

Welcome to *California*



Introduction to NHSN



Basics of Infection Prevention
2-Day Mini-Course
2013

Objectives

- Describe NHSN key terms
- Demonstrate how to use NHSN as both a surveillance system and the web-based platform used in California for public reporting
- Understand how to interpret NHSN reports of your data



National Healthcare Safety Network (NHSN)

- Surveillance system used nationwide for reporting HAI from acute care hospitals, LTAC hospitals, Rehabilitation hospitals, long term care facilities, and hemodialysis clinics
- Part of a larger trend toward more transparency and accountability in healthcare
- Has emerged as the primary surveillance system used by CDPH, other state health departments and CMS for HAI reporting mandates
- Data used for HAI public reporting, pay for reporting, and pay for performance programs
- Accessed through a secure, web-based interface; open to all US healthcare facilities at no charge



NHSN Strengths

- Provides standards for surveillance across healthcare facilities
- Data risk-adjusted for comparison to national data
- Web-based; data housed remotely; data quality checks
- Surveillance data analysis tools built into system
- Increasing adaptation to electronic reporting using national health record standards (e.g. HL7, CDA)
- Expandable to many health care settings



NHSN Limitations

- NHSN experience is with voluntary reporting
- Data validation methods in development
- Requires following all NHSN protocols (detailed, lengthy)
- Not easily integrated with electronic medical record for data import
- While training and support is provided by NHSN, its use is not as intuitive as initially assumed or hoped



Recommended Practices for Surveillance and NHSN

- I. Assess the population
- II. Select the outcome or process for surveillance

You may be required by regulation to perform surveillance for specific HAI and specific patient populations



NHSN for Mandatory HAI Reporting

Required by [CDPH](#) to meet mandated HAI reporting requirements in California acute care hospitals (including LTACs)

- CLIP in ICUs
- CLABSI facility-wide
- SSI from 29 operative procedures (per AFL 11-32)
- *C difficile* from inpatients*
- MRSA and VRE bacteremia from inpatients*
 - If inpatient MRSA BSI related to central line, event must be reported also as CLABSI (entered in both NHSN modules)

* and ED patients admitted to facility same day



Reference NHSN Patient Safety Manual, **January 2013**

NHSN for Mandatory HAI Reporting - continued

Required by [CMS](#) for reporting specific infections for Medicare and Medicaid reimbursement from all U.S. acute care, LTAC, and Rehabilitation hospitals

- CLABSI in hospital ICUs, 2011
- CAUTIs in hospital ICUs, 2012
- SSI from colon and abdominal hysterectomies, 2012
- Positive blood cultures, hospital admissions, symptoms of access site infection in outpatient dialysis, 2013

