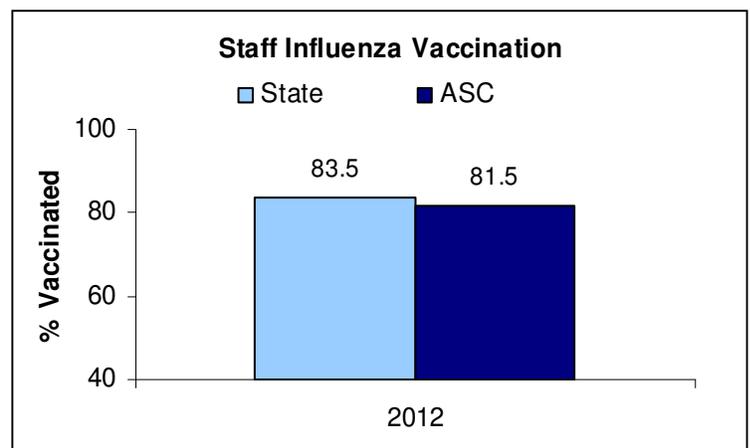
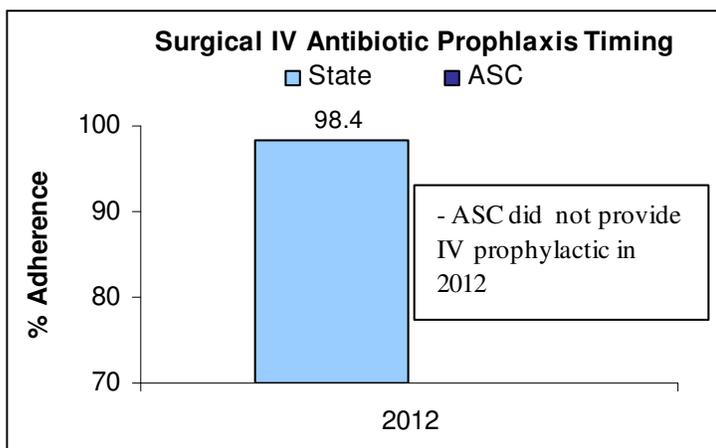
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	81.5	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection

BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# CONCORD EYE SURGERY

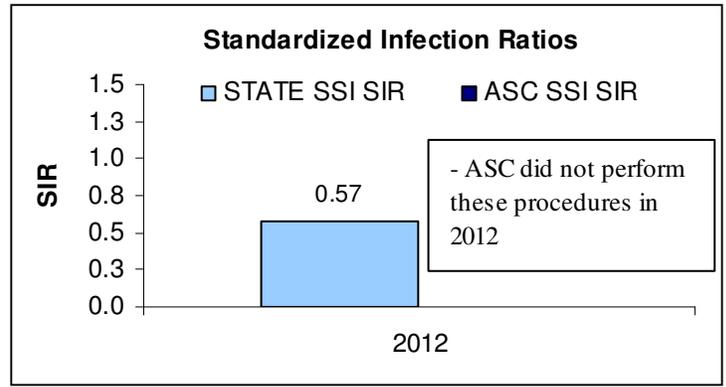
Concord, NH

Medical group

Free standing

# of Procedures: 2138

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

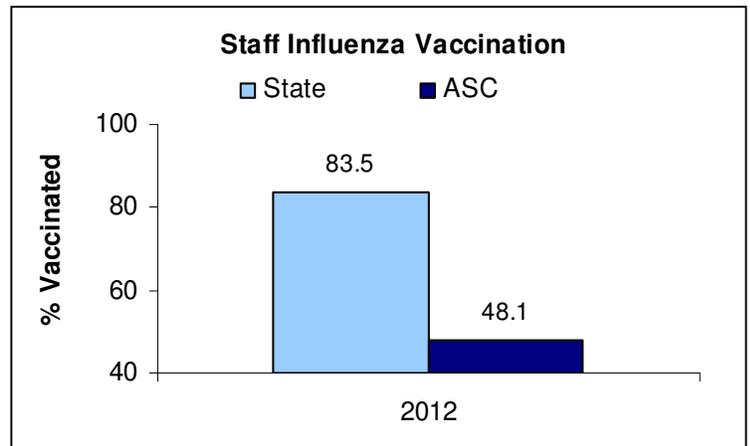
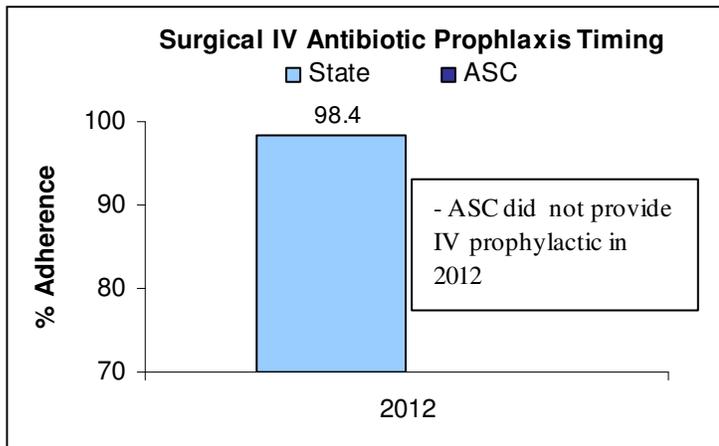
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	48.1	83.5	Lower

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



## DH, NASHUA ENDOSCOPY

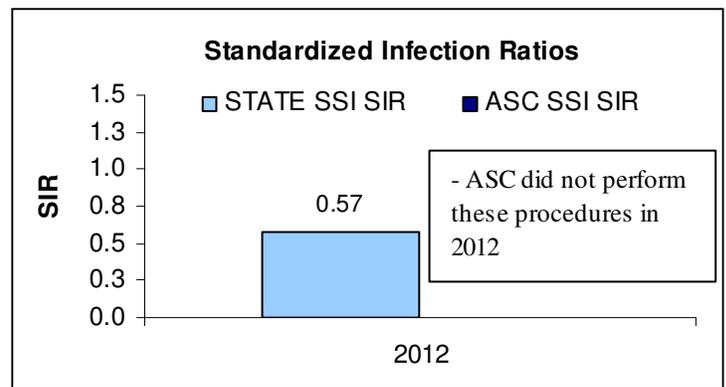
Nashua, NH

Not-for-profit

Free standing

# of Procedures: 2856

### 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

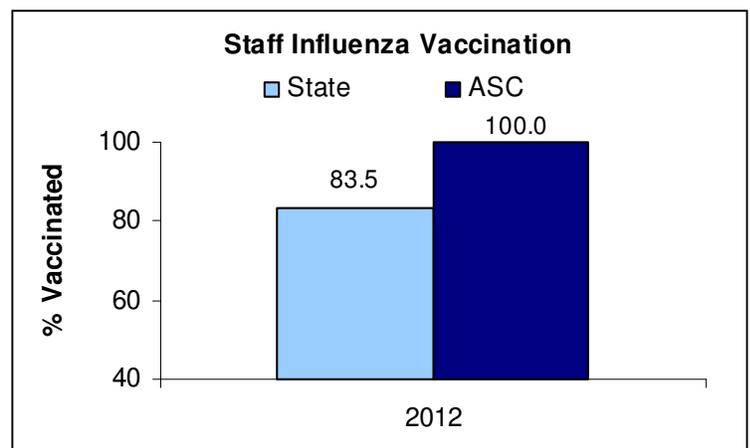
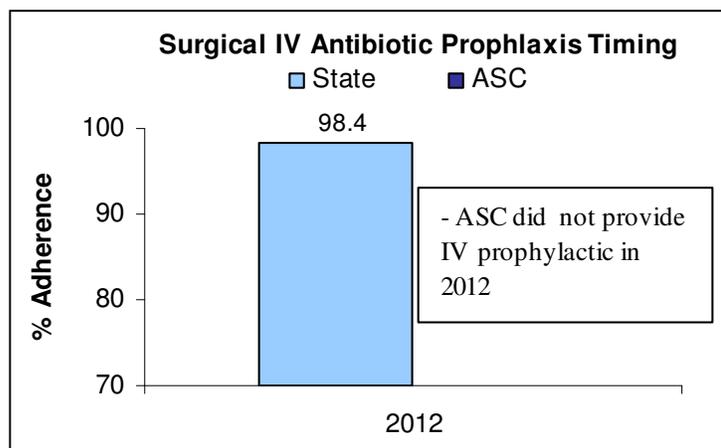
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	100.0	83.5	Higher

