

BSIs and the National Centers for Disease Control National Safety Network (NHSN): What Are We Learning?

Frequently Asked Questions with Mary Andrus, RN, CIC, Surveillance Solutions

1. I'm interested in learning more about NHSN. What resources do you recommend?

All the information you need about NHSN can be found on the NHSN website: <http://www.cdc.gov/nhsn/>. The site includes general information, a resource library (which includes the NHSN Manual), published reports and required NHSN training, currently in the form of archived webcasts that you can view on your computer. The NHSN Manual describes the definitions and protocols used in NHSN in detail and may be a good place to start.

2. Is there a fee to participate in NHSN?

There is no charge for participating in NHSN. The only resources needed are a computer, an Internet connection, and the time involved in training, enrollment, data collection and data entry.

3. How do I determine if voluntary participation is appropriate for my hospital?

The decision to participate in NHSN is entirely up to you and your facility leadership. Your annual infection control risk assessment may help you to identify potential issues that could be tracked using the NHSN tools, including generating reports that provide you with national rates to hospital locations that are similar to those in your facility.

If your acute care hospital is located in one of the 22 states that currently uses NHSN as the method of data collection for mandatory public reporting, the choice to join has already been made for you. At the present time, those states include: Alabama, California, Colorado, Connecticut, Delaware, Illinois, Maryland, Massachusetts, Nevada, New Jersey, New Hampshire, New York, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington and West Virginia.

4. Our ICU is very small. How do I know if our bed size is so small that comparative information from NHSN may be relevant or helpful in our situation?

Any time you're dealing with smaller numbers, the rates that you collect may be misleading. This is true no matter what type of HAI data collection tool you're using. If your device days or number of operations is small, I always suggest looking at rates over a longer period of time to give them more meaning.

More important to a small facility like yours, however, is looking at each infection as it is identified, or viewing line lists of specific HAIs over a shorter period of time (e.g., a week or a month) to see if you can see trends in location of HAIs, type of device used, device inserter, organism, etc. Showing these data to those individuals who work directly with patients or who make decisions about infection prevention resources can be very helpful in improving patient outcomes. Your facility does not have to be a large tertiary care center to reap the benefits from the tools available in NHSN.

5. What are percentile scores and how do I use them?

The percentile ranking is identified in the table below as the "Incidence Density Percentile". If you took all the reporting Medical/Surgical ICUs and lined up their rates from lowest to highest, the Incidence Density Percentile will tell you where your facility falls in this ranking. In the example below, the incidence density percentile is 71. This means that 71% of all the reporting Medical Surgical ICUs had a lower CLABSI rate than this facility.

National Healthcare Safety Network
 Rate Table for Central Line-Associated BSI Data for ICU-Other
 As of: September 1, 2008 at 9:32 AM
 Date Range: All CLAB_RATESICU
 Org ID=10000 CDC Location=IN:ACUTE:CC:MS

Location	CLA BSI Count	Central Line Days	CLA BSI Rate	NHSN CLAB Pooled Mean	Incidence Density p-value	Incidence Density Percentile	Patient Days	CL Util Ratio	NHSN Line DU Pooled Mean	Proportion p-value	Proportion Percentile
3 MS	22	10,296	2.1	2.2	0.5268	71	21,702	0.47	0.49	0.0003	44

Source of aggregate data: NHSN Report, Am J Infect Control 2007;35:290-301

Likewise, using the same example, the "Proportion Percentile" tells you that 44% of the reporting Medical Surgical ICUs had a lower Device Utilization ratio than this Medical Surgical ICU.

6. When should a hospital consider using CLIP?

CDC recommends evidence-based central line insertion practices (CLIP) known to reduce the risk of subsequent central line-associated bloodstream infection. These practices include hand hygiene by central line inserters, use of maximal sterile barriers during insertion, proper use of a skin antiseptic prior to insertion, and allowing that skin antiseptic to dry before catheter insertion. Despite the scientific evidence supporting these measures, several reports suggest that adherence to these practices remains low in US hospitals.

Several centers have found it useful to monitor adherence to evidence-based central line insertion practices as a method for identifying quality improvement opportunities and strategically targeting interventions. Feedback of adherence data has been a component of multifaceted interventions that have successfully reduced CLABSI rates.

7. Does the use of NHSN support compliance with TJC NPSG Goal 7.04.01?

Yes. NHSN can be used to support the Joint Commission National Patient Safety Goals, elements of performance 8 and 9 below. CLABSIs (central line associated bloodstream patient outcomes) data can be collected for any type of inpatient hospital location and CLIP (central line insertion practices adherence monitor) data can be collected in any healthcare location where central lines are inserted.

8. As of January 1, 2010, the hospital conducts periodic risk assessments for surgical site infections, measures central line–associated bloodstream infection rates, monitors compliance with best practices or evidence-based guidelines, and evaluates the effectiveness of prevention efforts.

9. As of January 1, 2010, the hospital provides central line–associated bloodstream infections rate data and prevention outcome measures to key stakeholders including leaders, licensed independent practitioners, nursing staff, and other clinicians.

Future enhancements to NHSN will allow facilities to link gaps in recommended practice with the clinical outcome. In this way, a facility could get a list of all CLABSIs identified which would also include the specific insertion practices that were used with the insertion of the central line for that patient.

8. Do payers use NHSN data? If so, how?

NHSN data are **not** used by payers for reimbursement purposes. A system of billing codes (either ICD-9-CM diagnosis codes or CPT codes) is used when submitting payment for care. These codes are assigned based on clinical documentation in the patient record, not on the identification of surveillance criteria.

Although NHSN has no relationship to billing, using the NHSN tools enables healthcare facilities to collect and use data about healthcare-associated infections (HAI), adherence to clinical practices known to prevent HAIs, the incidence or prevalence of multidrug-resistant organisms within their organizations, and other adverse events. Some states use NHSN as a means for healthcare facilities to submit data on HAIs mandated through their specific state legislation.

9. If we begin entering CLABSI data into NHSN, can we later change or add other topics?

Yes, the Monthly Reporting Plan is used to tell CDC which data your facility will report each month. If, for example, you indicate in the Plan that you'll collect CLABSI data in January and February, you may add VAP data and SSI data for HPRO operative procedures in March if you like. You may also discontinue reporting CLABSIs if that is appropriate based on your facility's risk assessment. The Monthly Reporting Plan can be edited at any point in time. Data for at least one module must be submitted for a minimum of six months of the calendar year to maintain active status in NHSN.

10. How does NHSN assure the privacy of protected patient health information?

CDC is authorized under Title III, Section 301, Section 304, and Section 306 of the Public Health Service Act (42 USC 241, 242b, 242k, and 242m(d)) to collect data on healthcare-associated infections (HAIs). This information is included in the Facility Consent and Agreement and is also included at the bottom of every NHSN data collection form.

This assurance provides strict confidentiality for data that could identify an individual or institution. The data are collected for the purposes of quality improvement and program management only.

Facilities can voluntarily release their own data to anyone they choose or grant access to a group (e.g., a state or accrediting entity for consumer choice purposes) to view and analyze the facility's data. Even though a facility may choose to share data with a group, CDC is prohibited from sharing data with others. For more information visit:

<http://www.cdc.gov/ncidod/dhqp/nnis.html>

<http://www.targetbsi.com/>