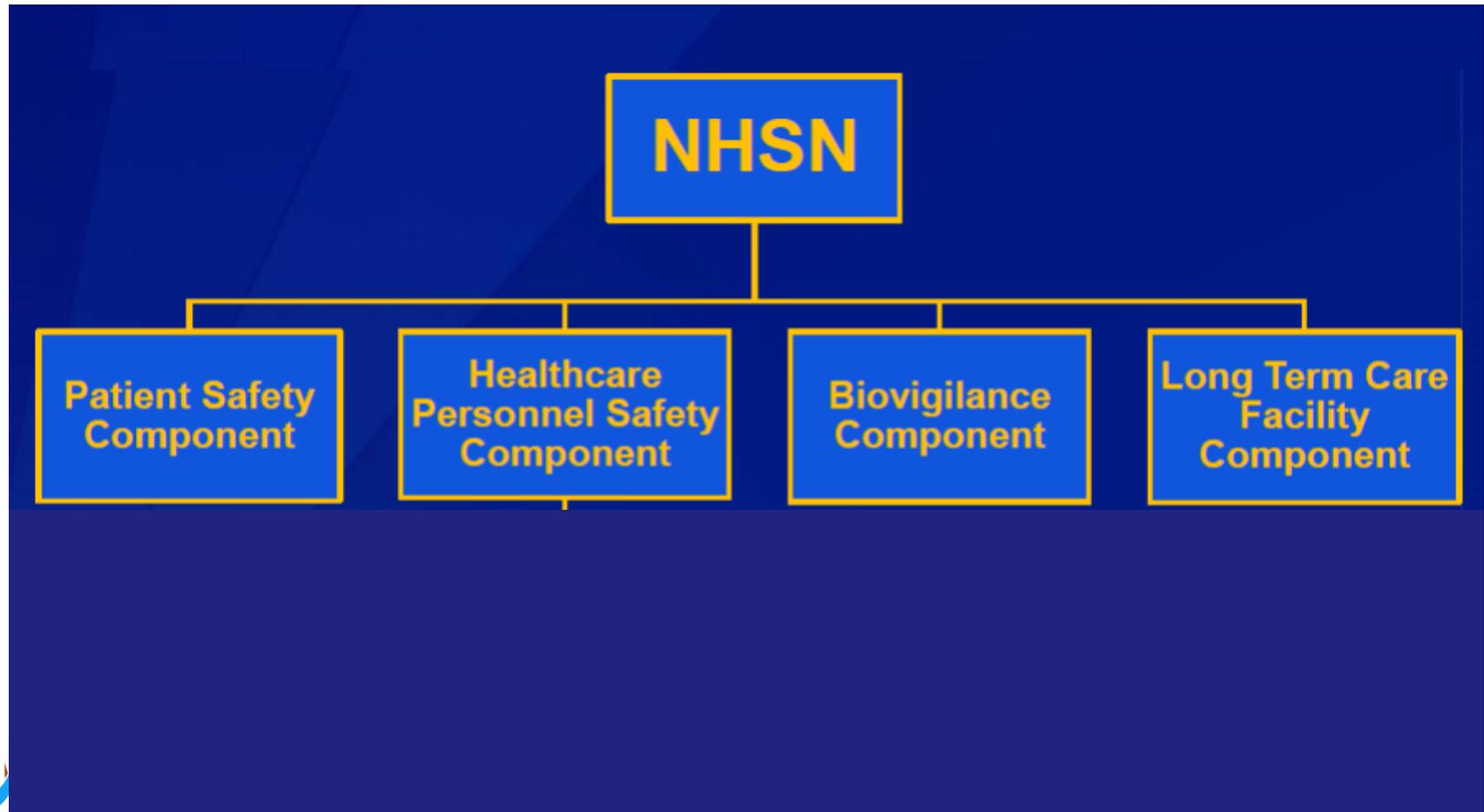


NHSN Data Access

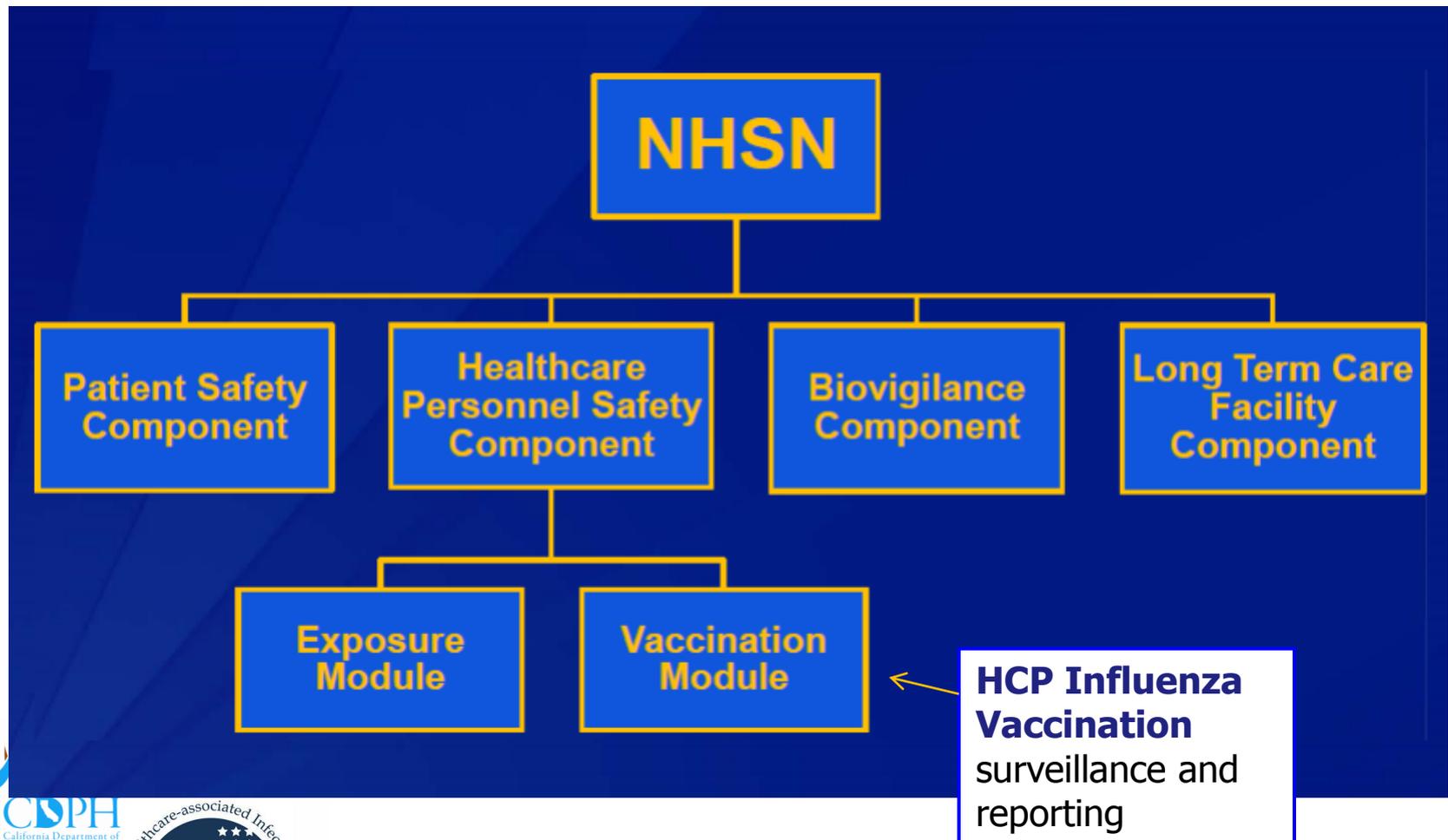
- Facilities own their NHSN surveillance data
 - May edit at any time to improve accuracy, completeness
- Facilities signed a data use agreement with CDC to allow CMS access to specific NHSN data
- Facilities can (or may be required) to join one or more NHSN Group
 - Examples: healthcare organization, CDPH
 - Facility confers rights for data access to the Group
 - CDPH accesses data required by statute
 - Facilities within Group cannot see each other's data



