# West Virginia
# Healthcare-Associated Infection
# 2015 Reporting Guide

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# Healthcare-Associated Infection Reporting Guide
## *2015*

# Contents

*This Guide was developed by the West Virginia Health Care Authority, in collaboration with the West Virginia Healthcare-Associated Infection Control Advisory Panel.*

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## I. Protocols and Procedures

### A. Legislative Authority

Pursuant to West Virginia Code §16-5B-17, West Virginia hospitals began collecting and reporting data on healthcare-associated infections (HAI) on July 1, 2009. In response to the requirements of the statute, the West Virginia Health Care Authority (WVHCA) convened the West Virginia Healthcare-Associated Infection Control Advisory Panel, whose duty is to assist the Health Care Authority in performing the following activities:

- Provide guidance to hospitals in their collection of information regarding healthcare-associated infections;
- Provide evidence-based practices in the control and prevention of healthcare-associated infections;
- Develop plans for analyzing infection-related data from hospitals;
- Develop healthcare-associated advisories for hospital distribution; and
- Determine a manner in which reporting of healthcare-associated infections is made available to the public in an understandable fashion.

HAI data are to be submitted by non-federal hospitals, excluding state psychiatric facilities, to the Centers for Disease Control and Prevention's (CDC) National Healthcare Safety Network (NHSN), in accordance with reporting guidelines determined by the Infection Control Advisory Panel and protocols established by NHSN. Beginning in the year 2011 and yearly thereafter, the WVHCA is to report to the Legislative Oversight Committee on Health and Human Resources Accountability in January. The report is to include summaries of the results of the required reporting and the work of the Infection Control Advisory Panel.

Additional information on the West Virginia Healthcare-Associated Infection Advisory Panel can be accessed at: http://www.hca.wv.gov/infectioncontrolpanel/Documents/PanelListing.pdf.

### B. Reporting Requirements and Instructions

Initially, the West Virginia Healthcare-Associated Infection Control Advisory Panel recommended two measures for public reporting effective July 2009. In recent years, Centers for Medicare and Medicaid Services (CMS) has defined HAI reporting requirements for hospitals participating in the Hospital Inpatient Quality Reporting Program. To the extent possible, the Panel has developed West Virginia HAI public reporting requirements to be consistent with CMS requirements in order to reduce the reporting burden among hospitals. In addition, the Advisory Panel recommended that Critical Access Hospitals report State defined HAI since Hospital Inpatient Quality Reporting Program is not required, but voluntary; those recommendations were subsequently approved by the WVHCA Board as required State reporting.

Detailed reporting requirements and related resources are outlined below. Refer to **Table 1** on page 8 for a summary of the requirements. Reporting deadlines in NHSN per CMS current rules are outlined in **Table 2** beginning on page 10.

1) **Healthcare Personnel Influenza Vaccinations**

   a. Beginning January 2012 and continuing into the 2015 collection year, all non-federal hospitals (excluding state psychiatric facilities) are required to report personnel influenza vaccinations to NHSN.

   b. Beginning in 2013 and continuing into the 2015 collection year, facilities shall use the NHSN's *Healthcare Personnel Safety Component Annual Facility Survey* and *Post-season Survey on Influenza Vaccination Programs for Healthcare Personnel* for required influenza vaccination reporting. The WVHCA may distribute an additional survey for questions not included in the NHSN survey.

2) **Central Line-Associated Blood Stream Infections (CLABSI)**

   a. Between July 2009 and December 2010, CLABSIs were required to be reported for general acute care hospitals' medical, surgical, and medical/surgical ICUs.

   b. In January 2011 and continuing into the 2015 collection year, CLABSI is required to be reported for all ICUs.

   c. Beginning in first quarter 2015, the reporting of CLABSI is required in adult and pediatric medical, surgical, and medical/surgical wards in addition to the adult and pediatric ICUs.

   d. Beginning October 2012 and continuing into the 2015 collection year, long term acute care hospitals are required to report CLABSIs.

3) **Catheter-Associated Urinary Tract Infections (CAUTI)**

   a. Beginning in January 2012, all hospitals, including general acute and critical access hospitals, with an ICU are required to report CAUTI for all adult and pediatric ICUs.

   b. Beginning in January 2012, acute care and critical access hospitals without an ICU were required to report CAUTI for Inpatient Medical Wards, and Adult Mixed Acuity Units.

   c. Beginning in 2013 and continuing into the 2015 collection year, inpatient Medical/Surgical Wards in both general acute and critical access hospitals are required to report CAUTI.

   d. Beginning in first quarter 2015, CMS requires acute care hospitals to report CAUTIs in adult and pediatric medical, surgical, and medical / surgical wards in addition to the adult and pediatric ICUs; critical access hospitals are also required to report CAUTIs in

adult and pediatric medical, surgical, and medical/surgical wards in addition to the adult and pediatric ICUs.

e. Beginning in October 2012 and continuing into the 2015 collection year, long term acute care hospitals and inpatient rehabilitation facilities are required to report CAUTI.

## 4) Surgical Site Infections (SSI)

a. Since January 2012 and continuing into the 2015 collection year, acute care hospitals are required to report SSI for colon and abdominal hysterectomy procedures.

## 5) Methicillin-Resistant *Staphylococcus aureus* (MRSA)

a. Beginning January 2013 and continuing into the 2015 collection year, acute care hospitals are required to report MRSA Bacteremia LabID Events.

b. Beginning in the first quarter of 2015, acute care hospitals are required to report MRSA Bacteremia LabID Events in the Emergency Dept. and for Observation Stays.

c. Beginning in the first quarter of 2015, long term acute care hospitals and inpatient rehabilitation facilities are required to report MRSA Bacteremia LabID Events facility-wide.

## 6) C. *difficile* LabID Event

a. Beginning January 2013 and continuing into the 2015 collection year, acute care hospitals are required to report C. *difficile* LabID Events.

b. Beginning in first quarter of 2015, acute care hospitals are required to report C. *difficile* LabID Events in the Emergency Dept. and for Observation Stays in the NHSN data collection program.

c. Beginning in first quarter of 2015, long term acute care hospitals and inpatient rehabilitation facilities are required to report C. *difficile* LabID Events facility-wide.

