



West Virginia Healthcare-Associated Infection 2016 Reporting Guide

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West Virginia Healthcare-Associated Infection Reporting Guide 2016

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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 and must be reported in the CDC's NHSN reporting system. 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 2016 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 2016 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 2016 collection year, CLABSIs are required to be reported for all ICUs.
- c. Beginning in first quarter 2015 and continuing into the 2016 collection year, the reporting of CLABSIs are 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 2016 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 were 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, inpatient Medical/Surgical Wards in both general acute and critical access hospitals were required to report CAUTI.
- d. Beginning in first quarter 2015 and continuing into the 2016 data collection year, 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. WV specific guidelines require critical access hospitals 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 2016 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 2016 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 2016 collection year, acute care hospitals are required to report MRSA Bacteremia LabID Events.
- b. Beginning in the first quarter of 2015, and continuing for the 2016 data collection period, acute care hospitals are required to report MRSA Bacteremia LabID Events for inpatient admissions facility-wide, including Emergency Dept. and Observation Stays.
- c. Beginning in the first quarter of 2015, and continuing for the 2016 data collection period, 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 2016 collection year, acute care hospitals are required to report *C. difficile* LabID Events for inpatient admissions, facility-wide.
- b. Beginning in first quarter of 2015, and continuing for the 2016 data collection period, acute care hospitals are required to report *C. difficile* LabID Events for Emergency Dept. and Observation Stays.
- c. Beginning in first quarter of 2015 and continuing into the 2016 collection period, long term acute care hospitals and inpatient rehabilitation facilities are required to report *C. difficile* LabID Events facility-wide.

7) Ventilator-Assisted Events

- a. Beginning in the first quarter of 2016, long term acute care hospitals' adult ICUs and wards must report ventilator-assisted events.



Table 1

West Virginia HAI Public Reporting Requirements – 2016

Reporting Requirement	Facility Type	HAI Event	Reporting Specifications
CMS Requirement	Acute Care Hospitals Only (Non-Critical Access)	CLABSI	Adult, Pediatric/Neonatal ICUs
			Adult/Pediatric Medical, Surgical and Medical/Surgical Wards
		CAUTI	Adult and Pediatric ICUs
			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
			Emergency Dept. and Observation Stays
		C. difficile LabID Event	Facility Wide Inpatient
	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
		MRSA Bacteremia LabID Event	Facility Wide Inpatient
C. difficile LabID Event		Facility Wide Inpatient	
NEW Ventilator-Assisted Events		Adult LTAC ICUs & Ward	
Healthcare Personnel Influenza Vaccination		All Inpatient Healthcare Personnel	

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

In prior years, long-term acute care hospitals' data submission due dates were different from all other facilities. Beginning with 4th quarter (Oct.- Dec.) 2015 data submissions, which will be due May 15, 2016, long-term acute care hospitals due dates will correlate with data submission due dates for all other facilities. The 2016 data collection year will be the first year all facilities will be on the same reporting schedule when reporting data to NHSN for the HAI program.

Table 2 provides quarterly reporting NHSN deadlines per CMS current rules for all facilities for the 2016 data submission year.

