

Introduction to NHSN

Last Updated 2019

Basics of Infection Prevention
Healthcare-Associated Infections Program
Center for Health Care Quality
California Department of Public Health



Objectives

- Review mandatory HAI surveillance and reporting requirements
- Describe National Healthcare Safety Network (NHSN) and key terms
- Demonstrate how to use NHSN
- Review how to interpret NHSN reports

California HAI Reporting Requirements for Hospitals

- Central line associated bloodstream infections (**CLABSI**)
- MRSA bloodstream infections (**MRSA BSI**)
- VRE bloodstream infections (**VRE BSI**)
- *C. difficile* infections (**CDI**)
- Surgical site infections for 28 procedures (**SSI**)
- Central line insertion practices (**CLIP**) adherence (for lines inserted in ICUs)

Report data monthly per NHSN protocol

CDPH reporting deadline: 30 days after end of each quarter

Additional HAI Reporting Requirements for Hospitals Participating in CMS Quality Improvement Programs

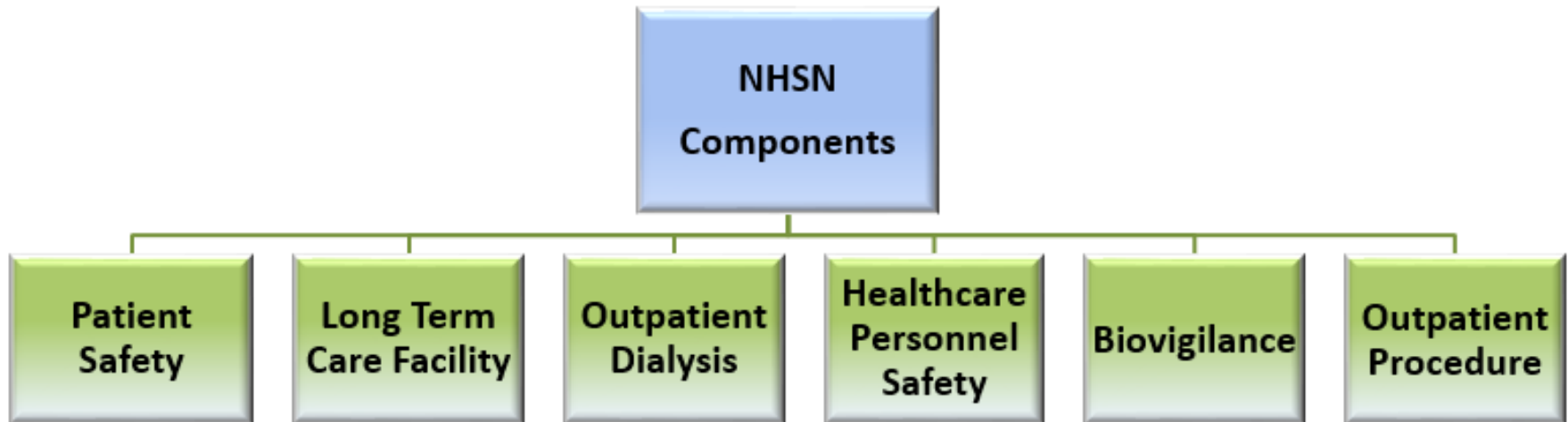
- Catheter-associated urinary tract infections (CAUTI)
- Ventilator-associated events (VAE) - **LTAC hospitals only**

[Healthcare Facility HAI Reporting Requirements to CMS via NHSN](https://www.cdc.gov/nhsn/PDFs/CMS/CMS-Reporting-Requirements.pdf) (PDF)
(<https://www.cdc.gov/nhsn/PDFs/CMS/CMS-Reporting-Requirements.pdf>)

National Healthcare Safety Network

- Centers for Disease Control and Prevention (CDC) surveillance system for HAI reporting from hospitals, long term care facilities, and hemodialysis clinics
 - Provides standardization
 - Data used for HAI public reporting and pay for performance programs
- **Required by CDPH to receive mandated HAI data from hospitals**
- Accessed through a secure, web-based interface; open to all U.S. healthcare facilities at no charge

