NEW YORK STATE | Department of Health

HOSPITAL-ACQUIRED INFECTION REPORTING PROGRAM
Getting Started Guide

May 2019

PURPOSE

This guide is intended to help orient new hospital Infection Preventionists to the New York State Department of Health (NYSDOH) Hospital-Acquired Infection (HAI) Reporting Program. This guide provides a brief background of the program, gives tips on how to get started reporting, and describes the role of the hospital and NYSDOH in validating the data.

BACKGROUND

In July of 2005, Public Health Law § 2819 was enacted mandating that New York hospitals report selected HAIs to NYSDOH. The HAIs to be reported are selected with the help of a Technical Advisory Workgroup (TAW). The TAW consists of experts in the prevention, identification, and control of HAIs, and the public reporting of performance data. The list of members is published in the annual HAI report. The TAW meets at least once a year to review public reporting requirements. NYSDOH also solicits and considers public comment regarding proposed changes to reporting requirements. NYSDOH will notify hospitals in writing of changes to any reporting requirements.

HAI INDICATORS TO BE REPORTED

The following indicators must be reported starting in 2019 to meet NYSDOH requirements:

- Central line-associated blood stream infections (CLABSIs) in
    - Adult and pediatric intensive care units (ICUs)
    - Neonatal ICUs (level 2/3 and level 3)
    - Adult and pediatric medical, surgical, and medical-surgical wards
    - Adult and pediatric step-down units
    - Adult and pediatric oncology wards
    - Adult and pediatric Mixed Acuity Units
- Colon procedures and any resulting surgical site infections (SSIs) (inpatient)
- Coronary artery bypass graft procedures and any resulting SSIs (inpatient)
- Hip replacement procedures and any resulting SSIs (inpatient)
- Abdominal hysterectomy procedures and any resulting SSIs(inpatient)
- Spinal fusion procedures and any resulting SSIs (inpatient)
- Laboratory identified *Clostridioides difficile* infections (inpatient, emergency room, observation unit, rehabilitation and psychiatric units with different CCNs)

- Laboratory identified carbapenem-resistant Enterobacteriaceae (CRE) from all specimen types for the following species: *Escherichia coli*, *Klebsiella oxytoca, Klebsiella pneumoniae, and Enterobacter* (inpatient, emergency room, observation unit, rehabilitation and psychiatric units with different CCNs)

Because of increased interest in multidrug-resistant organisms (MDROs), particularly gram-negative organisms, and the lack of baseline surveillance data for New York State, NYSDOH is asking NYS hospitals not already doing so to consider voluntarily reporting laboratory-identified multidrug-resistant *Acinetobacter* and cephalosporin resistant *Klebsiella* infections.

All indicators must be reported using the Center for Disease Control and Prevention's (CDC) National Healthcare Safety Network (NHSN). NYS follows NHSN surveillance definitions.

All hospitals are also required to report outbreaks and/or diseases in accordance with Part 2 of the State Sanitary Code (SSC) and 10 NYCRRR § 405.11. Reportable diseases are listed at https://www.health.ny.gov/forms/instructions/doh-389_instructions.pdf. In addition to the listed reportable diseases, any unusual disease (defined as a newly apparent or emerging disease or syndrome that could possibly be caused by a transmissible infectious agent or microbial toxin) is reportable. For questions about these requirements please contact the Bureau of Communicable Disease Control at 518-472-4439.

NATIONAL HEALTHCARE SAFETY NETWORK (NHSN)

NHSN Public Website (http://www.cdc.gov/nhsn**)**
- NHSN, at the public website, focuses on education regarding the NHSN reporting requirements and provides a variety of resources for IPs.
  - Tools on the public website include HAI reporting protocols, self-learning training modules providing direction for each of the protocol reporting requirements, newsletters that contain helpful clarifications and tips, and operational guidance for fulfilling Centers for Medicare and Medicaid Services (CMS) reporting requirements. Familiarize yourself with surveillance definitions and protocols using these detailed guidelines. Bookmark this website as a favorite.

NHSN Secure Website (https://auth.cdc.gov)
- NHSN has a separate secure website for hospital data entry that is accessed through Secure Access Management Services (SAMS)
- Follow the instructions on the NHSN website to apply for a SAMS card as soon as possible because the process takes time. You will be required to email, or fax notarized personal identifying information to CDC. Within 10-14 days you will receive a SAMS grid card by

mail along with instructions for use. The grid card is the size of a credit card and lists a table of uniquely arranged letters and numbers. Each time you log into NHSN you will be asked to enter three of the letters/numbers from the table as proof of your identity. You may access NHSN from any computer using your grid card.

- Bookmark the secure website as a favorite. This secure data website provides a variety of data analysis tools generating specific reports for your hospital using data you have entered in NHSN.

