

## Appendix A Glossary and Acronyms

| Term   | Meaning  |
|--|--|
| <b>Arthroplasty</b>  | Surgery to reshape, reconstruct or replace a diseased or damaged joint. <sup>1</sup>   |
| <b>Blood stream infection (BSI)</b>                            | Bloodstream infections may be either primary or secondary. Primary BSIs are associated with central venous catheters. Secondary infections are related to infections at other sites, such as the urinary tract, lung, postoperative wounds, and skin.  |
| <b>Central line associated blood stream infection (CLABSI)</b> | Central line-associated bloodstream infection (CLABSI) is a primary bloodstream infection (BSI) in a patient that had a central line within the 48-hour period before the development of the BSI. The infection must be confirmed by the laboratory and is not secondary to an infection at another body site.   |
| <b>Central line</b>  | A central line, also known as a central venous catheter (CVC), is a special type of flexible tube that is placed into a large vein in the chest, arm, neck or groin and ends at or close to the heart or one of the great vessels. In newborns, the umbilical artery or vein is considered a great vessel.   |
| <b>Central line days</b>                                       | The total number of days a central line is in place for each patient in the intensive care unit (ICU). The count is performed each day, and each patient with a central line is counted as a central line-day.   |
| <b>Central line utilization ratio</b>                          | The central line utilization ratio is the ratio of the number of central line-days divided by the number of days that patients are in the location during the selected time period.  |
| <b>Central venous catheter (CVC)</b>                           | An intravascular catheter that terminates at or close to the heart or in one of the great vessels which is used for infusion, withdrawal of blood, or hemodynamic monitoring. The following are considered great vessels for the purpose of reporting central-line BSI and counting central-line days in the NHSN system: aorta, pulmonary artery, superior vena cava, inferior vena cava, brachiocephalic veins, internal jugular veins, subclavian vein external iliac veins, common femoral veins, and in neonates, the umbilical artery or vein. |

<sup>1</sup> *Taber's Cyclopedic Medical Dictionary* (20th ed.). Philadelphia: F.A. Davis Company.

| Term                                       | Meaning   |
|--|---|
| <b>Coronary artery bypass graft (CABG)</b> | Commonly called “bypass surgery”, improves blood flow to the heart. During CABG surgery, a healthy vein or artery usually taken from the patient’s own blood vessels in the leg, arm or chest is connected or grafted to the blocked coronary artery. The graft allows blood to go around or “bypass” the blocked section of the coronary artery creating a new route to deliver oxygen and nutrients to the heart muscle.  |
| <b>Healthcare associated infection</b>     | A localized or systemic condition resulting from an adverse reaction to the presence of an infectious agent(s) or its toxin(s) that 1) occurs in a patient in a health care setting (eg, a hospital or outpatient clinic), 2) was not found to be present or incubating at the time of admission unless the infection was related to a previous admission to the same setting, and 3) if the setting is a hospital, meets the criteria for a specific infection site as defined by CDC. |
| <b>Implant</b>                             | A nonhuman-derived object, material, or tissue that is permanently placed in a patient during an operative procedure and is not routinely manipulated for diagnostic or therapeutic purposes. Examples include: porcine or synthetic heart valves, mechanical heart, metal rods, mesh, sternal wires, screws, cements, and other devices. (Source: NHSN Training website)   |
| <b>Infection Preventionist</b>             | Professionals trained in nursing, microbiology, epidemiology or medical technology who have obtained additional education in infection prevention and control.  |
| <b>Intensive care unit</b>                 | Intensive-care unit (ICU). A hospital unit that provides intensive observation, diagnostic, and therapeutic procedures for adults and/or children who are critically ill.   |

| Term   | Meaning  |
|--|--|
| <b>Laboratory-confirmed bloodstream infection (LCBI)</b> | <p>Primary bloodstream infection not related to infection at another body site and the patient has a central line or umbilical catheter in place at the time of or within 48 hours before onset of the event.</p> <p>The LCBI must meet one of the following criteria:</p> <p><u>Criterion 1:</u> Patient has a recognized pathogen cultured from one or more blood cultures and organism cultured from blood is not related to an infection at another site.</p> <p><u>Criterion 2:</u> Patient has at least one of the following signs or symptoms: fever &gt; 100.4° F, chills, or hypotension and signs and symptoms and positive laboratory results are not related to an infection at another site and common skin contaminant is cultured from two or more blood cultures drawn on separate occasions.</p> <p><u>Criterion 3:</u> Patient is less than 1 year of age has at least one of the following signs or symptoms: fever (&gt;100.4°F ) hypothermia (temperature &lt; 96.8° F) apnea, or bradycardia and signs and symptoms and positive laboratory results are not related to an infection at another site and common skin contaminant is cultured from two or more blood cultures drawn on separate occasions.</p> |
| <b>Major Teaching Hospital</b>                           | As defined by NHSN, a facility that is an important part of the teaching program of a medical school and where the majority of medical students rotate through multiple clinical services  |
| <b>Median</b>  | To find the median, numbers are placed in order from lowest to highest. The median is the number found exactly in the middle of the group of numbers.  |
| <b>Mean</b>  | The mean is the average of a group of numbers.   |
| <b>Neonatal ICU Level II (Step-Down)</b>                 | Special care nursery for care of preterm infants with birth weight >1500 grams. Includes resuscitation and stabilization of preterm and/or ill infants before transfer to a facility at which newborn intensive care is provided.  |
| <b>Neonatal Critical Care Level II/III</b>               | Combined nursery housing both Level II and III newborns and infants.   |
| <b>Neonatal Critical Care Level III</b>                  | A hospital neonatal intensive care unit (NICU) organized with personnel and equipment to provide continuous life support and comprehensive care for extremely high-risk newborn infants and those with complex and critical illness.   |

| Term   | Meaning  |
|--|--|
| <b>National Healthcare Safety Network (NHSN)</b> | NHSN is a secure, integrated, web-based, voluntary monitoring system established by the Centers for Disease Control and Prevention (CDC) for health care facilities to report HAI information confidentially.  |
| <b>Primary bloodstream infections (BSI)</b>      | Laboratory-confirmed bloodstream infections (LCBI) that are not secondary to an infection at another body site.  |
| <b>Standardized infection ratio (SIR)</b>        | <p>SIR is an indirect standardization method for summarizing HAI experience across any number of stratified groups of data.</p> <p>A SIR is the number of observed infections divided by the number of expected infections. The expected number is based on the national average, the number of procedures performed by a hospital, and historical data for those procedures.</p> <p>Values that exceed 1.0 indicate that more infections occurred than were expected whereas values that are less than 1.0 indicate the opposite.</p> |
| <b>Surgical site infection (SSI)</b>             | Surgical site infections (SSIs) are infections that are directly related to an operative procedure. SSIs develop within thirty days after an operation or within one year if an implant was placed and the infection appears to be related to the surgery.   |
| <b>Surveillance</b>                              | The ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health.  |
| <b>Umbilical catheter</b>                        | A central vascular device inserted through the umbilical artery or vein in a neonate.  |

## Acronyms

| Acronym       | Meaning  |
|---------------|--|
| <b>ACIP</b>   | Advisory Committee on Immunization Practices         |
| <b>ARRA</b>   | American Recovery and Reinvestment Act of 2009       |
| <b>ASA</b>    | American Society of Anesthesiologists                |
| <b>BSI</b>    | Blood stream infection                               |
| <b>BW</b>     | Birth weight   |
| <b>CABG</b>   | Coronary artery bypass graft                         |
| <b>CAUTI</b>  | Catheter associated urinary tract infection          |
| <b>CBGB</b>   | Coronary artery bypass graft and separate donor site |
| <b>CBGC</b>   | Coronary artery bypass graft with chest incision     |
| <b>CDC</b>    | Centers for Disease Control and Prevention           |
| <b>CI</b>     | Confidence interval                                  |
| <b>CLABSI</b> | Central line associated blood stream infection       |
| <b>CoNS</b>   | Coagulase-negative <i>Staphylococcus</i>             |
| <b>CVC</b>    | Central venous catheter                              |
| <b>HAI</b>    | Healthcare associated infection                      |
| <b>HCQCC</b>  | Healthcare Quality and Cost Council                  |
| <b>HYST</b>   | Vaginal hysterectomy                                 |
| <b>ICU</b>    | Intensive care unit                                  |
| <b>IDSA</b>   | Infectious Diseases Society of America               |
| <b>IP</b>     | Infection preventionist                              |
| <b>LCBI</b>   | Laboratory-confirmed bloodstream infection           |
| <b>MDPH</b>   | Massachusetts Department of Public Health            |

| <b>Acronym</b> | <b>Meaning</b>                                     |
|----------------|--|
| <b>MDRO</b>    | Multi drug resistant organisms                     |
| <b>MRSA</b>    | Methicillin-resistant <i>Staphylococcus aureus</i> |
| <b>MHA</b>     | Massachusetts Hospital Association                 |
| <b>NFID</b>    | National Foundation for Infectious Diseases        |
| <b>NHSN</b>    | National Healthcare Safety Network                 |
| <b>NICU</b>    | Neonatal intensive care unit                       |
| <b>PDS</b>     | Post discharge surveillance                        |
| <b>SIR</b>     | Standardized infection ratio                       |
| <b>SSI</b>     | Surgical site infection                            |
| <b>TAG</b>     | Technical Advisory Group                           |
| <b>VAP</b>     | Ventilator associated pneumonia                    |
| <b>VHYS</b>    | Vaginal hysterectomy                               |