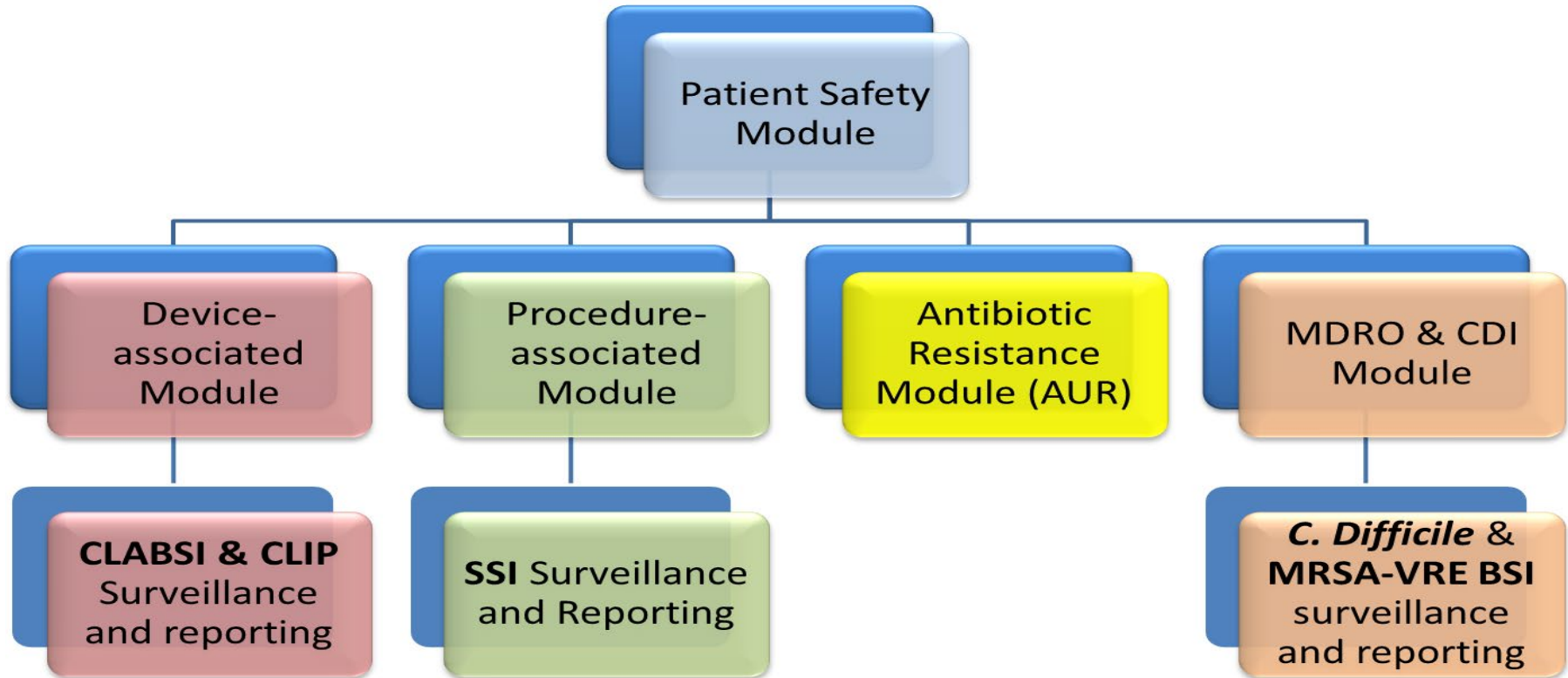
NHSN Structure



[NHSN Overview](#)

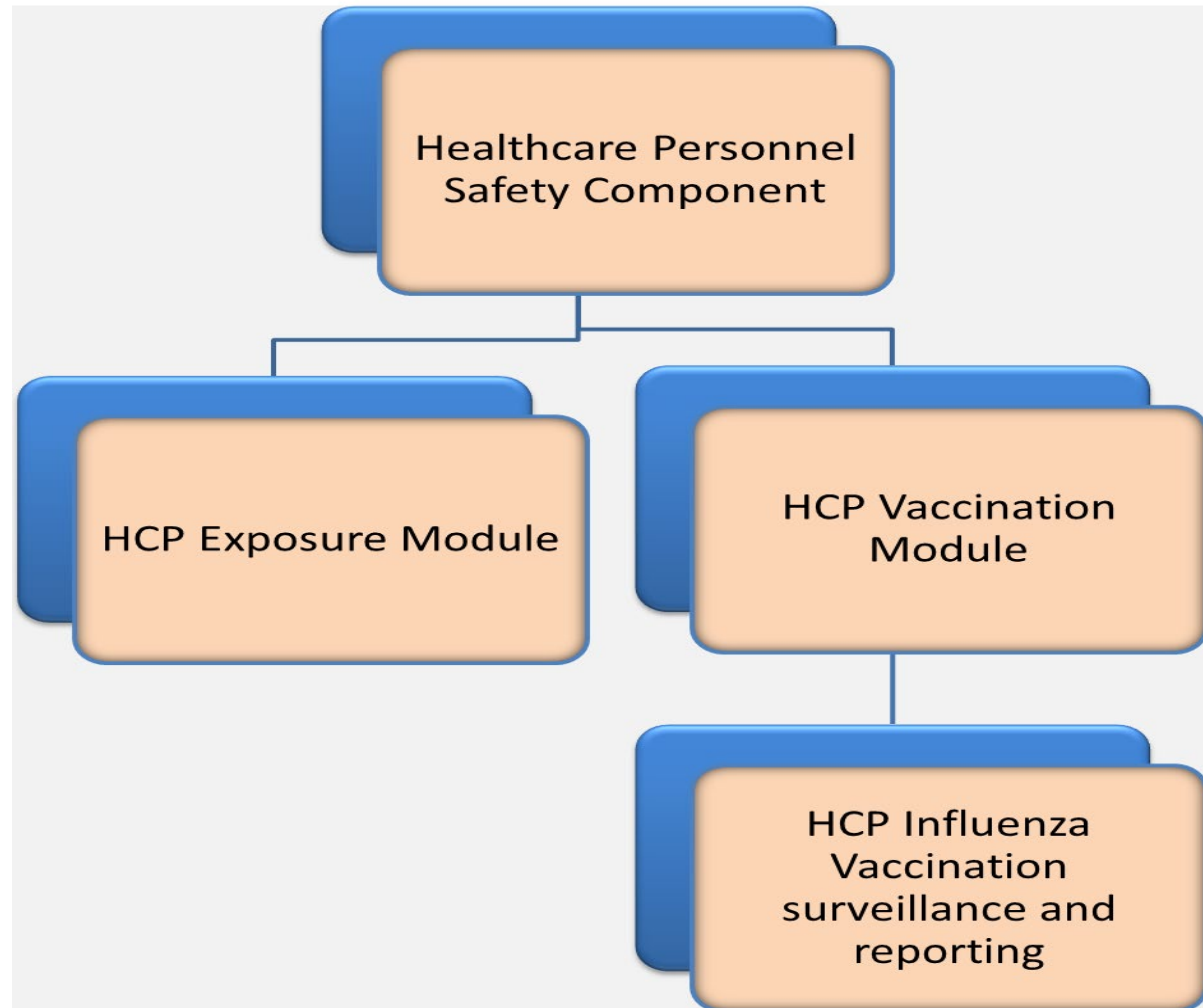
(www.cdc.gov/nhsn/PDFs/pscManual/1PSC_OverviewCurrent.pdf)