Hospital Designated NHSN Facility Administrator

- An individual in your hospital (often the IC Department Director or IP) is assigned as the administrator for overall management of the NHSN secure data functions for your hospital. This individual is referred to as the Facility Administrator (FA) and is responsible for the integrity and security of the data entered by your authorized hospital personnel into NHSN. The FA is also responsible for:
    - Adding users, and assigning level of user access to data reporting, editing, and analysis components
    - Approving the sharing of some or all data with other entities (e.g., hospital consortiums, CMS, Island Peer Review Organization (IPRO) Projects, Health Association of New York State (HANYS), and/or Greater New York Hospital Association (GNYHA)
    - The FA should grant at least one other user administrative rights in case the FA becomes temporarily unavailable. If the FA is no longer able to perform the duties, he/she must transfer the FA role to another person using NHSN.

NHSN Help Desk

- Submit any questions about NHSN via email to nhsn@cdc.gov. Be sure to include your name and NHSN assigned facility ID #, which is found on your hospitals NHSN secure data network "landing page", located under your name.   NHSN does not accept phone calls.

Frequently Asked Questions about NHSN Data

- **Can Centers for Medicare and Medicaid Services (CMS) access my NHSN data?** NHSN sends all the data required for the Inpatient Prospective Payment System (IPPS) to CMS. You can see and verify the data that CMS will receive by following the "Helpful Tips" provided on the NHSN website under "CMS Supporting Materials".

- **Can NYS view my hospital data?** Yes. When your hospital joined <u>NYS Group #10570,</u> your FA accepted a template (referred to as conferred rights) that lists exactly which data NYSDOH can see. To see the template, go to NHSN, click "Group" select "Confer Rights". Highlight "NYS Group" from the "Groups that have access to this facility's data" box and click "Confer Rights" on the right. NYS does not have the ability to edit any individual hospital reported NHSN data. In addition, the NYSDOH HAI Reporting Program has a data use agreement with CDC allow us to view voluntarily reported data entered in NHSN. Data obtained under this agreement will not be publicly reported in a manner that identifies individual institutions and will not be used for punitive or regulatory actions; rather, these data provide NYSDOH greater insight into indicators that are not subject to NYS mandated reporting and allows for better focus of future prevention activities.

- **Can other hospitals view my hospital data?** No, even if you are part of another NHSN group, other hospitals cannot view your data.

- **If my hospital belongs to multiple NHSN groups that want access to the same data as reported to NYS, do I have to enter the data again?** No, the advantage of hospitals using NHSN is entering data once.

- **Are there data analysis tools I can use in NHSN?** Hospitals have the ability to generate line lists, calculate Standardized Infection Rates (SIRs), check for common errors, and develop other reports for user designated timeframes and locations.

- **Are there any differences between NYS and NHSN reporting requirements and published rates?** Yes, the differences are summarized in Table 1. CMS publishes hospital-specific NHSN data on Hospital Compare (https://www.medicare.gov/hospitalcompare/search.html).

Table 1: National Healthcare Safety Network (NHSN) and New York State (NYS) Reporting Requirement Differences/Clarifications

Reporting Issue	NYS	NHSN
Timeliness of reporting	Report monthly **within 60** days after close of reporting period.	CDC strongly encourages facilities to enter each month's data **within 30** days of the end of the month in which it is collected. (CMS deadlines are 4.5 months after the end of each reporting quarter (Feb 15th, May 15th, Aug 15th, and Nov 15th).
Post discharge surveillance (PDS) reporting	NYS Public Health Law **mandates** inter-facility communication. "For HAIs for which the department requires tracking and reporting as permitted in this section, hospitals shall be required to report a suspected or confirmed HAI associated with another hospital to the originating hospital. Documentation of reporting should be maintained for a minimum of six years." SSI events that meet NHSN criteria must be entered in NHSN by the hospital where the procedure was originally performed. The law does not specify what SSI criteria to document. However, we recommend that the following information be communicated and documented by the secondary hospital infection prevention program: • name of patient • admission date to the secondary hospital • event date • NHSN SSI criteria met (SIP, SIS, DIP, DIS, OS) • culture and sensitivity results • surgical intervention needed to resolve the SSI.	Protocol states that PDS **should** be used to detect SSIs following operative procedures but doesn't stipulate the specific PDS methods that should be used. All SSIs identified as part of a hospital PDS reporting program are reported to NHSN.
Risk adjustment	Answers question "How did each hospital perform in 2019 compared to the NYS 2019 average?" Risk adjustment variables are different. For SSIs, excludes SSIs detected using post discharge surveillance and not readmitted to any hospital. Time period is calendar year. Facilities are identified by unique NHSN number.	Answers question "How did each hospital perform in 2019 compared to the National baseline (currently 2015 for SSI, CLABSI, MDROs)?" For SSIs, excludes children, patients with outlying risk adjustment variables, superficial infections. Time period is rolling year, updated quarterly. Facilities are identified by unique CMS number.