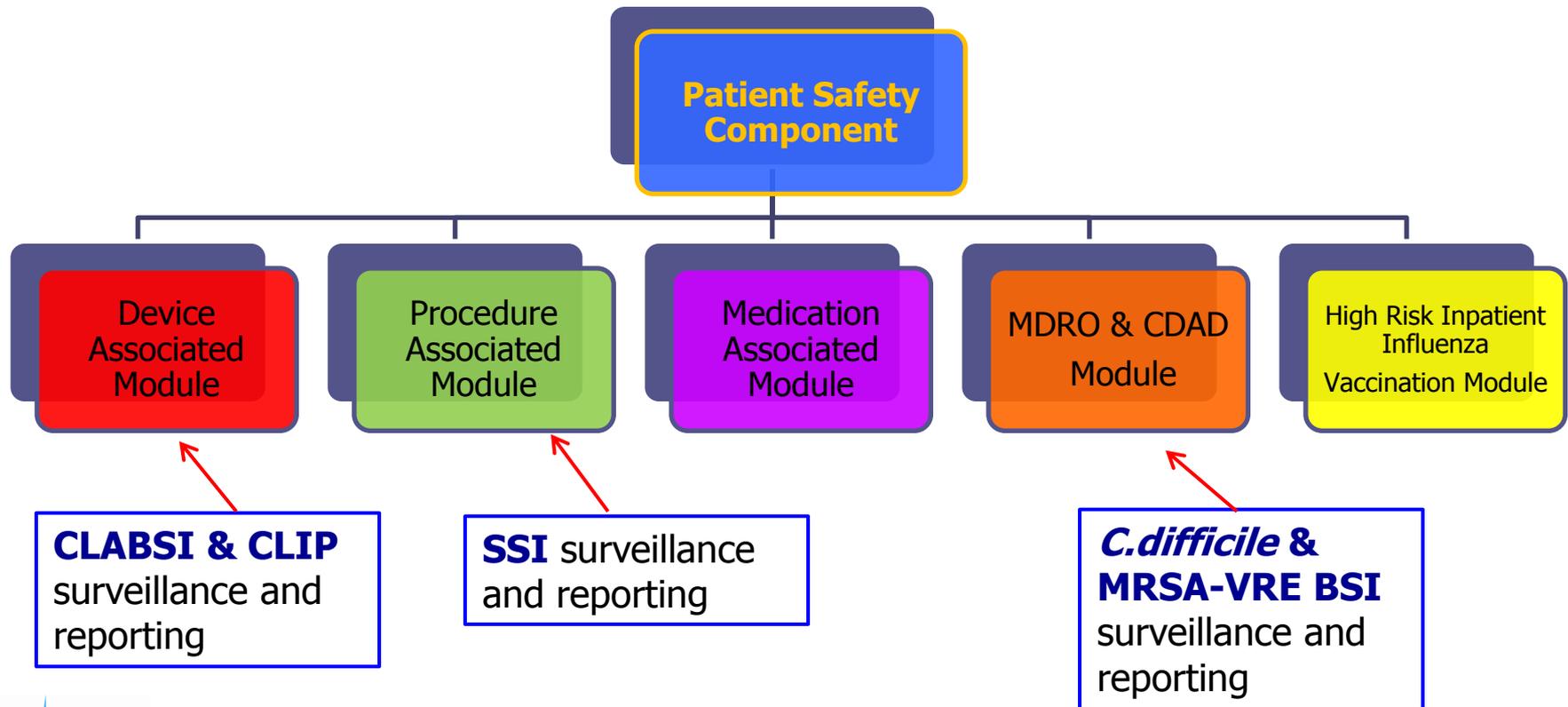
NHSN Structure – All Components, **2013**



NHSN Structure – HCP Safety Component



NHSN Structure – Patient Safety Component



Recommended Practices for Surveillance and NHSN

- III. Use surveillance definitions *(and protocols!)*
- IV. Collect surveillance data



Difference Between Clinical and Surveillance Definitions

- **Clinical criteria used by physicians for patient care and management may differ from surveillance criteria**
 - **Clinical**
 - Patient centered
 - Used for therapeutic decisions
 - **Surveillance**
 - Population based
 - Applied exactly the same way each time
 - Physician diagnosis of infection is acceptable for some infections

In NHSN, infection is not

- ❑ **Colonization** (presence of microorganisms on skin, mucous membranes, in open wounds, or in excretions or secretions but are not causing adverse clinical signs or symptoms)
- ❑ **Inflammation** that results from tissue response to injury or stimulation by noninfectious agents, such as chemicals

NHSN HAI Surveillance Definitions

Look for annual updates to definitions
www.cdc.gov/nhsn



CDC/NHSN Surveillance Definition of Healthcare-Associated Infection and Criteria for Specific Types of Infections in the Acute Care Setting

INTRODUCTION

This chapter contains the CDC/NHSN surveillance definition of healthcare-associated infection (HAI) and criteria for all specific types of HAI. Comments and reporting instructions that follow the site-specific criteria provide further explanation and are integral to the correct application of the criteria. This chapter also provides further required criteria for the specific infection types that constitute organ/space surgical site infections (SSI) (e.g., mediastinitis [MED] that may follow a coronary artery bypass graft, intra-abdominal abscess [IAB] after colon surgery).