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection

BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**DR. O'CONNELLS PAINCARE CENTERS, MERRIMACK**

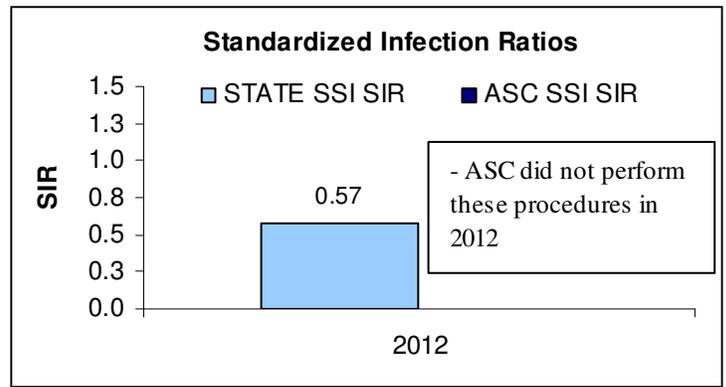
Merrimack, NH

For profit

Free standing

# of Procedures: 1,748

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

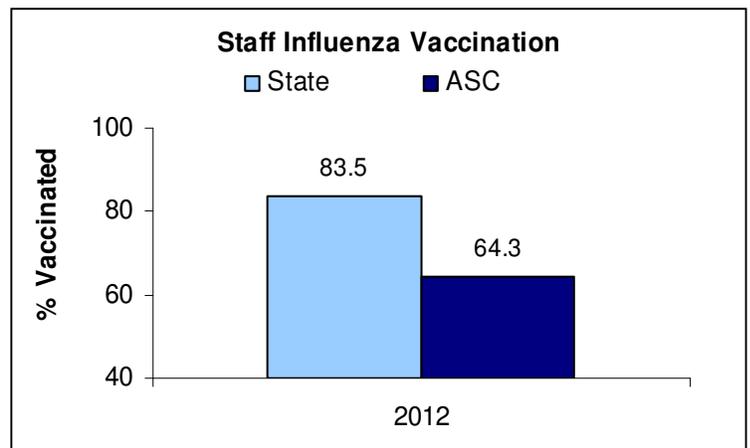
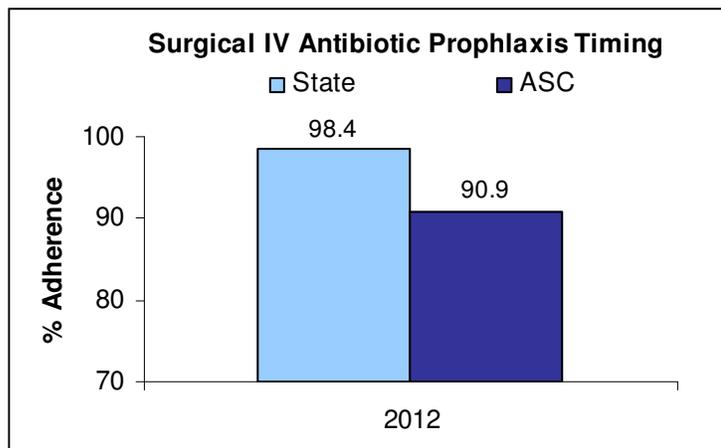
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	90.9	98.4	Similar
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	64.3	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**DR. O'CONNELLS PAINCARE CENTERS, SOMERSWORTH**

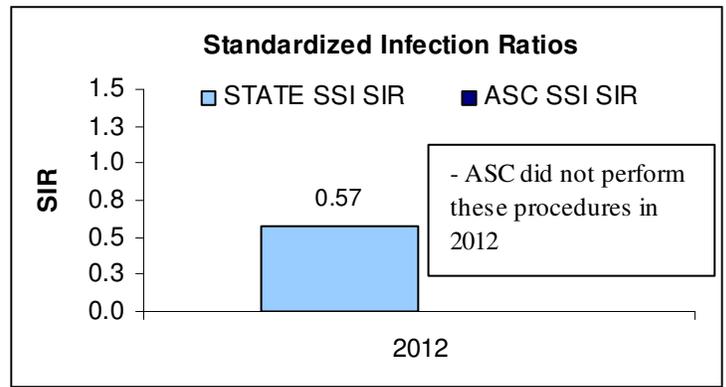
Somersworth, NH

For profit

Free standing

# of Procedures: 4,163

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

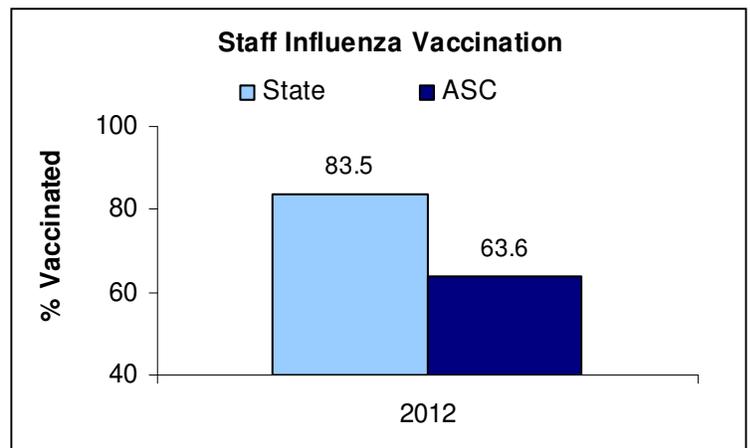
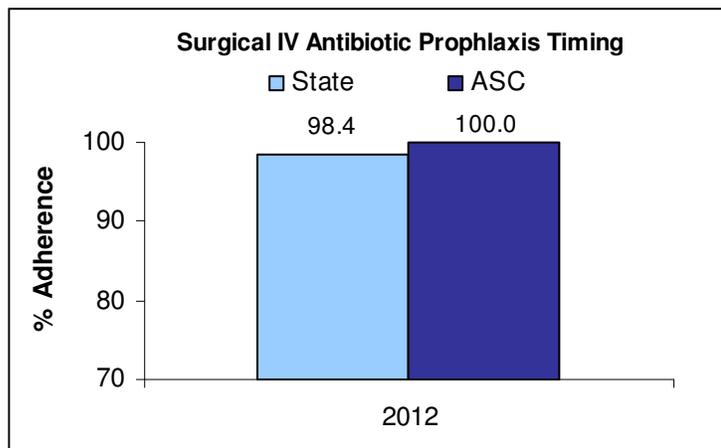
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	100.0	98.4	Similar
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	63.6	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**ELLIOT 1-DAY SURGERY CENTER, RIVERS EDGE**

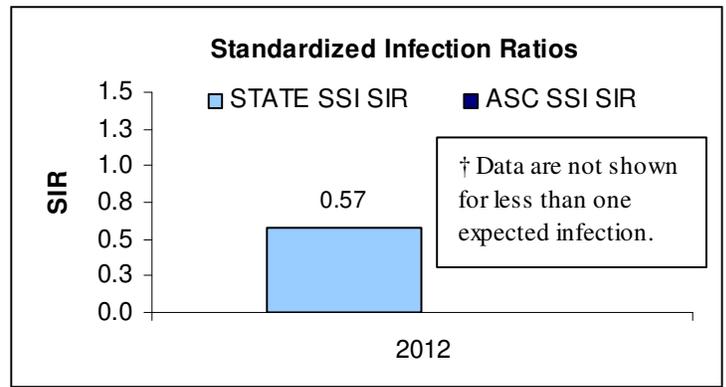
Manchester, NH

For profit

Free standing

# of Procedures: 4,793

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

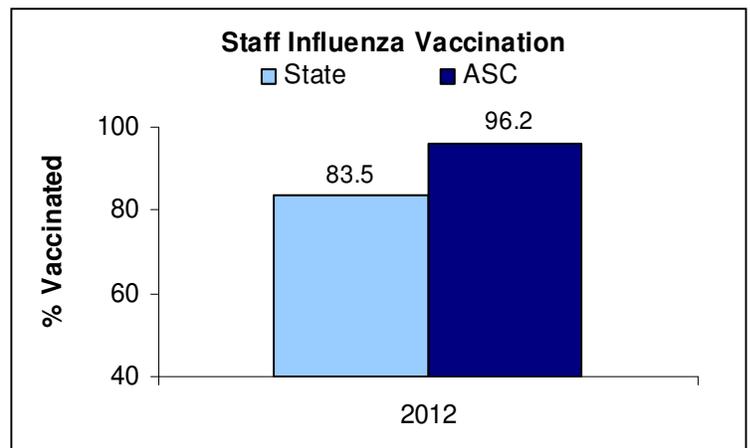
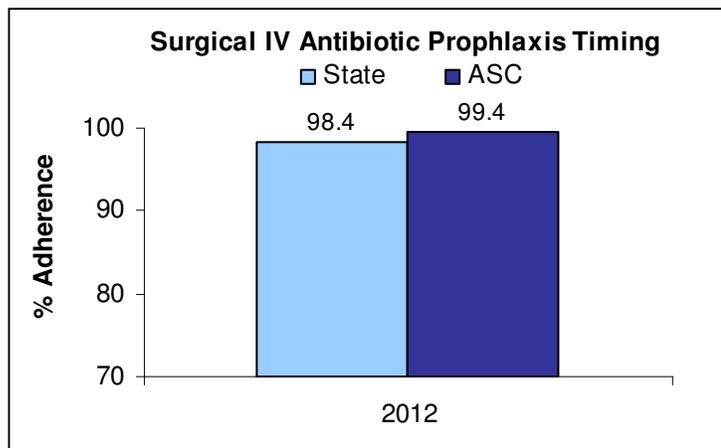
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	2	91	2.20	0.32	0.059	Similar
Risk Category 1, 2, 3	†	†	†	†	†	†
Hernia Procedures (HER)						
Risk Category 0, 1	0	34	0	0.46	0.856	Similar
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	†	†	†	†	†	†

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	99.4	98.4	Higher
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	96.2	83.5	Higher

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



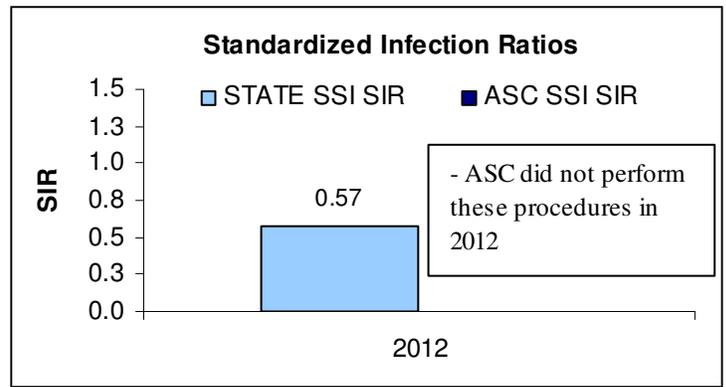
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**ELLIOT ENDOSCOPY,  
RIVERS EDGE**