HAI REPORTING PROGRAM REPRESENTATIVES

NYS HAI Regional Representatives are assigned to different regions of the state to verify the completeness and accuracy of the data submitted to NHSN, answer questions regarding reporting requirements, monitor HAI rates and surveillance and prevention practices, and provide recommendations as needed. Please let these Representatives know when there are changes to your contact information, so that they can keep you informed of validation issues and program changes.

MARO-NYC and Rockland county: Antonella Eramo antonella.eramo@health.ny.gov
MARO-Long Island, Queens and Westchester county: Marie Tsivitis marie.tsivitis@health.ny.gov
Capital Region, Sullivan, Ulster, Dutchess, Putnam and Orange counties: martha.luzinas@health.ny.gov
Western and Central Regions: Robin Knab robin.knab@health.ny.gov

VALIDATION OF REPORTED DATA

<u>Things that I can do</u>
Here are some tips to ensure that your data are accurate.
1) Every month, check the NHSN Alerts page and correct any data omissions or errors that NHSN has identified.
2) Check the data each month that you do surveillance and report the data so that you don't forget to enter data for a month. A sample check list is provided below.
3) Periodic (quarterly, yearly) check that all blood cultures have been reviewed and reportable CLABSI have been entered.
4) Periodic (quarterly, yearly) verification that all laboratory-identified *C. difficile* cases have been entered.
5) Periodic (quarterly, yearly) verification that all laboratory-identified CRE cases have been entered.
6) Ask your IT department to provide you with a list of patients assigned discharge ICD-10 codes related to infections. Review these cases to determine if they meet NHSN criteria.
7) When there are location/bed configuration changes in your hospital, verify that the NHSN location labels and the number of beds per location are correctly entered.
8) Periodically perform a check that central line days are correctly counted.
9) Regularly communicate with your lab to keep informed of changes to CDI or CRE test methods.

Work with your Micro Lab and Laboratory Information System staff to configure concise reports designed to meet your CDI and CRE reporting needs. Work with Information Systems to generate spreadsheets containing NHSN procedure data that can be uploaded into NHSN rather than manually entered.

Table 2: Sample monthly checklist for NYS HAI Reporting

NYS HAI REPORTING PROGRAM 2019 DATA SUBMISSION TIMELINE		**Date submitted** Use these columns to help you track your data entry dates! Remember to check "No Events" if you have no infections to report.							
		Procedure data & Events					CLABSI		LabID Events
Data from….	Enter by…..	CABG	Colon	HPRO	Abd Hyst	Spinal Fusion	ICU Summary data & events	Nursing Unit summary data & events	C difficile/ CRE Event & Summary data (Inpt/ER/Obs)
January, 2019	April 1st, 2019								
February	May 1st								
March	June 1st								
April	July 1st								
May	August 1st								
June	September 1st								
July	October 1st								
August	November 1st								
September	December 1st								
October	January 1, 2020								
November	February 1, 2020								
December	March 1, 2020								

NYSDOH Checks for data consistency

NYSDOH runs data consistency checks approximately every two months. When inconsistencies are identified for your hospital, you will receive an automated report from the HAI reporting program Address any issues on the report using the comments box and send your response back to your Regional Representative. The completed _report is due_ to your Regional Representative prior to _the first of the next month_.   If your facility requires that you send the completed report via a secure portal, please use

the HPN secure file transfer portal. (Go to https://commerce.health.state.ny.us, select Applications/Secure File Transfer Application/" I want to send someone else a file").

Some potential issues you may see on the discrepancy report and instructions on how to document the corrections are listed in Table 3 below.