## Appendix B Hospitals Providing Data for the Report

| Name                                   | City             |
|--|------------------|
| Addison Gilbert Hospital               | Gloucester       |
| Anna Jaques Hospital                   | Newburyport      |
| Athol Memorial Hospital                | Athol            |
| Baystate Franklin Medical Center       | Greenfield       |
| Baystate Mary Lane Hospital            | Ware             |
| Baystate Medical Center                | Springfield      |
| Berkshire Health System                | Pittsfield       |
| Beth Israel Deaconess Hospital Needham | Needham          |
| Beth Israel Deaconess Medical Center   | Boston           |
| Boston Medical Center                  | Boston           |
| Brigham and Women's Hospital           | Boston           |
| Cambridge Hospital                     | Cambridge        |
| Cape Cod Hospital                      | Hyannis          |
| Caritas Carney Hospital                | Boston           |
| Caritas Good Samaritan Medical Center  | Brockton         |
| Caritas Holy Family Hospital           | Methuen          |
| Caritas Norwood Hospital               | Norwood          |
| Caritas St. Elizabeth's Medical Center | Brighton         |
| Central New England Health Alliance    | Leominster       |
| Charlton Memorial Hospital             | Fall River       |
| Children's Hospital Boston             | Boston           |
| Clinton Hospital                       | Clinton          |
| Cooley Dickinson Hospital              | Northampton      |
| Emerson Hospital                       | Concord          |
| Fairview Hospital                      | Great Barrington |
| Falmouth Hospital                      | Falmouth         |
| Faulkner Hospital                      | Boston           |
| Harrington Memorial Hospital           | Southbridge      |
| Heywood Hospital                       | Gardner          |
| Holyoke Medical Center                 | Holyoke          |
| Hubbard Regional Hospital              | Webster          |
| Jordan Hospital                        | Plymouth         |
| Lahey Clinic                           | Burlington       |
| Lawrence General Hospital              | Lawrence         |
| Lawrence Memorial Hospital             | Medford          |
| Lowell General Hospital                | Lowell           |

| <b>Name</b>                                 | <b>City</b>    |
|---|----------------|
| Marlborough Hospital                        | Marlborough    |
| Martha's Vineyard Hospital                  | Oak Bluffs     |
| Massachusetts General Hospital              | Boston         |
| Melrose Wakefield Hospital                  | Melrose        |
| Mercy Medical Center                        | Springfield    |
| Merrimack Valley Hospital                   | Haverhill      |
| MetroWest Medical Center - Framingham Union | Framingham     |
| MetroWest Medical Center - Leonard Morse    | Natick         |
| Milford Regional Medical Center             | Milford        |
| Milton Hospital                             | Milton         |
| Morton Hospital and Medical Center          | Taunton        |
| Mount Auburn Hospital                       | Cambridge      |
| Nantucket Cottage Hospital                  | Nantucket      |
| Nashoba Valley Medical Center               | Ayer           |
| New England Baptist Hospital                | Boston         |
| Newton-Wellesley Hospital                   | Newton         |
| Noble Hospital                              | Westfield      |
| North Adams Regional Hospital               | North Adams    |
| North Shore Medical Center                  | Salem          |
| North Shore Medical Center – Union          | Lynn           |
| Northeast Hospitals, Beverly Hospital       | Beverly        |
| Quincy Medical Center                       | Quincy         |
| Saint Anne's Hospital                       | Fall River     |
| Saints Medical Center                       | Lowell         |
| Shriners Hospital for Children              | Boston         |
| Signature Healthcare - Brockton Hospital    | Brockton       |
| Somerville Hospital                         | Somerville     |
| South Shore Hospital                        | South Weymouth |
| St Vincent Hospital                         | Worcester      |
| St. Luke's Hospital                         | New Bedford    |
| Sturdy Memorial Hospital                    | Attleboro      |
| Tobey Hospital                              | Wareham        |
| Tufts Medical Center                        | Boston         |
| UMass Memorial Medical Center               | Worcester      |
| Whidden Hospital                            | Everett        |
| Winchester Hospital                         | Winchester     |
| Wing Memorial Hospital & Medical Centers    | Palmer         |

## Appendix C

# Development of the Massachusetts Infection Prevention and Control Program

|                                |  |
|--------------------------------|--|
| <b>2006</b>                    | Healthcare reform legislation enacted with HAI prevention provisions   |
| <b>November 30, 2006</b>       | MDPH convenes multidisciplinary Expert Panel   |
| <b>January – December 2007</b> | Monthly Expert Panel meetings  |
| <b>January 2008</b>            | Expert Panel presents recommendations to MDPH and the Betsy Lehman Center.   |
| <b>February 13, 2008</b>       | Public Health Council approves regulations requiring acute care hospitals report specific HAI data to MDPH and the Betsy Lehman Center.        |
| <b>February 22, 2008</b>       | Acute care hospitals receive notice on mandatory HAI reporting requirements.   |
| <b>March 25, 2008</b>          | Statewide hospital training on NHSN  |
| <b>April 1, 2008</b>           | Acute care hospitals required to complete training and enroll in NHSN.   |
| <b>April 3, 2008</b>           | First meeting of the HAI Technical Advisory Group (TAG)  |
| <b>June 25, 2008</b>           | Massachusetts Coalition for the Prevention of Medical Errors Program: <i>Preventing Hospital Acquired Infections in Critical Care Settings</i> |
| <b>July 1, 2008</b>            | Mandatory reporting of HAI begins  |
| <b>August 2008</b>             | Publication of HAI consumer focused fact sheet   |
| <b>August 2008</b>             | Hospital training on MRSA point prevalence survey  |
| <b>September 2008</b>          | Massachusetts MRSA point prevalence survey conducted in all acute care hospital ICUs.  |
| <b>November 2008</b>           | HAI Expert Panel recommendations published by the Agency for Health Research and Quality's National Guideline Clearinghouse™ .                 |
| <b>November 2008</b>           | Infection Preventionists initiate assessments in all acute care hospitals.   |

|                          |  |
|--------------------------|--|
| <b>November 21, 2008</b> | Massachusetts Coalition for the Prevention of Medical Errors Program: HAI Action Workgroup: <i>Using Quality Improvement Approaches to Prevent Infection.</i>                        |
| <b>December 2008</b>     | Statewide hospital HAI training. Topics included collecting requirements for collecting race and ethnicity data and reporting of influenza vaccination rates for health care workers |
| <b>January 2009</b>      | Findings of MRSA Point Prevalence Survey presented to the TAG.   |
| <b>February 2009</b>     | American Recovery and Reinvestment Act (ARRA) signed into law.   |
| <b>February 4, 2009</b>  | Massachusetts Coalition for the Prevention of Medical Errors Program: HAI Action Workgroup Meeting.  |
| <b>April 8, 2009</b>     | MDPH releases preliminary HAI Report.  |
| <b>May 2009</b>          | Findings on collection of influenza data for healthcare workers presented to the TAG.  |
| <b>June 26, 2009</b>     | MDPH submits grant proposal for American Recovery and Reinvestment Act funding to assist state efforts to prevent HAI.   |
| <b>June 2009</b>         | MDPH implements formal quality assurance protocol for NHSN data.   |
| <b>June 23, 2009</b>     | Massachusetts Coalition for the Prevention of Medical Errors Program: <i>Success Stories in Preventing HAI: An Opportunity to Share and Learn.</i>                                   |
| <b>July 1, 2009</b>      | Change in reporting requirements: HAI measures initially reported to the Betsy Lehman Center are now required to be reported to MDPH.  |
| <b>August 2009</b>       | Hospital training on MRSA point prevalence survey #2 and updates to reporting requirements.  |
| <b>August 31, 2009</b>   | Massachusetts selected to receive ARRA funding to assist in efforts to prevent HAI.  |
| <b>December 2009</b>     | MDPH submits Massachusetts State HAI Prevention Plan to the Department of Health and Human Services.   |
| <b>March 11, 2010</b>    | Results of Massachusetts MRSA point prevalence surveys 2008 and 2009 presented to the TAG.   |
| <b>April 2010</b>        | MDPH initiates infection prevention and control focused hospital surveys.  |

**April 14, 2010**

MDPH issues first report of hospital specific HAI data.

**June 1, 2010**

Free standing Ambulatory Surgical Centers required to begin reporting HAI resulting from hernia surgery.

## Appendix D Technical Advisory Group (TAG) Members

| Name                                       | Title and Affiliation  |
|--|--|
| Alfred DeMaria Jr. M.D., <i>Chair</i>      | Medical Director, Bureau of Infectious Disease<br>State Epidemiologist, <i>Commonwealth of Massachusetts</i>   |
| Laurie Kunches ANP, PhD, <i>Vice-Chair</i> | Director of Clinical Research<br><i>JSI Research and Training Institute.</i>   |
| <b>Members</b>                             |  |
| Karen Boudreau, MD                         | Medical Director, Healthcare Quality Improvement<br><i>Blue Cross Blue Shield</i>  |
| Mari-Kim Bunnell, MD                       | OB/GYN New England Obstetrics and Gynecology Associates  |
| Wanda Carey, RN, BSN, CIC                  | Infection Preventionist<br><i>Caritas Norwood Hospital</i>   |
| Philip Carling, MD                         | Director Infectious Diseases and Hospital Epidemiology<br><i>Caritas Carney Hospital</i>   |
| Linda Clayton, MD, MPH                     | Associate Medical Director, Office of Clinical Affairs<br><i>Office of Medicaid/MassHealth</i>   |
| Richard T. Ellison III, MD                 | Hospital Epidemiologist<br><i>U Mass Memorial Medical Center</i>   |
| Paula Griswold, MS                         | Executive Director<br><i>Massachusetts Coalition for the Prevention of Medical Errors</i>  |
| Lisa Hirschhorn, MD, MPH                   | Senior Clinical Consultant<br><i>JSI Research and Training Institute</i>   |
| David Hooper, MD                           | Internal Medicine/ Infectious Disease<br><i>Massachusetts General Hospital</i>   |
| Linda Kenney                               | President, Executive Director<br><i>Medically Induced Trauma Support Services</i><br>Consumer Representative   |
| Tricia A. Lemon, BSN, MPH, CIC             | Infection Preventionist<br><i>Tufts Medical Center</i>   |
| Jim Liljestrand, MD                        | Medical Director for Patient Safety<br><i>MassPro (Medicare Quality Improvement Organization)</i>  |
| Richard Platt, MD                          | Epidemiologist   |
| Selwyn Rogers, MD                          | Co-Director, Surgical ICU<br>Chief, Trauma, Burns, and Surgical Critical Care<br><i>Brigham and Women's Hospital</i>   |
| Thomas Sandora, MD, MPH                    | Pediatric Infectious Disease<br><i>Children's Hospital Boston</i>  |
| Mary Ellen Scales, RN, MSN, CIC            | Infection Control Professional<br><i>Baystate Medical Center</i><br>New England Chapter President<br><i>Association for Professionals in Infection Control</i> |
| David Smith, MHSA                          | Senior Director, Health Data Analysis & Research<br><i>Massachusetts Hospital Association</i>  |

|                    |  |
|--------------------|--|
| Lauren Smith       | Medical Director<br><i>Massachusetts Department of Public Health</i> |
| Deborah Wachenheim | Consumer Health Quality Coordinator<br><i>Health Care For All</i>    |
| Deborah Yokoe      | Hospital Epidemiologist<br><i>Brigham and Women's Hospital</i>       |

## Appendix E

# CLABSI Criterion Groupings

### Central Line Associated Blood Stream Infection (CLABSI)

A laboratory-confirmed central-line associated bloodstream infection must meet one of the following criteria:

#### **Criterion 1:**

- Patient has a recognized pathogen cultured from one or more blood cultures and
- The organism cultured from the blood is not related to an infection at another site.

#### **Criterion 2:**

- Patient has at least one of the following signs or symptoms:
  - fever ( $>38^{\circ}\text{C}$ ),
  - chills,
  - or hypotension,
- Signs and symptoms and positive laboratory results are not related to an infection at another site and common skin contaminant (i.e., diphtheroids [*Corynebacterium* spp.], *Bacillus* [not *B. anthracis*] spp., *Propionibacterium* spp., coagulase-negative staphylococci [including *S. epidermidis*], viridans group streptococci, *Aerococcus* spp., *Micrococcus* spp.) is cultured from two or more blood cultures drawn on separate occasions.