**Table 1**

**West Virginia HAI Public Reporting Requirements – 2015**

| Reporting Requirement | Facility Type | HAI Event | Reporting Specifications |
|---|---|---|---|
| CMS Requirement | Acute Care Hospitals Only (Non-Critical Access) | CLABSI | Adult, Pediatric/Neonatal ICUs |
| | | | *NEW* Adult/Pediatric Medical, Surgical and Medical/Surgical Wards |
| | | CAUTI | Adult and Pediatric ICUs |
| | | | *NEW* Adult/Pediatric Medical, Surgical and Medical/Surgical Wards |
| | | SSI: COLO | Inpatient COLO Procedures |
| | | SSI: HYST | Inpatient HYST Procedures |
| | | MRSA Bacteremia LabID Event | Facility Wide Inpatient |
| | | | *NEW* Emergency Dept. and Observation Stays |
| | | C. *difficile* LabID Event | Facility Wide Inpatient |
| | | | *NEW* Emergency Dept. and Observation Stays |
| | | Healthcare Personnel Influenza Vaccination | All Inpatient Healthcare Personnel |
| | Long-Term Acute Care Hospitals (LTCH) | CLABSI | Adult & Pediatric LTCH ICUs & Wards |
| | | CAUTI | Adult & Pediatric LTCH ICUs & Wards |
| | | *NEW* MRSA Bacteremia LabID Event | Facility Wide Inpatient |
| | | *NEW* C. difficile LabID Event | Facility Wide Inpatient |
| | | Healthcare Personnel Influenza Vaccination | All Inpatient Healthcare Personnel |

| | | CAUTI | Adult and Pediatric Wards |
|---|---|---|---|
| CMS Requirement (continued) | Inpatient Rehabilitation Facility | *NEW* MRSA Bacteremia LabID Event | Facility Wide Inpatient |
| | | *NEW* C. difficile LabID Event | Facility Wide Inpatient |
| | | Healthcare Personnel Influenza Vaccination | All Inpatient Healthcare Personnel |
| State Requirements | Critical Access Hospitals | CAUTI | Medical, Surgical, Medical/Surgical ICUs |
| | | | *NEW* **Adult/Pediatric Medical, Surgical and Medical/Surgical Wards** |
| | | Healthcare Personnel Influenza Vaccination | All Inpatient Healthcare Personnel |
| | Psychiatric Hospitals (Excluding State-Run Facilities) | Healthcare Personnel Influenza Vaccination | All Inpatient Healthcare Personnel |

## Table 2

| Reporting Requirements and Deadlines in NHSN per CMS Current Rules and WV HAI Advisory Panel Submission Requirements | | |
|---|---|---|
| **Healthcare Settings** | **NHSN Event** | **CMS Reporting Deadlines** |
| ***Acute Care Facilities that participate in CMS Hospital IQR Program*** | **CLABSI** Start Q1 2011 – adult, pediatric, and neonatal ICUs Start Q1 2015 – adult and pediatric medical, surgical, and medical/surgical wards | Q1 (Jan.-March):  August 15 Q2 (April – June):  November 15 Q3 (Jul. – Sept.):  February 15 Q4 (Oct. – Dec.):  May 15 |
| | **CAUTI** Start Q1 2012 – adult, pediatric ICUs Start Q1 2015 – adult and pediatric medical, surgical, and medical/surgical wards | Q1 (Jan.-March):  August 15 Q2 (April – June):  November 15 Q3 (Jul. – Sept.):  February 15 Q4 (Oct. – Dec.):  May 15 |
| | **SSI (following COLO Procedures)** (Start Q1 2012) | Q1 (Jan.-March):  August 15 Q2 (April – June):  November 15 Q3 (Jul. – Sept.):  February 15 Q4 (Oct. – Dec.):  May 15 |
| | **SSI (following HYST Procedures)** (Start Q1 2012) | Q1 (Jan.-March):  August 15 Q2 (April – June):  November 15 Q3 (Jul. – Sept.):  February 15 Q4 (Oct. – Dec.):  May 15 |
| | **MRSA Bacteremia LabID Event (FacWideIN)** (Start Q1 2013) | Q1 (Jan.-March):  August 15 Q2 (April – June):  November 15 Q3 (Jul. – Sept.):  February 15 Q4 (Oct. – Dec.):  May 15 |
| | **C. *difficile* LabID Event (FacWide IN)** (Start Q1 2013) | Q1 (Jan.-March):  August 15 Q2 (April – June):  November 15 Q3 (Jul. – Sept.):  February 15 Q4 (Oct. – Dec.):  May 15 |
| | **Healthcare Personnel Influenza Vaccination** (Start Q1 2013) | Q4 (Oct. – Dec.) – Q1 (Jan. – March): May 15 |
| ***Psychiatric Hospitals (Excluding State-Run Facilities)*** | **Healthcare Personnel Influenza Vaccination** | Q4 (Oct. – Dec.) – Q1 (Jan. – March): May 15 |

| Healthcare Settings | NHSN Event | CMS Reporting Deadlines |
|---|---|---|
| *Critical Access Hospitals* | **CAUTI**<br><br>Start Q1 2013 – adult and pediatric ICUs and inpatient medical/surgical wards | Q1 (Jan.-March):  August 15<br><br>Q2 (April – June):  November 15<br><br>Q3 (Jul. – Sept.):  February 15<br><br>Q4 (Oct. – Dec.):  May 15 |
| | | |
| | **Healthcare Personnel Influenza Vaccination**<br><br>(Start Q1 2013) | Q4 (Oct. – Dec.) – Q1 (Jan. – March): May 15 |
| | | |
| *Long-Term Acute Care Facilities (LTCHs) that participate in CMS LTCHQR Program*<br><br>*Starting January 2014, reporting deadline will be 1.5 months after the end of the quarter* | **CLABSI (all bedded inpatient care locations)**<br><br>(Start Q4 2012) | Q1 (Jan. – March): May 15<br><br>Q2 (April – June):  August 15<br><br>Q3 (Jul. – Sept.):  November 15<br><br>Q4 (Oct. – Dec.):  February 15 |
| | | |
| | **CAUTI (all bedded inpatient care locations)**<br><br>(Start Q4 2012) | Q1 (Jan. – March): May 15<br><br>Q2 (April – June):  August 15<br><br>Q3 (Jul. – Sept.):  November 15<br><br>Q4 (Oct. – Dec.):  February 15 |
| | | |
| | **MRSA Bacteremia LabID Event (FacWideIN)**<br><br>(Start Q1 2015) | Q1 (Jan. – March): May 15<br><br>Q2 (April – June):  August 15<br><br>Q3 (Jul. – Sept.):  November 15<br><br>Q4 (Oct. – Dec.):  February 15 |
| | | |
| | **C. *difficile* LabID Event (FacWideIN)**<br><br>(Start Q1 2015) | Q1 (Jan. – March): May 15<br><br>Q2 (April – June):  August 15<br><br>Q3 (Jul. – Sept.):  November 15<br><br>Q4 (Oct. – Dec.):  February 15 |
| | | |
| | **Healthcare Personnel Influenza Vaccination**<br><br>(Start Q4 2014) | Q4 (Oct. – Dec.) – Q1 (Jan. – March): May 15 |