Additionally, it is necessary to refer to the criteria in this chapter when determining whether a positive blood culture represents a primary bloodstream infection (BSI) or is secondary to a different type of HAI (see [Appendix 1 Secondary BSI Guide](#)). A BSI that is identified as secondary to another site of HAI must meet one of the criteria of HAI detailed in this chapter. Secondary BSIs are not reported as separate events in NHSN, nor can they be associated with the use of a central line.

Also included in this chapter are the criteria for Ventilator-Associated Events (VAEs). It should be noted that Ventilator-Associated Condition (VAC), the first definition within the VAE surveillance definition algorithm and the foundation for the other definitions within the algorithm (IVAC, Possible VAP, Probable VAP) may or may not be infection-related.

CDC/NHSN SURVEILLANCE DEFINITION OF HEALTHCARE-ASSOCIATED INFECTION

For the purposes of NHSN surveillance in the acute care setting, a healthcare-associated infection is a localized or systemic condition resulting from an adverse reaction to the presence of an infectious agent(s) or its toxin(s) that was not present on admission to the acute care facility. An infection is considered an HAI if all elements of a CDC/NHSN site-specific infection criterion were first present together on or after the 3rd hospital day (day of hospital admission is day 1). For an HAI, an element of the infection criterion may be present during the first 2 hospital days as long as it is also present on or after day 3. All elements used to meet the infection criterion must occur within a timeframe that does not exceed a gap of 1 calendar day between elements. Three examples of how to apply the HAI definition are shown in Table 1.

Table 1. Examples of Application of HAI Definition

Day 1	Day 2	Day 3	Day 4	Day 5	Infection is ...
Admit to ICU	ICU	ICU All elements of infection criterion were first present together			HAI attributable to ICU Rationale: On day 3, all elements first present together.

Review NHSN Surveillance Definitions

EXERCISE *(5-10 minutes)*:

Refer to “NHSN Surveillance Definition Worksheets”

Review criteria for

- Gastrointestinal infection (GE, GIT, IAB)





"For Enrolled Facilities" Web Page

National Healthcare Safety Network (NHSN)

- NHSN
- About NHSN
- Enroll Here
- Materials for Enrolled Facilities**
- Acute Care Hospitals/Facilities
- Long-Term Acute Care Facilities
- Long-Term Care Facilities
- Outpatient Dialysis Facilities
- Inpatient Rehabilitation Facilities
- Ambulatory Surgery Center
- FAQs about Healthcare Personnel (HCP) Influenza Vaccination Summary Reporting in NHSN
- Group Users
- Patient Safety Analysis Resources
- Annual Reports
- Newsletters
- E-mail Updates
- CMS Requirements
- Clinical Document Architecture (CDA)
- HIPAA Privacy Rule
- Contact NHSN

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Surveillance Reporting for Enrolled Facilities

Select Your Facility Type

 Acute Care Hospital/Facilities Urgent care or other short-term stay facilities.	 Outpatient Dialysis Facilities Outpatient dialysis clinics
 Long-Term Acute Care Facilities Long-term acute care hospitals (LTACHs).	 Inpatient Rehabilitation Facilities Inpatient rehabilitation hospitals
 Long-Term Care Facilities Nursing homes, assisted living and residential care, chronic care facilities, and skilled nursing facilities	 Ambulatory Surgery Center Outpatient surgery centers

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CMS
NHSN
Requirements
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Clinical Document Architecture
CDA

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[Training / Demo](#) [Newsletters](#) [E-mail Updates](#) [State-based HAI Prevention Activities](#) [HIPAA Privacy Rule](#)

Contact NHSN:

 Centers for Disease Control and Prevention
National Healthcare Safety Network
MS-A24
1600 Clifton Rd
Atlanta, GA 30333

 800-CDC-INFO
(800-232-4636)
TTY: (888) 232-6348
New Hours of

- NHSN Manuals**
- [Patient Safety Component Manual](#)

www.cdc.gov/nhsn/settings.html



National Healthcare Safety Network (NHSN)

Tracking Infections in Acute Care Hospitals/Facilities

NHSN is the HAI surveillance gold standard. This system (and its predecessors) started years ago helping a few hundred healthcare facilities; today, more than 11,000 healthcare facilities use NHSN as the cornerstone of their HAI elimination strategies. Specifically, facilities use NHSN to:

- Access NHSN enrollment requirements for CMS Hospital Inpatient Quality Reporting Program Here.
- Obtain baseline HAI rates.
- Compare rates to CDC's national data.
- Participate in state or national HAI prevention collaborative.
- Devise and implement HAI elimination strategies.
- Evaluate immediate and long-term results of elimination efforts.
- Refocus efforts as needed, or advance to different areas.