#### **Criterion 3:**

- Patient  $\leq 1$  year of age has at least one of the following signs or symptoms:
  - fever ( $>38^{\circ}\text{C}$  core)
  - hypothermia ( $<36^{\circ}\text{C}$  core),
  - apnea, or
  - bradycardia
- Signs and symptoms and positive laboratory results are not related to an infection at another site and common skin contaminant (i.e., diphtheroids [*Corynebacterium* spp.], *Bacillus* [not *B. anthracis*] spp., *Propionibacterium* spp., coagulase-negative staphylococci [including *S. epidermidis*], viridans group streptococci, *Aerococcus* spp., *Micrococcus* spp.) is cultured from two or more blood cultures drawn on separate occasions.<sup>2</sup>

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<sup>2</sup> [http://www.cdc.gov/nhsn/PDFs/pscManual/4PSC\\_CLABScurrent.pdf](http://www.cdc.gov/nhsn/PDFs/pscManual/4PSC_CLABScurrent.pdf)

## Appendix F NHSN ICU Locations

| CDC Location Label <sup>3</sup>                  | Location Description   |
|--|--|
| <b>Adult Critical Care Units</b>                 |  |
| Burn Critical Care                               | Critical care area specializing in the care of patients with significant/major burns   |
| Medical Cardiac Critical Care                    | Critical care area specializing in the care of patients with serious heart problems that do not require heart surgery.   |
| Medical Critical Care                            | Critical care area for patients who are being treated for nonsurgical conditions.  |
| Medical/Surgical Critical Care                   | An area where critically ill patients with medical and/or surgical conditions are managed.   |
| Neurologic Critical Care                         | Critical care area specializing in treating life-threatening neurological diseases   |
| Neurosurgical Critical Care                      | Critical care area specializing in the surgical management of patients with severe neurological diseases or those at risk for neurological injury as a result of surgery.  |
| Prenatal Critical Care Respiratory Critical Care | Critical care area specializing in the management of the pregnant patient with complex medical or obstetric problems requiring a high level of care to prevent the loss of the fetus and to protect the life of the mother |
| Respiratory Critical Care                        | Critical care area for the evaluation and treatment of the patient with severe respiratory conditions.   |
| Surgical Cardiothoracic Critical Care            | Critical care area specializing in the care of patients following cardiac and thoracic surgery.  |
| Surgical Critical Care                           | Critical care area for the evaluation and management of patients with serious illness before and/or after surgery.   |
| Trauma Critical Care                             | Critical care area specializing in the care of patients who require a high level of monitoring and/or intervention following trauma or during critical illness related to trauma.  |
| <b>Pediatric Critical Care Units</b>             |  |
| Pediatric Burn Critical Care                     | Critical care area specializing in the care of patients ≤ 18 years old with significant/major burns  |
| Pediatric Cardiothoracic Care                    | Critical care area specializing in the care of patients ≤ 18 Care years old following cardiac and thoracic surgery.  |

<sup>3</sup> [http://www.cdc.gov/nhsn/PDFs/pscManual/15LocationsDescriptions\\_current.pdf](http://www.cdc.gov/nhsn/PDFs/pscManual/15LocationsDescriptions_current.pdf)

|  |  |
|--|--|
| Pediatric Medical Critical Care          | Critical care area for patients ≤ 18 years old who are being treated for nonsurgical conditions. In the NNIS system, this was called Pediatric ICU (PICU).   |
| Pediatric Medical/Surgical Critical Care | An area where critically ill patients ≤ 18 years old with medical and/or surgical conditions are managed.  |
| Pediatric Neurology Critical             | Critical care area for patients ≤ 18 years old specializing in treating life-threatening neurological diseases.  |
| Pediatric Neurosurgical Critical Care    | Clinical care area specializing in the surgical management of patients ≤ 18 years old with severe neurological diseases or those at risk for neurological injury as a result of surgery.           |
| Pediatric Respiratory Critical Care      | Critical care area for the evaluation and treatment of patients ≤ 18 years old with severe respiratory conditions.   |
| Pediatric Surgical Critical Care         | Critical care area for the evaluation and management of patients ≤ 18 years old with serious illness before and/or after surgery   |
| Pediatric Trauma Critical Care           | Clinical care area specializing in the care of patients ≤ 18 years old who require a high level of monitoring and/or intervention following trauma or during critical illness related to trauma. . |

## Appendix G

### Criteria 1,2, and 3 BSI by ICU Type and Hospital<sup>4</sup>

#### Burn

| Hospital                       | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--------------------------------|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Massachusetts General Hospital | 12              | 2                   | 2.16                         | 5.5               | 0.39      | Statistically No Different |
| Shriners for Children (Boston) | 12              | 9                   | 7.23                         | 5.5               | 1.32      | Statistically No Different |

#### Medical Cardiac

| Hospital                             | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--------------------------------------|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Baystate Mary Lane                   | 1               | 0                   | 0.00                         | 2.0               | 0.00      | Statistically No Different |
| Baystate Medical Center              | 12              | 0                   | 0.00                         | 2.0               | 0.00      | Statistically No Different |
| Beth Israel Deaconess Medical Center | 12              | 3                   | 2.86                         | 2.0               | 1.43      | Statistically No Different |
| Boston Medical Center                | 12              | 1                   | 0.32                         | 2.0               | 0.16      | Lower                      |
| Brigham and Women's Hospital         | 11              | 1                   | 0.60                         | 2.0               | 0.30      | Statistically No Different |
| Cape Cod Hospital                    | 12              | 1                   | 1.78                         | 2.0               | 0.89      | Statistically No Different |
| Franklin Medical Center              | 2               | 0                   | 0.00                         | 2.0               | 0.00      | Statistically No Different |
| Lahey Clinic                         | 12              | 3                   | 3.45                         | 2.0               | 1.72      | Statistically No Different |
| Massachusetts General Hospital       | 12              | 2                   | 0.49                         | 2.0               | 0.24      | Statistically Lower        |

<sup>4</sup> hospitals with more than 12 months listed have more than one of that type of ICU. Hospitals with less than 12 months listed are assumed to have not had patients in that ICU for all months.

|   |    |   |      |     |      |                            |
|---|----|---|------|-----|------|----------------------------|
| South Shore Hospital                              | 12 | 0 | 0.00 | 2.0 | 0.00 | Statistically No Different |
| Southcoast Health Systems --<br>Charlton Hospital | 12 | 1 | 1.29 | 2.0 | 0.64 | Statistically No Different |
| St. Elizabeth's Medical Center                    | 12 | 0 | 0.00 | 2.0 | 0.00 | Statistically No Different |
| Tufts Medical Center                              | 11 | 7 | 3.72 | 2.0 | 1.86 | Statistically No Different |

### Surgical Cardiothoracic

| Hospital  | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|---|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Baystate Medical Center                           | 12              | 6                   | 2.80                         | 1.4               | 2.00      | Statistically No Different |
| Beth Israel Deaconess Medical Center              | 12              | 1                   | 0.44                         | 1.4               | 0.31      | Statistically No Different |
| Brigham and Women's Hospital                      | 12              | 1                   | 0.18                         | 1.4               | 0.13      | Statistically Lower        |
| Cape Cod Hospital                                 | 11              | 0                   | 0.00                         | 1.4               | 0.00      | Statistically No Different |
| Lahey Clinic                                      | 12              | 0                   | 0.00                         | 1.4               | 0.00      | Statistically No Different |
| Massachusetts General Hospital                    | 12              | 1                   | 0.23                         | 1.4               | 0.16      | Statistically Lower        |
| North Shore Medical Center - Salem Hospital       | 12              | 0                   | 0.00                         | 1.4               | 0.00      | Statistically No Different |
| Southcoast Health Systems --<br>Charlton Hospital | 12              | 0                   | 0.00                         | 1.4               | 0.00      | Statistically No Different |
| Tufts Medical Center                              | 11              | 2                   | 1.02                         | 1.4               | 0.73      | Statistically No Different |
| UMass Memorial Medical Center                     | 12              | 2                   | 0.84                         | 1.4               | 0.60      | Statistically No Different |

### Pediatric Cardiothoracic

| Hospital            | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|---------------------|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Children's Hospital | 12              | 27                  | 4.59                         | 3.3               | 1.39      | Statistically No Different |

### Medical Non-Major Teaching

| Hospital  | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|---|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Nthern Berkshire Health Sys (North Adams Reg Hos) | 10              | 0                   | 0.00                         | 1.9               | 0.00      | Statistically No Different |
| Southcoast Health Systems -- Charlton Hospital    | 12              | 0                   | 0.00                         | 1.9               | 0.00      | Statistically No Different |

### Medical Major Teaching

| Hospital                             | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--------------------------------------|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Beth Israel Deaconess Medical Center | 24              | 3                   | 0.94                         | 2.6               | 0.36      | Statistically No Different |
| Boston Medical Center                | 24              | 11                  | 3.10                         | 2.6               | 1.19      | Statistically No Different |
| Brigham and Women's Hospital         | 12              | 6                   | 1.43                         | 2.6               | 0.55      | Statistically No Different |
| Lahey Clinic                         | 22              | 6                   | 1.36                         | 2.6               | 0.52      | Statistically No Different |
| Massachusetts General Hospital       | 12              | 6                   | 1.39                         | 2.6               | 0.53      | Statistically No Different |
| Mount Auburn Hospital                | 12              | 1                   | 0.87                         | 2.6               | 0.34      | Statistically No Different |
| St. Elizabeth's Medical Center       | 12              | 1                   | 1.13                         | 2.6               | 0.43      | Statistically No Different |

|                               |    |    |      |     |      |                            |
|-------------------------------|----|----|------|-----|------|----------------------------|
| Tufts Medical Center          | 12 | 12 | 4.88 | 2.6 | 1.88 | Statistically No Different |
| UMass Memorial Medical Center | 36 | 13 | 1.42 | 2.6 | 0.55 | Statistically Lower        |

