National Healthcare Safety Network (NHSN)
Reporting for Inpatient Acute Care Hospitals

In a time when clinical data are being used for research, development of care guidelines, identification of trends, and reimbursement, the quality of data is vitally important. Data quality refers to the accuracy, completeness, validity, and consistency of the information collected and entered into the database. To ensure data quality, you must develop and follow a framework of procedures and processes. Use this guide as a quick reference resource to help improve the quality of your NHSN data.

Table of Contents

Data Quality Basics

Standardized Definitions: The Centers for Disease Control and Prevention (CDC) provides standardized definitions for each of the healthcare-associated infection (HAI) elements. It is imperative that you, and all staff members involved with the data collection process, are familiar with the definitions and adhere to them. Additionally, perform a periodic review of these definitions to ensure that you are compliant and up to date with any changes for all HAI modules.

Interrater Reliability: This is defined as the degree of agreement among two or more persons independently abstracting data elements from the same chart. Typically, interrater reliability should be assessed on approximately 10 percent of charts abstracted per quarter.

Accuracy: Ensure that abstracted data align with standardized definitions and specifications in the 2024 NHSN Patient Safety Component Manual, found at https://www.cdc.gov/nhsn/pdfs/pscmanual/pcsmanual_current.pdf. Issues that impact accuracy are:
- Interpretation errors—definitions are not applied accurately.
- Documentation errors—clinical data does not correlate with documentation in the chart.
- Coding error—clinical data do not match coding data.

Completeness: Each month and prior to data deadlines, run reports to ensure that data are complete. To have complete data means that no records are incomplete and NHSN alerts are completed; and every patient, procedure, and event have been entered into the database. Develop an internal, facility-specific process to track all cases qualifying for HAI public reporting. Cross-reference what has been coded, collected by the individual care plan, and entered into NHSN.

Quality Tips

Review your reports with enough time to make necessary adjustments prior to NHSN data submission deadlines.

Print out the HAI checklist (on pages 4–6) and keep it handy for monthly reporting. Validation reports should be run monthly, after data entry is complete, and a couple of weeks before the quarterly data submission deadlines. Planning around these timelines provides you the opportunity to identify issues and make corrections before NHSN takes the "final snapshot" of the data for CMS. Note: Failure to enter accurate data in a timely manner may result in annual payment update failure and lead to decreased reimbursement.

Always generate a new dataset before running reports.

*File Path: Analysis→Generate Data Sets→Generate New

Download troubleshooting reports on the NHSN site.

Log in to your NHSN Secure Access Management Services (SAMS) database and access the NHSN data quality troubleshooting reports at http://www.cdc.gov/nhsn. Locate NHSN Data Quality Reports to assist with troubleshooting data quality issues:

*File Path: Analysis→Reports→Advanced→Data Quality
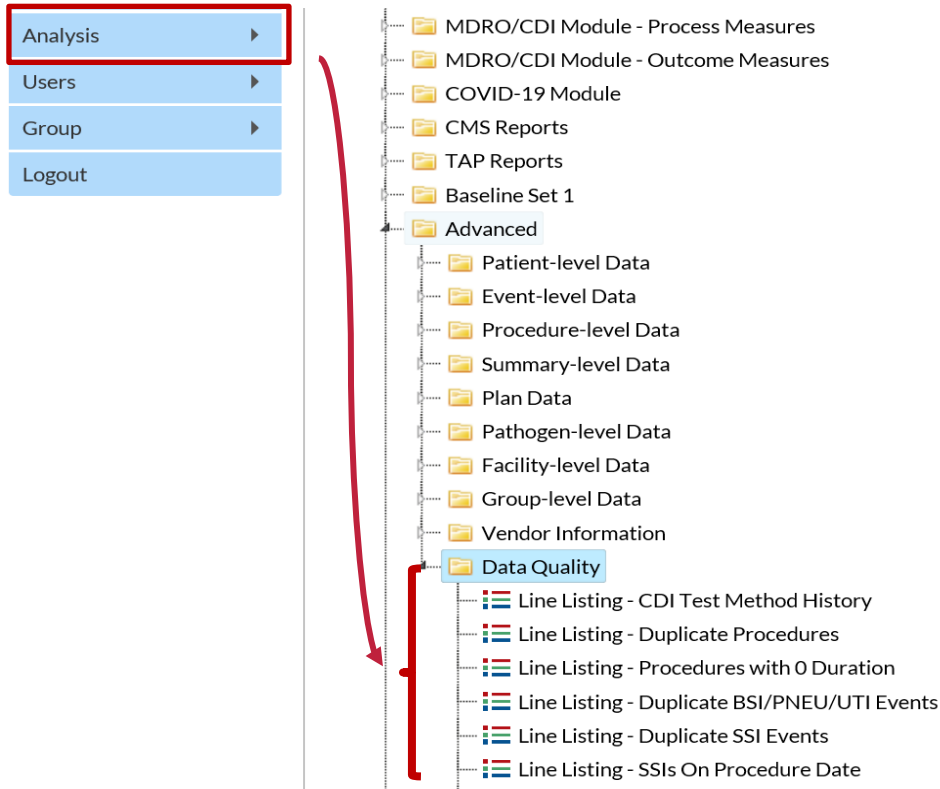
CMS HAI Data Quality Checklist