Manchester, NH  
For profit  
Free standing  
# of Procedures: 4,272

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

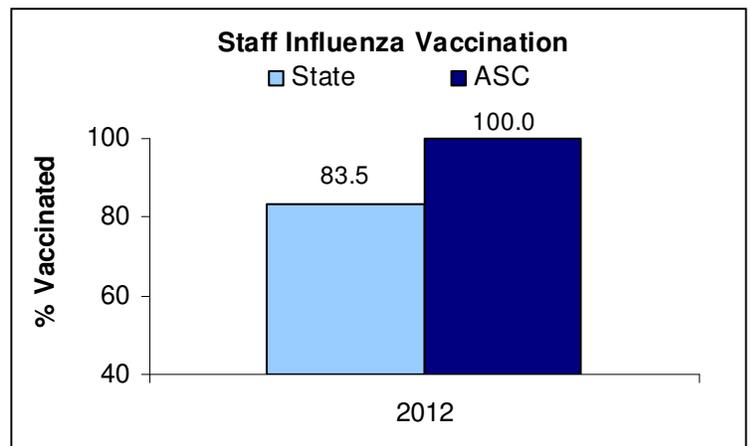
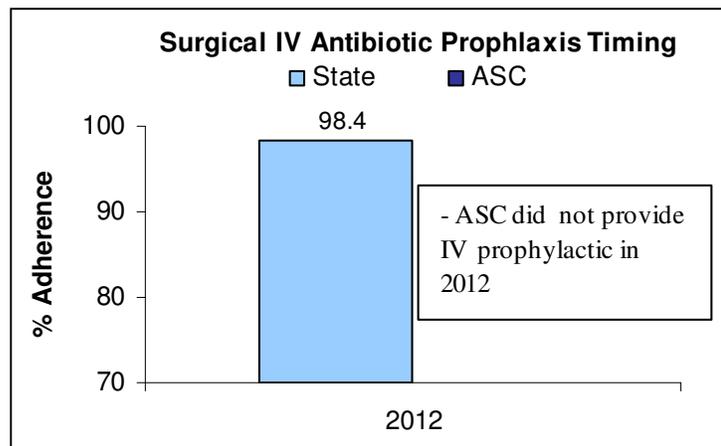
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	100.0	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# HILLSIDE SURGICAL CENTER

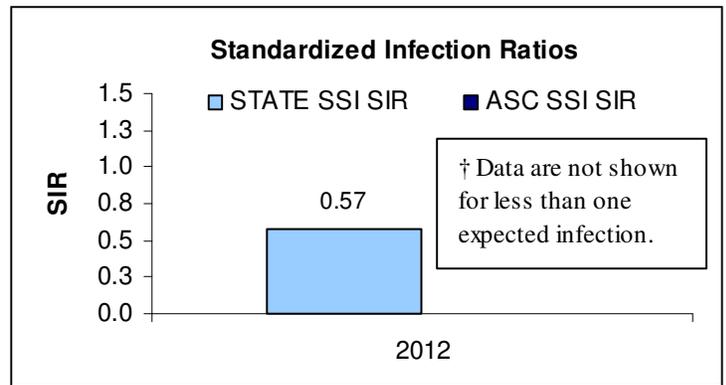
Gilford, NH

For profit

Free standing

# of Procedures: 2,312

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

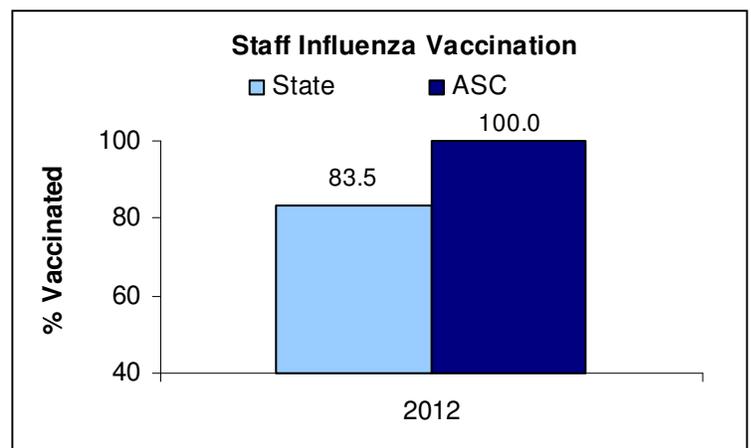
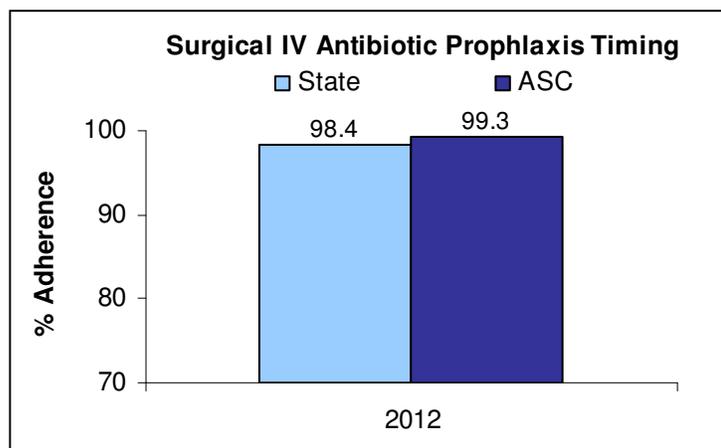
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	0	29	0	0.28	0.924	Similar

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	99.3	98.4	Similar
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	100.0	83.5	Higher

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



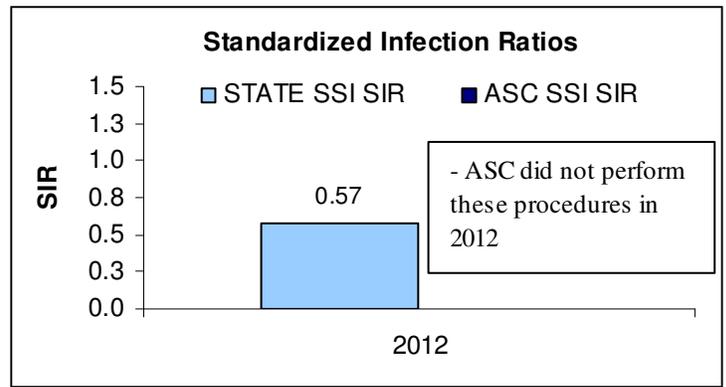
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection

BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**LACONIA CLINIC, ASC**  
 Laconia, NH  
 Not-for-profit  
 Free standing  
 # of Procedures: 1,453

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

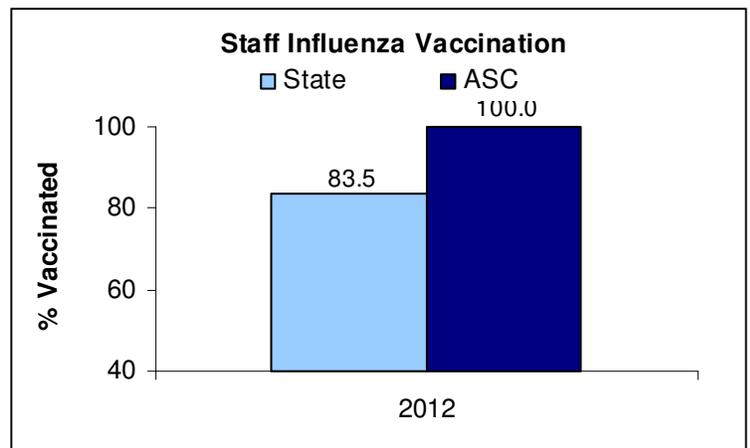
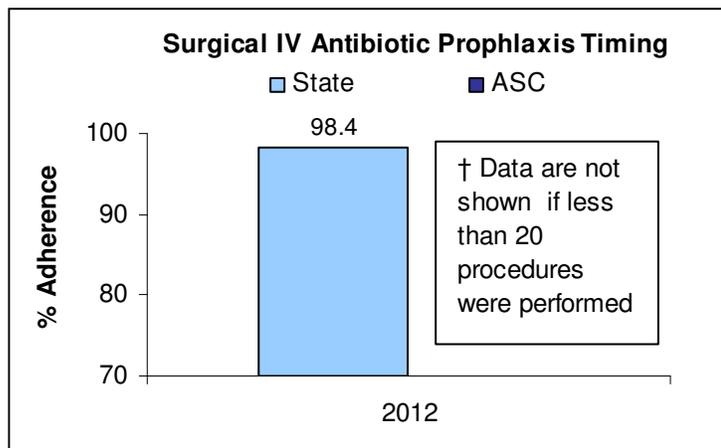
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	†	98.4	†
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	100.0	83.5	Higher

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012

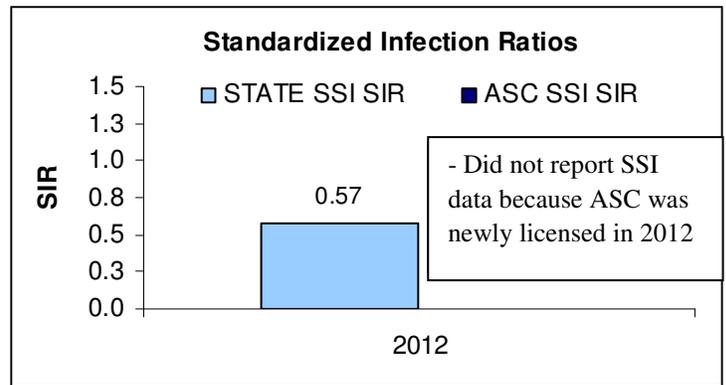


ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**NASHUA ASC**  
 Nashua, NH  
 Physician owned  
 Free standing  
 # of Procedures: Licensed in 2012