### Medical/Surgical Non-Major Teaching

| Hospital                                     | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Anna Jaques Hospital                         | 12              | 0                   | 0.00                         | 1.5               | 0.00      | Statistically No Different |
| Beth Israel Deaconess Medical Center Needham | 11              | 0                   | 0.00                         | 1.5               | 0.00      | Statistically No Different |
| Brockton Hospital (Signature)                | 11              | 1                   | 0.60                         | 1.5               | 0.40      | Statistically No Different |
| Cape Cod Hospital                            | 10              | 0                   | 0.00                         | 1.5               | 0.00      | Statistically No Different |
| Caritas Carney Hospital                      | 12              | 4                   | 5.12                         | 1.5               | 3.41      | Statistically No Different |
| Caritas Good Samaritan Medical Center        | 12              | 6                   | 2.29                         | 1.5               | 1.52      | Statistically No Different |
| Caritas Holy Family Hospital                 | 10              | 1                   | 2.11                         | 1.5               | 1.41      | Statistically No Different |
| Caritas Norwood Hospital                     | 12              | 1                   | 1.11                         | 1.5               | 0.74      | Statistically No Different |
| Cooley Dickinson Hospital                    | 11              | 1                   | 0.74                         | 1.5               | 0.49      | Statistically No Different |
| Emerson Hospital                             | 12              | 1                   | 0.98                         | 1.5               | 0.65      | Statistically No Different |
| Fairview                                     | 2               | 0                   | 0.00                         | 1.5               | 0.00      | Statistically No Different |
| Falmouth Hospital                            | 12              | 0                   | 0.00                         | 1.5               | 0.00      | Statistically No Different |
| Hallmark Health Corp- Melrose-Wakefield      | 12              | 0                   | 0.00                         | 1.5               | 0.00      | Statistically No Different |
| Harrington Memorial Hospital                 | 3               | 0                   | 0.00                         | 1.5               | 0.00      | Statistically No Different |
| Health Alliance Hospital                     | 11              | 2                   | 2.62                         | 1.5               | 1.75      | Statistically No Different |

|   |    |   |      |     |      |                            |
|---|----|---|------|-----|------|----------------------------|
| Heywood Hospital                                  | 6  | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Holyoke Medical Center                            | 12 | 2 | 1.98 | 1.5 | 1.32 | Statistically No Different |
| Hubbard Regional Hospital                         | 2  | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Jordan Hospital                                   | 12 | 1 | 1.14 | 1.5 | 0.76 | Statistically No Different |
| Lawrence General Hospital                         | 24 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Lawrence Memorial Hospital                        | 11 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Lowell General Hospital                           | 12 | 2 | 1.51 | 1.5 | 1.01 | Statistically No Different |
| Marlborough Hospital                              | 12 | 1 | 1.23 | 1.5 | 0.82 | Statistically No Different |
| Mercy Medical Center                              | 11 | 1 | 0.56 | 1.5 | 0.38 | Statistically No Different |
| Merrimack Valley Hospital                         | 11 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Metro West Medical Center-Framingham Hospital     | 12 | 4 | 3.90 | 1.5 | 2.60 | Statistically No Different |
| Metro West Medical Center- Leonard Morse Hospital | 12 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Milton Hospital                                   | 11 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Morton Hospital and Medical Center                | 12 | 2 | 1.89 | 1.5 | 1.26 | Statistically No Different |
| Nashoba Valley Medical Center                     | 7  | 1 | 4.85 | 1.5 | 3.24 | Statistically No Different |
| New England Baptist Hospital                      | 12 | 1 | 1.30 | 1.5 | 0.87 | Statistically No Different |
| Noble Hospital                                    | 11 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| North Shore Medical Center - Salem Hospital       | 12 | 4 | 1.14 | 1.5 | 0.76 | Statistically No Different |
| North Shore Medical Center - Union Hospital       | 6  | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Northeast Hospital - Addison Gilbert              | 6  | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Northeast Hospital - Beverly Hospital             | 12 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |

|  |    |   |      |     |      |                            |
|--|----|---|------|-----|------|----------------------------|
| Quincy Medical Center                            | 12 | 2 | 1.96 | 1.5 | 1.31 | Statistically No Different |
| Saints Memorial Medical Center                   | 12 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| South Shore Hospital                             | 12 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Southcoast Health Systems -- St. Luke's Hospital | 12 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Southcoast Health Systems -- Tobey Hospital      | 10 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| St. Anne's Hospital                              | 12 | 3 | 5.02 | 1.5 | 3.34 | Statistically No Different |
| Sturdy Memorial Medical Center                   | 12 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Winchester Hospital                              | 12 | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |
| Wing Memorial Hospital                           | 9  | 0 | 0.00 | 1.5 | 0.00 | Statistically No Different |

### Medical/Surgical Major Teaching

| Hospital  | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|---|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Baystate Medical Center                               | 12              | 5                   | 1.19                         | 2.1               | 0.57      | Statistically No Different |
| Berkshire Health Systems                              | 12              | 2                   | 0.59                         | 2.1               | 0.28      | Statistically No Different |
| Beth Israel Deaconess Medical Center                  | 12              | 4                   | 1.98                         | 2.1               | 0.94      | Statistically No Different |
| Cambridge Health Alliance - Cambridge Hospital        | 11              | 1                   | 1.30                         | 2.1               | 0.62      | Statistically No Different |
| Cambridge Health Alliance - Whidden Memorial Hospital | 12              | 2                   | 2.21                         | 2.1               | 1.05      | Statistically No Different |
| Cambridge Health Alliance - Somerville Hospital       | 4               | 0                   | 0.00                         | 2.1               | 0.00      | Statistically No Different |
| Milford Regional Hospital                             | 12              | 2                   | 2.89                         | 2.1               | 1.38      | Statistically No Different |
| Newton-Wellesley Hospital                             | 12              | 0                   | 0.00                         | 2.1               | 0.00      | Statistically No Different |

|                        |    |   |      |     |      |       |
|------------------------|----|---|------|-----|------|-------|
| Saint Vincent Hospital | 12 | 0 | 0.00 | 2.1 | 0.00 | Lower |
|------------------------|----|---|------|-----|------|-------|

### Pediatric Medical/Surgical

| Hospital                       | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--------------------------------|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Baystate Medical Center        | 12              | 1                   | 1.62                         | 3.0               | 0.54      | Statistically No Different |
| Boston Medical Center          | 6               | 1                   | 5.41                         | 3.0               | 1.80      | Statistically No Different |
| Children's Hospital            | 12              | 15                  | 3.47                         | 3.0               | 1.16      | Statistically No Different |
| Massachusetts General Hospital | 12              | 4                   | 3.06                         | 3.0               | 1.02      | Statistically No Different |
| Tufts Medical Center           | 12              | 0                   | 0.00                         | 3.0               | 0.00      | Statistically No Different |
| UMass Memorial Medical Center  | 12              | 0                   | 0.00                         | 3.0               | 0.00      | Statistically No Different |

### Pediatric Medical

| Hospital            | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|---------------------|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Children's Hospital | 12              | 1                   | 1.17                         | 1.3               | 0.90      | Statistically No Different |

### Neurosurgical

| Hospital                       | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--------------------------------|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Brigham and Women's Hospital   | 12              | 6                   | 3.13                         | 2.5               | 1.25      | Statistically No Different |
| Massachusetts General Hospital | 12              | 0                   | 0.00                         | 2.5               | 0.00      | Lower                      |

## Surgical

| Hospital   | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Beth Israel Deaconess Medical Center             | 12              | 4                   | 1.48                         | 2.3               | 0.64      | Statistically No Different |
| Boston Medical Center                            | 12              | 2                   | 0.56                         | 2.3               | 0.25      | Lower                      |
| Brigham and Women's Hospital                     | 36              | 5                   | 0.97                         | 2.3               | 0.42      | Lower                      |
| Lahey Clinic                                     | 12              | 7                   | 1.69                         | 2.3               | 0.74      | Statistically No Different |
| Massachusetts General Hospital                   | 12              | 2                   | 0.41                         | 2.3               | 0.18      | Lower                      |
| Mount Auburn Hospital                            | 12              | 1                   | 0.69                         | 2.3               | 0.30      | Statistically No Different |
| South Shore Hospital                             | 12              | 2                   | 2.28                         | 2.3               | 0.99      | Statistically No Different |
| Southcoast Health Systems -- St. Luke's Hospital | 12              | 3                   | 3.08                         | 2.3               | 1.34      | Statistically No Different |
| St. Elizabeth's Medical Center                   | 12              | 1                   | 1.10                         | 2.3               | 0.48      | Statistically No Different |
| Tufts Medical Center                             | 12              | 7                   | 3.67                         | 2.3               | 1.60      | Statistically No Different |
| UMass Memorial Medical Center                    | 24              | 2                   | 0.54                         | 2.3               | 0.23      | Lower                      |

## Trauma

| Hospital                             | Months Reported | Criterion 1,2,3 BSI | Criterion 1,2,3 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--------------------------------------|-----------------|---------------------|------------------------------|-------------------|-----------|----------------------------|
| Beth Israel Deaconess Medical Center | 12              | 1                   | 0.67                         | 3.6               | 0.19      | Statistically No Different |
| Boston Medical Center                | 12              | 2                   | 0.90                         | 3.6               | 0.25      | Lower                      |
| UMass Memorial Medical Center        | 12              | 4                   | 2.15                         | 3.6               | 0.60      | Statistically No Different |

## Appendix H Criterion 1 BSI<sup>5</sup>

### Burn

| Hospital                       | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--------------------------------|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Massachusetts General Hospital | 12              | 2               | 2.16                     | 4.8               | 0.45      | Statistically No Different |
| Shriners for Children (Boston) | 12              | 8               | 6.43                     | 4.8               | 1.34      | Statistically No Different |

### Medical Cardiac

| Hospital                             | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|--------------------------------------|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Baystate Mary Lane                   | 1               | 0               | 0.00                     | 1.6               | 0.00      | Statistically No Different |
| Baystate Medical Center              | 12              | 0               | 0.00                     | 1.6               | 0.00      | Statistically No Different |
| Beth Israel Deaconess Medical Center | 12              | 3               | 2.86                     | 1.6               | 1.79      | Statistically No Different |
| Boston Medical Center                | 12              | 1               | 0.32                     | 1.6               | 0.20      | Statistically No Different |
| Brigham and Women's Hospital         | 11              | 1               | 0.60                     | 1.6               | 0.38      | Statistically No Different |
| Cape Cod Hospital                    | 12              | 0               | 0.00                     | 1.6               | 0.00      | Statistically No Different |
| Franklin Medical Center              | 2               | 0               | 0.00                     | 1.6               | 0.00      | Statistically No Different |
| Lahey Clinic                         | 12              | 2               | 2.30                     | 1.6               | 1.44      | Statistically No Different |
| Massachusetts General Hospital       | 12              | 1               | 0.24                     | 1.6               | 0.15      | Statistically Lower        |
| South Shore Hospital                 | 12              | 0               | 0.00                     | 1.6               | 0.00      | Statistically No Different |

<sup>5</sup> Hospitals with more than 12 months listed have more than one of that type of ICU. Hospitals with less than 12 months listed are assumed to have not had patients in that ICU for all months.

|   |    |   |      |     |      |                               |
|---|----|---|------|-----|------|-------------------------------|
| Southcoast Health Systems --<br>Charlton Hospital | 12 | 1 | 1.29 | 1.6 | 0.81 | Statistically<br>No Different |
| St. Elizabeth's Medical Center                    | 12 | 0 | 0.00 | 1.6 | 0.00 | Statistically<br>No Different |
| Tufts Medical Center                              | 11 | 3 | 1.59 | 1.6 | 1.00 | Statistically<br>No Different |