Table 2

2016 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	Q1 (Jan.-March): August 15
	Start Q1 2011 – adult, pediatric, and neonatal ICUs	Q2 (April – June): November 15
	Start Q1 2015 – adult and pediatric medical, surgical, and medical/surgical wards	Q3 (Jul. – Sept.): February 15
		Q4 (Oct. – Dec.): May 15
	CAUTI	Q1 (Jan.-March): August 15
	Start Q1 2012 – adult, pediatric ICUs	Q2 (April – June): November 15
	Start Q1 2015 – adult and pediatric medical, surgical, and medical/surgical wards	Q3 (Jul. – Sept.): February 15
		Q4 (Oct. – Dec.): May 15
	SSI (following COLO Procedures)	Q1 (Jan.-March): August 15
	(Start Q1 2012)	Q2 (April – June): November 15
		Q3 (Jul. – Sept.): February 15
		Q4 (Oct. – Dec.): May 15
	SSI (following HYST Procedures)	Q1 (Jan.-March): August 15
	(Start Q1 2012)	Q2 (April – June): November 15
		Q3 (Jul. – Sept.): February 15
		Q4 (Oct. – Dec.): May 15
MRSA Bacteremia LabID Event (FacWideIN)	Q1 (Jan.-March): August 15	
(Start Q1 2013)	Q2 (April – June): November 15	
	Q3 (Jul. – Sept.): February 15	
	Q4 (Oct. – Dec.): May 15	
C. difficile LabID Event (FacWide IN)	Q1 (Jan.-March): August 15	
(Start Q1 2013)	Q2 (April – June): November 15	
	Q3 (Jul. – Sept.): February 15	
	Q4 (Oct. – Dec.): May 15	
Healthcare Personnel Influenza Vaccination	Q4 (Oct. – Dec.) – Q1 (Jan. – March): May 15	
(Start Q1 2013)		
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	Q1 (Jan.-March): August 15
	Start Q1 2013 – adult and pediatric ICUs and inpatient medical/surgical wards	Q2 (April – June): November 15 Q3 (Jul. – Sept.): February 15 Q4 (Oct. – Dec.): May 15
	Healthcare Personnel Influenza Vaccination	Q4 (Oct. – Dec.) – Q1 (Jan. – March): May 15
	(Start Q1 2013)	
Long-Term Acute Care Facilities (LTCHs) that participate in CMS LTCHQR Program	CLABSI (all bedded inpatient care locations)	Q1 (Jan.-March): August 15
	(Start Q4 2012)	Q2 (April – June): November 15 Q3 (Jul. – Sept.): February 15 Q4 (Oct. – Dec.): May 15
	CAUTI (all bedded inpatient care locations)	Q1 (Jan.-March): August 15
	(Start Q4 2012)	Q2 (April – June): November 15 Q3 (Jul. – Sept.): February 15 Q4 (Oct. – Dec.): May 15
	MRSA Bacteremia LabID Event (FacWideIN)	Q1 (Jan.-March): August 15
	(Start Q1 2015)	Q2 (April – June): November 15 Q3 (Jul. – Sept.): February 15 Q4 (Oct. – Dec.): May 15
	C. difficile LabID Event (FacWideIN)	Q1 (Jan.-March): August 15
	(Start Q1 2015)	Q2 (April – June): November 15 Q3 (Jul. – Sept.): February 15 Q4 (Oct. – Dec.): May 15
	Ventilator-Assisted Events (all bedded inpatient care locations)	Q1 (Jan.-March): August 15
	(Start Q1 2016)	Q2 (April – June): November 15 Q3 (Jul. – Sept.): February 15 Q4 (Oct. – Dec.): May 15
Healthcare Personnel Influenza Vaccination	Q4 (Oct. – Dec.) – Q1 (Jan. – March): May 15	
(Start Q4 2014)		

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

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 administrator 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 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 by facility type for NHSN enrollment can be accessed at: <http://www.cdc.gov/nhsn/enrollment>.

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. 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 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.

NHSN requires group administrators, such as the WVHCA, to create a Confer Rights Template within NHSN to be reviewed and accepted by group members in order for hospitals to confer rights to groups to which they belong. This template details the data that the WVHCA will 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. NHSN requires all

hospitals to review and accept the new Confer Rights Template in NHSN, 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.

Prior to accepting the Confer Rights Template developed by the WVHCA through NHSN, the template is available for review by the 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. 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. Yearly, 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:

- CDC Locations and Descriptions and Instructions for Mapping Patient Care Locations Manual
http://www.cdc.gov/nhsn/PDFs/pscManual/15LocationsDescriptions_current.pdf
- Instructions for Mapping Patient Care Locations in NHSN (pictures)
<http://www.cdc.gov/nhsn/PDFs/psc/MappingPatientCareLocations.pdf>

- d. Reporting requirements are 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” of the CDC Locations and Descriptions Manual 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 2016; 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

The information below provides additional instructions to assist with mapping facility locations. 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).

Location Mapping in NHSN

- 1** A user with Administrator Rights selects **Facility**, then **Locations**.
- 2** On the **Locations** screen, read the **Instructions** carefully.
- 3** Complete all mandatory fields.
 - Your Code** – Enter a code of your choice that will allow easy identification of the location.
 - Your Label** – Enter a short description of the location.
 - CDC Location Description** – Select the appropriate CDC location from the drop down menu.
 - Status** – Select 'Active' when adding a new location.
 - Bed Size** – Enter the bed size.
- 4** Click on the **Add** button to save the location.

Continued →

Location Mapping in NHSN

- 5** After successfully adding a location, it will be available in all active components.

Important Tips:

- Facility locations are shared across components. Confer with the Primary Contacts of all components before deleting or making changes to locations in NHSN.
- Follow the 80% Rule – 80% of the patients must be of a consistent type to classify the location as that specific type. For locations with mixed patient populations that do not meet the 80% rule, the locations may be mapped to CDC-defined mixed acuity units (see link below).
- **Most** locations can be used in all components. However, there are a few locations that can only be used in specific components, modules, or facility types. These exceptions are noted in the Master CDC Locations and Descriptions document: http://www.cdc.gov/nhsn/PDFs/pscManual/15LocationsDescriptions_current.pdf

NHSN user support: nhsn@cdc.gov.

- f. FacWideIN LabID surveillance has been expanded by CMS and NHSN to include emergency department (ED) and observation (OBS) locations. Acute care hospitals that are performing in-plan FacWideIN LabID Surveillance are 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.

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 and verify that data 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 that facilities run the reports immediately after the data is submitted and file them in the case they are needed in the future.