Complete the following review steps several weeks prior to the quarterly CMS reporting deadlines. For reporting deadlines, visit: https://www.cdc.gov/nhsn/pdfs/cms/cms-reporting-requirements.pdf

☐ **Check the monthly reporting plan.**
Although most hospitals copy the data reporting plan from month to month, it is important to closely review what is included. Visit: https://www.cdc.gov/nhsn/pdfs/training/general/PS-Data-Entry.pdf

- Mandated reporting units with a complete list and guidance available at: https://www.cdc.gov/nhsn/pdfs/cms/cms-reporting-requirements.pdf
- Facility-wide inpatient lab ID MDRO and CDI events with guidance available at: https://www.cdc.gov/nhsn/pdfs/training/general/PS-Data-Entry.pdf

Important: CDC NHSN will only submit data to CMS for measures included in the monthly reporting plan.

☐ **Enter and review the summary data.**
Verify that all denominator data are included:

- Total Patient Days
- Total Patient Admissions
- ED Encounters
- Central Line Days
- Urinary Catheter Days
- MDRO (MRSA) Days and CDI Days

Important: High errors with MDRO denominator entry! Visit: https://www.cdc.gov/nhsn/pdfs/cms/acutecare-mrsa-cdi-labiddenominator-reporting.pdf

(Include summary data for all adult and pediatric units per the CMS requirement).

☐ **Validate number of SSI cases** (denominator) for hysterectomy and colon surgeries.
*File Path: Analysis→Reports→Procedure Associated (PA) Module→SSI→Line Listing—All SSI Events.
This can be easily accomplished by running a line list.

☐ **Enter "No Infections"/"No Events" properly for CLABSI, CAUTI, and MDRO (MRSA/CDI).**
If your facility did not have infections for the month, you must select "Report No Events" on the Summary page. Failure to do so will result in those data not being submitted to CMS. Visit:

- https://www.cdc.gov/nhsn/PDFs/CMS/how-to-report-No-Events-CLAB-CAU.pdf
- https://www.cdc.gov/nhsn/pdfs/cms/how-to-set-up-and-report-mrsa-cdi.pdf

☐ **Report "No Procedures."**
If your facility did not have any SSI colon or SSI hysterectomy procedures for the month, you must report "No Procedures Performed" on the "Missing Procedures" tab on the "Alerts Screen." Visit: https://www.cdc.gov/nhsn/PDFs/CMS/How-to-Report-No-Events-SSI.pdf