### Surgical Cardiothoracic

| Hospital  | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate     |
|---|-----------------|-----------------|--------------------------|-------------------|-----------|-------------------------------|
| Baystate Medical Center                           | 12              | 4               | 1.87                     | 1.1               | 1.70      | Statistically<br>No Different |
| Beth Israel Deaconess Medical Center              | 12              | 1               | 0.44                     | 1.1               | 0.40      | Statistically<br>No Different |
| Brigham and Women's Hospital                      | 12              | 1               | 0.18                     | 1.1               | 0.16      | Statistically<br>Lower        |
| Cape Cod Hospital                                 | 11              | 0               | 0.00                     | 1.1               | 0.00      | Statistically<br>No Different |
| Lahey Clinic                                      | 12              | 0               | 0.00                     | 1.1               | 0.00      | Statistically<br>No Different |
| Massachusetts General Hospital                    | 12              | 1               | 0.23                     | 1.1               | 0.21      | Statistically<br>No Different |
| North Shore Medical Center -<br>Salem Hospital    | 12              | 0               | 0.00                     | 1.1               | 0.00      | Statistically<br>No Different |
| Southcoast Health Systems --<br>Charlton Hospital | 12              | 0               | 0.00                     | 1.1               | 0.00      | Statistically<br>No Different |
| Tufts Medical Center                              | 11              | 2               | 1.02                     | 1.1               | 0.93      | Statistically<br>No Different |
| UMass Memorial Medical Center                     | 12              | 2               | 0.84                     | 1.1               | 0.77      | Statistically<br>No Different |

### Pediatric Cardiothoracic

| Hospital            | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate     |
|---------------------|-----------------|-----------------|--------------------------|-------------------|-----------|-------------------------------|
| Children's Hospital | 12              | 24              | 4.08                     | 2.9               | 1.41      | Statistically<br>No Different |

### Medical Non-Major Teaching

| Hospital  | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National Rate  |
|---|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Nthern Berkshire Health Sys (North Adams Reg Hos) | 10              | 0               | 0.00                     | 1.5               | 0.00      | Statistically No Different |
| Southcoast Health Systems -- Charlton Hospital    | 12              | 0               | 0.00                     | 1.5               | 0.00      | Statistically No Different |

### Medical Major Teaching

| Hospital                             | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National       |
|--------------------------------------|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Beth Israel Deaconess Medical Center | 24              | 2               | 0.63                     | 2.2               | 0.28      | Statistically No Different |
| Boston Medical Center                | 24              | 10              | 2.82                     | 2.2               | 1.28      | Statistically No Different |
| Brigham and Women's Hospital         | 12              | 3               | 0.71                     | 2.2               | 0.32      | Statistically Lower        |
| Lahey Clinic                         | 22              | 3               | 0.68                     | 2.2               | 0.31      | Statistically Lower        |
| Massachusetts General Hospital       | 12              | 5               | 1.16                     | 2.2               | 0.53      | Statistically No Different |
| Mount Auburn Hospital                | 12              | 1               | 0.87                     | 2.2               | 0.40      | Statistically No Different |
| St. Elizabeth's Medical Center       | 12              | 1               | 1.13                     | 2.2               | 0.51      | Statistically No Different |
| Tufts Medical Center                 | 12              | 8               | 3.25                     | 2.2               | 1.48      | Statistically No Different |
| UMass Memorial Medical Center        | 36              | 11              | 1.20                     | 2.2               | 0.55      | Statistically Lower        |

## Medical/Surgical Non-Major Teaching

| Hospital                                     | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National       |
|--|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Anna Jaques Hospital                         | 12              | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Beth Israel Deaconess Medical Center Needham | 11              | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Brockton Hospital (Signature)                | 11              | 1               | 0.60                     | 1.1               | 0.54      | Statistically No Different |
| Cape Cod Hospital                            | 10              | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Caritas Carney Hospital                      | 12              | 4               | 5.12                     | 1.1               | 4.65      | Statistically Higher       |
| Caritas Good Samaritan Medical Center        | 12              | 3               | 1.14                     | 1.1               | 1.04      | Statistically No Different |
| Caritas Holy Family Hospital                 | 10              | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Caritas Norwood Hospital                     | 12              | 1               | 1.11                     | 1.1               | 1.01      | Statistically No Different |
| Cooley Dickinson Hospital                    | 11              | 1               | 0.74                     | 1.1               | 0.67      | Statistically No Different |
| Emerson Hospital                             | 12              | 1               | 0.98                     | 1.1               | 0.89      | Statistically No Different |
| Fairview                                     | 2               | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Falmouth Hospital                            | 12              | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Hallmark Health Corp- Melrose-Wakefield      | 12              | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Harrington Memorial Hospital                 | 3               | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Health Alliance Hospital                     | 11              | 1               | 1.31                     | 1.1               | 1.19      | Statistically No Different |
| Heywood Hospital                             | 6               | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |
| Holyoke Medical Center                       | 12              | 1               | 0.99                     | 1.1               | 0.90      | Statistically No Different |
| Hubbard Regional Hospital                    | 2               | 0               | 0.00                     | 1.1               | 0.00      | Statistically No Different |

|  |    |   |      |     |      |                            |
|--|----|---|------|-----|------|----------------------------|
| Jordan Hospital                                  | 12 | 1 | 1.14 | 1.1 | 1.03 | Statistically No Different |
| Lawrence General Hospital                        | 24 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Lawrence Memorial Hospital                       | 11 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Lowell General Hospital                          | 12 | 2 | 1.51 | 1.1 | 1.37 | Statistically No Different |
| Marlborough Hospital                             | 12 | 1 | 1.23 | 1.1 | 1.12 | Statistically No Different |
| Mercy Medical Center                             | 11 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Merrimack Valley Hospital                        | 11 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Metro West Medical Center-Framingham Hospital    | 12 | 4 | 3.90 | 1.1 | 3.55 | Statistically No Different |
| Metro West Medical Center-Leonard Morse Hospital | 12 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Milton Hospital                                  | 11 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Morton Hospital and Medical Center               | 12 | 1 | 0.94 | 1.1 | 0.86 | Statistically No Different |
| Nashoba Valley Medical Center                    | 7  | 1 | 4.85 | 1.1 | 4.41 | Statistically No Different |
| New England Baptist Hospital                     | 12 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Noble Hospital                                   | 11 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| North Shore Medical Center - Salem Hospital      | 12 | 4 | 1.14 | 1.1 | 1.03 | Statistically No Different |
| North Shore Medical Center - Union Hospital      | 6  | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Northeast Hospital - Addison Gilbert             | 6  | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Northeast Hospital - Beverly Hospital            | 12 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Quincy Medical Center                            | 12 | 2 | 1.96 | 1.1 | 1.79 | Statistically No Different |
| Saints Memorial Medical Center                   | 12 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| South Shore Hospital                             | 12 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |

|  |    |   |      |     |      |                            |
|--|----|---|------|-----|------|----------------------------|
| Southcoast Health Systems -- St. Luke's Hospital | 12 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Southcoast Health Systems -- Tobey Hospital      | 10 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| St. Anne's Hospital                              | 12 | 2 | 3.34 | 1.1 | 3.04 | Statistically No Different |
| Sturdy Memorial Medical Center                   | 12 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Winchester Hospital                              | 12 | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |
| Wing Memorial Hospital                           | 9  | 0 | 0.00 | 1.1 | 0.00 | Statistically No Different |

### Medical/Surgical Major Teaching

| Hospital  | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National       |
|---|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Baystate Medical Center                               | 12              | 4               | 0.95                     | 1.6               | 0.60      | Statistically No Different |
| Berkshire Health Systems                              | 12              | 2               | 0.59                     | 1.6               | 0.37      | Statistically No Different |
| Beth Israel Deaconess Medical Center                  | 12              | 2               | 0.99                     | 1.6               | 0.62      | Statistically No Different |
| Cambridge Health Alliance - Cambridge Hospital        | 11              | 0               | 0.00                     | 1.6               | 0.00      | Statistically No Different |
| Cambridge Health Alliance - Whidden Memorial Hospital | 12              | 1               | 1.11                     | 1.6               | 0.69      | Statistically No Different |
| Cambridge Health Alliance - Somerville Hospital       | 4               | 0               | 0.00                     | 1.6               | 0.00      | Statistically No Different |
| Milford Regional Hospital                             | 12              | 1               | 1.45                     | 1.6               | 0.90      | Statistically No Different |
| Newton-Wellesley Hospital                             | 12              | 0               | 0.00                     | 1.6               | 0.00      | Statistically No Different |
| Saint Vincent Hospital                                | 12              | 0               | 0.00                     | 1.6               | 0.00      | Lower                      |

### Pediatric Medical/Surgical

| Hospital                       | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National       |
|--------------------------------|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Baystate Medical Center        | 12              | 1               | 1.62                     | 2.4               | 0.68      | Statistically No Different |
| Boston Medical Center          | 6               | 0               | 0.00                     | 2.4               | 0.00      | Statistically No Different |
| Children's Hospital            | 12              | 13              | 3.00                     | 2.4               | 1.25      | Statistically No Different |
| Massachusetts General Hospital | 12              | 2               | 1.53                     | 2.4               | 0.64      | Statistically No Different |
| Tufts Medical Center           | 12              | 0               | 0.00                     | 2.4               | 0.00      | Statistically No Different |
| UMass Memorial Medical Center  | 12              | 0               | 0.00                     | 2.4               | 0.00      | Statistically No Different |

### Pediatric Medical

| Hospital            | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National       |
|---------------------|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Children's Hospital | 12              | 0               | 0.00                     | 1.2               | 0.00      | Statistically No Different |

### Neurosurgical

| Hospital                       | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National       |
|--------------------------------|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Brigham and Women's Hospital   | 12              | 4               | 2.09                     | 1.9               | 1.10      | Statistically No Different |
| Massachusetts General Hospital | 12              | 0               | 0.00                     | 1.9               | 0.00      | Lower                      |

## Surgical

| Hospital   | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National       |
|--|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Beth Israel Deaconess Medical Center             | 12              | 1               | 0.37                     | 1.9               | 0.19      | Statistically No Different |
| Boston Medical Center                            | 12              | 1               | 0.28                     | 1.9               | 0.15      | Statistically Lower        |
| Brigham and Women's Hospital                     | 36              | 1               | 0.19                     | 1.9               | 0.10      | Statistically Lower        |
| Lahey Clinic                                     | 12              | 2               | 0.48                     | 1.9               | 0.25      | Statistically Lower        |
| Massachusetts General Hospital                   | 12              | 1               | 0.20                     | 1.9               | 0.11      | Statistically Lower        |
| Mount Auburn Hospital                            | 12              | 1               | 0.69                     | 1.9               | 0.37      | Statistically No Different |
| South Shore Hospital                             | 12              | 0               | 0.00                     | 1.9               | 0.00      | Statistically No Different |
| Southcoast Health Systems -- St. Luke's Hospital | 12              | 2               | 2.06                     | 1.9               | 1.08      | Statistically No Different |
| St. Elizabeth's Medical Center                   | 12              | 0               | 0.00                     | 1.9               | 0.00      | Statistically No Different |
| Tufts Medical Center                             | 12              | 1               | 0.52                     | 1.9               | 0.28      | Statistically No Different |
| UMass Memorial Medical Center                    | 24              | 0               | 0.00                     | 1.9               | 0.00      | Statistically Lower        |