| Healthcare Settings | NHSN Event | CMS Reporting Deadlines |
|---|---|---|
| ***Inpatient Rehabilitation Facilities (IRFs) that participate in CMS Quality Reporting Program*** | **CAUTI (all bedded inpatient care locations)**<br><br>(Start Q4 2012) | Q1 (Jan. – March):  August 15<br>Q2 (April – June):  November 15<br>Q3 (Jul. – Sept.):  February 15<br>Q4 (Oct. – Dec.):  May 15 |
| | | |
| | **MRSA Bacteremia LabID Event (FacWideIN)**<br><br>(Start Q1 2015) | Q1 (Jan. – March):  August 15<br>Q2 (April – June):  November 15<br>Q3 (Jul. – Sept.):  February 15<br>Q4 (Oct. – Dec.):  May 15 |
| | | |
| | **C. *difficile* LabID Event (FacWideIN)**<br><br>(Start Q1 2015) | Q1 (Jan. – March):  August 15<br>Q2 (April – June):  November 15<br>Q3 (Jul. – Sept.):  February 15<br>Q4 (Oct. – Dec.):  May 15 |
| | | |
| | **Healthcare Personnel Influenza Vaccination**<br><br>(Start Q4 2014) | Q4 (Oct. – Dec.) – Q1 (Jan.- March):  May 15 |
| | | |

## II. NHSN Enrollment and Group Membership

### A.  Enrolling in NHSN

Facilities must be enrolled in NHSN to submit data to the system. Your hospital must identify a facility administer to enroll in NHSN. All personnel that will be using NHSN must complete the appropriate training before enrolling in or using NHSN. At the completion of the required training, each user must apply to CDC for a Secure Access Management Services (SAMS) card to access NHSN, which replaces the Secure Data Network (SDN)/Digital Certificate, and will give authorized personnel secure access to non-public CDC applications. This process may take a few days and require assistance from your hospital's IT staff. Detailed instructions on NHSN enrollment can be accessed at: http://www.cdc.gov/nhsn/enrollment/index.html.

As part of the enrollment and initial set-up process, you should complete the Annual Facility Survey and map your hospital units to the CDC Locations defined in NHSN. Refer to Section II.D.c. of this guide for additional information on mapping your locations.

### B.  Joining a West Virginia Reporting Group in NHSN

Once enrolled in NHSN, hospitals must join the WVHCA group in order to confer rights to the WVHCA to access the data required for public reporting. Follow the steps below to join the "West Virginia HAI Reporting" Group.

      1)  Log-in to NHSN

2) On the navigation bar (left side of screen), click "Group" and select "Join." The "Memberships" screen will appear (see Figure 1).

3) Enter the following Group ID and Password:
Group ID = 14840
Password = wvhaigroup

4) Click "Join Group." A message will appear indicating that you have joined the group "West Virginia HAI Reporting." You will be asked to review and accept the Confer Rights Template developed by the WVHCA. Accepting this template will allow the WVHCA to access your data required for public reporting, as defined in the template. Refer to Section II.C of this guide for additional information on the Confer Rights Template.

**Figure 1 – NHSN Group Memberships Screen**



**C.    Conferring Rights to the Health Care Authority**

Hospitals must allow the WVHCA to access the data submitted to NHSN that is required for West Virginia HAI public reporting. Conferring rights to the data enables only the WVHCA to view and analyze your facility's de-identified HAI data. Group members/facilities will not be able to view or analyze any data reported by other group members/facilities.

In June 2011, NHSN revised the method for hospitals to confer rights to groups to which they belong. Now, group administrators, such as the WVHCA, must create a Confer Rights Template within NHSN to be reviewed and accepted by group members. This template details the data that the WVHCA should have access to, based on the reporting requirements outlined in this Guide. Upon joining the group, facility administrators are prompted to review and accept the template. Hospitals that are already members of the group will receive a notification the next time the facility administrator logs in to NHSN that a Confer Rights Template is available for

review. This change in NHSN requires all hospitals to review and accept the new Confer Rights Template, even if the hospital has previously conferred rights to the WVHCA.

If, at a later date, the WVHCA makes a change to the template (e.g., to request access to revised or additional data), hospitals will be prompted, at the next NHSN log-in, to review and accept the new template.

The WVHCA will only gain access to the data included on the Confer Rights Template. Data submitted by hospitals to NHSN that are not included in the template will not be accessible by the WVHCA. The WVHCA will have access to the data, as defined in the template, until the hospital leaves the group.

A sample and description of the Confer Rights Template developed by the WVHCA is available and has been distributed to all HAI contacts. Be aware of the following guidelines when reviewing the template:

1) Not all hospitals are required to report all of the data included in the Confer Rights Template. If a data element is not required for your facility check "N/A" on the Confer Rights template for that data element. Refer to Section B and Table 1 of this guide for the reporting requirements that relate to your hospital.

2) On the confer rights template, the WVHCA indicated the "Location Type" and "Location" for which the reporting is required (e.g., medical critical care units). When you receive the template, the "Your Locations" field will be populated with the units you mapped in NHSN that meet the criteria defined by the WVHCA (e.g., medical critical care units). Review this list and ensure that all of the units in your hospital that meet the criteria are included. It is essential that your hospital units are correctly mapped in NHSN. Refer to Section II.D.c. for additional information on mapping locations. If a location is not included in the "Your Locations" list, then it is either not mapped in NHSN or inaccurately mapped to a different location type.