In 2015, new reports, Targeted Assessment for Prevention (TAP) Strategy – referred to as “TAP Reports” - were implemented in NHSN in alignment with CDC's Targeted Assessment for Prevention (TAP) strategy. The TAP strategy allows for the ranking of facilities (or locations) in order to identify and target those areas with the greatest need for improvement.

TAP Reports can be generated within NHSN for CLABSI, CAUTI, and CDI LabID data. The reports will rank facilities (or locations) by the cumulative attributable difference (CAD), which is the number of infections that must be prevented to achieve a HAI reduction goal. The CAD can help to prioritize the facilities (or locations) where the greatest prevention impact could be achieved. Ranking occurs for overall Hospital CAD (highest to lowest) and by location within the hospital.

This quick reference guide found at <http://www.cdc.gov/hai/prevent/tap.html> will describe, run and interpret the TAP reports, as generated by an individual facility within NHSN.

See **Appendix B** for more information on running TAP reports for your facility.

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 C**. 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 training, forms, support materials, analysis resources, protocols, guidelines, recommendations, or FAQs, 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 sites:

Acute Care Hospital Patient Safety Resources

- 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>
- 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>
- 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>
- Surveillance Information and Tracking Infections in Acute Care Hospitals/Facilities <http://www.cdc.gov/nhsn/acute-care-hospital>
- 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
- Monthly Checklist for Acute Care Hospital Units Designated as Inpatient Rehabilitation Facilities (IRFs) Reporting to CMS IRF Inpatient Quality Reporting Program <http://www.cdc.gov/nhsn/PDFs/CMS/IRFs-acute-monthly-checklist-cms-iqr.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>
- Monthly Checklist for the CMS Hospital IQR Program for Acute Care Hospitals <http://www.cdc.gov/nhsn/PDFs/CMS/ach-monthly-checklist-cms-iqr.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>
- Surveillance information for Long-term Acute Care Hospitals <http://www.cdc.gov/nhsn/ltach>
- 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/ltac/helpful-tips-clabsi-ltac.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-LTAC.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
- Monthly Checklist for the CMS Long Term Care Hospital Quality Reporting Program
<http://www.cdc.gov/nhsn/PDFs/CMS/ltch-monthly-checklist-cms-igr.pdf>

Inpatient 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>
- Surveillance information for Inpatient Rehabilitation Facilities
<http://www.cdc.gov/nhsn/inpatient-rehab>
- 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

- Monthly Checklist for Acute Care Hospital Units Designated as Inpatient Rehabilitation Facilities (IRFs) Reporting to CMS IRF IQR
http://www.cdc.gov/nhsn/PDFs/CMS/Helpful_Tips_MRSA_Cdiff_IRF_Acute_Ward.pdf
- Freestanding Inpatient Rehabilitation Facilities (IRFs) Reporting to CMS IRF Quality Reporting Program
<http://www.cdc.gov/nhsn/PDFs/CMS/irfs-freestand-monthly-checklist-cms-iqr.pdf>

General Resources

- NHSN www.cdc.gov/nhsn/
- 2016 NHSN Patient Safety Component Manual <http://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>

- NHSN eNews December 2014 <http://www.cdc.gov/nhsn/PDFs/Newsletters/Newsletter-Dec2014.pdf>
- NHSN Newsletters <http://www.cdc.gov/nhsn/newsletters.html>
- CMS Quality Reporting Programs, FAQs and Requirements www.cdc.gov/nhsn/cms
- Understanding SIR and Why Like Hospitals May be Different – See **Appendix D and E**
- NHSN Patient Safety Component Measures and Source of Aggregate Data Used for Comparisons – **See Appendix F**

Healthcare Personnel Influenza Vaccination Reporting Resources

- Healthcare Personnel Safety Component Manual <http://www.cdc.gov/nhsn>
- HCP Influenza Vaccination Summary: General Training December 2015
<http://www.cdc.gov/nhsn/pdfs/training/hcp/hcp-flu-vaccination-summary-reporting-general-training.pdf>
- HCP influenza Vaccination Summary: Acute Care Facilities 2015
<http://www.cdc.gov/nhsn/pdfs/training/hcp/hcp-flu-vaccination-summary-reporting-ac-training-slides.pdf>
- HCP Safety Monthly Reporting Plan Form January 2016
http://www.cdc.gov/nhsn/forms/57.203_hcpsafetyplan_blank.pdf
- 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) http://www.cdc.gov/nhsn/PDFs/CMS/LTAC-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 are available on the NHSN website. These trainings provide a comprehensive overview of the Device-associated (DA) module and Procedure-associated (PA) module for NHSN. The courses 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.