## Trauma

| Hospital                             | Months Reported | Criterion 1 BSI | Criterion 1 BSI Rate (A) | National Rate (B) | SIR (A/B) | Compared to National       |
|--------------------------------------|-----------------|-----------------|--------------------------|-------------------|-----------|----------------------------|
| Beth Israel Deaconess Medical Center | 12              | 1               | 0.67                     | 3.1               | 0.22      | Statistically No Different |
| Boston Medical Center                | 12              | 2               | 0.90                     | 3.1               | 0.29      | Statistically No Different |
| UMass Memorial Medical Center        | 12              | 0               | 0.00                     | 3.1               | 0.00      | Statistically Lower        |

## Appendix I Central Line Utilization Ratios by Hospital

### Anna Jaques Hospital

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 357               | 1,821        | 0.20                           |

### Baystate Mary Lane

| ICU Type        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac | 1                         | 16                | 51           | 0.31                           |

### Baystate Medical Center

| ICU Type                        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|---------------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac                 | 12                        | 743               | 1,783        | 0.42                           |
| Surgical cardiothoracic         | 12                        | 2,141             | 2,585        | 0.83                           |
| Medical/surgical major teaching | 12                        | 4,194             | 7,552        | 0.56                           |
| Pediatric medical/surgical      | 12                        | 616               | 2,049        | 0.30                           |

### Berkshire Health Systems

| ICU Type                        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|---------------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical major teaching | 12                        | 3,366             | 4,851        | 0.69                           |

### Beth Israel Deaconess Medical Center

| ICU Type                | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac         | 12                        | 1,050             | 2,208        | 0.48                           |
| Surgical cardiothoracic | 12                        | 2,282             | 2,694        | 0.85                           |

|                                 |    |       |       |      |
|---------------------------------|----|-------|-------|------|
| Medical major teaching          | 24 | 3,196 | 5,195 | 0.62 |
| Medical/surgical major teaching | 12 | 2,025 | 3,256 | 0.62 |
| Surgical                        | 12 | 2,704 | 4,580 | 0.59 |
| Trauma                          | 12 | 1,500 | 2,684 | 0.56 |

**Beth Israel Deaconess Medical Center Needham**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 471               | 1,700        | 0.28                           |

**Boston Medical Center**

| ICU Type                   | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac            | 12                        | 3,131             | 4,851        | 0.65                           |
| Medical major teaching     | 24                        | 3,545             | 5,833        | 0.61                           |
| Pediatric medical/surgical | 6                         | 185               | 610          | 0.30                           |
| Surgical                   | 12                        | 3,541             | 4,582        | 0.77                           |
| Trauma                     | 12                        | 2,228             | 3,526        | 0.63                           |

**Brigham and Women's Hospital**

| ICU Type                | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac         | 11                        | 1,661             | 3,447        | 0.48                           |
| Surgical cardiothoracic | 12                        | 5,671             | 6,161        | 0.92                           |
| Medical major teaching  | 12                        | 4,202             | 6,138        | 0.68                           |
| Neurosurgical           | 12                        | 1,918             | 6,116        | 0.31                           |
| Surgical                | 36                        | 5,153             | 9,346        | 0.55                           |

**Brockton Hospital (Signature)**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 1,680             | 3,895        | 0.43                           |

**Cambridge Health Alliance - Cambridge Hospital**

| ICU Type                        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|---------------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical major teaching | 11                        | 768               | 1,568        | 0.49                           |

**Cambridge Health Alliance - Whidden Memorial Hospital**

| ICU Type                        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|---------------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical major teaching | 12                        | 904               | 1,874        | 0.48                           |

**Cambridge Health Alliance -Somerville Hospital**

| ICU Type                        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|---------------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical major teaching | 4                         | 85                | 385          | 0.22                           |

**Cape Cod Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac             | 12                        | 561               | 2,025        | 0.28                           |
| Surgical cardiothoracic     | 11                        | 928               | 1,309        | 0.71                           |
| Medical/surgical all others | 10                        | 1,004             | 2,465        | 0.41                           |

**Caritas Carney Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 782               | 3,512        | 0.22                           |

**Caritas Good Samaritan Medical Center**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 2,623             | 4,358        | 0.60                           |

### Caritas Holy Family Hospital

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 10                        | 474               | 1,304        | 0.36                           |

### Caritas Norwood Hospital

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 903               | 2,072        | 0.44                           |

### Children's Hospital

| ICU Type                   | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Pediatric cardiothoracic   | 12                        | 5,877             | 7,964        | 0.74                           |
| Pediatric medical/surgical | 12                        | 4,329             | 8,395        | 0.52                           |
| Pediatric medical          | 12                        | 855               | 2,965        | 0.29                           |

### Cooley Dickinson Hospital

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 1,353             | 2,174        | 0.62                           |

### Emerson Hospital

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 1,019             | 2,934        | 0.35                           |

### Fairview

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 2                         | 41                | 117          | 0.35                           |

**Falmouth Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 755               | 2,739        | 0.28                           |

**Franklin Medical Center**

| ICU Type        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac | 2                         | 28                | 250          | 0.11                           |

**Hallmark Health Corp- Melrose-Wakefield**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 647               | 1,832        | 0.35                           |

**Harrington Memorial Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 3                         | 51                | 321          | 0.16                           |

**Health Alliance Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 762               | 2,566        | 0.30                           |

**Heywood Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 6                         | 131               | 521          | 0.25                           |

### Holyoke Medical Center

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 1,008             | 2,307        | 0.44                           |

### Hubbard Regional Hospital

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 2                         | 33                | 506          | 0.07                           |

### Jordan Hospital

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 880               | 3,776        | 0.23                           |

### Lahey Clinic

| ICU Type                | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac         | 12                        | 870               | 1,939        | 0.45                           |
| Surgical cardiothoracic | 12                        | 1,548             | 1,598        | 0.97                           |
| Medical major teaching  | 22                        | 4,412             | 5,585        | 0.79                           |
| Surgical                | 12                        | 4,135             | 4,799        | 0.86                           |

### Lawrence General Hospital

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 24                        | 970               | 3,750        | 0.26                           |

**Lawrence Memorial Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 390               | 1,737        | 0.22                           |

**Lowell General Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 1,325             | 2,678        | 0.49                           |

**Marlborough Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 813               | 2,524        | 0.32                           |

**Massachusetts General Hospital**

| ICU Type                   | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Burn                       | 12                        | 928               | 1,061        | 0.87                           |
| Medical Cardiac            | 12                        | 4,103             | 4,732        | 0.87                           |
| Surgical cardiothoracic    | 12                        | 4,343             | 4,359        | 1.00                           |
| Medical major teaching     | 12                        | 4,315             | 5,071        | 0.85                           |
| Pediatric medical/surgical | 12                        | 1,307             | 2,683        | 0.49                           |
| Neurosurgical              | 12                        | 3,050             | 5,697        | 0.54                           |
| Surgical                   | 12                        | 4,934             | 6,095        | 0.81                           |

**Mercy Medical Center**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 1,777             | 2,301        | 0.77                           |

**Merrimack Valley Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 549               | 2,196        | 0.25                           |

**Metro West Medical Center- Framingham Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 1,025             | 3,449        | 0.30                           |

**Metro West Medical Center- Leonard Morse Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 595               | 2,148        | 0.28                           |

**Milford Regional Hospital**

| ICU Type                        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|---------------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical major teaching | 12                        | 691               | 2,983        | 0.23                           |

**Milton Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 553               | 1,517        | 0.36                           |

**Morton Hospital and Medical Center**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 1,061             | 2,760        | 0.38                           |

**Mount Auburn Hospital**

| ICU Type               | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical major teaching | 12                        | 1,148             | 2,374        | 0.48                           |
| Surgical               | 12                        | 1,439             | 2,024        | 0.71                           |

**Nashoba Valley Medical Center**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 7                         | 206               | 1,267        | 0.16                           |

**New England Baptist Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 769               | 1,461        | 0.53                           |

**Newton-Wellesley Hospital**

| ICU Type                        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|---------------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical major teaching | 12                        | 1,120             | 2,681        | 0.42                           |

**Noble Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 11                        | 292               | 1,186        | 0.25                           |

**North Shore Medical Center - Salem Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Surgical cardiothoracic     | 12                        | 758               | 1,694        | 0.45                           |
| Medical/surgical all others | 12                        | 3,521             | 5,733        | 0.61                           |

**North Shore Medical Center - Union Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 6                         | 951               | 1,355        | 0.70                           |

**Northeast Hospital - Addison Gilbert**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 6                         | 191               | 619          | 0.31                           |

**Northeast Hospital - Beverly Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 1,852             | 3,380        | 0.55                           |

**Nthern Berkshire Health Sys (North Adams Reg Hos)**

| ICU Type           | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|--------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical all others | 10                        | 394               | 1,532        | 0.26                           |

**Quincy Medical Center**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 1,018             | 1,494        | 0.68                           |

**Saint Vincent Hospital**

| ICU Type                        | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|---------------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical major teaching | 12                        | 3,768             | 6,804        | 0.55                           |

**Saints Memorial Medical Center**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 693               | 2,090        | 0.33                           |

**Shriners for Children (Boston)**

| ICU Type | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|----------|---------------------------|-------------------|--------------|--------------------------------|
| Burn     | 12                        | 1,244             | 1,256        | 0.99                           |

**South Shore Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac             | 12                        | 650               | 2,200        | 0.30                           |
| Medical/surgical all others | 12                        | 850               | 2,246        | 0.38                           |
| Surgical                    | 12                        | 877               | 2,445        | 0.36                           |

**Southcoast Health Systems -- Charlton Hospital**

| ICU Type                | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac         | 12                        | 776               | 2,115        | 0.37                           |
| Surgical cardiothoracic | 12                        | 608               | 998          | 0.61                           |
| Medical all others      | 12                        | 1,477             | 2,387        | 0.62                           |

**Southcoast Health Systems -- St. Luke's Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 2,282             | 4,533        | 0.50                           |
| Surgical                    | 12                        | 973               | 1,999        | 0.49                           |

**Southcoast Health Systems -- Tobey Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 10                        | 358               | 1,976        | 0.18                           |

**St. Anne's Hospital**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 598               | 2,436        | 0.25                           |

**St. Elizabeth's Medical Center**

| ICU Type               | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac        | 12                        | 650               | 1,637        | 0.40                           |
| Medical major teaching | 12                        | 886               | 1,949        | 0.45                           |
| Surgical               | 12                        | 906               | 1,824        | 0.50                           |

**Sturdy Memorial Medical Center**

| ICU Type                    | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|-----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical/surgical all others | 12                        | 2,023             | 3,548        | 0.57                           |