Table 3: Potential data consistency issues

| Issue	Resolution	Instructions
Missing reporting plan	There must be a plan for every indicator for every month. For CDI/CRE surveillance, there must be plans for inpatient, emergency department, observation unit, and rehabilitation and psychiatric locations that have different CCNs. Enter missing plans for the months indicated.	Enter comments to demonstrate you have addressed the issue in the NHSN.
Missing procedure data: no procedures entered for the specified month(s)	If there are no procedures for the month identified on the report, enter or click **No Procedures** were performed on the NHSN alert page. This can also be found by going to Summary Data then Incomplete/Missing List and choosing the Missing Procedures tab.	Enter comments to demonstrate you have addressed the issue in the NHSN.
Missing CLABSI, CDI, or CRE Summary data: no summary data entered for the specified month(s)	CLABSI summary data is checked by location (ICU/ward type). CDI/CRE summary data are also checked for all locations that have plans. Enter your summary data for the month/months indicated.	Enter comments to demonstrate you have addressed the issue by entering the missing summary data in the NHSN.
Procedure date equals Date of Birth (DOB)	Verify that the DOB is correct, if not enter the correct DOB.	Enter comments to demonstrate you have addressed the issue in the NHSN.
Duplicate procedures	Verify that the procedure does not have multiple entries. Delete the duplicate entries.	Enter comments to demonstrate you have addressed the issue in the NHSN and indicate which if any procedures were deleted.
Unusual PATOS response	Verify correctness of PATOS=Y events that were reported to have clean or clean contaminated wound class.	Enter comments to show if PATOS data are correct.
PATOS and Prior joint infection (jntRepPriorinf =N but PATOS=Y)	Verify correctness of PATOS=Y events and/or prior joint infection fields.	Enter comments to show if PATOS data are correct.
Closure/scope mismatch	If closure=no and scope=yes, verify these fields.	Enter comments to show if data are correct.
Duplicate SSI or CLABSI events	Review list of possible duplicates and delete the duplicate entries.	Enter comments to show the events that have been deleted.
Unusual height and/or weight information based	Verify correctness of height (ft) weight (lbs.)	Enter comments: verify unusual measurements or correctness.

Issue	Resolution	Instructions
on NHSN calculated BMI.		
DIP/OS SSI detected via post discharge surveillance but not readmitted	Verify correctness of 'whendetected' and/or depth of infection.	Enter comments to show if fields are correct.
Unusual summary data for CLABSI and MDROs	Verify that there was not a typo in the summary data (number of admissions or patient days) for the specified month and indicator and make corrections in NHSN as needed.	Enter comments to demonstrate you have addressed the issue in the NHSN or the entry was correct.
Potential age (DOB) issue in CDI events	Check the date of birth and correct it in NHSN. *Surveillance for CDI is not performed in Neonatal Intensive Care Unit (NICU) or well baby nurseries.*	Enter comments to demonstrate you have addressed the issue in the NHSN.
CDI or CRE admission, specimen, or discharge date	Verify the admission and specimen date if there was more than one year from admission to specimen date and make corrections in NHSN. The last discharge date should be **prior to the specimen date.** Verify the discharge date and make corrections in NHSN.	Enter comments to demonstrate you have addressed the issue in the NHSN.
Duplicate CDI or CRE events (events reported in both in IN- and OUT-patient locations on same date)	Verify that the patient had two separate specimens on the same day in different locations.	If there was only one specimen in the outpatient setting, remove the inpatient report and add admit date to the outpatient report if appropriate.
Verify reported CDI methods: CDI test method=other, or CDI test method changed from Sensitive to Non-Sensitive	Verify quarterly reported CDI testing method in NHSN	Enter comments to demonstrate you have addressed the issue in the NHSN.

NYSDOH HAI Rate Updates

A data summary report usually accompanies the discrepancy report. This report summarizes your HAI rates compared to the NYS average. Review for accuracy and to observe trends in your HAI rates. Sections of a sample report are shown below. The raw rate is the actual infection rate observed in your hospital. For surgical site infections, this is 100 times the number of infections divided by the number of procedures. The adjusted rate is based on a comparison of the actual (observed) rates and rate expected if the state had the types of patients (in terms of risk of developing an HAI) as the hospital. The 95% confidence interval (CI) is the range of possible rates within which there is 95% confidence that the real infection rate lies. If the confidence interval is entirely greater than the state average, the hospital rate is flagged "significantly higher than the state average" (red). If the confidence interval is entirely lower than the state average, the hospital rate is flagged "significantly lower than the state average" (blue). If the confidence interval surrounds the state average, the hospital rate is not different from the state average (grey).

Figure 1: Sample NYSDOH HAI Rate Report

| | Colon Surgical Site Infection Rates | | | | | | | | | |
| | New York State Total | | | My Hospital | | | | | | |
Reporting Year	Number of Procs	Number of SSI	State rate	# PATOS procs excluded	#SSI-PDS excluded	# final Procs	# final SSI	Raw rate	Adjusted rate (95% CI)	Compared to NYS
2015	18,364	1,027	5.59	6	5	446	30	6.70	7.0 (4.7- 10.0)	No difference
2016	19,650	985	5.01	13	2	515	26	5.00	5.4 (3.5- 7.9)	No difference
2017	19,294	860	4.46	6	5	470	29	6.20	6.5 (4.3- 9.3)	No difference
2018	14,078	567	4.03	6	2	378	18	4.80	5.0 (3.0- 7.9)	No difference