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

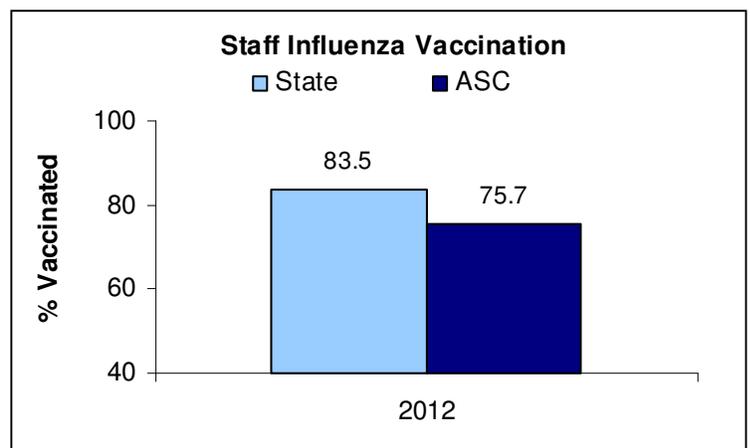
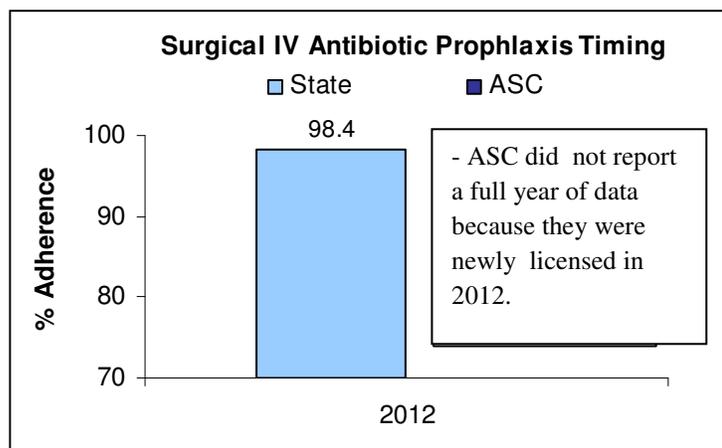
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	-	-	-	0.28	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	75.7	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



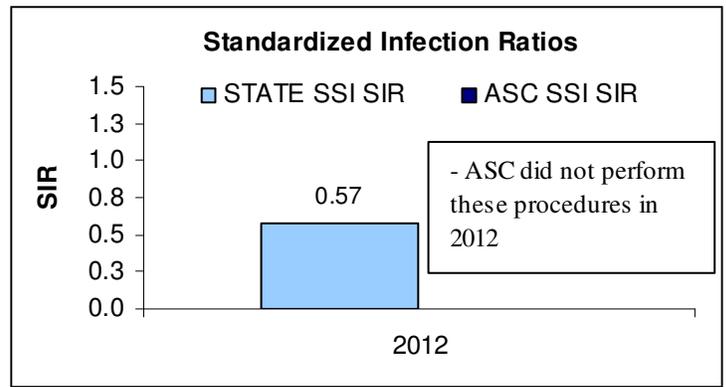
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**NASHUA EYE SURGERY CENTER / NOVAMED**

Nashua, NH  
 Corporate/Physician Owned  
 Free standing  
 # of Procedures: 347

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

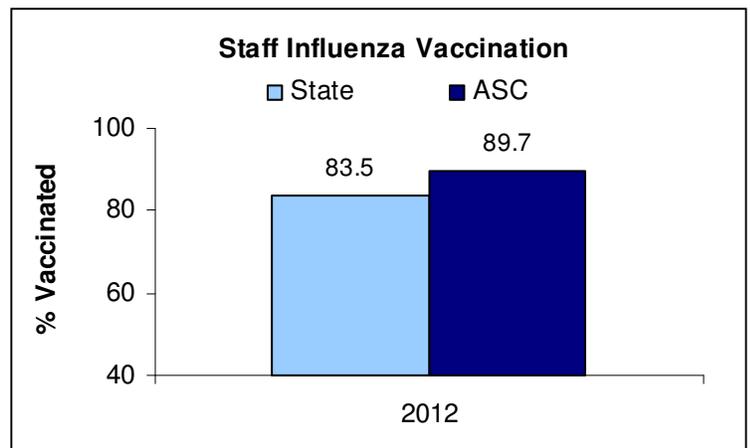
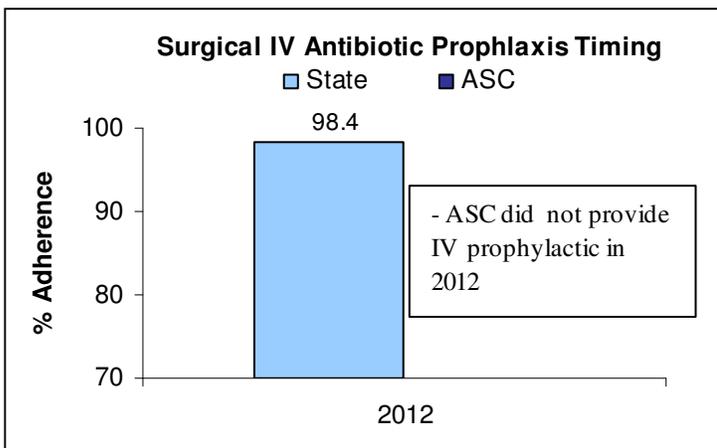
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	89.7	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



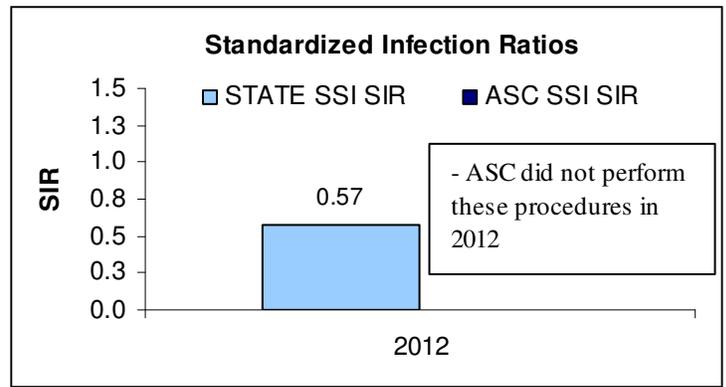
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**NH EYE SURGICENTER / NOVAMED**

Bedford, NH  
 Physician owned  
 Free standing  
 # of Procedures: 1,242

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

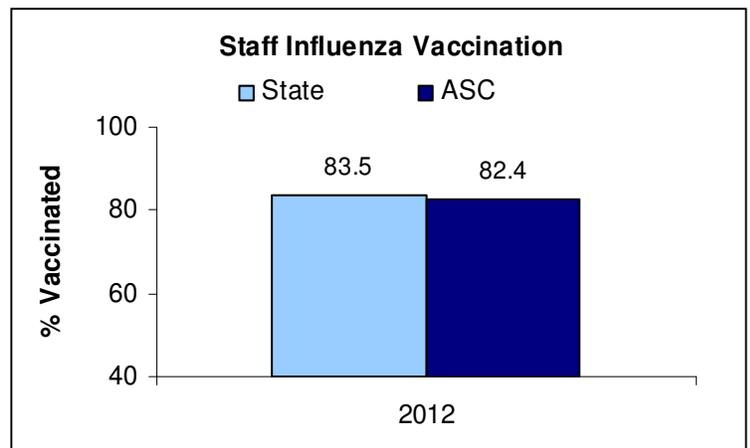
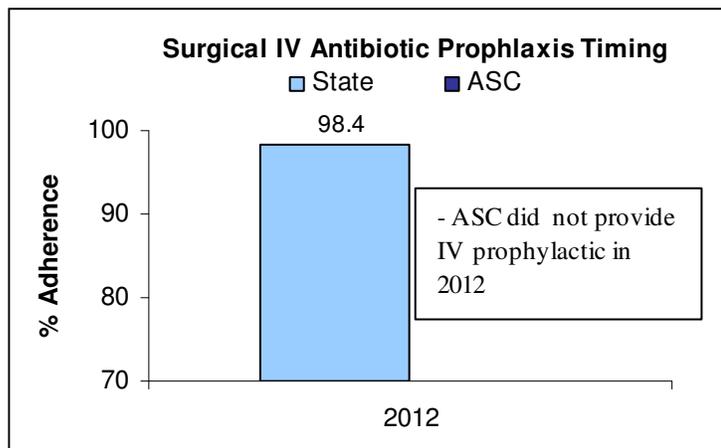
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	82.4	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



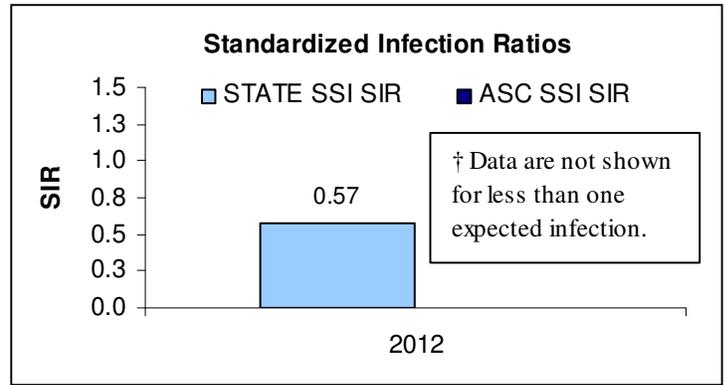
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# NORTHEAST SURGICAL CARE

Newington, NH  
 Physician owned  
 Free standing  
 # of Procedures: 1,859

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

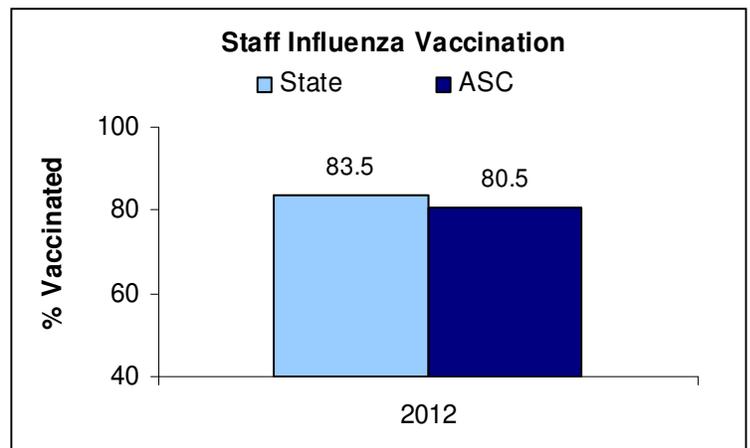
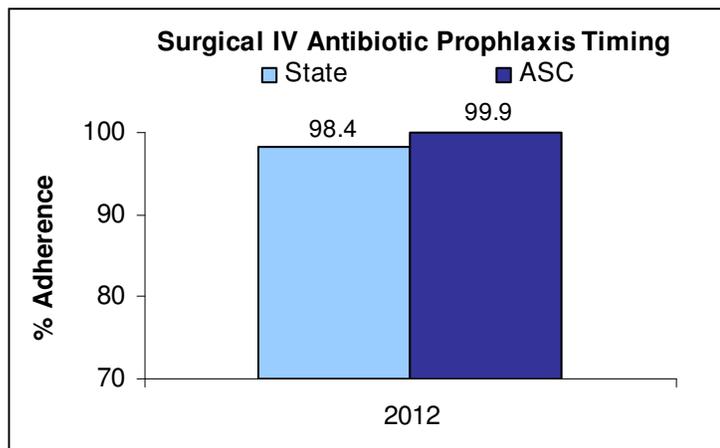
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	0	49	0.00	0.28	0.876	Similar