**Tufts Medical Center**

| ICU Type                   | Number of Months Reported | Central Line Days | Patient Days | Central Line Utilization Ratio |
|----------------------------|---------------------------|-------------------|--------------|--------------------------------|
| Medical Cardiac            | 11                        | 1,881             | 2,947        | 0.64                           |
| Surgical cardiothoracic    | 11                        | 1,964             | 2,843        | 0.69                           |
| Medical major teaching     | 12                        | 2,459             | 3,634        | 0.68                           |
| Pediatric medical/surgical | 12                        | 1,029             | 2,069        | 0.50                           |
| Surgical                   | 12                        | 1,905             | 3,372        | 0.56                           |

**UMass Memorial Medical Center**

| <b>ICU Type</b>            | <b>Number of Months Reported</b> | <b>Central Line Days</b> | <b>Patient Days</b> | <b>Central Line Utilization Ratio</b> |
|----------------------------|----------------------------------|--------------------------|---------------------|---------------------------------------|
| Surgical cardiothoracic    | 12                               | 2,370                    | 4,528               | 0.52                                  |
| Medical major teaching     | 36                               | 9,164                    | 14,751              | 0.62                                  |
| Pediatric medical/surgical | 12                               | 537                      | 1,878               | 0.29                                  |
| Surgical                   | 24                               | 3,713                    | 5,690               | 0.65                                  |
| Trauma                     | 12                               | 1,858                    | 4,871               | 0.38                                  |

**Winchester Hospital**

| <b>ICU Type</b>             | <b>Number of Months Reported</b> | <b>Central Line Days</b> | <b>Patient Days</b> | <b>Central Line Utilization Ratio</b> |
|-----------------------------|----------------------------------|--------------------------|---------------------|---------------------------------------|
| Medical/surgical all others | 12                               | 933                      | 2,843               | 0.33                                  |

**Wing Memorial Hospital**

| <b>ICU Type</b>             | <b>Number of Months Reported</b> | <b>Central Line Days</b> | <b>Patient Days</b> | <b>Central Line Utilization Ratio</b> |
|-----------------------------|----------------------------------|--------------------------|---------------------|---------------------------------------|
| Medical/surgical all others | 9                                | 240                      | 906                 | 0.26                                  |

## Appendix J

### Definitions of Neonatal Intensive Care Unit (NICU) types<sup>6</sup>

| NICU Type            | Definition  |
|----------------------|---|
| Level II (Step-Down) | Special care nursery for care of preterm infants with birth weight >1500g. Includes resuscitation and stabilization of preterm and/or ill infants before transfer to a facility at which newborn intensive care is provided.  |
| Level II/III         | Combined nursery housing both Level II and III newborns and infants.  |
| Level III            | <p>A hospital neonatal intensive care unit (NICU) organized with personnel and equipment to provide continuous life support and comprehensive care for extremely high-risk newborn infants and those with complex and critical illness. Level III is subdivided into 4 levels differentiated by the capability to provide advanced medical and surgical care. The categories of Level III below are classifications from the American Academy of Pediatrics, Definitions of hospital-based newborn services. These classifications are all considered Level III nurseries in NHSN.</p> <p>Level IIIA -Hospital or state-mandated restriction on type and/or duration of mechanical ventilation.</p> <p>Level IIIB -No restrictions on type or duration of mechanical ventilation. No major surgery.</p> <p>Level IIIC -Major surgery performed on site (e.g., omphalocele repair, tracheoesophageal fistula or esophageal atresia repair, bowel resection, myelomeningocele repair, ventriculoperitoneal shunt). No surgical repair of serious congenital heart anomalies that require cardiopulmonary bypass and /or ECMO for medical conditions.</p> <p>Level IIID -Major surgery, surgical repair of serious congenital heart anomalies that require cardiopulmonary bypass, and/or ECMO for medical conditions.</p> |

<sup>6</sup> [http://www.cdc.gov/nhsn/PDFs/pscManual/15LocationsDescriptions\\_current.pdf](http://www.cdc.gov/nhsn/PDFs/pscManual/15LocationsDescriptions_current.pdf)

## Appendix K Criteria 1,2, and 3 BSI by Birth Weight

### Level II/III NICU

| Hospital                             | Birth Weight | Months | All Criteria BSI per 1,000 Central Line Days (A) | National Rate (B) | SIR (A/B) | Statistical Interpretation |
|--------------------------------------|--------------|--------|--|-------------------|-----------|----------------------------|
| Beth Israel Deaconess Medical Center | <=750 g      | 12     | 2.0  | 3.9               | 0.51      | Statistically No Different |
| Beth Israel Deaconess Medical Center | 751-1000 g   | 12     | 0.0  | 3.1               | 0         | Statistically No Different |
| Beth Israel Deaconess Medical Center | 1001-1500 g  | 12     | 2.5  | 1.9               | 1.3       | Statistically No Different |
| Beth Israel Deaconess Medical Center | 1501-2500 g  | 12     | 3.8  | 1.5               | 2.55      | Statistically No Different |
| Beth Israel Deaconess Medical Center | >2500 g      | 12     | 16.4   | 1.1               | 14.9      | Statistically No Different |
| UMass Memorial Medical Center        | <=750 g      | 12     | 4.4  | 3.9               | 1.12      | Statistically No Different |
| UMass Memorial Medical Center        | 751-1000 g   | 12     | 0.0  | 3.1               | 0         | Statistically No Different |
| UMass Memorial Medical Center        | 1001-1500 g  | 12     | 7.5  | 1.9               | 3.95      | Higher                     |
| UMass Memorial Medical Center        | 1501-2500 g  | 12     | 2.4  | 1.5               | 1.59      | Statistically No Different |
| UMass Memorial Medical Center        | >2500 g      | 12     | 0.0  | 1.1               | 0         | Statistically No Different |

### Level III NICUs

| Hospital                    | Birth Weight | Months Reported | Criteria 1,2, & 3 BSI per 1,000 Central Line Days(A) | National Rate (B) | SIR (A/B) | Statistical Interpretation |
|-----------------------------|--------------|-----------------|--|-------------------|-----------|----------------------------|
| Baystate Medical Center     | <=750 g      | 12              | 0.0  | 3.6               | 0         | Statistically No Different |
| Baystate Medical Center     | 751-1000 g   | 12              | 2.5  | 3.1               | 0.8       | Statistically No Different |
| Baystate Medical Center     | 1001-1500 g  | 12              | 0.0  | 2.3               | 0         | Statistically No Different |
| Baystate Medical Center     | 1501-2500 g  | 12              | 0.0  | 2.2               | 0         | Statistically No Different |
| Baystate Medical Center     | >2500 g      | 12              | 0.0  | 1.7               | 0         | Statistically No Different |
| Boston Medical Center       | <=750 g      | 12              | 13.3   | 3.6               | 3.68      | Statistically No Different |
| Boston Medical Center       | 751-1000 g   | 12              | 0.0  | 3.1               | 0         | Statistically No Different |
| Boston Medical Center       | 1001-1500 g  | 12              | 3.9  | 2.3               | 1.7       | Statistically No Different |
| Boston Medical Center       | 1501-2500 g  | 12              | 0.0  | 2.2               | 0         | Statistically No Different |
| Boston Medical Center       | >2500 g      | 12              | 13.4   | 1.7               | 7.9       | Statistically No Different |
| Brigham and Womens Hospital | <=750 g      | 12              | 2.0  | 3.6               | 0.57      | Statistically No Different |
| Brigham and Womens Hospital | 751-1000 g   | 12              | 4.5  | 3.1               | 1.44      | Statistically No Different |
| Brigham and Womens Hospital | 1001-1500 g  | 12              | 4.4  | 2.3               | 1.91      | Statistically No Different |
| Brigham and Womens Hospital | 1501-2500 g  | 12              | 2.8  | 2.2               | 1.26      | Statistically No Different |
| Brigham and Womens Hospital | >2500 g      | 12              | 0.0  | 1.7               | 0         | Statistically No Different |
| Childrens Hospital          | <=750 g      | 12              | 2.6  | 3.6               | 0.72      | Statistically No Different |
| Childrens Hospital          | 751-1000 g   | 12              | 0.0  | 3.1               | 0         | Statistically No Different |

| Hospital                       | Birth Weight | Months Reported | Criteria 1,2, & 3 BSI per 1,000 Central Line Days(A) | National Rate (B) | SIR (A/B) | Statistical Interpretation |
|--------------------------------|--------------|-----------------|--|-------------------|-----------|----------------------------|
| Childrens Hospital             | 1001-1500 g  | 12              | 0.0  | 2.3               | 0         | Statistically No Different |
| Childrens Hospital             | 1501-2500 g  | 12              | 0.0  | 2.2               | 0         | Statistically No Different |
| Childrens Hospital             | >2500 g      | 12              | 0.0  | 1.7               | 0         | Statistically No Different |
| Massachusetts General Hospital | <=750 g      | 6               | 0.0  | 3.6               | 0         | Statistically No Different |
| Massachusetts General Hospital | 751-1000 g   | 6               | 0.0  | 3.1               | 0         | Statistically No Different |
| Massachusetts General Hospital | 1001-1500 g  | 6               | 0.0  | 2.3               | 0         | Statistically No Different |
| Massachusetts General Hospital | 1501-2500 g  | 6               | 0.0  | 2.2               | 0         | Statistically No Different |
| Massachusetts General Hospital | >2500 g      | 6               | 0.0  | 1.7               | 0         | Statistically No Different |
| South Shore Hospital           | <=750 g      | 12              | 0.0  | 3.6               | 0         | Statistically No Different |
| South Shore Hospital           | 751-1000 g   | 12              | 0.0  | 3.1               | 0         | Statistically No Different |
| South Shore Hospital           | 1001-1500 g  | 12              | 0.0  | 2.3               | 0         | Statistically No Different |
| South Shore Hospital           | 1501-2500 g  | 12              | 0.0  | 2.2               | 0         | Statistically No Different |
| South Shore Hospital           | >2500 g      | 12              | 0.0  | 1.7               | 0         | Statistically No Different |
| St. Elizabeths Medical Center  | <=750 g      | 12              | 0.0  | 3.6               | 0         | Statistically No Different |
| St. Elizabeths Medical Center  | 751-1000 g   | 12              | 0.0  | 3.1               | 0         | Statistically No Different |
| St. Elizabeths Medical Center  | 1001-1500 g  | 12              | 0.0  | 2.3               | 0         | Statistically No Different |
| St. Elizabeths Medical Center  | 1501-2500 g  | 12              | 0.0  | 2.2               | 0         | Statistically No Different |
| St. Elizabeths Medical Center  | >2500 g      | 12              | 0.0  | 1.7               | 0         | Statistically No Different |

| <b>Hospital</b>                  | <b>Birth Weight</b> | <b>Months Reported</b> | <b>Criteria 1,2, &amp; 3 BSI per 1,000 Central Line Days(A)</b> | <b>National Rate (B)</b> | <b>SIR (A/B)</b> | <b>Statistical Interpretation</b> |
|----------------------------------|---------------------|------------------------|---|--------------------------|------------------|-----------------------------------|
| Tufts New England Medical Center | <=750 g             | 12                     | 5.0   | 3.6                      | 1.39             | Statistically No Different        |
| Tufts New England Medical Center | 751-1000 g          | 12                     | 2.3   | 3.1                      | 0.76             | Statistically No Different        |
| Tufts New England Medical Center | 1001-1500 g         | 12                     | 2.5   | 2.3                      | 1.07             | Statistically No Different        |
| Tufts New England Medical Center | 1501-2500 g         | 12                     | 5.3   | 2.2                      | 2.4              | Statistically No Different        |
| Tufts New England Medical Center | >2500 g             | 12                     | 2.1   | 1.7                      | 1.25             | Statistically No Different        |