Email page link
Print page

NHSN Login

Get email updates
To receive email updates about this page, enter your email address:
[input field]
[Submit]

CAUTI - Surveillance for Catheter-Associated Urinary Tract Infection

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

CLABSI - Surveillance for Central Line-Associated Bloodstream Infection

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

CMS NHSN Requirements
Click here for more information

MDRO/CDI - Surveillance for C. difficile, MRSA, and Other Drug-Resistant Infections

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

CLIP - Surveillance for Central Line Insertion Practices Adherence

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs



Contact NHSN:
Centers for Disease Control and Prevention
National Healthcare Safety Network
HQ-USA
1600 Clifton Rd
Atlanta, GA 30333
800-CDC-INFO
1-800-458-5231
New Hours of Operation
9am-5pm ET Monday-Friday
Closed holidays
www.cdc.gov
More contact info »

SSI - Surveillance for Surgical Site Infections

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

VAE - Surveillance for Ventilator-associated Events

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

AUR - Surveillance for Antimicrobial Use and Antimicrobial Resistance Option

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

VAP - Surveillance for Ventilator-associated Pneumonia Event

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

Surveillance for Healthcare Personnel Influenza Vaccination

- Training
- Protocols
- Forms

Surveillance for Healthcare Personnel Influenza Vaccination

- Training
- Protocols
- Forms

NHSN Acute Care Hospital-Specific Page

- Contains educational modules
- CMS requirements
- Links to emails and past newsletters



- ### SSI Surveillance
- Training
 - Protocols
 - Forms
 - Support Materials
 - Analysis Resources
 - FAQs

www.cdc.gov/nhsn/acute-care-hospital

Special Edition!October 2010, Updated
December 2010

evention (CDC)

NEWS

Your Guide to the Standardized Infection Ratio (SIR)

With the new version of NHSN (version 6.3), new output options are available that will permit the calculation of standardized infection ratios (SIRs) for central line-associated bloodstream infection (CLABSI) and surgical site infection (SSI) data. Each of these measures fall in line with the State-Specific Healthcare-associated Infections Summary Data Report, published by CDC. For SSIs, we will make the transition from SSI rates to the SSI SIR with this new version of the NHSN tool. The SSI SIR is the result of logistic regression modeling that considered all procedure-level data collected by NHSN facilities in order to provide better risk adjustment than afforded by the risk index. In addition, the SSI SIR provided to facilities within NHSN will be more precise and be calculated only if appropriate for comparisons. As we make this transition, we understand that you will have numerous questions, including how to operationalize this new statistic in your facility to drive prevention practices. This guide is intended to answer some of these questions.

STANDARDIZED INFECTION RATIO (SIR)

What is a standardized infection ratio (SIR)?

The standardized infection ratio (SIR) is a summary measure used to track HAIs at a national, state, or local level over time. The SIR adjusts for patients of varying risk

Read all NHSN Newsletters – great guidance!

Key Term: Inpatient vs. Outpatient

NHSN Inpatient

- A patient whose date of admission to the healthcare facility and the date of discharge are different calendar days

NHSN Outpatient

- A patient whose date of admission to the healthcare facility and the date of discharge are the same day



CDC Location Mapping

- Each patient care area in NHSN is defined by the type of patients receiving care in that location
 - To define (or redefine) a patient care location
 - Step 1: Determine the acuity level (e.g. critical care, ward)
 - Step 2: Determine the type of service (e.g. burn, surgical)
 - Apply 80% Rule to designate patient type
- EXCEPTION: Medical/Surgical Locations (ICUs and wards)
- Try to better define medical/surgical mixed units
 - If more than 60% medical patients, define as a medical location
 - If more than 60% surgical, define as a surgical location



NHSN Facility Home Page

Accessed via secure web portal

NHSN 6.4.2.4 Home Page - Windows Internet Explorer

https://sdn7.cdc.gov/nhsn/nhsnMain.do

File Edit View Favorites Tools Help

Favorites HAI Program CDC Portal Login Page SDN

NHSN 6.4.2.4 Home Page

CDC Department of Health and Human Services
Centers for Disease Control and Prevention

NHSN - National Healthcare Safety Network

NHSN Home | My Info | Contact us | Help | Log Out

NHSN Home Logged into California General Hospital (ID 15633) as SUECHEN.
Facility California General Hospital (ID 15633) is following the PS component.

NHSN Patient Safety Component Home Page

Use the Navigation bar on the left to access the features of the application.

Assurance of Confidentiality: The voluntarily provided information obtained in this surveillance system that would permit identification of any individual or institution is collected with a guarantee that it will be held in strict confidence, will be used only for the purposes stated, and will not otherwise be disclosed or released without the consent of the individual, or the institution in accordance with Sections 304, 306 and 308(d) of the Public Health Service Act (42 USC 242b, 242k, and 242m(d)).

- The number of available functions (on the left blue navigation bar) depends on your NHSN User's rights
- Your NHSN Facility Administrator sets (and can change) the rights for each User
- Types of User rights are: 1) Administrative (all functions available), 2) Analyze data, 3) Enter data, 4) View data

Recommended Practices for Surveillance and NHSN

- V. Calculate and analyze infection rates
- VI. Apply risk stratification methodology
- VII. Report and use surveillance data

*Can all be done
within the NHSN
system!*



NHSN Rate Table

Review your Data Findings!