**D.  General Requirements for NHSN Reporting**

a. Data must be collected and reported in accordance with NHSN methods and protocols. Detailed guidance on NHSN Surveillance Reporting for Enrolled Facilities can be accessed at: http://www.cdc.gov/nhsn/settings.html.

b. Complete the NHSN Annual Survey appropriate for the hospital type, i.e., acute care, critical access, rehabilitation, long term acute care.

c. Each unit/location in your hospital must be "mapped" in NHSN to a listed CDC Location. The CDC Location code that you choose is determined by the type of patients cared for in that area according to the 80% Rule. That is, if 80% of patients are of a certain type (e.g., pediatric patients with orthopedic problems) then that area is designated as that type of location (in this case, an Inpatient Pediatric Orthopedic Ward). This method must be used to

define your units in NHSN, regardless of the name you use to define that unit in your hospital. It is important that your locations are mapped correctly. The data you submit to NHSN is analyzed in comparison to data from units of the same type. Therefore, if your unit is inaccurately mapped in NHSN, analysis results (such as the standardized infection ratio) will not be accurate for your hospital. For more information about mapping hospitals units appropriately, please refer to the following NHSN website:

http://www.cdc.gov/nhsn/PDFs/pscManual/15LocationsDescriptions_current.pdf.

d. In 2015, reporting requirements will be based on how a unit is defined using the CDC definitions and instructions for mapping locations. Acute care hospitals should give careful consideration to the types of patients receiving care in a given unit in order to determine the most appropriate CDC location. Locations must be mapped and set-up in NHSN according to the guidance provided in the "Instructions for Mapping Patient Care Locations in NHSN" on page 2 of the CDC Locations and Descriptions chapter found at the website above.

e. In addition to reporting CLABSI and CAUTI data from all adult, pediatric, and neonatal ICUs, CMS IPPS hospitals will also be required to report CLABSI and CAUTI data from **adult and pediatric medical, surgical, and medical/surgical wards.**

Any unit that meets the CDC definition for – and is mapped as – a specific type that is not an ICU, NICU, or one of the six wards listed below (e.g. mapped as orthopedic ward, telemetry ward, step-down unit) would not be required to report CLABSI and CAUTI data for the CMS Hospital IQR Program in 2015; any CLABSI or CAUTI data reported from non-required units in NHSN will not be submitted to CMS.

| CDC Location Label | CDC Location Code |
|---|---|
| Medical Ward | IN:ACUTE:WARD:M |
| Medical/Surgical Ward | IN:ACUTE:WARD:MS |
| Surgical Ward | IN:ACUTE:WARD:S |
| Pediatric Medical Ward | IN:ACUTE:WARD:M_PED |
| Pediatric Medical/Surgical Ward | IN:ACUTE:WARD:MS_PED |
| Pediatric Surgical Ward | IN:ACUTE:WARD:S_PED |

A few example scenarios listed below may be used to determine if a unit would be required for CLABSI and CAUTI reporting in 2015:

| Scenario | CDC Location | Are CLABSI and CAUTI required in this location for Hospital IQR in 2015? |
|---|---|---|
| An inpatient adult ward in which approximately 90% of patients are admitted to that unit because of the need for telemetry. | Telemetry Ward (IN:ACUTE:WARD:TELE) | No |
| An inpatient adult unit that is comprised of 60% step-down patients and 40% medical ward patients. | Adult Mixed Acuity Unit (IN:ACUTE:MIXED:ALL_ADULT) | No |
| An inpatient adult ward that is comprised of 55% surgical patients and 45% medical patients. | Medical/Surgical Ward (IN:ACUTE:WARD:MS) | Yes |

The CDC location assigned for each of the above scenarios was determined by using the "Instructions for Mapping Patient Care Locations in NHSN", as found on pages 2-6 of the CDC Locations and Descriptions chapter. If you have questions about how to map a particular unit in your hospital, please contact the NHSN Helpdesk (NHSN@cdc.gov ) and provide specific information about the patient care area (e.g., types of patients and percentage of each type, location bed size).

f.  FacWideIN LabID surveillance has been expanded to include emergency department (ED) and observation (OBS) locations.  Acute care hospitals that are performing in-plan FacWideIN LabID Surveillance will also be required to perform in- plan surveillance in each emergency department (ED) and 24-hour Observation location (OBS) for the same organism and LabID event type (i.e., all specimens or blood specimens only). This rule will facilitate accurate categorization of LabID Events, as well as allow each facility to capture community-onset cases.

**In preparation for this protocol change, we strongly encourage all hospitals to begin mapping each ED and OBS unit in their hospital to the appropriate, corresponding CDC Location description**. Mapping these locations now will ensure that, in the next version of NHSN, these locations will automatically be added to your hospital's monthly reporting plans for 2015 when FacWideIN LabID surveillance is selected.

**PLEASE  NOTE:**  If your facility does not have a designated observation unit, then you do not need to map an observation unit in NHSN. The observation patients should continue to be included in the surveillance efforts for the unit in which they reside.

g.  Hospitals may run their own reports in order to identify if data is can be viewed by CMS in NHSN.  Instructions for generating CMS reports in NHSN can be found in **Appendix A**.

**PLEASE NOTE:**  In order to avoid CMS penalties or to use in a facility's appeal to CMS if penalized for not appropriately submitting data or not submitting the data timely, it is advised for facilities to run the reports immediately after the data is submitted and file them in the case they are needed in the future.

## III.   Data Submission and Quality Review Schedule/Procedure

Hospitals are required to report their data timely and in accordance with the CMS/NHSN schedule. The WVHCA will review submissions in accordance with the Data Submission and Quality Review Schedule and Procedure provided in **Appendix B**.  If submissions are not timely, the WVHCA will attempt to ensure your hospital does not incur any additional state penalties for delinquent data by following the procedure; however, the WVHCA has no influence over penalties incurred by CMS for delinquent data submissions.

## IV.   Technical Assistance

For additional information related to NHSN protocols, policies, or methods, refer to the following NHSN resources:

- Website: www.cdc.gov/nhsn
- Training Documents and Webcast Lectures: http://www.cdc.gov/nhsn/training/
- Surveillance Reporting Resource Library: http://www.cdc.gov/nhsn/settings.html

Additional support can be found at the following:

**Acute Care Hospital Patient Safety Resources**

- Acute Care Hospital CLABSI for training, protocols, data collection forms, and CMS supporting materials http://www.cdc.gov/nhsn/acute-care-hospital/clabsi/index.html

- Operational Guidance for Acute Care Hospitals that includes CLABSI, CAUTI, Surgical Site Infection, MRSA, C. *difficile*, and Healthcare Personnel Influenza Vaccination reporting http://www.cdc.gov/nhsn/cms/index.html#ach

- How to Report Zero Surgical Procedures or SSI Events for a Month http://www.cdc.gov/nhsn/PDFs/CMS/How-to-Report-No-Events-SSI.pdf

- New NHSN Guidance for Acute Care Hospital FacWideIN MRSA/CDI LabID Denominator Reporting http://www.cdc.gov/nhsn/PDFs/mrsa-cdi/AcuteCare-MRSA-CDI-LabIDDenominator-Reporting.pdf