NHSN Structure: Patient Safety Component



[NHSN Overview \(PDF\)](http://www.cdc.gov/nhsn/PDFs/pscManual/1PSC_OverviewCurrent.pdf)
(www.cdc.gov/nhsn/PDFs/pscManual/1PSC_OverviewCurrent.pdf)

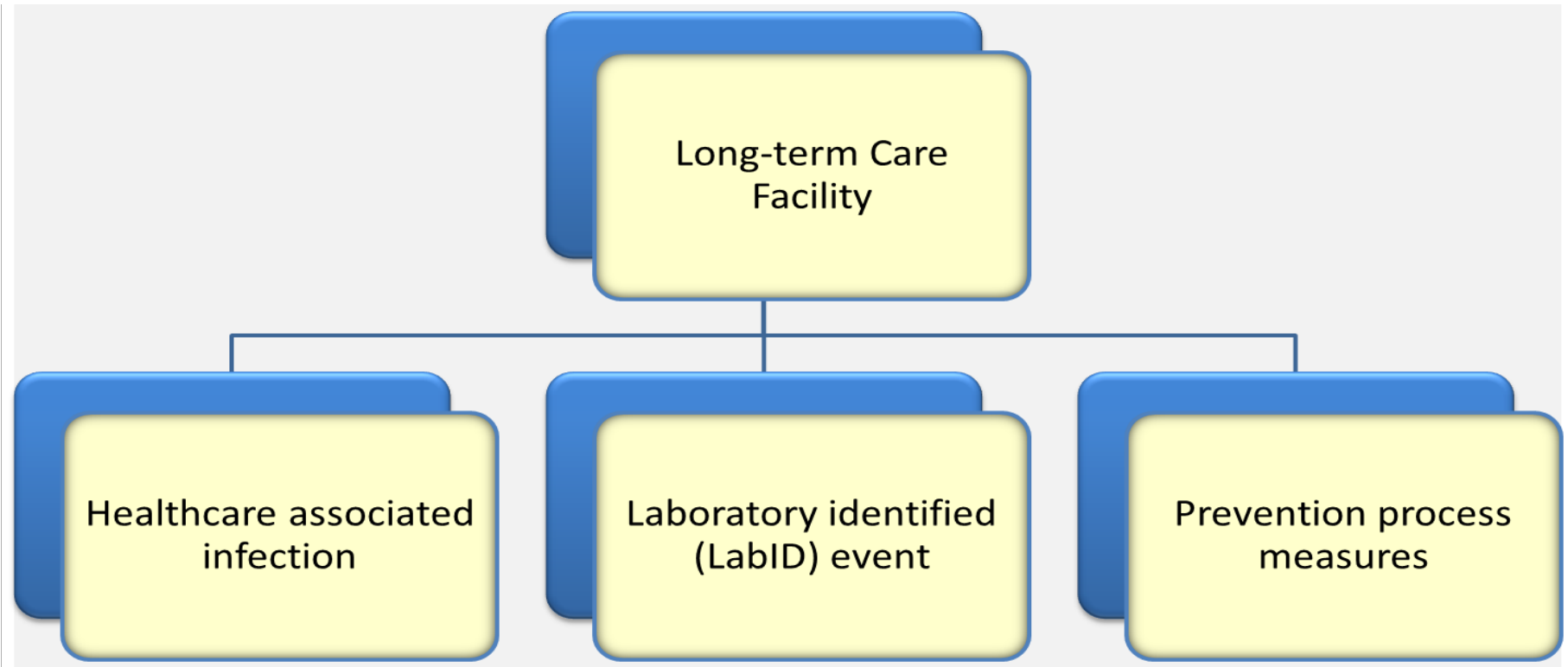
NHSN Structure: Healthcare Personnel Safety Component