Colon Surgical Site Infection Rates
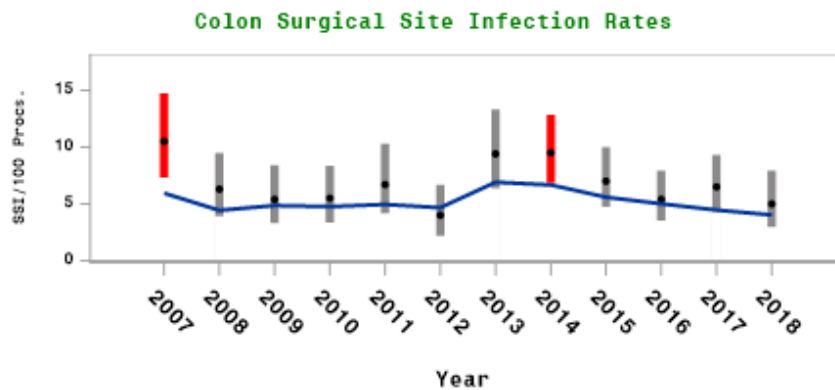
NYSDOH Audits

The purposes of audit are to:

- Validate accuracy of infection rates and risk adjustment variables.
- Evaluate current surveillance methods used to detect infections.
- Determine the reliability and consistency of surveillance definitions.
- Evaluate intervention strategies designed to reduce or eliminate specific infections.
- Provide education on definitions, surveillance mechanisms, and use of the NHSN.

Audits may be performed either through on-site visits or off-site access to electronic medical records. All hospitals will be audited every 1 to 2 years, if staffing allows. HAI Regional representatives select hospitals for audits in his/her region each calendar quarter based on established criteria. NHSN patient safety protocol criteria are used for reviewing medical records. The following table describes the procedure.

Table 4: NYSDOH HAI Audit

Topic	Procedure for on-site audit	Procedure for off-site audit
Hospital audit and visit preparation	The HAI regional representative will make an initial phone call to Infection Preventionist (IP) to schedule the audit and explain audit process. A follow-up email will be sent to the IP within 3 business days to confirm the audit date(s). On the day of audit, HAI regional representative will require access to the complete patient medical record(s) (electronic and/or paper) requested including readmissions, diagnostic/laboratory results, clinical documentation and ICD-10 codes.	The HAI regional representative will make an initial phone call to Infection Preventionist (IP) to confirm method of external access: electronic medical record, external information system, or full medical records on DVD/flash drive. The IP will provide the name of a contact who will supply passwords/permissions. An email will confirm the audit date and method. On the day of audit, HAI regional representative will require access to the complete patient medical record(s) (electronic and/or paper) requested including readmissions, diagnostic/laboratory results, clinical documentation and ICD-10 codes.
CEO audit notification letter	The HAI regional staff will send via fax, email, or NYS Commerce secure data transmission, an audit notification letter, patient medical record request list, and audit instructions to the CEO at least 2 weeks prior to the audit visit. A copy of the letter is sent to the designated IP program leader. The letter will include the purpose of the audit, and access to the requested medical records described in the audit letter.	same
CLABSI audit	The IP will provide a line list of patients with positive blood cultures obtained during the specified time frame. Forms with the unit, admit dates and central line insertion dates are required. These patient medical records will be made available for review during the on-site hospital audit. HAI regional staff will enter all data reviewed at the time of the on-site audit and determine if blood cultures meet NHSN criteria using a unique hospital identified Access™ data file.	The IP will send a laboratory line list of all patients with a positive blood culture for the specified time frame, and completed forms with the unit, admit dates, and central line insertion dates, via the Health Commerce System (HCS) secure file transfer or fax. HAI regional staff will enter all data reviewed at the time of the off-site audit and determine if blood cultures meet NHSN criteria using a unique hospital identified Access™ data file

Topic	Procedure for on-site audit	Procedure for off-site audit
CDI audit	Per audit instructions the IP will provide a laboratory line list of all positive CDI lab reports for the audited time period. No patient chart review will be conducted. HAI staff will compare this laboratory list to the list of CDI LabID events entered in NHSN for the facility for the requested time period.	The IP will send a line list of all positive CDI lab reports for the audited time period, via the Health Commerce System (HCS) secure file transfer or fax. No patient chart review will be conducted. HAI staff will compare this laboratory list to the list of CDI LabID events entered in NHSN for the facility for the requested time period.
CRE audit	Per audit instructions the IP will provide a laboratory line list of all positive CRE lab reports for the audited time period. No patient chart review will be conducted. HAI staff will compare this laboratory list to the list of CRE LabID events entered in NHSN for the facility for the requested time period.	The IP will send a laboratory line list of all positive CRE lab reports for the audited time period, via the Health Commerce System (HCS) secure file transfer or fax. No patient chart review will be conducted. HAI staff will compare this laboratory list to the list of CRE LabID events entered in NHSN for the facility for the requested time period.