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	99.9	98.4	Higher
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	80.5	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



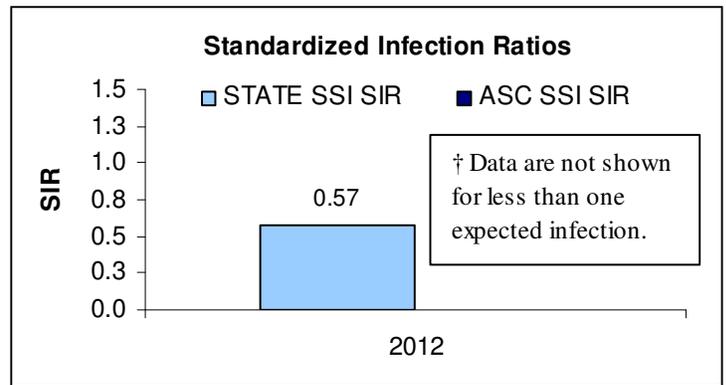
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# ORTHOPAEDIC SURGERY CENTER

Concord, NH  
 Not-for-profit  
 Free standing  
 # of Procedures: 470

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

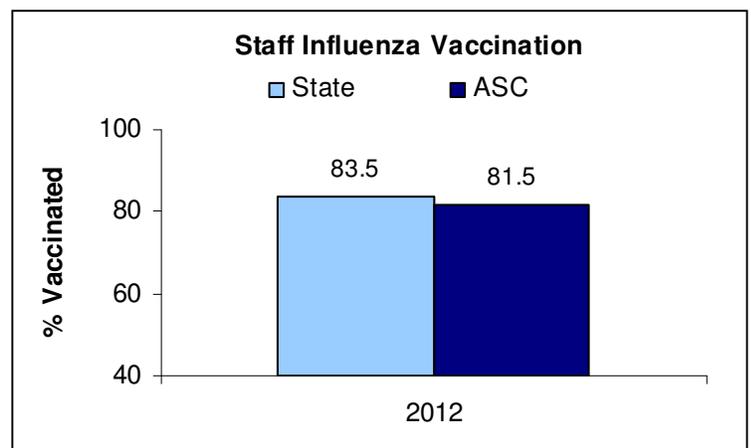
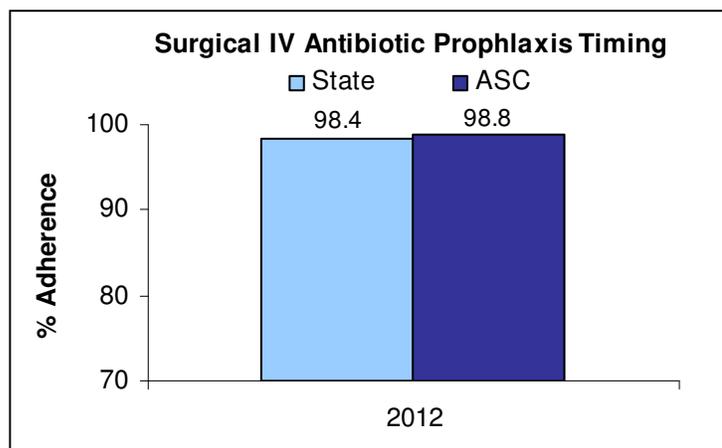
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	0	75	0	0.28	0.819	Similar

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	98.8	98.4	Similar
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	81.5	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



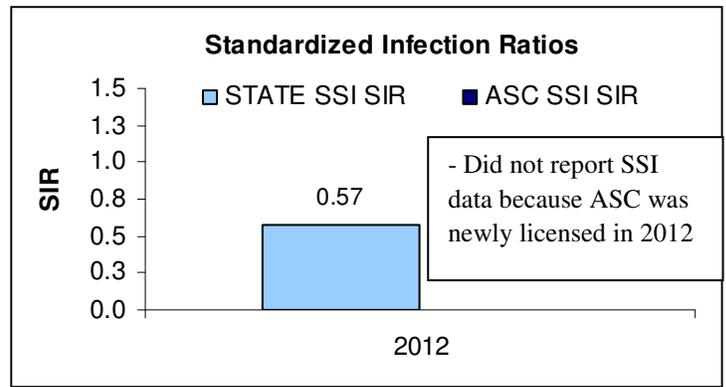
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



# ORTHOPAEDIC SURGERY CENTER, DERRY

Derry, NH  
 Not-for-profit  
 Free standing  
 # of Procedures: Licensed in 2012

## 2012 HAI ASC DATA REPORT



### STANDARDIZED INFECTION RATIOS (SIR)

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

### PROCEDURE SPECIFIC RATES BY RISK CATEGORY

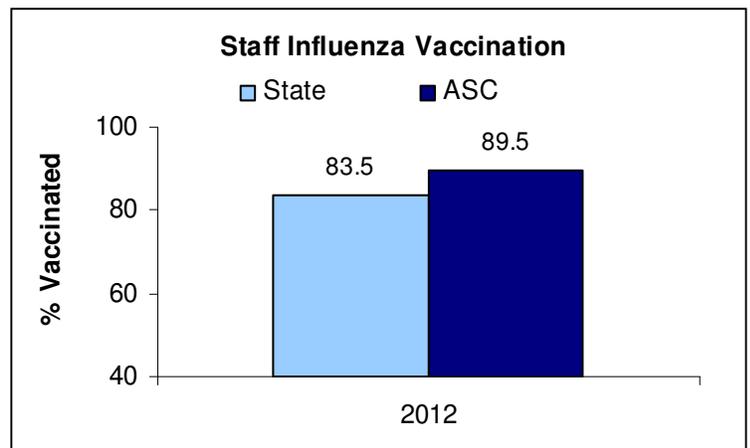
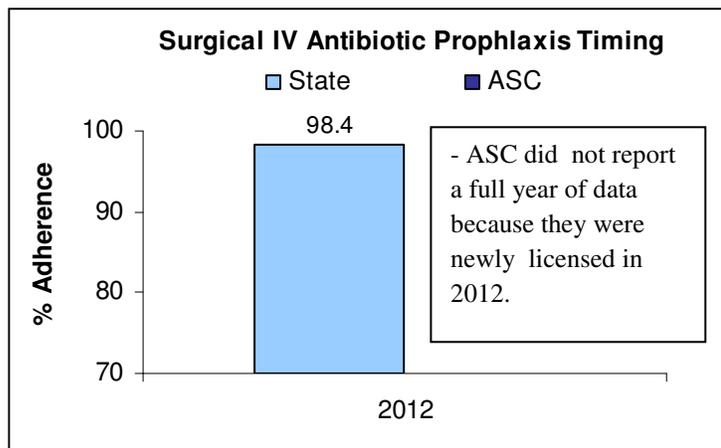
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

### PROCESS MEASURES

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	89.5	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



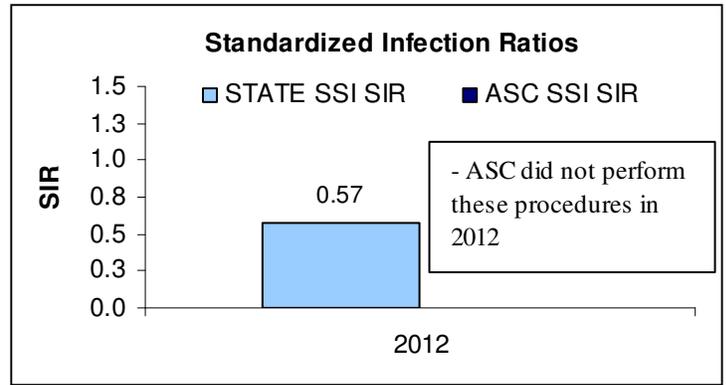
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**PARKLAND ENDOSCOPY CENTER**

Derry, NH  
For-profit  
Free-standing  
# of Procedures: 5,111

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	-	-	-	-	-

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

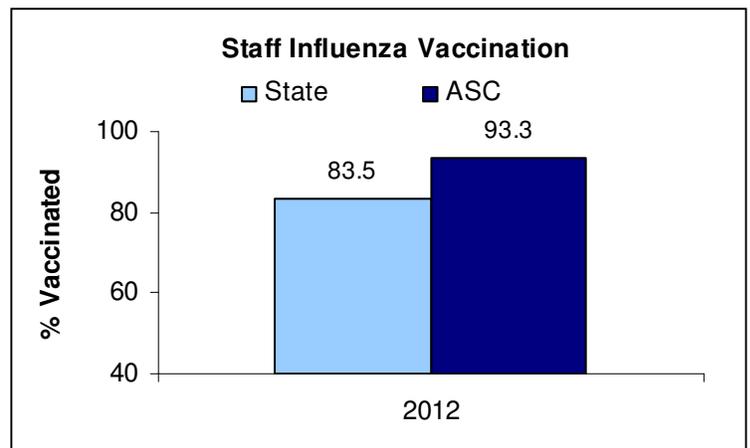
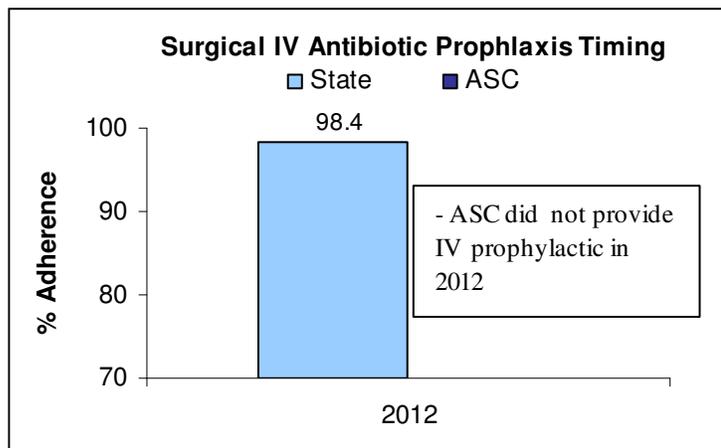
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	-	98.4	-
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	93.3	83.5	Similar