[NHSN Healthcare Personnel Safety Component](#) (PDF)

(https://www.cdc.gov/nhsn/pdfs/hps-manual/hps_manual-exp-plus-flu-portfolio.pdf)

NHSN Structure – Long Term Care Facility Component



[NHSN Long-term Care Component](https://www.cdc.gov/nhsn/ltc/index.html)
(<https://www.cdc.gov/nhsn/ltc/index.html>)

NHSN Strengths

- Provides standards for surveillance to allow comparisons over time
- Data are risk-adjusted using national referent (baseline) data
- Web-based; data housed remotely
- Automated data quality checks
- Built-in data analysis tools Allows electronic reporting using national electronic health record standards (e.g., HL7, CDA)
- Expandable to many health care setting types

NHSN Data

Facilities own their NHSN surveillance data

- May edit data at any time to improve accuracy and completeness
- May join NHSN groups to confer rights for data access
 - Allow healthcare organizations to analyze data from member facilities
 - Facilities within a group cannot see each other's data
 - California hospitals mandated to join the **CDPH group** in NHSN
- Data use agreement with NHSN describes data sharing with CMS and state/local public health departments

- NHSN
- NHSN Login
- About NHSN +
- Enroll Here +
- Materials for Enrolled Facilities -
- Ambulatory Surgery Centers +
- Acute Care Hospitals/Facilities +
- Long-term Acute Care Hospitals/Facilities +
- Long-term Care Facilities +
- Outpatient Dialysis Facilities +
- Inpatient Rehabilitation Facilities +
- Inpatient Psychiatric Facilities +
- MDRO & CDI LabID Event Calculator
- VAE Calculator
- HAI & POA Worksheet Generator
- FAQs about HCP Influenza Vaccination Summary Reporting in NHSN
- FAQs About the Hemovigilance Module
- 2015 Rebaseline

[CDC](#) > [NHSN](#)

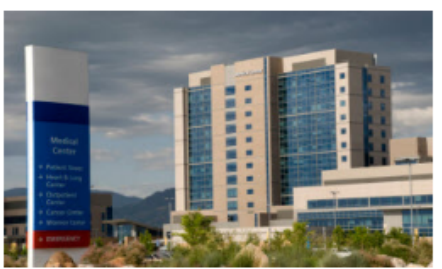
Surveillance Reporting for Enrolled Facilities

Reporting & Surveillance Resources for Enrolled Facilities



<https://www.cdc.gov/NHSN>
Surveillance protocols, forms, analysis resources, FAQ, training, CMS requirements, newsletters

Acute Care Hospitals/Facilities



Urgent care or other short-term stay facilities (e.g. critical access facilities, oncology facilities, military/VA facilities)

[More >](#)

Ambulatory Surgery Centers



Outpatient surgery centers.

[More >](#)

Long-term Acute Care Facilities



Long-term acute care hospitals (LTACs).

[More >](#)

Long-term Care Facilities



Nursing homes, assisted living and residential care, chronic care facilities

Outpatient Dialysis Facilities



Outpatient dialysis clinics.

Inpatient Rehabilitation Facilities



Inpatient Rehabilitation Facilities.

Accessing NHSN

- Each hospital must assign a NHSN facility administrator (FA)
 - Receives all NHSN communications
 - Assigns new users
 - Has full rights and can assign user rights as needed
 - Can create user groups
- To become an NHSN user
 - FA sends new user requests (e-mail) to NHSN
 - NHSN invites (email) the new user
- All NHSN users must apply for a Security Access Management Services (SAMS) card to access NHSN

Access NHSN via Secure Web Portal Using SAMS Card



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

NHSN - National Healthcare Safety Network

NHSN Home

Alerts

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Procedure ▶

Summary Data ▶

Import/Export

Surveys ▶

Analysis ▶

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Group ▶

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NHSN Patient Safety Component Home Page

- ▶ • The number of available functions (on the left blue navigation bar) depends on your NHSN user rights
- ▼ • Your NHSN Facility Administrator sets the rights for each user
- Types of user rights
 - Administrative, all functions available
 - Analyze data
 - Enter data
 - View data

Map NHSN Locations

- Each NHSN patient care area is defined by the type of patients receiving care in that location
- 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, cardiac)
- Hospital designates each location type
- Important to review location mapping **yearly** to ensure correct risk adjustments applied for each location

Determine NHSN Location Types

- Apply 80% Rule to designate patient type in **most locations**
 - Patient care area is comprised of at least 80% patients of the same acuity level
- Apply **60% Rule** for **medical/surgical mixed** units
 - If more than 60% are medical patients, define as a medical location
 - If more than 60% are surgical patients, define as a surgical location

NHSN Patient Safety Manual: Chapter 15

NHSN 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: patient whose date of admission to the healthcare facility and the date of discharge are the same day
- SSI and surgical procedure data are only reported for NHSN inpatients
- However, data from outpatient locations (for example, ED and 24-observation units) required for other surveillance protocols