Topic	Procedure for on-site audit	Procedure for off-site audit
Surgical procedure audit	List of pre-selected medical records for each procedure (coronary artery bypass, colon, hip replacement, abdominal hysterectomy and spinal fusions) are sent to the hospital. Medical records for the initial surgical admission, all outpatient visits, and subsequent readmissions (as stated on the procedure request list) should be made available for the entire audit. Prior to the audit visit, NYSDOH downloads surgical procedure and infection data from NHSN into a unique hospital identified Access™ data file. Data entered by hospital is compared to patient medical record documentation and assessed for accuracy and meeting NHSN criteria. Results are recorded in the data file.	List of pre-selected medical records for each procedure (coronary artery bypass, colon, hip replacement, abdominal hysterectomy and spinal fusions) are sent to the hospital. Electronic medical records for the initial surgical admission, all outpatient visits, and subsequent readmissions (as stated on the procedure request list) should be made available. The following documentation is required: coding summary sheet (diagnosis and procedure); intraoperative report (surgeon dictation, ASA score, wound class, procedure time, anesthesia); height and weight, laboratory results, microbiology results, radiology results, physician progress notes, physician consult reports, physician orders, nursing assessment (admissions and routine progress). Prior to the audit visit, NYSDOH downloads surgical procedure and infection data from NHSN into a unique hospital identified Access™ data file. Data entered by hospital is compared to patient medical record documentation and assessed for accuracy and meeting NHSN criteria. Results are recorded in the data file.
Audit review findings and data correction	All NHSN corrections and additional reporting are reviewed on-site with the IP and additional hospital staff at the completion of the audit visit. A written summary of corrections is given to the IP prior to leaving the facility or shortly thereafter. All NHSN edits/corrections must be made within 30 days of the on-site audit visit.	All NHSN corrections and additional reporting are reviewed with the IP and additional hospital staff during a phone call within 3 days of completion of the audit. A summary of corrections is emailed to the IP. All NHSN edits/corrections must be made within 30 days of the off-site audit.
If there is a disagreement	If NYSDOH and the facility do not agree on the data corrections, the facility should send an email to NHSN with a detailed description of the case, describing the reason for the disagreement, and cc'ing the Regional Staff member. NHSN will respond by email.	same

Topic	Procedure for on-site audit	Procedure for off-site audit
Post audit CEO communication	Regional HAI staff emails post-audit follow-up letter to CEO and IP within 2 weeks of the completed audit with identified findings, recommendations for improvement, and data corrections required.	same
HAI program follow-up	HAI Regional staff finalizes the hospital audit data files. Data staff will review the finalized audit files to determine if the corrections/additions have been completed by the hospital. Regional staff will communicate with the IP and/or the CEO if requested NHSN information is not corrected.	same

Table 5 describes some common errors identified during audits and highlights how to correctly report the data.

Table 5: Guidance on Common Data Errors from Medical Record Reviews

Data	Common reasons for incorrect responses	Reporting Instructions
Duration of procedure	Incorrect OR times frequently related to: • filtered reports using OR time "in" to OR time "out" • using Anesthesia start and stop • miscalculations. • inclusion of non-surgical portion of operative time, such as pre-incision cystoscopy for laparoscopic surgery. • not adding procedure duration times if patient returned to OR within 24 hours of closure.	Duration of Procedures: Interval in hours and minutes between the surgery start time and finish time. Deduct time of cytoscopy if it was included in the OR reported duration of procedure. **Tip:** If this data is given to you in a report, conduct periodic review to validate internal processes accurately capture duration "incision to closure" times.
Wound class	Incorrect wound class entries were most frequently related to incorrect surgical wound classifications documented in the OR record.	An assessment of the likelihood and degree of contamination of a surgical wound at the time of the operation. Adapted from the American College of Surgeon's wound classification schema. If the OR record documentation is incorrect, enter the correct classification into the NHSN and review the definitions with your OR staff. **Tip:** Review annually with OR staff how surgical wound classifications are assigned.
Primary closure	This was most often related to: • select surgeon operative reports not being reviewed • no process in place to review operative reports.	Primary closure is defined as closure of the skin level during the original surgery, regardless of the presence of wires, wicks, drains, or other devices or objects extruding through the incision. This category includes surgeries where the skin is closed by some means.
Scope	Incorrect responses related to: • Not reviewing procedure codes	ICD-10 PCS codes answer the scope question. The fifth character indicates the approach to reach the procedure site. See Chapter 9 -pg.6 Pt. Safety Manual.
Diabetes	Not using diagnosis codes as an option.	Indicates that the patient has a diagnosis of diabetes requiring management with insulin or a non-insulin anti-diabetic agent. The ICD-10-CM diagnosis codes that reflect the diagnosis of diabetes are acceptable for use to answer YES.