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/pdfs/training/hcp/hcp-flu-vaccination-summary-reporting-ac-training-slides.pdf>
- **Long-Term Acute Care Hospitals:**
<http://www.cdc.gov/nhsn/pdfs/training/vaccination/hcp-flu-vaccination-summary-reporting-ltac-training-slides.pdf>
- **Inpatient Rehabilitation Facilities:**
<http://www.cdc.gov/nhsn/PDFs/training/HCP-flu-Vaccination-Summary-Reporting-IRF-Training-Slides.pdf>
- **Inpatient Psychiatric Facilities:**
<http://www.cdc.gov/nhsn/pdfs/training/vaccination/hcp-flu-vax-summary-reporting-ipf-training.pdf>

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).

APPENDICES

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Appendix A

Instructions for Generating CMS Reports in NHSN

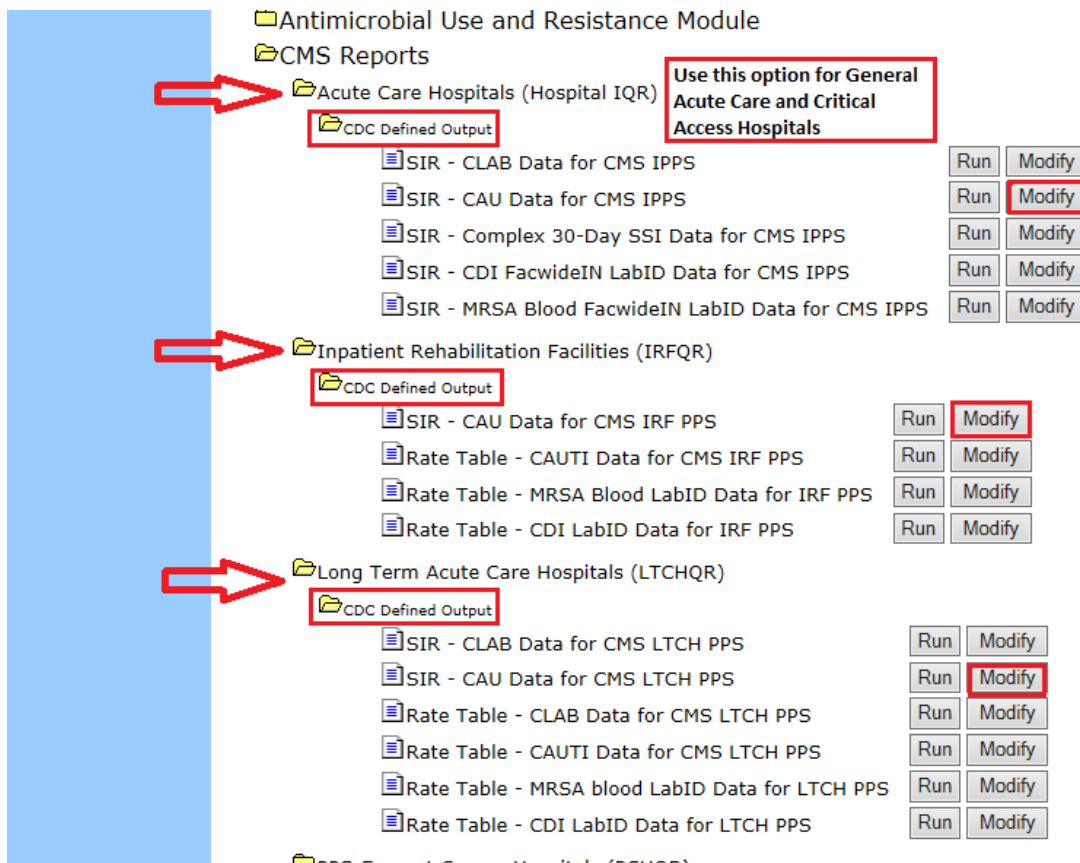
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How to Generate a CMS Report Using NHSN

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

Output Name:

Output Title:

Select output format:

Output Format:

Use Variable Labels

Select a time period or Leave Blank for Cumulative Time Period: [HELP](#)

Date Variable: Beginning: Ending:

Enter Date variable Time period at the same time you click the Run button

Specify Other Selection Criteria: [HELP](#)

[Show Criteria](#) [Column +](#) [Row +](#) [Clear Criteria](#)

utiPlan	locationType	locCDC		
= Y	IN (CC)			
= Y		IN (IN:ACUTE:WARD:M, IN:ACUTE:WARD:MS, IN:ACUTE:WARD:S, IN:ACUTE:WARD:M_PED, IN:ACUTE:WARD:MS_PED, IN:ACUTE:WARD:S_PED)		

Other Options: [HELP](#) [Print Variable Reference List](#)

Group by:

- **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

Select output format:

Output Format:

Use Variable Labels

Select a time period or Leave Blank for Cumulative Time Period: [HELP](#)

Date Variable: Beginning: Ending:

Enter Date variable time period at the time you click the Run button

Specify Other Selection Criteria: [HELP](#)

[Show Criteria](#) [Column +](#) [Row +](#) [Clear Criteria](#)

Other Options: [HELP](#) [Print Variable Reference List](#)

Group by:

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).