Enter Your Monthly Reporting Plan

NHSN Home

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Add Monthly Reporting Plan

marked with *

California General Hospital (ID 15633)

Year *:

No NHSN Patient Safety Modules Followed

Device-Associated Module

	Locations
🗑	2 WEST - M/S ICU

Procedure-Associated Module

	Procedures
🗑	APPY - Appendix surgery

Antimicrobial Use and Resistance Module

	Locations	Antimicrobial Use	Antimicrobial Resistance
🗑	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

Multi-Drug Resistant Organism Module

	Locations
🗑	<input type="text"/>

- Your monthly reporting plan tells NHSN in what modules you will enter data each month
- Plan must include CDPH reporting requirements
- May add plans ahead of time for each month for the entire year

Report Events (CLABSI, MRSA/VRE BSI, CDI, SSI, CLIP)

Patient Information

Facility ID *: California General Hospital (ID 15633) ▼

Patient ID *: 12345 Find Find Events for Pat

Secondary ID:

Last Name: PIE

Middle Name:

Gender *: F - Female ▼

Ethnicity:

Race: American Indian/Alaska Native
 Black or African American
 White

- Add events, infections or CLIP observations
- Choose event type and follow prompts for required data entry

Event Information

Event Type *: BSI - Bloodstream Infection ▼

Post-procedure: N - No ▼

MDRO Infection Surveillance *: No, this infection's pathogen/location are not in-plan for Infection Surveillance in the MDRO/CDI M

Location *: Z-ICU - MED/SURG ICU ▼

Date Admitted to Facility *: 03/01/2018 21

Risk Factors

Central line *: Y - Yes ▼

Any hemodialysis catheter present: Y - Yes ▼

Location of Device Insertion: ED - EMERGENCY DEPARTMENT (ED) ▼

Date of Device Insertion: 03/01/2019 21

Colonization and Inflammation

- 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 – results from tissue response to injury or stimulation by noninfectious agents, such as chemicals
- Colonization and inflammation are not infections and not reported to NHSN
- May need to report colonization to public health per communicable disease reporting requirements (for example, CRE, *C. auris*)

Report Monthly Summary Data - CLABSI

NHSN - National Healthcare Safety Network

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Denominators for Intensive Care Unit (ICU)/Other locations (not NICU or SCA)

Mandatory fields marked with *

Facility ID *: California General Hospital (ID 15633) ▼

Location Code *: Z-ICU - MED/SURG ICU ▼

Month *: March ▼

Year *: 2018 ▼

Denominator Data		Report No Events
Total Patient Days *	450	
Central Line Days *	210	CLABSI: <input type="checkbox"/>
Urinary Catheter Days:	360	CAUTI: <input type="checkbox"/>
Ventilator Days:		VAE: <input type="checkbox"/> PedVAP: <input type="checkbox"/>
APRV Days:		
Episodes of Mechanical Ventilation:		

- Enter denominator data for each patient location
 - Patient days
 - Line days

Report Monthly Summary Data – MDRO / CDI

NHSN - National Healthcare Safety Network

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Facility ▶



MDRO and CDI Monthly Denominator Form

Mandatory fields marked with *

Facility ID *: California General Hospital (ID 15633) ▼

Location Code *: FACWIDEIN - Facility-wide Inpatient (FacWIDEIn)

Month *: March ▼

Year *: 2018 ▼

General

Setting: Inpatient Total Facility Patient Days *: 5400 Total Facility Admissions *: 450

Setting: Outpatient Total Facility Encounters:

If monitoring *MDRO* in a FACWIDE location, then subtract all counts from patient care units with unique CCNs (IRF and IPF) from Totals:

MDRO Patient Days *: 4800 MDRO Admissions *: 390 MDRO Encounters:

If monitoring *C.difficile* in a FACWIDE location, then subtract all counts from patient care units with unique CCNs (IRF and IPF) as well as NICU and Well Baby counts from Totals:

CDI Patient Days *: 4500 CDI Admissions *: 330 CDI Encounters:

• Enter denominator data for MRSA/VRE and CDI for Facility

- Patient Days
- Patient Admissions
- **MDRO** - subtract units with unique CCN (IRF or IPF)
- **CDI** – subtract units with unique CCN (IRF or IPF) and NICU and well baby days/admissions
- ED/24hr Observation encounters reported separately

Report Monthly Surgical Procedure Data

NHSN Home
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Add Procedure

Mandatory fields marked with *

Fields required when in Plan marked with >

Patient Information

Add

Find

Incomplete

Facility ID *: California General Hospital (ID 15633) ▼

Patient ID *: Find Find Procedures for Patient

Secondary ID:

Last Name:

Middle Name:

Gender *:

Ethnicity:

Race: American Indian/Alaska Native Asian
 Black or African American Native Haw
 White