- How to Set Up NHSN Reporting for MRSA Bacteremia and *C. difficile* LabID events for the CMS Inpatient Rehabilitation Facility (IRF) Quality Reporting Program: IRF Unit within an

Acute Care or Critical Access Hospital
http://www.cdc.gov/nhsn/PDFs/CMS/SettingUp_Reporting_LabID_Event_IRF_AcuteC.pdf

- Helpful Tips for MRSA Bacteremia and *C.difficile* LabID Event Reporting for Acute Care Hospital Units Designated as Inpatient Rehabilitation Facilities (IRFs) Participating in the Centers for Medicare and Medicaid Services' IRF Quality Reporting Program http://www.cdc.gov/nhsn/PDFs/CMS/Helpful_Tips_MRSA_Cdiff_IRF_Acute_Ward.pdf

- Operational Guidance for Acute Care Hospitals to Report Facility-Wide Inpatient (FacWideIN) *Clostridium difficile* Infection (CDI) Laboratory-Identified (LabID) Event Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Requirements http://www.cdc.gov/nhsn/PDFs/mrsa-cdi/FINAL-ACH-CDI-Guidance.pdf

- Helpful Tips for SSI Reporting for the Centers for Medicare and Medicaid Services' Hospital Inpatient Quality Reporting Program (CMS Reporting Program) via NHSN http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-for-SSI-Reporting.pdf

### Long Term Acute Care Hospital Patient Safety Resources

- Operational Guidance for Long Term Care Hospitals that includes CLABSI, CAUTI, MRSA, C. difficile, and Healthcare Personnel Influenza Vaccination reporting http://www.cdc.gov/nhsn/cms/index.html#ach

- Helpful Tips for CLABSI Reporting for the Centers for Medicare and Medicaid Services' Long Term Care Hospital Quality Reporting Program http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-CLABSI-LTCH.pdf

- Helpful Tips for CAUTI Reporting for the Centers for Medicare and Medicaid Services' Long Term Care Hospital Quality Reporting Program http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-CAUTI-LTCH.pdf

- How to Set Up NHSN Reporting for Facility-Wide Inpatient MRSA Bacteremia and *C. difficile* LabID events for the CMS Long Term Care Hospital* Quality Reporting Program http://www.cdc.gov/nhsn/PDFs/CMS/Setting-Up-and-Reporting-LabID-Event_LTCH.pdf

- Operational Guidance for Long Term Care Hospitals* to Report Central Line-Associated Bloodstream Infection (CLABSI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Quality Reporting Requirements http://www.cdc.gov/nhsn/PDFs/CMS/LTCH-CLABSI-Guidance_2015.pdf

- Operational Guidance for Long Term Care Hospitals* to Report Catheter-Associated Urinary Tract Infection (CAUTI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Quality Reporting Requirements http://www.cdc.gov/nhsn/PDFs/CMS/LTCH-CAUTI-Guidance_2015.pdf

- Helpful Tips for FacWideIn MRSA Bacteremia LabID Event Reporting for the Centers for Medicare and Medicaid Services' Long Term Care Hospital Quality Reporting (LTCHQR)

Program http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-for-MRSA-Blood-Reporting_LTCH.pdf

- Helpful Tips for FacWideIn CDI LabID Event Reporting for the Centers for Medicare and Medicaid Services' Long Term Care Hospital Quality Reporting (LTCHQR) Program http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-for-CDI-Reporting_LTCH.pdf.

## Rehabilitation Hospital Resources

- Operational Guidance for Inpatient Rehabilitation Facilities that includes CAUTI, MRSA, C. difficile, and Healthcare Personnel Influenza Vaccination reporting: http://www.cdc.gov/nhsn/cms/index.html#ach

- Helpful Tips for MRSA Bacteremia and *C.difficile* LabID Event Reporting for Acute Care Hospital Units Designated as Inpatient Rehabilitation Facilities (IRFs) Participating in the Centers for Medicare and Medicaid Services' IRF Quality Reporting Program http://www.cdc.gov/nhsn/PDFs/CMS/Helpful_Tips_MRSA_Cdiff_IRF_Acute_Ward.pdf

- How to Set Up NHSN Reporting for Facility-Wide Inpatient MRSA Bacteremia and *C. difficile* LabID events for the CMS Inpatient Rehabilitation Facility (IRF) Quality Reporting Program: Free-standing IRFs http://www.cdc.gov/nhsn/PDFs/CMS/SettingUp_Reporting_LabID_Event_freestanding_IRF.pdf

- Helpful Tips for FacWideIN MRSA Bacteremia and FacWideIN *C.difficile* LabID Event Reporting for Free-Standing Inpatient Rehabilitation Facilities (IRFs) Participating in the Centers for Medicare and Medicaid Services' IRF Quality Reporting Program http://www.cdc.gov/nhsn/PDFs/CMS/Helpful_Tips_MRSA_Cdiff_IRF_Freestanding.pdf

## General Resources

- NHSN www.cdc.gov/nhsn/

- NHSN Facility Administrator Enrollment Guide http://www.cdc.gov/nhsn/PDFs/FacilityAdminEnrollmentGuideCurrent.pdf

- CMS Reporting Requirements FAQ http://www.cdc.gov/nhsn/PDFs/CMS/faq/FAQs-CMS-Reporting-Requirements.pdf

- Instructions for Completion of the Patient Safety Component-Annual Hospital Survey http://www.cdc.gov/nhsn/forms/instr/57_103-TOI.pdf

- Mapping Locations http://www.cdc.gov/nhsn/PDFs/pscManual/15LocationsDescriptions_current.pdf

- How to Report Zero CLABSI or CAUTI Events  http://www.cdc.gov/nhsn/PDFs/CMS/how-to-report-No-Events-CLAB-CAU.pdf

- Helpful Tips for CLABSI Reporting for the Centers for Medicare and Medicaid Services' Hospital Inpatient Quality Reporting Program (CMS Reporting Program) http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-for-CLABSI-Reporting.pdf

- How to Set Up Facility-Wide Inpatient MRSA Bacteremia and *C. difficile* LabID Event Reporting per NHSN Protocol for the CMS Inpatient Quality Reporting Program (Updated for New January 2015 Requirements) http://www.cdc.gov/nhsn/PDFs/mrsa-cdi/How-To-Set-Up-And-Report-MRSA-CDI.pdf

- Helpful Tips for CAUTI Reporting for the Centers for Medicare and Medicaid Services' Hospital Inpatient Quality Reporting Program (CMS Reporting Program) via NHSN http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-for-CAUTI-Reporting.pdf

- Helpful Tips for FacWideIn CDI LabID Event Reporting for the Centers for Medicare and Medicaid Services' Hospital Inpatient Quality Reporting (IQR) Program http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-for-CDI-Reporting.pdf

- NHSN eNews December 2014  http://www.cdc.gov/nhsn/PDFs/Newsletters/Newsletter-Dec2014.pdf

- NHSN Newsletters http://www.cdc.gov/nhsn/newsletters.html

- Understanding SIR and Why Like Hospitals May be Different – See **Appendix C and D**.