National Healthcare Safety Network
SIR for CAUTI Data for CMS IPPS - Overall
As of: March 26, 2015 at 3:41 PM
Date Range: CAU_RATES_CMS summaryYM 2013M01 to 2013M12

summaryYM	infCount	numExp	numcathdays	SIR	SIR_pval	SIR95CI
2013M01	10	19.890	9852	0.503	0.0168	0.255, 0.896
2013M02	8	16.715	8248	0.479	0.0213	0.222, 0.909
2013M03	11	18.624	9138	0.591	0.0635	0.311, 1.027
2013M04	14	17.834	8803	0.785	0.3704	0.447, 1.286
2013M05	11	17.998	8927	0.611	0.0853	0.321, 1.062
2013M06	11	17.527	8354	0.628	0.1059	0.330, 1.091
2013M07	10	17.809	8624	0.562	0.0504	0.285, 1.001
2013M08	5	17.500	8473	0.286	0.0006	0.105, 0.633
2013M09	12	17.599	8526	0.682	0.1730	0.369, 1.159
2013M10	15	17.697	8565	0.848	0.5397	0.493, 1.367
2013M11	9	17.515	8466	0.514	0.0293	0.251, 0.943
2013M12	20	17.431	8635	1.147	0.5250	0.721, 1.741

If infCount in this table is less than you reported, aggregate data are not available to calculate numExp.
Lower bound of 95% Confidence Interval only calculated if infCount > 0. SIR values only calculated if numExp >= 1.
SIR excludes those months and locations where device days are missing.
Applicable ward-level data included for 2015 and forward only, per CMS IPPS requirements.
Beginning January 2015, the CAUTI definition excludes all non-bacterial pathogens and therefore, the number of CAUTIs reported in 2015 and forward may be lower than in previous years.

Source of aggregate data: NHSN Report, Am J Infect Control 2009;37:783-805
Data contained in this report were last generated on March 26, 2015 at 11:13 AM.

National Healthcare Safety Network
SIR for CAUTI Data for CMS IPPS - Overall by Location Type

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Appendix B

**Targeted Assessment Prevention Strategy
(TAP Reports)**

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TAP Reports for the FACILITY User

Description

In 2015, new reports – referred to as “TAP Reports” - were implemented in NHSN in alignment with CDC’s Targeted Assessment for Prevention (TAP) strategy. The TAP strategy allows for the ranking of facilities (or locations) in order to identify and target those areas with the greatest need for improvement.

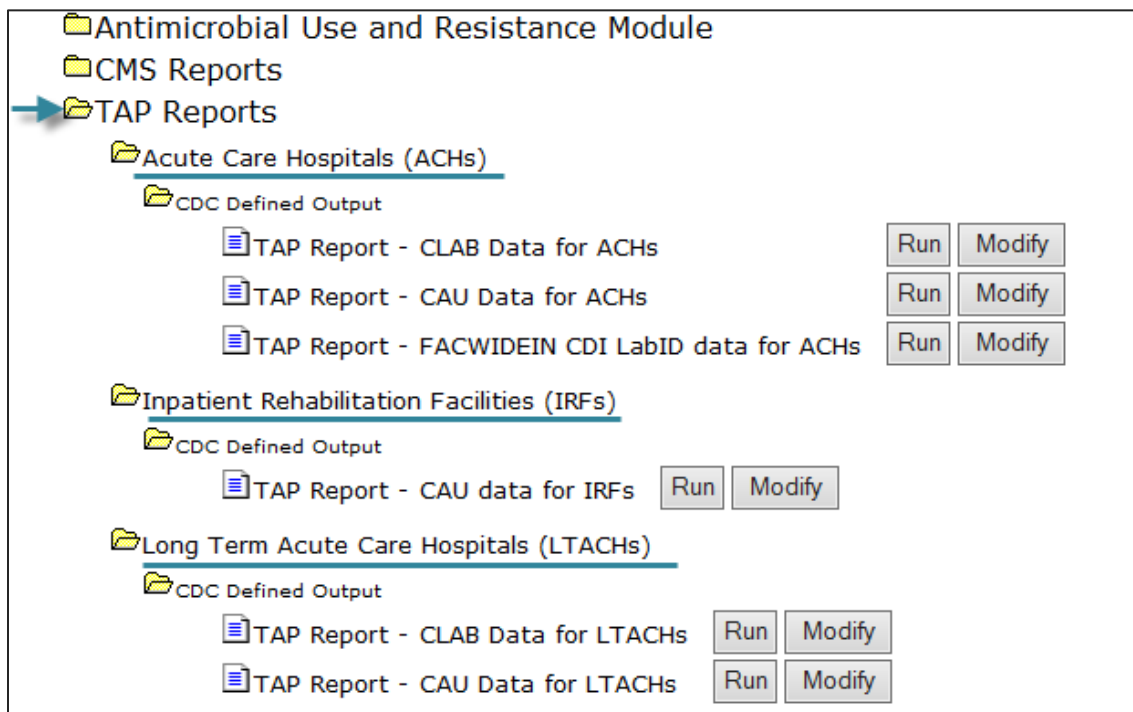
TAP Reports can be generated within NHSN for CLABSI, CAUTI, and CDI LabID data. The reports will rank facilities (or locations) by the cumulative attributable difference (CAD), which is the number of infections that must be prevented to achieve a HAI reduction goal. The CAD can help to prioritize the facilities (or locations) where the greatest prevention impact could be achieved. Ranking occurs for overall Hospital CAD (highest to lowest) and by location within the hospital.