Procedure Information

NHSN Procedure Code *: COLO - Colon surgery ▼

Select button for system used

ICD-10 PCS

CPT Code

Procedure Date *: 2 Link/Unlink to Event

Procedure Details

Outpatient *: N - No ▼ Duration (Hrs:Mins) *: 1 : 20

Wound Class *: CO - Contaminated ▼ General Anesthesia *: Y - Yes ▼

ASA Score: 2 - A patient with mild systemic disease

Emergency *: Y - Yes ▼ Trauma *: Y - Yes ▼ Scope *: N - No ▼

- Add monthly procedure data for each procedure
- **Electronic upload strongly recommended**

NHSN Standardized Infection Ratio (SIR)

- Used by NHSN to report infection incidence
 - SIR instead of infection rate
- Driven by need for a single summary measure of infection incidence that adjusts for differences in infection risk
- SIR compares the number of HAI reported by your hospital with a predicted number of HAI calculated by NHSN

NHSN Risk Adjustment

- NHSN applies risk adjustment to determine the predicted number of HAI for your hospital based on 2015 referent data

HAI	Factors in Risk Adjustment
CDI	Test type, community onset prevalence, facility bed size*, facility medical school affiliation*, number of ICU beds*, facility type*, reporting from ED or 24-hr observation unit
CLABSI	ICU vs ward, medical school affiliation*, facility bed size*, facility type* average length of stay* (LTACH), birth weight (NICU)
MBI-LCBI	Acute care hospitals only; ICU vs ward, facility bed size*, medical school affiliation*
MRSA BSI	Community onset prevalence, average length of stay*, medical school affiliation*, facility type*, number of ICU beds*
SSI	Age, ASA score, wound class (contaminated or dirty), procedure duration, general anesthesia, emergency procedure, gender, BMI, diabetes, trauma, endoscope, procedure type (primary, revision), approach, spine level, closure, duration of labor, oncology, facility bed size*, medical school affiliation*

* Data from NHSN Annual Survey

SSI Risk Adjustment

- Risk models developed for each NHSN operative procedure
 - Includes only those risk factors found to increase SSI risk for that procedure
- Every patient undergoing a procedure in your hospital has a SSI risk probability calculated by NHSN
- Your hospital's predicted number of SSI is the sum of your surgical patients' risk probabilities

Calculating SIR

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

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:

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

Interpreting SIR

- SIR= **1.0**
 - Number of HAI observed in your hospital is the **same as the predicted** number of HAI for your hospital as derived from NHSN national referent data
- SIR <1.0
 - Fewer HAI observed than predicted
- SIR >1.0
 - More HAI observed than predicted

Note: NHSN will only calculate the SIR for your hospital if the predicted number of infection is >1

Determine if Your SIR is Significantly Higher or Lower than National Comparison Data

Summary Yr	Infection Count	Number Expected	Central Line Days	SIR	SIR p-value	95% Confidence Interval
2016	9	7.191	3786	1.25	0.2962	0.653, 2.184

The observed difference is not statistically significant if

- p-value >0.05, or
- 95% confidence interval includes 1.0
- If the p-value is not significant, the confidence interval won't be significant either and vice versa
- The confidence interval indicates precision as well as significance

SIR Interpretation

Summary Yr	Infection Count	Number Expected	Central Line Days	SIR	SIR p-value	95% Confidence Interval
2016	9	7.191	3786	1.25	0.2962	0.653, 2.184

Describe findings:

1. “We had 9 CLABSI in 2016; 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 **that predicted by** 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 CLABSI over time. More data will help us better understand how we compare. Our goal is to prevent all CLABSI.”

SIR Interpretation - 2

Summary Yr/Half	InfCount	Number Expected	Central Line Days	SIR	SIR p-value	95% Confidence Interval
2016H1	74	26.606	10065	2.78	0.0000	2.184, 3.492

Describe 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 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 - 2

Example: Abdominal hysterectomy (HYST)

- Factors in the model that add to SSI risk are
 - Diabetes
 - ASA score
 - Hospital bed size (from the annual survey)
 - Scope
 - Age
 - Duration of procedure
 - BMI

[NHSN: A Guide to the SIR \(PDF\)](#)

(<https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf>)

SSI Risk Adjustment - 3

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

Table 2. Risk Factors for 100 Patients Undergoing a HYST Procedure (Complex 30-Day model)

Patient	Diabetes	ASA score	BMI	Age	Oncology Hospital	SSI Identified?	Probability of SSI (\hat{p})
1	Y	2	29	32	Y	1	0.020
2	N	3	35	49	Y	0	0.019
3	N	5	20	51	Y	1	0.026
.
.
100	N	4	27	27	Y	0	0.037
TOTAL						8 (observed SSIs)	6.750 (predicted SSIs)

2% 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 number of SSI for this surgical patient population

$$\text{SIR} = \frac{\text{Observed (O) HAIs}}{\text{Predicted (P) HAIs}} = \frac{8}{6.750} = 1.190$$

SIR indicates 19% higher than predicted from national data

NHSN: A Guide to the SIR

- How to interpret SIR
- How SIR is calculated
- Risk adjustment factors for specific HAI

THE NHSN STANDARDIZED INFECTION RATIO (SIR)

A Guide to the SIR

Updated July 2017. Please see [Page 2](#).