Check first that all your infections are listed
AND denominator data for each month

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Rate Table for Central Line-Associated BSI Data for ICU-Other												
2	Date Range: All CLAB_RATESICU												
3	Location	Summary Yr/Mon	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 DUPooled Mean	Proportion p-value	Proportion Percentile
4	Z-ICU	2010M07	0	250	0	1.5	0.6928	25	450	0.56	0.51	0.0182	72
5	Z-ICU	2010M08	4	300	13.3	1.5	0.0011	100	400	0.75	0.51	0	93
6	Z-ICU	2010M09	1	300	3.3	1.5	0.3562	87	325	0.92	0.51	0	96
7	Z-MED/SURG	2010M07	0	275	0	1.2	0.7218	50	400	0.69	0.16	0	100
8	Z-MED/SURG	2010M08	0	250	0	1.2	0.7435	50	425	0.59	0.16	0	100
9	Z-MED/SURG	2010M09	0	300	0	1.2	0.7007	50	550	0.55	0.16	0	100
10	Source of aggregate data: NHSN Report					Am J Infect Control 2009;37:783-805							

Sample Rate Table

Shows your CLABSI rate and p-value to determine if significantly higher or lower as compared to NHSN rate (>0.05 NS)

Shows where your rate falls in the percentile distribution of all NHSN hospital rates

Shows your device utilization ratio compared to all similar hospital units in NHSN data 2006-2008

	A	B	C	D	E								
1	Rate Table for Central Line-Associated BSI Data for ICU-Other												
2	Date Range: All CLAB_RATESICU												
3	Location	Summary Yr/Mon	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 DUPooled Mean	Proportion p-value	Proportion Percentile
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9	Z-MED/SURG	2010M09	0	300	0	1.2	0.7007	50	550	0.55	0.16	0	100
10	Source of aggregate data: NHSN Report					Am J Infect Control 2009;37:783-805							

Check for missing infections AND missing Summary data for each unit each month!

NHSN Standardized Infection Ratio (SIR)

- Driven by need for a **summary measure**
 - e.g. replaces multiple rate comparisons for SSI
- Adjusts for differences in infection risk
 - e.g. by type of procedure and associated risk factors of patients undergoing that procedure in your hospital
- SIR compares #HAIs reported by your hospital with the “predicted” #based on NHSN data (2006-2008)



Interpreting SIR

- Value of **1.0** = number of HAI observed in your hospital is the **same as the predicted** number of HAI compared to national referent data
 - Less than 1.0 = fewer HAI than predicted
 - Greater than 1.0 = more HAI than predicted

Note: In NHSN, the SIR will only be calculated for your hospital if the predicted is >1 (*because can't have less than a whole person infected*)



$$\text{SIR} = \frac{\text{Observed HAIs}}{\text{Predicted HAIs}}$$

Examples:

If your hospital has 2 CLABSI per 1000 line days and national data predict 2.0 CLABSI per 1000 line days:

$$\text{SIR} = \frac{2}{2.0} = 1.0$$

If your hospital has 4 SSI per 100 Hip prosthesis procedures and national data predict 2.5 SSI:

$$\text{SIR} = \frac{4}{2.5} = 1.6$$

“How do I interpret whether our SIR is significantly different (higher or lower) than NHSN data?”

Org ID	Summary Yr	Infection Count	Number Expected	Central Line Days	SIR	SIR p-value	95% Confidence Interval
10018	2009	9	7.191	3786	1.25	0.2962	0.653, 2.184

1. If the p-value is above 0.05, the observed difference is not statistically significant.
2. If the 95% Confidence interval overlaps 1.0, the observed difference is not statistically significant.

If the p-value is not significant, the confidence interval won't be significant either and vice versa

SIR Interpretation - Example

Pretend this is "our" hospital.

Org ID	Summary Yr	Infection Count	Number Expected	Central Line Days	SIR	SIR p-value	95% Confidence Interval
10018	2009	9	7.191	3786	1.25	0.2962	0.653, 2.184

To discuss these findings:

1. "We had 9 CLABSI; 7.2 were expected. Our SIR is 1.25 or 25% higher than what would be predicted from national data."
2. "However, this difference is not significantly different than the national hospital data because our estimate is not very precise." *
3. "In fact, our SIR may be anywhere from 35% below to more than double the predicted value (.65 – 2.2)."
4. "We will continue to monitor CLABSIs. Observations over time (and more line days) will help us better understand how we compare. Our ultimate goal is to prevent all CLABSIs."



* Due to limited surveillance experience, e.g. too few line days across hospital units with predicted low rates.

SIR Interpretation - Example 2

Pretend this is our hospital.

Org ID	Summary Yr/Half	infCount	Number Expected	Central Line Days	SIR	SIR p-value	95% Confidence Interval
15331	2009H1	74	26.606	10065	2.78	0.0000	2.184, 3.492

To discuss these findings:

1. "We saw 74 CLABSI in 10,065 line days; 26.6 were predicted."
2. The SIR is 2.78 or nearly 3 times higher than what would be predicted from national data."
3. "This difference is significantly different than the national hospital data."
4. "In fact, the precision of this estimate shows that our hospital is between 2 and 3 ½ times higher than predicted (C.I. 2.2 – 3.5)."
5. "We need to implement a CLABSI prevention program immediately."