Data	Common reasons for incorrect responses	Reporting Instructions
Extent	Not updating the Extent of the SSI. Patient initially met criteria for a superficial infection, and then progressed to a deep or organ space.	The Extent field must be updated to reflect the deeper SSI event. Edit the event.
When detected	Not updating "When detected" if patient is readmitted for SSI to the facility that performed the procedure or at another facility.	If SSI was detected on post-discharge surveillance (P), and patient is readmitted for treatment of SSI, the When detected field must be updated to reflect the readmission to same facility (RF) or readmission to other facility (RO).
Date of Event	Incorrect event date.	Beginning in 2015, this is the date when the first element used to meet the SSI infection criterion occurs. Date of event must be within 30 days or 90 days of the date of procedure, depending on the operative procedure category.
Trauma	Responding "No" to trauma if HPRO was related to a fall.	Check Y if operative procedure was performed because of blunt or penetrating traumatic injury to the patient. A patient fall that results in a hip procedure is considered a traumatic injury.
Unreported CDI and CRE events	Misinterpretation of definition.	Ensure that your laboratory is following the NHSN LabID definitions. Use NHSN's MDRO and CDI LabID Event Calculator for assistance in determining which results should be reported. **Tip**: Run an NHSN Analysis report for: Line Listing for All CDI or CRE LabID Events and reconcile the line list against a laboratory or data mined line list.
Unreported SSIs	Inadequate surveillance of imaging test results. Not following up on culture reports. No post-discharge follow-up.	It is not sufficient to only review laboratory test results. IPs should also review imaging test results. In addition, it is useful to review readmission and ED visit coding.
Incorrect PATOS Response	There was a complication during procedure vs. an infection. Incorrect depth of infection present at time of procedure and related SSI. Did not consider period of wellness between the time of a preoperative condition and surgery.	PATOS denotes that there is evidence of an infection or abscess at the start of or during the index surgical procedure (in other words, it is present preoperatively). This is a Yes or No response when there is an SSI.

Data	Common reasons for incorrect responses	Reporting Instructions
Unreported CLABSIs	Misinterpretation of criteria for infection at another site. Missed surveillance. CLABSI Criteria misinterpretation. Misinterpreted as being part of the RIT (repeat infection timeframe)	The NHSN Secondary Bloodstream Infection Guide and CDC Surveillance definitions of HAIs must be used when determining if the positive blood culture was related to an infection at another body site.
Mucosal Barrier Injury	Misinterpretation of neutropenic criterion	NHSN defines a neutropenic patient as one with "at least 2 separate days with values of absolute neutrophil count (ANC) or total white blood cell count (WBC) <500 cells/mm3 within a 7-day period which includes the date of the positive blood culture was collected (Day 1), the 3 calendar days before and the 3 calendar days after."
Physician interpretation of positive blood culture	Physician determines that positive blood culture should not be counted as a CLABSI.	NHSN does not recognize physician diagnosis as an acceptable reason to exclude a CLABSI from being reported to NHSN if CLABSI meets reporting criteria.

WHAT DOES NYSDOH DO WITH THE DATA?

The NYS law was created to provide the public with fair, accurate, and reliable HAI data to compare hospital infection rates, and to support quality improvement and infection control activities in hospitals. Annual reports, summarizing hospital-specific infection rates, are posted on the DOH website (http://www.health.ny.gov/statistics/facilities/hospital/hospital_acquired_infections) in September each year. The HAI representatives work with hospitals that have HAI rates significantly higher than the state average following the "Policy for Facilities with Consecutive Years of High HAI Rates" at (http://www.health.ny.gov/statistics/facilities/hospital/hospital_acquired_infections)

NYS Hospital-Acquired Infection Reporting Program – November 2018
Understanding the difference between 2017 NYS and CMS Indicators

Hospital performance statistics published by the NYS HAI Reporting Program and CMS Hospital Compare are different. This document can help you understand these differences in more detail.

The first important difference is the peer group to which your hospital is compared.

- In the NYS 2017 report, your hospital's 2017 data are compared to <u>2017</u> data reported by other hospitals in <u>NYS</u>.

- In CMS Hospital Compare, your hospital's 2017 data are compared to <u>2015</u> data reported by other hospitals in the <u>United States</u>.

In general, NYS hospital Standardized Infection Ratios (SIRs) tend to be higher than CMS SIRs for two reasons.

- HAI rates decrease over time as infection prevention practices improve; the NYS benchmark is expected to decrease over time (but the average SIR is always 1.0 because comparison is in the same year), while the CMS benchmark remains the same (SIRs decrease over time).