[NHSN: A Guide to the SIR](#) (PDF)

(<https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf>)

Use Your NHSN Data

- Generate a data set after all data are entered before running analysis reports
- Generating a data set retrieves a copy of your hospital data from NHSN

The screenshot shows the NHSN - National Healthcare Safety Network interface. On the left is a navigation menu with items: NHSN Home, Alerts, Dashboard, Reporting Plan, Patient, Event, Procedure, Summary Data, Import/Export, Surveys, Analysis, Users, and Facility. The 'Analysis' menu item is highlighted with a red box, and a dropdown menu is open showing 'Generate Data Sets', 'Reports', and 'Statistics Calculator'. The main content area is titled 'Generate Data Sets' and contains the following text:

Generate Patient Safety Analysis Data Sets

Datasets generated will include data for the 3 most recent full calendar years up until today's date for the Patient Safety Component. To include all years check the box below.

For all other components, datasets generated will include all years. Note that any analysis options you run will be limited to the time period shown on the date range bar.

Include all data reported to NHSN for this component within the parameters of rights conferred.

Below the text is a date range bar with callouts for '1/2014' and '9/2017'. At the bottom, it says 'Last Generated: Sep 15 2017 12:02PM'.

NHSN Analysis Options and Reports

- Analysis Reports are available only if you have generated a data set
- Developed by NHSN
- Presented in a series of expandable folders
- To view report options
 - Choose a module
 - Choose “Modify Report” to choose a date range, other options
 - If you select “Run Report,” all relevant data for the last several years will be included in the report

NHSN - National Healthcare Safety Network

NHSN Home

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Analysis Reports

Expand All Collapse All Search

- Device-Associated (DA) Module
 - Central Line-Associated BSI
 - Line Listing - All CLAB Events
 - Frequency Table - All CLAB Events
 - Bar Chart - All CLAB Events
 - Pie Chart - All CLAB Events
 - Rate Table - CLAB Data for ICU-Other
 - Run Chart - CLAB Data for ICU-Other
 - Rate Table - CLAB Data for NICU
 - Run Chart - CLAB Data for NICU
 - Rate Table - CLAB Data for SCA/ONC
 - Run Chart - CLAB Data for SCA/ONC
 - SIR SIR - Acute Care Hospital CLAB Data
 - Run Report
 - Modify Report
 - Export Data Set
 - Central Line Device Use
 - als CLAB Data
 - als Central Line Device Use
 - CLAB Data
 - SUR - Long Term Acute Care Central Line Device Use
 - SIR SIR - Inpatient Rehab Facilities CLAB Data
 - SUR SUR - Inpatient Rehab Facilities Central Line Device Use
 - Custom Reports
- Mucosal Barrier Injury CLABSI
- Ventilator-Associated PNEU
- Ventilator-Associated Events
- Urinary Catheter-Associated UTI
- Central Line Insertion Practices
- Procedure-Associated (PA) Module

Modifying NHSN “Canned” Report

- Check “Show descriptive variable names”
 - Easier to read
- Choose what you want to modify
 - Title or Format
 - Time Period

Modify “SIR - Acute Care Hospital CLAB Data”

Show descriptive variable names (Print List)

Title/Format Time Period Filters Display Options

Title:
SIR for Central Line-Associated BSI Data for Acute Care Hospitals (2015 baseline)

Format:

html pdf xls rtf

Title/Format Time Period Filters Display Options

Time Period:

Date Variable Beginning Ending

Modifying NHSN “Canned” Report - 2

- Filters
 - Allows more variables to be added to the report
- Display Options
 - Choose how you want the data displayed in the report

The screenshot shows the 'Filters' tab of the NHSN report configuration interface. At the top, there are four tabs: 'Title/Format', 'Time Period', 'Filters' (which is highlighted in green), and 'Display Options'. Below the tabs, there is a section for 'Additional Filters' with a 'Show' button and a 'Clear' button. The main area contains a logical filter structure with 'AND' and 'OR' operators. A filter is currently defined with the variable 'location', the operator 'equal', and an empty text input field.

The screenshot shows the 'Display Options' tab of the NHSN report configuration interface. At the top, there are four tabs: 'Title/Format', 'Time Period', 'Filters', and 'Display Options' (which is highlighted in green). Below the tabs, there is a section for 'SIR Options' with a 'Group by:' label. A dropdown menu is open, showing the following options: 'Cumulative summaryYH', 'summaryYM', 'summaryYQ', and 'summaryYr'. The 'summaryYr' option is currently selected and highlighted in blue.