**Healthcare Personnel Influenza Vaccination Reporting Resources**

- Helpful Tips for Healthcare Personnel (HCP) Influenza Vaccination Reporting for the Centers for Medicare and Medicaid Services' Hospital Inpatient Quality Reporting (IQR) Program and Outpatient Quality Reporting (OQR) Program http://www.cdc.gov/nhsn/PDFs/CMS/AC-Helpful_Tips%20_HCP_Flu_Vaccination8-2014.pdf

- Helpful Tips for Healthcare Personnel (HCP) Influenza Vaccination Reporting for the Centers for Medicare and Medicaid Services' Long Term Care Hospital Quality Reporting (LTCHQR) Program http://www.cdc.gov/nhsn/PDFs/CMS/LTCH-Helpful_Tips%20_HCP_Flu_Vaccination-8-2014.pdf

- Helpful Tips for Healthcare Personnel (HCP) Influenza Vaccination Reporting for the Centers for Medicare and Medicaid Services' Inpatient Rehabilitation Facility Quality Reporting Program (IRF QRP) http://www.cdc.gov/nhsn/PDFs/CMS/IRF-Helpful_Tips%20_HCP_Flu_Vaccination8-2014.pdf

- The National Healthcare Safety Network (NHSN) Manual, HEALTHCARE PERSONNEL SAFETY COMPONENT PROTOCOL: Healthcare Personnel Exposure Module http://www.cdc.gov/nhsn/PDFs/HPS-manual/HPS_Manual-exp-plus-flu-portfolio.pdf

- Healthcare Personnel (HCP) Influenza Vaccination Summary Reporting in NHSN FAQs
http://www.cdc.gov/nhsn/faqs/FAQ-Influenza-Vaccination-Summary-Reporting.html

**NHSN Interactive Computerized Self-Study Trainings**

New self-study training courses for 2015 will be available in the next few months on the NHSN website. These trainings will provide a comprehensive overview of the Device-associated (DA) module and Procedure-associated (PA) module for NHSN. The courses will review the structure of the DA and PA modules and the methodology used for data collection; define key terms and protocol criteria for each of the different infection types; describe how to collect and calculate the infection rates, and interpret the data for accurate use.

Training courses will include: Introduction to Device-associated module, CLABSI, CAUTI, VAP, CLIP, MRSA Bacteremia and CDI LabID Event Reporting, Introduction to Procedure-associated module, and SSI.

These online courses provide instructional slides with detailed graphics, screen shots with step by step examples of form completion for instructional purposes, practice questions, and case study examples. Those taking the courses will need a computer with access to the internet. Hyperlinks to the forms, protocols and NHSN manual are available throughout the courses and available for printing if needed.

The first trainings available will be Introduction to the Device-associated module and CAUTI, to be released in late January. Other trainings will follow in February, March, and April of 2015. All trainings will be located on the NHSN training page: http://www.cdc.gov/nhsn/Training/patient-safety-component/index.html.

For more information on how to appropriately collect and enter these data into NHSN please see the link below according to your facility type:

- Acute Care Hospitals:
http: //www.cdc.gov/nhsn/acute-car e-hospital/hcp-vaccination/index.html

- LTCHs:
http: //www.cdc.gov/nhsn/LTCHH/hcp-flu-vac/index.html

- IRFs:
http: //www.cdc.gov/nhsn/inpatient-rehab/hcp-vacc/index.html

For additional information related to this Guide or West Virginia HAI public reporting requirements, please contact: Shelley Baston, MBA, RN, RNC-NIC, CPC, Health Planning Manager, WVHCA (304-558-7000 x220, SBaston@hcawv.org.), or Dr. Laura Boutwell, DVM, MPH, Epidemiologist, WVHCA (304-558-7000 x 135, LBoutwell@hcawv.org).
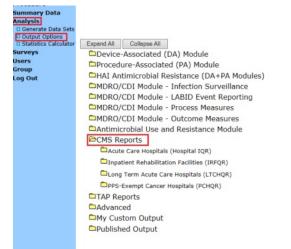
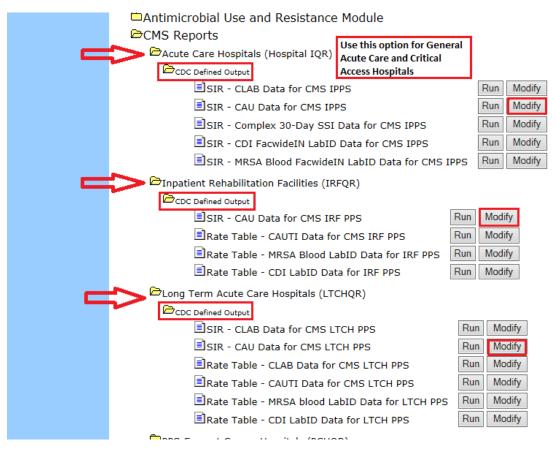This Page Intentionally Left Blank

# APPENDICES

How to Generate a CMS Report Using NHSN

1. After logging into NHSN, from the left hand side of the screen, select Analysis>Output Options> CMS Reports



2. Select the appropriate facility type for your facility (Acute Care, Inpatient Rehab, or Long Term Acute Care)
   - Note: Critical Access Hospitals, use the Acute Care Hospitals (Hospital IQR) Option
   - All facilities then select "CDC Defined Output"
3. Select the report you would like to generate. For this example, we will use CAUTI as it is the most universal reporting requirement
   - Select "SIR- CAU Data for CMS IPPS" and then "Modify



4. On the next screen, go down to the section titled "Select a time period or Leave Blank for Cumulative Time Period" and from the dropdown menu under "Date Variable", select "SummaryYM"

5. In the box under "Beginning", enter the beginning of the time period of interest. Here, we are selecting all months for 2014 data. Enter this date in MMYYYY format (Here, 012014- NHSN will auto fill in the forward-slash). Repeat for box titled "Ending" (For this example, 122014).