- NYS HAI data are audited more than data from other states. Auditing is likely to increase HAI rates because missed infections are identified and entered in the National Healthcare Surveillance Network (NHSN), and training efforts lead to better identification of HAIs.

We also note that by comparing data within the same year, NYS ensures that the same protocol is followed for identification of a hospital's data and the data to which it is compared. There were minimal changes in surveillance definitions and guidance between 2015 and 2017.

Finally, the statistical models used to predict HAI rates in NYS and CMS models are slightly different. These differences are described in the following table. For HAI rates published on Hospital Compare we show the CMS model, and for HAI rates not published on Hospital Compare, we show a model available through the NHSN application that hospitals may or may not use for internal benchmarking.[1]

Each approach has advantages and disadvantages and may be implemented for different purposes. NYS assesses hospital-specific performance each year, while CMS and NHSN measure improvement over time. NYS often avoids using hospital-level risk adjustment variables (e.g. teaching hospital vs. not) because these are affects we are interested in measuring, while NHSN may include these variables to increase the homogeneity of the groups under comparison. NYS includes superficial infections (except those identified from post-discharge surveillance) because they have been found to be similar to deeper infections in terms of infectious etiologies and length of stay, while CMS focuses on deeper infectious because they may be reported more consistently across facilities.

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[1] CDC. The NHSN Standardized Infection Ratio: A Guide to the SIR (Updated August 2018). Available at https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf.

[2] March M, **Haley V,** Lutterloh E. Analysis of the impact of surgical site infections on post-operative length of stay following hip replacements and revisions in New York State, 2008–2012. Poster, 2014 CSTE Conference, Nashville.

Comparison of New York State and Centers for Medicare and Medicaid Services (CMS) Methods for 2017 Hospital-Acquired Infection Reports

Indicator	Report	Exclusions	Risk Adjustment
CLABSI	NYS	Mucosal barrier injury CLABSIs; oncology, neurologic, burn, trauma, prenatal, and respiratory ICUs	In adult/pediatric units, CLABSI rates are compared within each CDC location independently. In NICUs, CLABSI rates are compared by level (RPC, Level 3, Level 2/3) and birthweight group. Hospital compared to NYS 2017 average.
	CMS	Mucosal barrier injury CLABSIs; step down units	In adult/pediatric units, negative binomial regression model with location type, facility bed size, medical school affiliation, and facility type. In NICUs, only birthweight group. Hospital compared to National 2015 average.
Colon SSI	NYS	SSIs detected by post discharge surveillance (PDS) or present at time of surgery (PATOS)	ASA, duration, BMI, trauma, laparoscope. Hospital compared to NYS 2017 average.
	CMS	Complex 30-day SSI model: age<18, superficial SSIs, PATOS, outliers	Diabetes, ASA, gender, age, BMI, closure technique, oncology hospital. Hospital compared to National 2015 average.
Hysterectomy SSI	NYS	PDS, PATOS	Diabetes, ASA, BMI, duration, laparoscope. Hospital compared to NYS 2017 average.
	CMS	Complex 30-day SSI model: age<18, superficial SSIs, PATOS, outliers	Diabetes, ASA, BMI, age, cancer hospital. Hospital compared to National 2015 average.
Hip SSI	NYS	PDS, PATOS	ASA, BMI, procedure type. Hospital compared to NYS 2017 average.
	NHSN	Complex admission/readmission model: superficial SSIs, PDS, PATOS, outliers	Adults: Diabetes, trauma, anesthesia, ASA, wound class, medical school affiliation, hospital bed size, age, duration, BMI, procedure type. Children: intercept only. Hospital compared to National 2015 average.
CABG chest SSI	NYS	PDS, PATOS	Diabetes, BMI, gender, trauma. Hospital compared to NYS 2017 average.
	NHSN	Complex admission/readmission model: superficial SSIs, PDS, PATOS, outliers, children.	Diabetes, gender, ASA, trauma, wound class, medical school affiliation, hospital bed size, age duration, BMI, age-gender interaction. Hospital compared to National 2015 average.
CABG donor SSI	NYS	PDS, PATOS	BMI, diabetes. Hospital compared to NYS 2017 average.
	NHSN	No model	No model
Clostridium difficile	NYS	Outlier community onset (CO) prevalence rate	CDI test type, CO admission prevalence rate (including patients tested in ED and admitted same day), hospital bed size, % patient days in adult ICUs. Hospital compared to NYS 2017 average.
	CMS	Outlier CO prevalence rate	Hospitals: CDI test type, CO admission prevalence rate, medical school affiliation, number of ICU beds, facility type, facility bed size, reporting from ED. LTACHs: CDI test type, CO rate, % ventilator, % single occupancy. Hospital compared to National 2015 average.