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



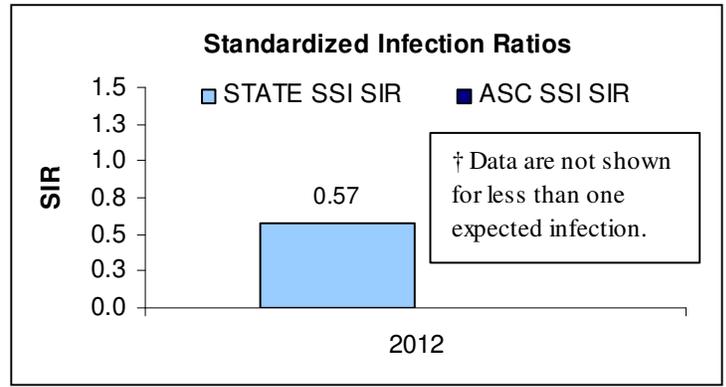
ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**PORTSMOUTH REGIONAL  
ASC**

Portsmouth, NH  
Physician owned  
Free standing  
# of Procedures: 3,031

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

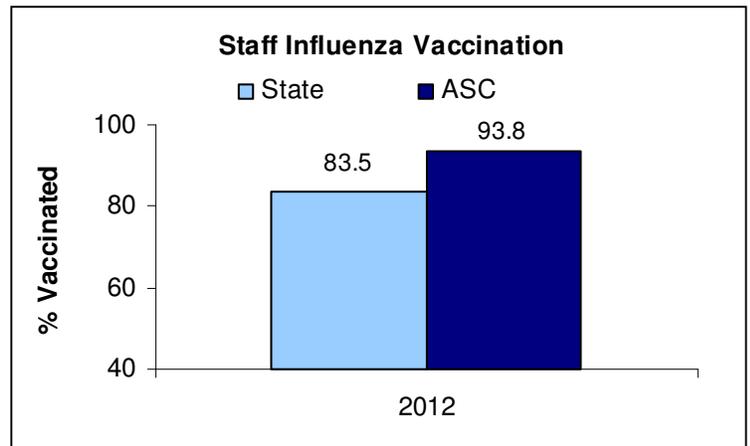
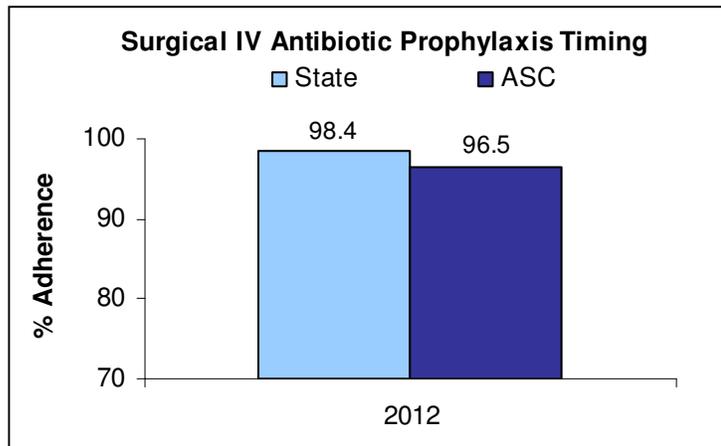
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	-	-	-	-	-	-
Risk Category 1, 2, 3	-	-	-	-	-	-
Hernia Procedures (HER)						
Risk Category 0, 1	-	-	-	-	-	-
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	†	†	†	†	†	†

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	96.5	98.4	Lower
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	93.8	83.5	Higher

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**SALEM SURGERY CENTER**

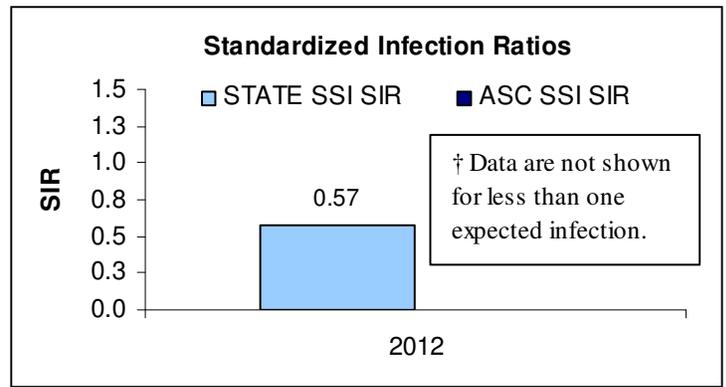
Salem, NH

For-profit

Free standing

# of Procedures: 3,494

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

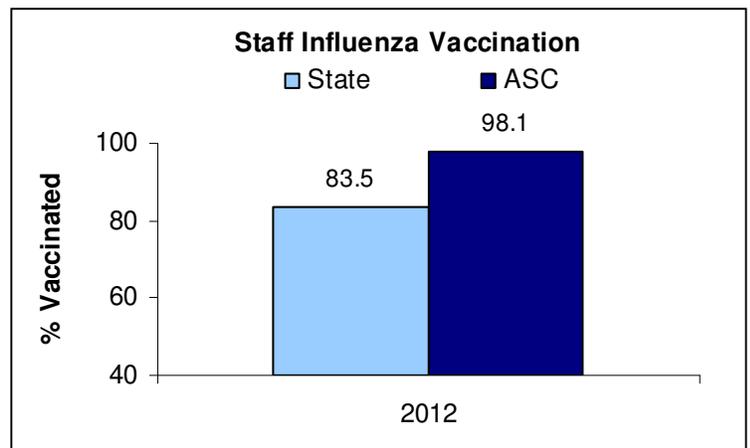
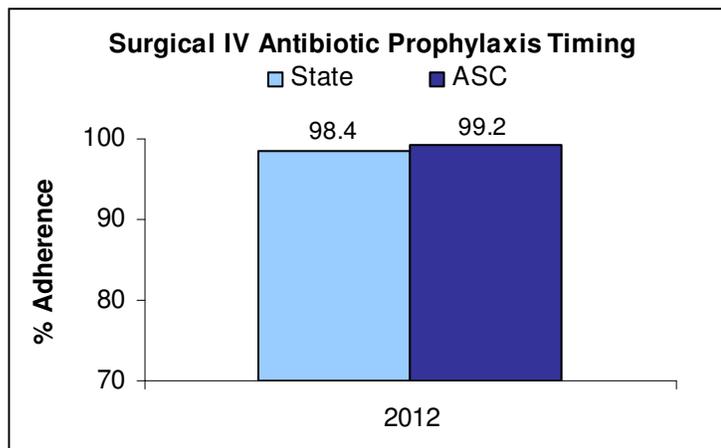
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
<b>Breast Procedures (BRST)</b>						
Risk Category 0	1	145	0.69	0.32	0.436	Similar
Risk Category 1, 2, 3	†	†	†	†	†	†
<b>Hernia Procedures (HER)</b>						
Risk Category 0, 1	0	34	0	0.46	0.856	Similar
Risk Category 1, 2	-	-	-	-	-	-
<b>Open Reduction of Fracture Procedures (FX)</b>						
Risk Category 0, 1, 2, 3	†	†	†	†	†	†

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	99.2	98.4	Similar
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	98.1	83.5	Higher

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012

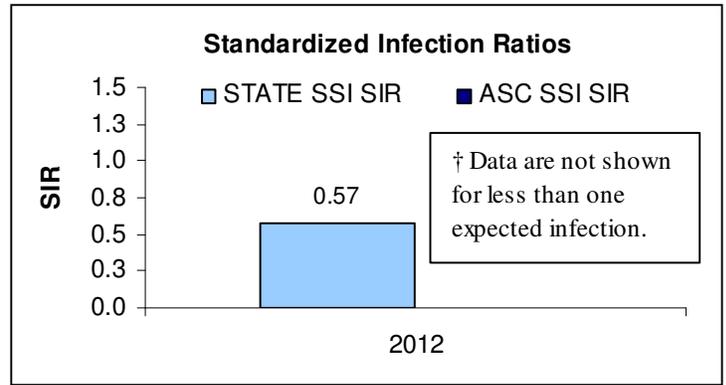


ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous



**STRATHAM ASC**  
 Stratham, NH  
 Physician owned  
 Free standing  
 # of Procedures: 2,489

**2012 HAI ASC DATA REPORT**



**STANDARDIZED INFECTION RATIOS (SIR)**

Measure	Observed Infections	Expected Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Comparison to Expected
Overall SSI	†	†	†	†	†