This quick reference guide will describe how to run and interpret the TAP report, as generated by an individual facility within NHSN. For more information about the TAP strategy, please visit:

<http://www.cdc.gov/hai/prevent/tap.html>

Generate a TAP Report

1. On the output options screen, expand the “TAP Reports” folder. The TAP Reports are organized by facility type. Expand the folder for your facility type to see the TAP Report options available:



2. For each TAP Report, you can choose to either **Run** or **Modify**:
 - A. Clicking **Run** would provide a TAP Report that is inclusive of all data reported to NHSN that are included in the analysis datasets (e.g., all CAUTI data from 2012 to present).
 - b. Clicking **Modify** will allow you to limit the TAP Report by time period (e.g., summaryYr 2014 to 2014), as well as include the variable labels for more descriptive column headers.

NOTE: The TAP reports must be generated for a cumulative time period only (i.e., the GroupBy option must be blank on the modification screen.)



Example TAP Report Output - CAUTI

The following table is an example CAUTI TAP report generated for an acute care hospital, for the calendar year 2013. The footnotes provided with each table define the data that appear in the derived columns. Please see page 3 for an interpretation of this report.

National Healthcare Safety Network

TAP Report - CAUTI Data for Acute Care Hospitals

Locations Ranked by CAD Within a Facility

As of: January 12, 2015 at 1:46 PM

Date Range: CAU_TAP summaryYr 2013 to 2013

	Facility Name FACILITY	Facility CAD	Location Rank	Location	CDC Location	Events LOCATION	Urinary Catheter Days	DUR %	CAD	SIR	SIR Test	No. Pathogens (EC,YS,PA,KS,PM,ES)
10018	DHQP MEMORIAL HOSPITAL	8.17	1	ICU	IN:ACUTE:CC:MS	5	400	32	4.31	.	.	5 (2, 1, 1, 0, 0, 1)
			2	JOYREHAB	IN:ACUTE:WARD:REHAB	2	50	25	1.86	.	.	6 (0, 0, 0, 0, 0, 0)
			3	INPEDREB	IN:ACUTE:WARD:REHAB_PED	1	20	20	0.96	.	.	1 (0, 0, 0, 0, 0, 0)
			4	ONC M	IN:ACUTE:CC:M	1	310	56	0.47	.	.	1(1, 0, 0, 0, 0, 0)
			4	ONC_MS	IN:ACUTE:CC:MS	1	310	56	0.47	.	.	1 (0, 1, 0, 0, 0, 0)
			6	ONC_S	IN:ACUTE:CC:S	1	310	56	0.40	.	.	1 (0, 0, 0, 0, 1, 0)
			7	5G	IN:ACUTE:CC:C	0	1	100	0.00	.	.	
			7	AA.3RD	IN:ACUTE:WARD:MS	0	1	100	0.00	.	.	
			7	AA.4TH	IN:ACUTE:WARD:MS	0	1	100	0.00	.	.	
			7	AA.5TH	IN:ACUTE:WARD:MS	0	2	100	0.00	.	.	
			11	INSURGCC	IN:ACUTE:CC:S	0	10	33	-0.02	.	.	
			12	MD	IN:ACUTE:CC:B	0	10	33	-0.03	.	.	
			13	S-ICU	IN:ACUTE:CC:S	0	20	20	-0.04	.	.	
			14	ICU/CCU	IN:ACUTE:CC:C	0	125	31	-0.19	.	.	

If location-level CADs are the same in a given facility, their ranks are tied.

(EC,YS,PA,KS,PM,ES) = No. of E. Coli, Yeast (both candida and non-candida species), P. aeruginosa, K. pneumoniae/K. oxytoca, Proteus Mirabilis, Enterococcus species

SIR is set to '.' when expected number of events is <1.0.