SSI Risk Adjustment

- Models developed for each NHSN operative procedure
 - Specific factors found to increase SSI risk for that procedure
- Every patient undergoing a procedure in your hospital has a calculated SSI risk
- Based on your surgical patient population, the expected (predicted) number of SSI can be calculated

Example: HYST

Factors in the risk adjustment model that add to SSI risk are

- Age equal to or younger than 44 years
- ASA score of 3, 4, or 5
- Duration of surgery longer than 100 minutes (incision to close time)
- Procedure done at major teaching hospital (from NHSN Annual Survey)



This table represents a partial list of 100 hypothetical patients who have undergone a HYST procedure and the risk factors present for each.

Patient	Age	Duration	ASA	Medical School Aff.	SSI	Probability of SSI
1	40	117	4	Y	0	0.050
2	53	95	2	N	0	0.004
3	30	107	2	Y	1	0.033
.
.
.
100	37	128	4	Y	1	0.050
TOTAL					Observed (O)	Expected (E)
					3	2.91
SIR = O/E = 3/2.91					= 1.03	

Interpreted as a 5.0% risk of SSI for patient 1

Probability of SSI is calculated for each surgical patient

The SSI probabilities are added together to get the predicted (expected) number of SSI for this surgical patient population

SSI SIR is not different than predicted

- 3 SSI observed
- 2.9 SSI expected



NHSN Data Analysis Functions


Department of Health and Human Services
Centers for Disease Control and Prevention

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 **NHSN Home** Logged into California General Hospital (ID 15633) as SUECHEN.
 Facility California General Hospital (ID 15633) is following the PS component.

Generate Data Sets

[HELP](#)

Generate Patient Safety Analysis Data Sets

Date Last Generated	Action
Jul 28 2011 2:13PM	<input type="button" value="Generate New"/>

The data set generation process will take several minutes. Do not process is running. You may minimize the browser window and work

Analysis
 Generate Data Sets
 Output Options
 Statistics Calculator

Surveys
Users
Facility
Group
Log Out

- Prior to performing Analysis, a data set must be generated
- “Generating a Data Set” retrieves a copy of your hospital data from the NHSN servers in Atlanta
- Data sets aren’t shared; specific to each NHSN User only



NHSN Analysis Options and Reports

Patient Safety Component

Analysis Output Options

Expand All

Collapse All

- ☞ Device-Associated Module
 - ☞ All Device-Associated Events
 - ☞ Central Line-Associated BSI
 - ☞ CDC Defined Output
 - ☞ Ventilator-Associated PNEU
 - ☞ Urinary Catheter-Associated UTI
 - ☞ Central Line Insertion Practices
 - ☞ Dialysis Events
- ☞ Procedure-Associated Module
- ☞ MDRO/CDI Module - Infection Surveillance
- ☞ MDRO/CDI Module - LABID Event Reporting
- ☞ MDRO/CDI Module - Process Measures
- ☞ MDRO/CDI Module - Outcome Measures
- ☞ Vaccination Module
- ☞ Advanced
- ☞ My Custom Output
- ☞ Published Output

- Analysis options are available only if you have generated a data set
- “Analysis Output Options” are the canned analysis reports developed by NHSN
- Options are presented in a series of expandable folders
- To view report Options
 - Chose a Module
 - Chose “CDC-defined Output”

If you select to “Run” a report, all relevant data since starting NHSN reporting will be included. You can also “Modify” canned reports.

Modifying a CDC "Canned" Report

Select output format:

Output Format:

Use Variable Labels

Always check - Labels easier to read

If you want to pick a specific time period click here

Select a time period or Leave Blank for Cumulative Time Period:

Date Variable

Beginning

Ending

Clear Time Period

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

Example: To select only specific locations click here and make selection

Specify Other Selection Criteria:

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

location				

Then click here to pick which of your locations

NHSN Help

Use website at
www.cdc.gov/nhsn

Email questions to
nhsn@cdc.gov

CDC -NHSN - Windows Internet Explorer

http://www.cdc.gov/nhsn/

File Edit View Favorites Tools Help

Favorites HAI Program CDC Portal Login Page SDN

CDC -NHSN

CDC Home
Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People.™

NHSN
All CDC Topics
Choose a topic above

A-Z Index A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

National Healthcare Safety Network (NHSN)

CDC's National Healthcare Safety Network is the nation's most widely used healthcare-associated infection tracking system. NHSN provides facilities, states, regions, and the nation with data needed to identify problem areas, measure progress of prevention efforts, and ultimately eliminate healthcare-associated infections.

In addition, NHSN allows healthcare facilities to track blood safety errors and important healthcare process measures such as healthcare personnel influenza vaccine status and infection control adherence rates.

New HAI Report: Analysis of NHSN data

Identifies national and state prevention gaps
[Learn More >>](#)

1 2 3

About NHSN
CDC's NHSN is the largest HAI reporting system in the U.S.

Data & Reports
See national and state reports using NHSN data

Guidelines and Recommendations
Review CDC HAI prevention guidelines

New to NHSN? Enroll Facility Here.
For first time facility enrollment.

Reporting & Surveillance Resources for Enrolled Facilities
Training, protocols, forms, support materials, analysis resources, and FAQs

Group Users
View resources for group users here.

Email page
Print page
NHSN L
Get email updates
To receive updates on this page, enter your email address.
What's this?