6. Go to the section titled "Specify Other Selection Criteria"
   - ***Acute Care, Long Term Acute Care, and Inpatient Rehab facilities***: Do not change any of the pre-selected options in these columns
     - Then, go to the section titled "Other Options" and from the drop down menu by "Group By", select "SummaryYM"
     - Proceed to Step 7

- *__Critical Access Hospitals__*: Please select the blue option "Clear Criteria" so that there are no options selected and the columns are clear
    - Then, go to the section titled "Other Options" and from the drop down menu by "Group By", select "SummaryYM"
    - Proceed to Step 7



7. Then you select "Run", you will get a html window pop up with the report and you can print from that window (*__This is the recommended output for CMS documentation due to the timestamp__*; 2013 data used for this example).

# West Virginia Hospital Healthcare-Associated Infection
# 2015 Data Submission and Quality Review Schedule/Procedure

| General Acute, CAH, Inpatient Rehabilitation Facilities' Patient Safety Requirements | | QUARTER 1 *January - March Events* | QUARTER 2 *April - June Events* | QUARTER 3 *July - September Events* | QUARTER 4 *October - December Events* |
|---|---|---|---|---|---|
| | DATA DUE TO NHSN | August 15 | November 15 | February 15 | May 15 |
| | WVHCA DATA QUALITY REVIEW | August 29 | November 29 | March 1 | May 29 |
| | REQUESTED REVISIONS COMPLETED BY HOSPITAL | September 30 | December 31 | March 31 | June 30 |

| Long-Term Acute Care Facilities' Patient Safety Requirements | | QUARTER 1 *January - March Events* | QUARTER 2 *April - June Events* | QUARTER 3 *July - September Events* | QUARTER 4 *October - December Events* |
|---|---|---|---|---|---|
| | DATA DUE TO NHSN | May 15 | August 15 | November 15 | February 15 |
| | WVHCA DATA QUALITY REVIEW | May 29 | August 29 | November 29 | March 1 |
| | REQUESTED REVISIONS COMPLETED BY HOSPITAL | June 30 | September 30 | December 31 | March 31 |

| General Acute, CAH, Inpatient Rehabilitation, and LTCH Facilities' Healthcare Personnel Safety Requirements | | QUARTER 4<br><br>*October - December* | QUARTER 1<br><br>*January - March* |
|---|---|---|---|
| | **DATA DUE TO NHSN** | **October** | **May 15** |
| | **WVHCA DATA QUALITY REVIEW** | | **May 29** |
| | **REQUESTED REVISIONS COMPLETED BY HOSPITAL** | | **June 30** |

**Review Process:**

➢ 2 weeks after the data submission due date, a review of all hospitals will be complete to determine outstanding data submissions.

➢ Hospitals that have outstanding data submissions will be notified via email.

  o Data will be monitored for completeness and accepted, OR,

  o If after 2 weeks data remains incomplete, hospitals will be notified via email that data remains incomplete and giving the hospital 30 days to complete the data submission. Healthcare Personnel Safety, Patient Safety and Facility Administrator contacts within NHSN will be utilized for notifying hospitals of issues and delinquencies.

    ▪ If NHSN issues arise and WVHCA cannot view the data submission, the hospital may fax/email NHSN reports as documentation of timely submission.

➢ If after 30 days the issues remain or the data is not available, the hospital will be notified via email that the data is due immediately or the issue must be resolved immediately.

  o If after 1 week the issue is not resolved or the data is not submitted, the appropriate hospital contact will be contacted via phone.

  o If after 2 weeks, a letter will be sent to the hospital contacts detailing the issue and timeline for correcting the issue.

  o If after 3 weeks the issue is not corrected, a letter to the CEO will be sent.

  o If after 1 month the issue is not corrected, hospitals who fail to report information on healthcare-associated infections in the manner and timeframe required by the West Virginia Health Care Authority shall be fined the sum of **$5,000.00** for each such failure in accordance with §16-5B-17.

04/2015

# Standardized Infection Ratio (SIR)

There are various statistics that can be used to summarize and report HAI data at a national, state, or local level. The standardized infection ratio (SIR) is a commonly reported summary measure because it adjusts for patients of varying risk within each facility, which allows for valid comparisons between facilities.

The SIR compares the actual number of events reported by the hospital ("observed") to the expected number of events (from the National Healthcare Safety Network (NHSN) aggregate data), adjusting for several risk factors that have been significantly associated with differences in infection incidence. This risk adjusted statistic serves as the "expected" HAIs. This allows for a comparison between a baseline statistic calculated by NHSN and the actual number of events that occurred.

$$SIR = Observed\ HAIs \div Expected\ HAIs$$

A SIR greater than 1.0 indicates that more infections occurred in the hospital than were expected based on national averages for hospitals of that type and size. Conversely, a SIR less than 1.0 indicates that fewer infections occur than expected. For example, a SIR of 1.20 indicates that the hospital had 20% more infections than expected; a SIR of 0.80 indicates that the hospital had 20% fewer infections than expected. When the number of expected infections are <1, the number of procedures performed is too low to calculate a precise SIR and to perform comparative statistics.

It is important to consider all the factors that go into NHSN's calculation of the "Expected HAIs" number. The SIR is risk adjusted for many different scenarios. For example, the facility's expected number of CLABSI varies depending on the types of units located in the facility but when looking at MRSA, the facility size, medical school affiliation, and other factors go into the "Expected HAI" calculation. NHSN provides specific information regarding how each event is risk adjusted and calculated. This is important to understand because it means that a facility's SIR is best compared to the national baseline and is not meant to be a comparative statistic between individual facilities, as no two facilities will have the same composition or types of patients.