**PROCEDURE SPECIFIC RATES BY RISK CATEGORY**

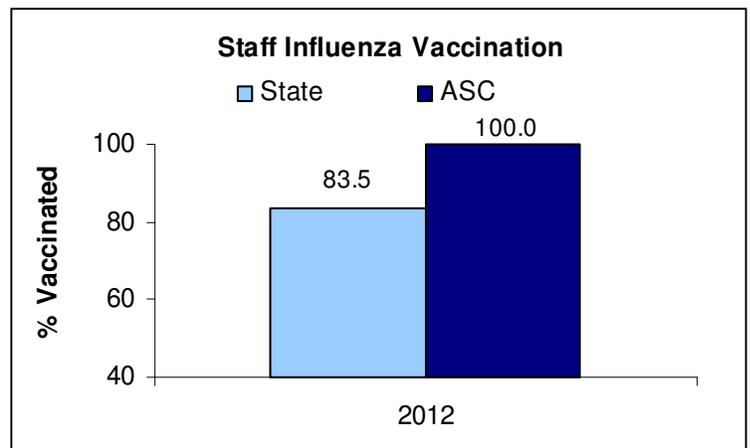
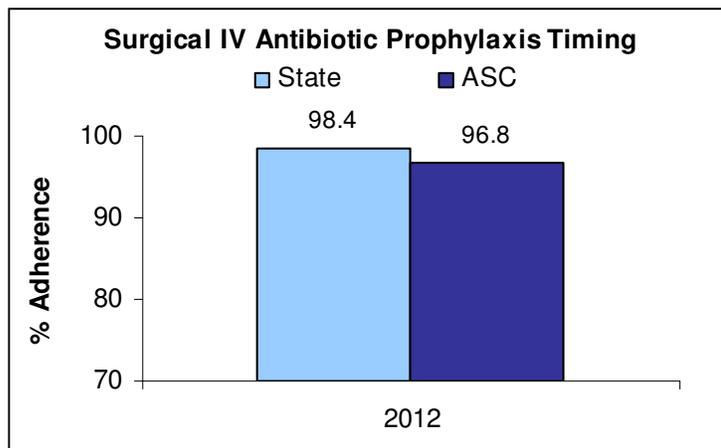
Risk Category	Infections	Procedures	Hospital Rate	National Rate	P-Value	ASC rate Compared to National Rate
Breast Procedures (BRST)						
Risk Category 0	0	74	0	0.32	0.797	Similar
Risk Category 1, 2, 3	†	†	†	†	†	†
Hernia Procedures (HER)						
Risk Category 0, 1	†	†	†	†	†	†
Risk Category 1, 2	-	-	-	-	-	-
Open Reduction of Fracture Procedures (FX)						
Risk Category 0, 1, 2, 3	-	-	-	-	-	-

†Data are not shown when fewer than 20 procedures were performed - Facility did not perform any procedures in this category for 2012

**PROCESS MEASURES**

Measure	Percent Adherence %	State Percentage %	Comparison to State Percentage
IV Antibiotic Prophylactic Timing	96.8	98.4	Similar
	Percent Vaccinated %	State Percentage %	Comparison to State Percentage
Staff Influenza Vaccination	100.0	83.5	Higher

†Data are not shown when fewer than 20 patients received IV prophylactic in 2012 - Facility did not provide IV prophylactic for 2012



ASC: Ambulatory Surgery Center ICPs: Infection Control Practitioners SSI: Surgical site infection  
 BRST: Breast procedures HER: Hernia procedures FX: Open Reduction of Fracture Procedures IV: Intravenous

## APPENDIX 1: Technical Notes

1. Data in this report were extracted from NHSN on 07/08/2013. Changes or new infections reported by ASCs after this date are not reflected in this report.
2. The SSI national comparison data used in this report come from the 2009 NHSN Report. The 2009 NHSN report summarizes data reported to NHSN from 2006–2008. These report are available at:
  - a. <http://www.cdc.gov/nhsn/PDFs/dataStat/2009NHSNReport.pdf>
3. Rate data were risk-adjusted and were only presented if appropriately risk-adjusted as follows:
  - a. SSI: Rate data must be broken down by both type of procedure and risk category. Data can be aggregated only if the procedure and risk category are the same.
4. Rates for any grouping were not presented if data were insufficient to generate a stable rate.
  - a. SSI: There must be at least 20 procedures in the denominator to present a rate.
5. Standardized Infection Ratios for any grouping were not presented if less than one infection was expected.
6. All confidence intervals presented in this report are 95% confidence intervals. A confidence interval is a measure of certainty (usually with 95% confidence) of an estimate (such as a percentage). Because we can never obtain a facility’s true “population” data (e.g., all patients for all time), we use statistical procedures to “estimate” various measurements using “sample” data. Since estimates have “variability” we use 95% confidence limits to describe the variability around the estimate. The confidence interval (CI) gives us the range within which the TRUE value will fall 95% of the time, assuming that the sample data are reflective of the true population. If the confidence intervals for the two rates overlap, then it is reasonably possible that the REAL rates are not different from one another.
7. Statistical significance is affected by sample size. If a value is almost or just barely significant, just a few additional observations can push significance one-way or the other (i.e., not significant or significant).

### Standardized Infection Ratios

8. Calculating a standardized infection ratio (SIR): The standardized infection ratio is the number of observed infections divided by the number of expected infections based on most recent national data. In order to calculate an SIR, it is recommended that there be at least one expected number of infections. See Appendix 2 for more information on the SIR.
9. Interpreting a standardized infection ratio (SIR): The resulting SIR is a comparison between the number of observed infections and the number expected.
  - a. An SIR of 1.0 means that exactly the same number of infections was observed as was expected.
  - b. An SIR of less than one means that fewer infections were observed than was expected (for example, SIR = 0.70 would be interpreted as 30% fewer infections observed than expected).
  - c. An SIR of more than one means that fewer infections were observed than was expected (for example, SIR = 1.30 would be interpreted as 30% more infections observed than expected).

10. Calculating a corresponding confidence interval for a standardized infection ratio: The calculations for determining the 95% confidence interval for SIRs in this report are taken from: Liddell FD. Simple exact analysis of the standardised mortality ratio. *Journal of Epidemiology and Community Health*, 1984; 38:85-88.<sup>10</sup>
11. Interpreting a standardized infection ratio confidence interval (CI): A confidence interval is a measure of certainty (usually with 95% confidence) of an estimate (such as a Standardized Infection Ratio). Confidence intervals can be used to assess whether differences in the number of observed and expected infections is statistically significant (or significantly different).
- For CIs that contain the value 1.0, the observed number of infections will be considered "Similar" to the expected number of infections based on national data (e.g., 0.27–1.49).
  - For CIs that are lower than and do not contain the value 1.0, the observed number of infections will be considered "Lower" than the expected number of infections based on national data (e.g., 0.13–0.74).
  - For CIs that are higher than and do not contain the value 1.0, the observed number of infections will be considered "Higher" than the expected number of infections based on national data (e.g., 1.09–2.63).

### **Infection Rates**

12. Calculating a surgical site infection rate and associated p-value: SSI rates are presented as the number of infections per 100 procedures.

$$\text{SSI rate} = (\text{number of infections} / \text{number of procedures}) \times 100$$

13. Interpreting a p-value: All ASC-specific rates and corresponding p-values in this report were generated directly by NHSN using Poisson statistical methods. State level rates and corresponding p-values were calculated by DHHS using exact methods. A p-value provides a statistical comparison of two values in order to determine whether those values are statistically different or similar. In this report, p-values are used to assess whether ASC infection rates are similar or different to national infection rates. A p-value of <0.05 would indicate the ASC rate is significantly different than the national rate.
- If the p-value is  $\geq 0.05$ , then the ASC rate would be considered statistically "Similar" to the national rate.
  - If the ASC rate is lower than the national rate and the p-value is <0.05, then the ASC rate would be considered significantly "Lower" than the national rate.
  - If the ASC rate is higher than the national rate and the p-value is <0.05, then the ASC rate would be considered significantly "Higher" than the national rate.

### **Process Measure Percentages**

14. Calculating an influenza vaccination percentage: Influenza vaccination percentages are presented as the number of persons vaccinated divided by the total number of persons expressed as a percent.

$$\text{Influenza Vaccination (\%)} = (\text{number of persons vaccinated} / \text{total number of persons}) \times 100$$

---

<sup>10</sup> Liddell FD. Simple exact analysis of the standardised mortality ratio. *Journal of Epidemiology and Community Health*, 1984; 38:85-88.

15. Calculating a surgical IV antimicrobial prophylaxis adherence percentage: Surgical IV antimicrobial prophylaxis adherence percentages are presented as the number of persons whose treatment adhered to the measure divided by the total number of persons undergoing a surgical procedure expressed as a percent.

Surgical antimicrobial prophylaxis adherence (%) = (number of persons whose treatment adhered to the measure / total number of persons) x 100

Calculating a corresponding confidence interval (CI) for an influenza vaccination percentage: Confidence intervals calculated for influenza vaccination data presented in this report are mid-p exact 95% confidence intervals, which were calculated using a statistical software program.

16. Calculating a corresponding confidence interval (CI) for a surgical IV antimicrobial prophylaxis adherence percentage: Confidence intervals calculated for IV antimicrobial prophylaxis data presented in this report are mid-p exact 95% confidence intervals, which were calculated using a statistical software program.
17. Interpreting a proportion confidence interval (CI) for vaccination data: A confidence interval is a measure of certainty (usually with 95% confidence) of an estimate (such as a percentage). Confidence intervals can be used to assess whether differences in the percentages observed for each group (for example, ASC vs. state) is statistically significant (or significantly different).
- CI's that overlap the state confidence interval are considered "Similar" to the overall state percentage.
  - CI's that are lower than and do not overlap the state confidence interval are considered "Lower" than the overall state percentage.
  - CI's that are higher than and do not overlap the state confidence interval are considered "Higher" than the overall state percentage.

## APPENDIX 2: Understanding the Relationship between Healthcare-Associated Infection Rates and Standardized Infection Ratio Comparison Metrics

HAI Elimination Metrics are very useful for performing evaluations. Several metrics are based on the science employed in the NHSN. While national aggregate Central Line-Associated Bloodstream Infections (CLABSI) data are published in the annual NHSN Reports, these rates must be stratified by types of locations to be risk-adjusted. This scientifically sound risk-adjustment strategy creates a practical challenge to summarizing this information nationally, regionally, or even for an individual healthcare facility. For instance, when comparing CLABSI rates, there may be quite a number of different types of locations for which a CLABSI rate could be reported. This raises the need for a way to combine CLABSI rate data across locations.