Contact Us
Centers for Disease Control and Prevention
National Healthcare Safety Network
MS-A1
1600 Clifton Road, NE
Atlanta, GA 30333
800-CDC-INFO (800-352-7474)
TTY: (800) 458-5231
New Hours of Operation
8am-4pm ET/MTWTFSS
Closed on weekends and holidays
nhsn@cdc.gov
More

CDPH
California Department of Public Health
Healthcare-associated Infections
HAI Elimination

Internet

CA .GOV California Department of **Public Health** CDPH

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Healthcare Associated Infections (HAI) Program

The Healthcare Associated Infections (HAI) Program is one of three programs in the [Center for Health Care Quality](#) of the [California Department of Public Health](#). The Program is responsible for the surveillance, reporting, and prevention of infections in California's general acute care hospitals as mandated by Senate Bills 739, 1058, and 158. The Program was authorized in December 2009.

HAIs are the most common complication of hospital care and are listed among the top ten leading causes of death in the United States. It is estimated that each year there are more than 1.7 million infections, 99,000 deaths, and \$3.1 billion dollars in excess healthcare costs in acute care hospitals alone. Based on this data it is estimated that approximately 200,000 infections occur in California each year with an annual cost of about \$600 million - \$1.6 billion. The vision of the HAI Program is to eliminate HAIs for California patients.

Healthcare Associated Infections

- » HAI Information and Reports
Links to All Pages on HAIs and Mandatory Public Reporting

Healthcare Associated Infections - Advisory Committee

- » [New HAI Advisory Committee](#)

Information for Infection Prevention Programs

- » AFLs, Legislation, and Regulations
- » [New NHSN Guidance Specific to California Hospitals](#)
- » Using NHSN Data Validation for Improved HAI Surveillance and Prevention (New Page)
- » Using NHSN Analysis for Prevention Guidance Series
- » Basics of Infection Prevention 2 Day Mini Course
- » California Infection Control and Prevention Guidelines
- » HAI Liaison Program - IP Assignments by County (PDF, New Window)

Antimicrobial Resistance

- » California Antibigram Project
- » The California Antimicrobial Stewardship Program Initiative

Influenza Information

- » Healthcare Personnel Influenza Vaccination

Public Reporting - Healthcare Associated Infections

- » [New My Hospital - Healthcare Associated Infections Interactive Map 2011 Data](#)
- » Central Line associated Bloodstream Infection (CLABSI) 2011
- » Methicillin-resistant Staphylococcus aureus (MRSA) and Vancomycin-resistant Enterococcus (VRE) 2011
- » Surgical Site Infections 2011
- » Clostridium difficile Infection (CDI) 2011 data will be published soon

Public Reporting - Prevention Measures

- » [New Central Line Insertion Practices \(CLIP\) 2011](#)
- » Surgical Site Infection Prevention Measures Mandatory Reporting

Long-Term Care (LTC)

- » [New Guidelines and Information for Long-Term Care Facilities](#)
Includes New Survey

Resources

- » Selected links to the Association of Professionals in Infection Control and Hospital Epidemiology (APIC)
- » Selected links to the Centers for Disease Control and Prevention (CDC)

For issues specific to California, NHSN help is also available from the CDPH HAI Program

www.cdph.ca.gov/hai

Includes tailored guides, slide sets, implementation tools

NHSN Guidance Specific to California Hospitals

Information for IPs

- [New HAI Liaison Program Summary of 2013 NHSN Changes](#)
- [Changing Data Fields for Multiple Procedures in NHSN Analysis - March 2012 \(PDF, 1MB\)](#)
- [California Monthly NHSN Reporting Requirements \(PDF, New Window\)](#)
- [Procedure Import WORKBOOK Feb. 2012 \(Excel, New Window\)](#)
- [SSI Surveillance and Reporting_July 2011.pdf](#)
- [Using NHSN Analysis and SIR_July 2011 .pdf](#)
8MB
- [SSI Procedure Data Entry GUIDE \(PDF, 5.8MB, New Window\)](#)
- [How to Reassign Your NHSN Facility Administrator \(PDF\)](#)
- [NHSN Set-up Guide \(PDF, New Window\)](#)

Resources

- [HAI Program Home Page](#)

Data Quality for California Hospitals

- [New Monthly Plan Set-up](#)

Quality Assurance / Quality Control (QAQC)

- [New Surgical Site Infections](#)

In Summary

- NHSN is a surveillance system
 - It is also the platform for recording data, which meets the regulatory reporting requirements for CDPH and CMS
- This slide set provides only an introduction to NHSN
- Intent not to provide every detail (you wouldn't remember anyway)
- Enough information to get you started
- Available resources
- The best way to begin NHSN surveillance?
 - Take a deep breath and just start
 - Find a mentor
 - Consult with your designated HAI Program Liaison IP



Questions?

For more information, please contact any
HAI Liaison Team member.

Thank you



Device day

- daily count of patients with a specific device in the patient care location during a time period.
- At the end of month sum, the daily counts
- Device-associated denominator data should be collected at the same time each day.
- If from electronic database, counts should be within +/- 5% from manual counts

48-hour transfer rule

- If all elements of an HAI are present within 2 calendar days of transfer from one inpatient location to another in the same facility, the HAI is attributed to the transferring location
- This also applies to inpatient interfacility transfers.



Plus many more at www.cdc.gov/nhsn
See "Key Terms" in Patient Safety Manual