LOCATION CAD = (OBSERVED_LOCATION - EXPECTED_LOCATION* 0.75)

Interpretation

- Looking at the third column in the TAP report, we can see that this facility's CAD is 8.17 – this means that the facility had approximately 8 excess infections when compared to the number of infections that were predicted.
- When we look at the location-specific information, we can begin to interpret data at the location level. For example:
 - The ICU location is ranked as #1 (location rank)– meaning, this location has the highest number of “excess” infections than all other locations for which CAUTI data were reported during 2013.
 - There were 5 CAUTIs (events) identified in the ICU, in 400 urinary catheter days.
 - The device utilization ratio (DUR), as a percent, was 32% - that is, 32% of the patient days in this unit were also urinary catheter days.
 - The CAD in the ICU was 4.31, indicating that at least 4 infections would need to be prevented in order to meet the HAI reduction goal.
 - The standardized infection ratio (SIR) is not calculated, as the number of predicted events is <1.
 - Of the 5 pathogens identified in these CAUTIs (No. pathogens), 2 were *E. coli* (EC), 1 was a yeast (YS), 1 was *P. aeruginosa*, and 1 was *Enterococcus* species.

Additional Resources:

- The Five "W"s of the Targeted Assessment for Prevention (TAP) Strategy:
<http://www.cdc.gov/hai/prevent/tap.html>
- Introduction to NHSN Analysis:
<http://www.cdc.gov/nhsn/PDFs/training/intro-AnalysisBasics-PSC.pdf>
- How to filter your data by time period:
<http://www.cdc.gov/nhsn/PS-Analysis-resources/PDF/FilterTimePeriod.pdf>
- How to filter your data on additional criteria:
<http://www.cdc.gov/nhsn/PS-Analysis-resources/PDF/SelectionCriteria.pdf>
- Analysis Quick Reference Guides:
<http://www.cdc.gov/nhsn/PS-Analysis-resources/reference-guides.html>

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Appendix C

Data Submission and Quality Review Schedule and Procedure

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West Virginia Hospital Healthcare-Associated Infection 2016 Data Submission and Quality Review Schedule/Procedure

	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4	
	<i>January - March Events</i>	<i>April - June Events</i>	<i>July - September Events</i>	<i>October - December Events</i>	
General Acute, CAH, Inpatient Rehabilitation Facilities, and Long-Term Acute Care Facilities' Patient Safety Requirements	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

	QUARTER 4	QUARTER 1	
	<i>October - December</i>	<i>January - March</i>	
General Acute, CAH, Inpatient Rehabilitation, and LTAC Facilities' Healthcare Personnel Safety Requirements	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.
 - Data will be monitored for completeness and accepted, OR,
 - 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.
 - If after 1 week the issue is not resolved or the data is not submitted, the appropriate hospital contact will be contacted via phone.
 - If after 2 weeks, a letter will be sent to the hospital contacts detailing the issue and timeline for correcting the issue.
 - If after 3 weeks the issue is not corrected, a letter to the CEO will be sent.
 - 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.
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Appendix D
Standardized Infection Ratio (SIR)

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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.

$$\text{SIR} = \text{Observed HAIs} \div \text{Expected HAIs}$$

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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Appendix E

Why Like Hospitals May Be Different

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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* ÷ *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						