Sample Rate Table

- Review your rate tables routinely to verify that infections and denominator data are reported each month

National Healthcare Safety Network
Rate Table for Central Line-Associated BSI Data for ICU-Ot
 As of: September 23, 2017 at 6:20 PM
 Date Range: BS2_CLAB_RATES ICU summaryYM 2016M01 to 2016M12

loccdc=IN:ACUTE:CC:CT CCN= 99999 facType=HO

location	summaryYM	CLABCount	numCLDays	CLABRate	numPatDays
CCU	2016M01	0	187	0.000	410
CCU	2016M02	1	226	4.425	392
CCU	2016M03	0	242	0.000	383
CCU	2016M04	0	165	0.000	388
CCU	2016M05	0	217	0.000	341
CCU	2016M06	1	197	5.076	353
CCU	2016M07	0	207	0.000	386
CCU	2016M08	0	164	0.000	289
CCU	2016M09	0	180	0.000	342
CCU	2016M10	0	176	0.000	356
CCU	2016M11	0	53	0.000	469
CCU	2016M12	0	197	0.000	398

Sample Standardized Infection Ration (SIR) Table for One Year – by Location

Shows each location's predicted number of CLABSI

Shows each locations SIR and p-value indicating if the SIR is significantly lower or higher than predicted

location	summaryYr	months	infcount	numPred	numcldays	SIR	SIR_pval	SIR95CI
4 M/S	2016	12	1	2.862	3288	0.349	0.2778	0.017, 1.723
5 MED	2016	12	3	4.237	4867	0.708	0.5940	0.180, 1.927
6E ONC	2016	12	5	4.406	4158	1.135	0.7309	0.416, 2.516
6S 6W	2016	12	1	2.330	2676	0.429	0.4214	0.021, 2.117
CCU	2016	12	2	2.227	2211	0.898	0.9634	0.151, 2.967
CMU NEW	2016	12	1	1.905	2188	0.525	0.5813	0.026, 2.589
ICCU	2016	12	2	1.333	1477	1.501	0.5352	0.252, 4.958
ICU	2016	12	11	4.463	4430	2.465	0.0085	1.296, 4.284

Standardized Utilization Ratio (SUR)

The number of central line days/the number of predicted central line days = SUR*

location	summaryYr	months	numCLDays	numPredDDays	SUR	SUR_pval	SUR95CI
4 M/S	2016	12	3288	3,178.743	1.034	0.0547	0.999, 1.070
5 MED	2016	12	4867	4,204.914	1.157	0.0000	1.125, 1.190
6E ONC	2016	12	4158	3,412.874	1.218	0.0000	1.182, 1.256
6S 6W	2016	12	2676	1,836.685	1.457	0.0000	1.403, 1.513
CCU	2016	12	2211	2,291.468	0.965	0.0936	0.925, 1.006
CMU NEW	2016	12	2188	2,257.310	0.969	0.1464	0.929, 1.011
ICCU	2016	12	1477	882.010	1.675	0.0000	1.591, 1.762
ICU	2016	12	4430	5,873.825	0.754	0.0000	0.732, 0.777

*Calculated SUR is also available for CAUTI surveillance

[CDC NHSN Standardized Utilization Ratio \(SUR\) Guide \(PDF\)](https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sur-guide-508.pdf)

(<https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sur-guide-508.pdf>)

Targeted Assessment for Prevention (TAP) Reports

Number of Beds	Patient Days	COHCFA Prevalence	CDIF Facility Incident HO LabID Event Count	CDIF Facility Incident HO LabID Number Expected	Facility CAD	SIR
354	60059	0.14	61	55.034	22.48	1.108

- Available for CDI, CLABSI, CAUTI
- Identifies **number of infections that need to be prevented** to reach targeted goal
 - Called the cumulative attributable difference (CAD) in NHSN
 - Lists results by location for CLABSI and CAUTI
- Assists in deciding where to focus infection prevention efforts

NHSN Help

- Use NHSN website www.cdc.gov/nhsn
- Email NHSN questions to nhsn@cdc.gov
- For technical questions about CDPH NHSN requirements, email HAI_Data@cdph.ca.gov

National Healthcare Safety Network (NHSN)

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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.



See CDC's newest antibiotic resistance and HAI data
New Data Tools



About NHSN

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



Data and Reports

See national and state reports using NHSN data.



Guidelines and Recommendations

Review CDC HAI prevention guidelines.



NHSN Member Login



New to NHSN? Enroll Facility Here

For first time facility enrollment.



Reporting and Surveillance for Enrolled Facilities

Training, protocols, forms, support materials, analysis resources and FAQs.



Group Users

View resources for group users.



CDA Submission Support Portal (CSSP)

Toolkits, FAQs, webinars and resources for testing and validation for CDA implementers.



[Training / Demo](#)



[Newsletters / Members Meeting Updates](#)



[Email Updates](#)



[State-based HAI Prevention Activities](#)

Summary

- NHSN is a surveillance system used for recording data which meets the regulatory reporting requirements for CDPH and CMS
- NHSN has many analysis features to assist users in interpreting and presenting their data
- Resources are available for interpretation and analysis of NHSN data from:
 - [CDC](http://www.cdc.gov/nhsn) (www.cdc.gov/nhsn)
 - [CDPH](http://www.cdph.ca.gov/HAI) (www.cdph.ca.gov/HAI)

Questions?

For more information,
please contact any
HAI Program Team member

Or email

HAIProgram@cdph.ca.gov