A standardized infection ratio (SIR) can be used as an indirect standardization method for summarizing HAI experience across any number of stratified groups of data. To illustrate the method for using an SIR as an HAI comparison metric, the following example data are displayed below:

<b>Risk Group Stratifier</b>	<b>Observed CLABSI Rates</b>			<b>NHSN CLABSI Rates for 2008 (Standard Population)</b>		
<b>Location Type</b>	<b>#CLABSI</b>	<b>#Central line-days</b>	<b>CLABSI rate*</b>	<b>#CLABSI</b>	<b>#Central line-days</b>	<b>CLABSI rate*</b>
ICU	170	100,000	1.7	1200	600,000	2.0
WARD	58	58,000	1.0	600	400,000	1.5
$\text{SIR} = \frac{\text{observed}}{\text{expected}} = \frac{170 + 58}{100000 \times \left(\frac{2}{1000}\right) + 58,000 \times \left(\frac{1.5}{1000}\right)} = \frac{228}{200 + 87} = \frac{228}{287} = 0.79 \quad 95\% \text{CI} = (0.628, 0.989)$						

\*Defined as the number of CLABSIs per 1000 central line-days

In the table above, there are two strata to illustrate risk-adjustment by location type for which national data exist from NHSN. The SIR calculation is based on dividing the total number of observed CLABSI events by an “expected” number using the CLABSI rates from the standard population. This “expected” number is calculated by multiplying the national CLABSI rate from the standard population by the observed number of central line-days for each stratum, which can also be understood as a prediction or projection. If the observed data represented a follow-up period, such as 2009, one would state that an SIR of 0.79 implies that there was a 21% reduction in CLABSIs overall for the nation, region, or facility.

The SIR concept and calculation is completely based on the underlying rate data that exist across a potentially large group of strata. Thus, the SIR provides a single metric for performing comparisons rather than attempting to perform multiple comparisons across many strata which makes the task cumbersome. The SIR concept and calculation can be applied equitably to other HAI metrics. This is especially true for HAI metrics for which national data are available and reasonably precise using a measurement system such as the NHSN. The SIR calculation methods differ in the risk group stratification only. See the following example data and SIR calculation.

Risk Group Stratifiers		Observed SSI Rates			NHSN SSI Rates for 2008 (Standard Population)		
Procedure Code	Risk Index Category	#SSI <sup>†</sup>	#procedures	SSI rate *	#SSI <sup>†</sup>	#procedures	SSI rate *
CBGB	1	315	12,600	2.5	2100	70,000	3.0
CBGB	2,3	210	7000	3.0	1000	20,000	5.0
HPRO	1	111	7400	1.5	1020	60,000	1.7
$\text{SIR} = \frac{\text{observed}}{\text{expected}} = \frac{315 + 210 + 111}{12600 \times \left(\frac{3.0}{100}\right) + 7000 \times \left(\frac{5.0}{100}\right) + 7400 \left(\frac{1.7}{100}\right)} = \frac{636}{378 + 350 + 125.8} = \frac{636}{853.8} = 0.74 \quad 95\% \text{CI} = (0.649, 0.851)$							

<sup>†</sup> SSI, surgical site infection

\* Defined as the number of deep incision or organ space SSIs per 100 procedures

This example uses SSI rate data stratified by procedure and risk index category. The SIR for this set of observed data is 0.74, which indicates there is a 26% reduction in the number of SSI events based on the baseline NHSN SSI rates as representing the standard population.

There are clear advantages to reporting and comparing a single number for prevention assessment. In addition to the simplicity of the SIR concept and the advantages listed above, it is important to note another benefit of using an SIR comparison metric for HAI data. If there was need at any level of aggregation (national, regional, facility-wide, etc.) to combine the SIR values across mutually exclusive data one could do so. The below table demonstrates how the example data from the previous two metric settings could be summarized.

HAI Metric	Observed HAIs			Expected HAIs		
	#CLABSI	#SSI <sup>†</sup>	#Combined HAI	#CLABSI	#SSI <sup>†</sup>	#Combined HAI
CLABSI 1	228			287		
SSI 1		636			853.8	
Combined HAI			228 + 636 = 864			287+853.8 = 1140.8
$\text{SIR} = \frac{\text{observed}}{\text{expected}} = \frac{228 + 636}{287 + 853.8} = \frac{864}{1140.8} = 0.76 \quad 95\% \text{CI} = (0.673, 0.849)$						

<sup>†</sup> SSI, surgical site infection

## **APPENDIX 3: Preventing Healthcare-Associated Infections**

### **What You Can Do to Prevent Healthcare-Associated Infections**

There are several prevention tips you can follow all the time to reduce your chance of getting an infection or spreading your infection to others.

1. Clean your hands.
  - Use soap and warm water. Rub your hands really well for at least 15 seconds. Rub your palms, fingernails, in between your fingers, and the backs of your hands.
  - If your hands do not look dirty, you can clean them with alcohol-based hand sanitizers. Rub the sanitizer all over your hands, especially under your nails and between your fingers, until your hands are dry.
  - Clean your hands before touching or eating food. Clean them after you use the bathroom, take out the trash, change a diaper, visit someone who is ill, or play with a pet.
2. Make sure healthcare providers clean their hands first, even if they wear gloves for a procedure.
  - Doctors, nurses, dentists, and other healthcare providers come into contact with many bacteria and viruses. So if you do not see your healthcare provider wash their hands or use an alcohol-based hand sanitizer before they treat you, ask them if they have cleaned their hands.
  - Healthcare providers should wear clean gloves when they perform tasks such as taking throat cultures, pulling teeth, taking blood, touching wounds or body fluids, while suctioning tubes, and examining your mouth or private parts. Don't be afraid to ask if they should wear gloves.
3. Cover your mouth and nose.
  - Many diseases are spread through sneezes and coughs. When you sneeze or cough, the germs can travel 3 feet or more. Cover your mouth and nose to prevent the spread of infection to others.
  - Use a tissue. Keep tissues handy at home, at work, and in your pocket. Be sure to throw away used tissues and clean your hands after coughing or sneezing.
  - If you don't have a tissue, cover your mouth and nose with the bend of your elbow or hands. If you use your hands, clean them right away.
4. If you are sick, avoid close contact with others.
  - If you are sick, stay away from other people or stay home. Don't shake hands or touch others.
  - When you go for medical treatment, call ahead and ask if there is anything you can do to avoid infecting people in the waiting room.
5. Get shots to avoid disease and fight the spread of infection.
  - Make sure that your vaccinations are current—even for adults. Check with your doctor about shots you may need.
6. If you are prescribed an antibiotic for an illness, take them exactly as directed by your doctor.
  - Don't take half-doses or stop before you complete your prescribed course even if you feel better. Not taking them as directed can lead to infections that become resistant to antibiotics, making them more difficult to treat.

## **What You Can Do to Help Prevent Surgical Site Infections**

- Tell your doctor about other medical problems you may have. Health problems such as allergies, diabetes, and obesity could affect your surgery and your treatment.
- Quit smoking. Patients who smoke get more infections. Talk to your doctor about how you can quit before your surgery.
- Do not shave near where you will have surgery. Shaving with a razor can irritate your skin and make it easier to develop an infection.
- You may have some of your hair removed immediately before your surgery using electric clippers if the hair is in the same area where the procedure will occur, however you should not be shaved with a razor. Speak up if someone tries to shave you with a razor before surgery. Ask why you need to be shaved and talk with your surgeon if you have any concerns.
- Ask if you will get antibiotics before surgery.
- After your surgery, make sure that your healthcare providers clean their hands before examining you, either with soap and water or an alcohol-based hand rub. If you do not see your providers clean their hands, please ask them to do so.
- Family and friends who visit you should not touch the surgical wound or dressings and prevent pets from coming into contact with your wound.
- Family and friends should clean their hands with soap and water or an alcohol-based hand rub before and after visiting you. If you do not see them clean their hands, ask them to do so.
- Before you go home, your doctor or nurse should explain everything you need to know about taking care of your wound. Make sure you understand how to care for your wound before you leave the healthcare facility. If you do develop an infection at the healthcare facility, be sure to ask what type of bacteria you have, whether you need antibiotics for it, what steps you should take to prevent it from spreading, and make plans for follow up care for the infection.
- Always clean your hands before and after caring for your wound.
- Before you go home, make sure you know who to contact if you have questions or problems after you get home.
- If you have any symptoms of an infection, such as redness and pain at the surgery site, drainage, or fever, call your doctor immediately.

## **What Healthcare Facilities Can Do to Prevent Surgical Site Infections**

To prevent surgical site infections, doctors, nurses, and other healthcare providers:

- Clean their hands and arms up to their elbows with an antiseptic agent before the surgery.
- Clean their hands with soap and water or an alcohol-based hand rub before and after caring for each patient.
- May remove some of your hair immediately before your surgery using electric clippers if the hair is in the same area where the procedure will occur. They should not shave you with a razor.
- Wear special hair covers, masks, gowns, and gloves during surgery to keep the surgery area clean.

- Give you antibiotics before your surgery starts. In most cases, you should get antibiotics within 60 minutes before the surgery starts and the antibiotics should be stopped within 24 hours after surgery.
- Clean the skin at the site of your surgery with a special soap that kills germs.

This prevention information was adapted from materials developed by the Centers for Disease Control and Prevention, the Association for Professionals in Infection Control and Epidemiology, the Joint Commission, and Society of Healthcare Epidemiology of America. This information can be accessed at the following websites:

[http://www.cdc.gov/ncidod/dhqp/HAI\\_shea\\_idsa.html](http://www.cdc.gov/ncidod/dhqp/HAI_shea_idsa.html)

[http://www.jointcommission.org/PatientSafety/SpeakUp/speak\\_up\\_ic.htm](http://www.jointcommission.org/PatientSafety/SpeakUp/speak_up_ic.htm)

[http://www.apic.org/AM/Template.cfm?Section=Education\\_Resources&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=91&ContentID=8738](http://www.apic.org/AM/Template.cfm?Section=Education_Resources&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=91&ContentID=8738)

<http://www.shea-online.org/ForPatients.aspx>

**Other useful resources:**

<http://www.dhhs.nh.gov/dphs/cdcs/hai/index.htm>

<http://www.nhqualitycare.org/index.php>

<http://www.cdc.gov/HAI/>

<http://www.cdc.gov/HAI/patientSafety/patient-safety.html>

<http://www.qualityforum.org/Home.aspx>

<http://www.ahrq.gov/>

<http://www.shea-online.org/about/patientguides.cfm>

<http://www.jointcommission.org/>

# APPENDIX 4: Map of NH Ambulatory Surgical Centers (ASCs)