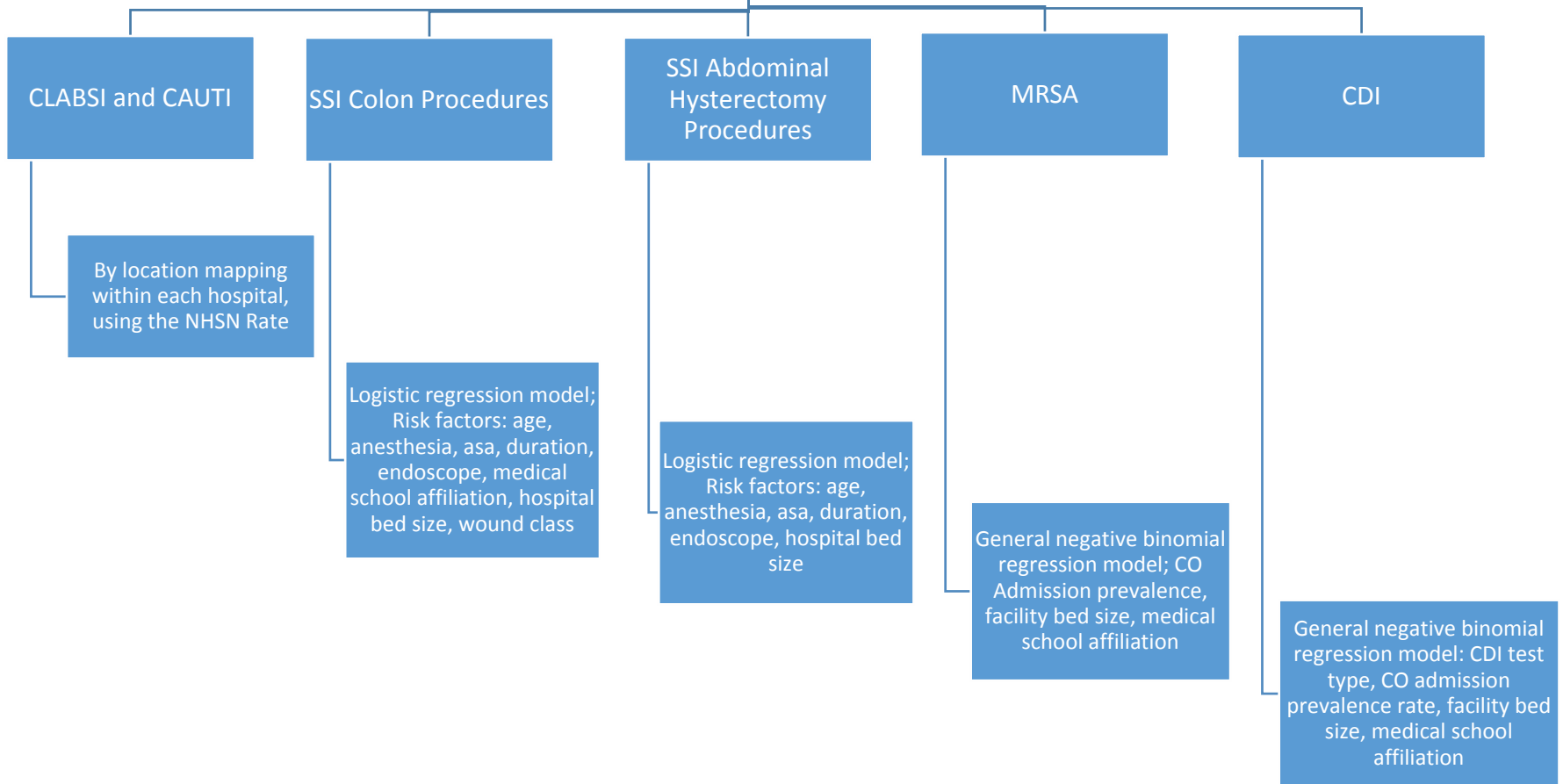
*Table and information reproduced from CDC, NHSN e-News: *SIRs Special Edition*. October 2010 (updated December 2010);1.

“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



Appendix F

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

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

Measure	Source of Aggregate Data (as of 01/31/2015, NHSN v8.3)
CLABSI Rates*	NHSN Report, data summary for 2013, Device-associated Module Am J Infect Control 2015;43:206-21 http://www.sciencedirect.com/science/article/pii/S0196655314013546
CLABSI SIRs, Acute care hospitals (ACHs)	NHSN Annual Report: data summary for 2006-2008, issued December 2009 Am J Infect Control 2009;37:783-805 http://www.cdc.gov/nhsn/PDFs/dataStat/2009NHSNReport.PDF
CLABSI SIRs, Long Term Acute Care Hospitals (LTACHs)	NHSN Report, data summary for 2013, Device-associated Module Am J Infect Control 2015;43:206-21 http://www.sciencedirect.com/science/article/pii/S0196655314013546
CAUTI Rates*	NHSN Report, data summary for 2013, Device-associated Module Am J Infect Control 2015;43:206-21 http://www.sciencedirect.com/science/article/pii/S0196655314013546
CAUTI SIRs, ACHs	NHSN Annual Report: data summary for 2009 Am J Infect Control 2011;39:349-67 http://www.cdc.gov/nhsn/PDFs/NHSNReport_DataSummaryfor2009.pdf
CAUTI SIRs, LTACHs and Inpatient Rehabilitation Facilities (IRFs)	NHSN Report, data summary for 2013, Device-associated Module Am J Infect Control 2015;43:206-21 http://www.sciencedirect.com/science/article/pii/S0196655314013546
Pediatric VAP Rates*	NHSN Report, data summary for 2013, Device-associated Module Am J Infect Control 2015;43:206-21 http://www.sciencedirect.com/science/article/pii/S0196655314013546
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 Infect Control Hosp Epidemiol 2011;32(10):970-986 http://www.cdc.gov/nhsn/PDFs/pscManual/SSI_ModelPaper.pdf
Complex 30-Day SSI SIR for CMS IPPS	NHSN 2006-2008, unpublished data For more information, please see: http://www.cdc.gov/nhsn/PDFs/FINAL-ACH-SSI-Guidance.pdf
MRSA Blood and CDI FacWideIn LabID SIRs, ACHs	Risk Adjustment for Healthcare Facility-Onset <i>C. difficile</i> and MRSA Bacteremia Laboratory-identified Event Reporting in NHSN Published March 12, 2013 http://www.cdc.gov/nhsn/PDFs/mrsa-cdi/RiskAdjustment-MRSA-CDI.pdf

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