## Appendix L Criterion 1 BSI by Birth Weight

### Level II/III NICU

| Hospital                             | Birth Weight | Months Reported | Criterion 1 BSI per 1,000 Central Line Days (A) | National Rate (B) | SIR (A/B) | Interpretation             |
|--------------------------------------|--------------|-----------------|---|-------------------|-----------|----------------------------|
| Beth Israel Deaconess Medical Center | <=750 g      | 12              | 1.97  | 2.5               | 0.79      | Statistically No Different |
| Beth Israel Deaconess Medical Center | 751-1000 g   | 12              | 0   | 2                 | 0         | Statistically No Different |
| Beth Israel Deaconess Medical Center | 1001-1500 g  | 12              | 2.47  | 1.3               | 1.9       | Statistically No Different |
| Beth Israel Deaconess Medical Center | 1501-2500 g  | 12              | 3.83  | 1.1               | 3.48      | Statistically No Different |
| Beth Israel Deaconess Medical Center | >2500 g      | 12              | 16.39   | 0.7               | 23.42     | Statistically No Different |
| UMass Memorial Medical Center        | <=750 g      | 12              | 4.36  | 2.5               | 1.74      | Statistically No Different |
| UMass Memorial Medical Center        | 751-1000 g   | 12              | 0   | 2                 | 0         | Statistically No Different |
| UMass Memorial Medical Center        | 1001-1500 g  | 12              | 1.88  | 1.3               | 1.44      | Statistically No Different |
| UMass Memorial Medical Center        | 1501-2500 g  | 12              | 2.39  | 1.1               | 2.17      | Statistically No Different |
| UMass Memorial Medical Center        | >2500 g      | 12              | 0   | 0.7               | 0         | Statistically No Different |

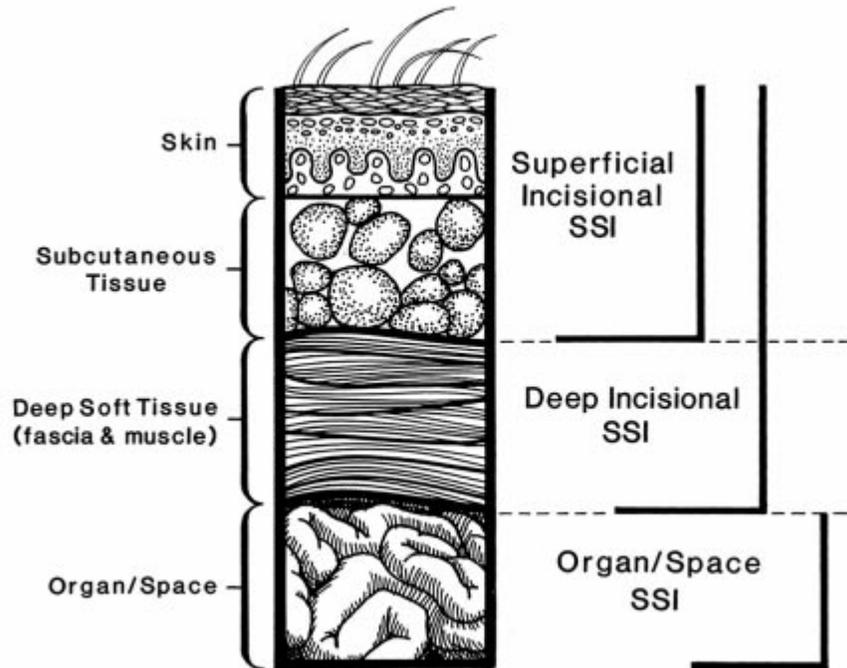
**Level III NICU**

| <b>Hospital</b>             | <b>Birth Weight</b> | <b>Months Reported</b> | <b>Criterion 1 BSI per 1,000 Central Line Days(A)</b> | <b>Expected (B)</b> | <b>SIR (A/B)</b> | <b>Statistical Interpretation</b> |
|-----------------------------|---------------------|------------------------|---|---------------------|------------------|-----------------------------------|
| Baystate Medical Center     | <=750 g             | 12                     | 0   | 2.6                 | 0                | Statistically No Different        |
| Baystate Medical Center     | 751-1000 g          | 12                     | 2.48  | 2.5                 | 0.99             | Statistically No Different        |
| Baystate Medical Center     | 1001-1500 g         | 12                     | 0   | 1.6                 | 0                | Statistically No Different        |
| Baystate Medical Center     | 1501-2500 g         | 12                     | 0   | 1.5                 | 0                | Statistically No Different        |
| Baystate Medical Center     | >2500 g             | 12                     | 0   | 1.1                 | 0                | Statistically No Different        |
| Boston Medical Center       | <=750 g             | 12                     | 13.25   | 2.6                 | 5.09             | Statistically No Different        |
| Boston Medical Center       | 751-1000 g          | 12                     | 0   | 2.5                 | 0                | Statistically No Different        |
| Boston Medical Center       | 1001-1500 g         | 12                     | 0   | 1.6                 | 0                | Statistically No Different        |
| Boston Medical Center       | 1501-2500 g         | 12                     | 0   | 1.5                 | 0                | Statistically No Different        |
| Boston Medical Center       | >2500 g             | 12                     | 0   | 1.1                 | 0                | Statistically No Different        |
| Brigham and Womens Hospital | <=750 g             | 12                     | 0   | 2.6                 | 0                | Statistically No Different        |
| Brigham and Womens Hospital | 751-1000 g          | 12                     | 2.23  | 2.5                 | 0.89             | Statistically No Different        |
| Brigham and Womens Hospital | 1001-1500 g         | 12                     | 4.4   | 1.6                 | 2.75             | Statistically No Different        |
| Brigham and Womens Hospital | 1501-2500 g         | 12                     | 0   | 1.5                 | 0                | Statistically No Different        |
| Brigham and Womens Hospital | >2500 g             | 12                     | 0   | 1.1                 | 0                | Statistically No Different        |
| Childrens Hospital          | <=750 g             | 12                     | 0   | 2.6                 | 0                | Statistically No Different        |
| Childrens Hospital          | 751-1000 g          | 12                     | 0   | 2.5                 | 0                | Statistically No Different        |
| Childrens Hospital          | 1001-1500 g         | 12                     | 0   | 1.6                 | 0                | Statistically No Different        |
| Childrens Hospital          | 1501-2500 g         | 12                     | 0   | 1.5                 | 0                | Statistically No Different        |
| Childrens Hospital          | >2500 g             | 12                     | 0   | 1.1                 | 0                | Statistically No Different        |

| Hospital                         | Birth Weight | Months Reported | Criterion 1 BSI per 1,000 Central Line Days(A) | Expected (B) | SIR (A/B) | Statistical Interpretation |
|----------------------------------|--------------|-----------------|--|--------------|-----------|----------------------------|
| Massachusetts General Hospital   | <=750 g      | 6               | 0  | 2.6          | 0         | Statistically No Different |
| Massachusetts General Hospital   | 751-1000 g   | 6               | 0  | 2.5          | 0         | Statistically No Different |
| Massachusetts General Hospital   | 1001-1500 g  | 6               | 0  | 1.6          | 0         | Statistically No Different |
| Massachusetts General Hospital   | 1501-2500 g  | 6               | 0  | 1.5          | 0         | Statistically No Different |
| Massachusetts General Hospital   | >2500 g      | 6               | 0  | 1.1          | 0         | Statistically No Different |
| St. Elizabeths Medical Center    | <=750 g      | 12              | 0  | 2.6          | 0         | Statistically No Different |
| St. Elizabeths Medical Center    | 751-1000 g   | 12              | 0  | 2.5          | 0         | Statistically No Different |
| St. Elizabeths Medical Center    | 1001-1500 g  | 12              | 0  | 1.6          | 0         | Statistically No Different |
| St. Elizabeths Medical Center    | 1501-2500 g  | 12              | 0  | 1.5          | 0         | Statistically No Different |
| St. Elizabeths Medical Center    | >2500 g      | 12              | 0  | 1.1          | 0         | Statistically No Different |
| South Shore Hospital             | <=750 g      | 12              | 0  | 2.6          | 0         | Statistically No Different |
| South Shore Hospital             | 751-1000 g   | 12              | 0  | 2.5          | 0         | Statistically No Different |
| South Shore Hospital             | 1001-1500 g  | 12              | 0  | 1.6          | 0         | Statistically No Different |
| South Shore Hospital             | 1501-2500 g  | 12              | 0  | 1.5          | 0         | Statistically No Different |
| South Shore Hospital             | >2500 g      | 12              | 0  | 1.1          | 0         | Statistically No Different |
| Tufts New England Medical Center | <=750 g      | 12              | 4  | 2.6          | 1.54      | Statistically No Different |
| Tufts New England Medical Center | 751-1000 g   | 12              | 2.34   | 2.5          | 0.94      | Statistically No Different |
| Tufts New England Medical Center | 1001-1500 g  | 12              | 2.45   | 1.6          | 1.53      | Statistically No Different |
| Tufts New England Medical Center | 1501-2500 g  | 12              | 5.28   | 1.5          | 3.52      | Statistically No Different |
| Tufts New England Medical Center | >2500 g      | 12              | 2.13   | 1.1          | 1.94      | Statistically No Different |

## Appendix M SSI Classification

**Cross-section of Abdominal Wall Depicting CDC Classifications of Surgical Site Infection.**



7 8

Acute care hospitals are required to report deep incisional HAIs and infections that affect body organs or spaces to MDPH

<sup>7</sup> Mangram AJ, Horan TC, Pearson ML, Silver LC, Jarvis WR, the Hospital Infection Control Practices Advisory Committee. Guideline for the prevention of surgical site infection, 1999. *Infect Control Hosp Epidemiol*. 1999;20:247-280.

<sup>8</sup>Horan TC, Gaynes RP, Martone WJ, Jarvis WR, Emori TG. CDC definitions of nosocomial surgical site infections, 1992: a modification of CDC definitions of surgical wound infections. *Infect Control Hosp Epidemiol* 1992;13(10):606-8.