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# Comparing Apples to Oranges: Why Two "Like" Hospitals are not alike

The main HAI summary statistic for the WVHCA Annual HAI report is standardized infection ratio (SIR) $= Observed\ HAIs \div Expected\ HAIs$

The SIR will only be calculated if expected HAIs are greater than 1. If less than 1, there were too few central line days, catheter days, procedures performed, or patient days to calculate a reliable SIR for the facility's data. Below is an example of how a single facility's CLABSI SIR is calculated into a single, risk adjusted statistic. The expected # of CLABSI is calculated by multiplying the location's number of central line days by the NHSN rate and dividing by 1000.
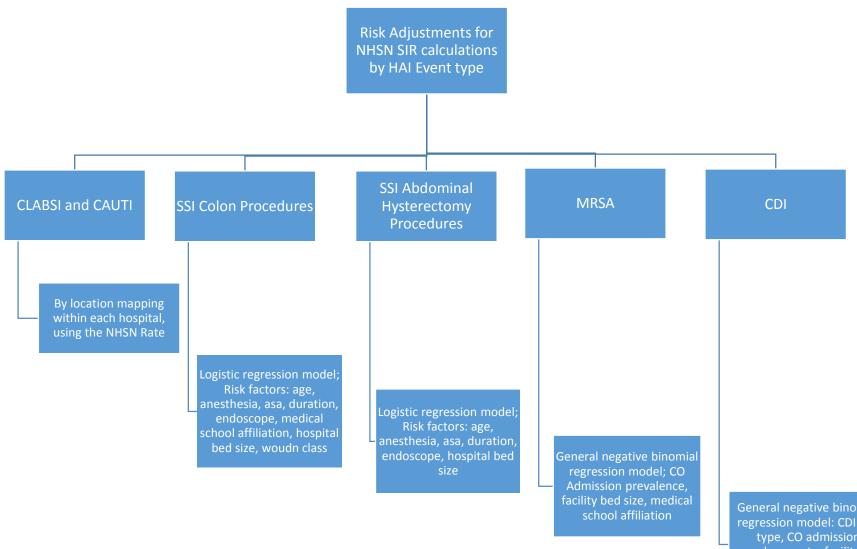
| Type of ICU Location | # CLABSI | # Central Line Days | CLABSI Rate | NHSN Rate | p-value | Expected # of CLABSI |
|---|---|---|---|---|---|---|
| Medical cardiac | 2 | 380 | 5.26 | 2.0 | 0.09 | 0.76 |
| Medical | 1 | 257 | 3.89 | 2.6 | 0.15 | 0.67 |
| Med/Surgical | 3 | 627 | 4.78 | 1.5 | 0.11 | 0.94 |
| Neurosurgical | 2 | 712 | 2.81 | 2.5 | 0.32 | 1.78 |
| Total | 8 | 1976 | 4.05 | --- | --- | 4.15 |
| Overall CLABSI SIR = Observed/Expected= 8/4.15 = 1.93 | | | | | | |

*Table and information reproduced from CDC, NHSN e-News: *SIRs Special Edition.* October 2010 (updated December 2010);1.

"NHSN Rate" is based upon 2006-2008 data from a sample of hospitals across the country and determined the pooled mean rate for different location types within hospitals. This rate is used to calculate the expected number of CLABSIs by location type. This is the same basic procedure all of the SIR calculations are based upon, the biggest change being how each statistic is risk adjusted.

These calculations of risk are based upon not only the individual location mix and type of facility, but on the types of patients that are admitted to each individual facility. Therefore, when looking at the WVHCA HAI report, the most important comparison is how any individual hospital is doing compared to the NHSN rates which serve as a baseline. Making comparisons between two seemingly "like" hospitals should only be interpreted knowing how much individual and patient variation goes into the calculation of these statistics.

The graph on the next page represents an overview of the different factors that go into calculating the statistics seen in the HAI Annual report as per NHSN calculations. The page following the graph has links to the specific references for these calculations for more detailed information.

Risk Adjustments for NHSN SIR calculations by HAI Event type

**CLABSI and CAUTI**

By location mapping within each hospital, using the NHSN Rate

**SSI Colon Procedures**

Logistic regression model; Risk factors: age, anesthesia, asa, duration, endoscope, medical school affiliation, hospital bed size, woudn class

**SSI Abdominal Hysterectomy Procedures**

Logistic regression model; Risk factors: age, anesthesia, asa, duration, endoscope, hospital bed size

**MRSA**

General negative binomial regression model; CO Admission prevalence, facility bed size, medical school affiliation

**CDI**

General negative binomial regression model: CDI test type, CO admission prevalence rate, facility bed size, medical school affiliation

# NHSN Patient Safety Component Measures and Source of Aggregate Data Used for Comparisons

| Measure | Source of Aggregate Data (as of 01/25/2014, NHSN v8.1) |
|---|---|
| CLABSI Rates* | NHSN Report, data summary for 2012, Device-associated Module<br><br>Am J Infect Control 2013;41:1148-66<br>http://www.cdc.gov/nhsn/PDFs/2012-data-summary-nhsn.pdf |
| CLABSI SIRs** | NHSN Annual Report: data summary for 2006-2008, issued December 2009<br><br>Am J Infect Control 2009;37:783-805<br>http://www.cdc.gov/nhsn/PDFs/dataStat/2009NHSNReport.PDF |
| CAUTI Rates* | NHSN Report, data summary for 2012, Device-associated Module<br><br>Am J Infect Control 2013;41:1148-66<br>http://www.cdc.gov/nhsn/PDFs/2012-data-summary-nhsn.pdf |
| CAUTI SIRs** | NHSN Annual Report: data summary for 2009<br><br>Am J Infect Control 2011;39:349-67<br>http://www.cdc.gov/nhsn/PDFs/NHSNReport_DataSummaryfor2009.pdf |
| VAP Rates* | NHSN Report, data summary for 2012, Device-associated Module<br><br>Am J Infect Control 2013;41:1148-66<br>http://www.cdc.gov/nhsn/PDFs/2012-data-summary-nhsn.pdf |
| SSI SIRs** (excluding Complex 30-day SSI SIR for CMS IPPS reporting) | Improving Risk-Adjusted Measures of Surgical Site Infection for the National Healthcare Safety Network<br><br>Infect Control Hosp Epidemiol 2011;32(10):970-986<br>http://www.cdc.gov/nhsn/PDFs/pscManual/SSI_ModelPaper.pdf |
| Complex 30-Day SSI SIR for CMS IPPS | NHSN 2006-2008, unpublished data<br><br>For more information, please see: http://www.cdc.gov/nhsn/PDFs/FINAL-ACH-SSI-Guidance.pdf |
| MRSA Blood and CDI FacWideIn LabID SIRs | Risk Adjustment for Healthcare Facility-Onset *C. difficile* and MRSA Bacteremia Laboratory-identified Event Reporting in NHSN<br>Published March 12, 2013<br>http://www.cdc.gov/nhsn/PDFs/mrsa-cdi/RiskAdjustment-MRSA-CDI.pdf |

*Comparisons (e.g., pooled means, percentiles) within NHSN Analysis are updated with each publication of the NHSN Annual Report.

**SIR baselines remain consistent in order to measure progress as part of the HHS Action Plan to Prevent Healthcare-associated Infections.