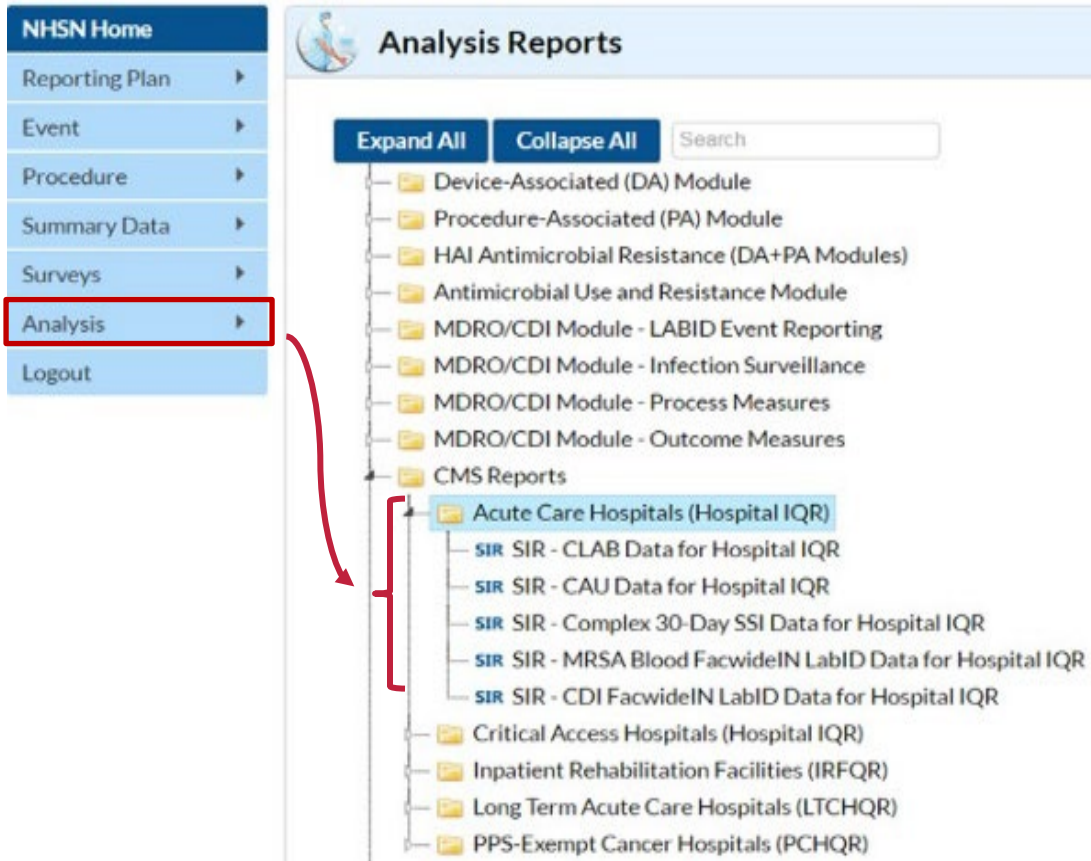☐ **Enter "No Infections"/"No Events" for SSI properly.**
If your facility did not have infections for the month, you must report "Report No Events" on the "Missing PA Events" tab on the on the "Alerts Screen." Failure to do so result in those data not being submitted to CMS.
Visit: https://www.cdc.gov/nhsn/PDFs/CMS/How-to-Report-No-Events-SSI.pdf

HSAG HQIC

Use the following reports to validate data quality for CMS IQR/IPPS NHSN submissions.

☐ **CMS Analysis Reports in NHSN.**
  *File Path: Analysis→Reports→CMS Reports→Acute Care Hospitals

- SIR–CLAB data for Hospital IQR
  https://www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-CLABSI-SIR.pdf

- SIR–CAUTI data for Hospital IQR
  https://www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-CAUTI-SIR.pdf

- SIR–CDI FacwideIN LabID data for Hospital IQR
  https://www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-CDI-SIR.pdf

- SIR–MRSA Blood FacwideIN LabID data for Hospital IQR
  https://www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-MRSA-SIR.pdf

- SIR–Complex 30-day SSI data for Hospital IQR
  https://www.cdc.gov/nhsn/pdfs/cms/ssi/cms-ipps-ssi-sir.pdf

Important: These reports show exactly what data will be submitted to CMS by NHSN and should be checked against facility-specific data to validate accuracy of information sent to CMS.

☐ **Select "Modify Report"** to open the Report Variable Screen→Select "Time Period" in the "Date Variable" box, use the dropdown box to select Summary YQ, enter beginning/ending quarter

☐ **Select "Display Options" in the "Group by" box**, use the dropdown box to select "summaryYM"—Run Report

Additional Recommended Analysis Reports
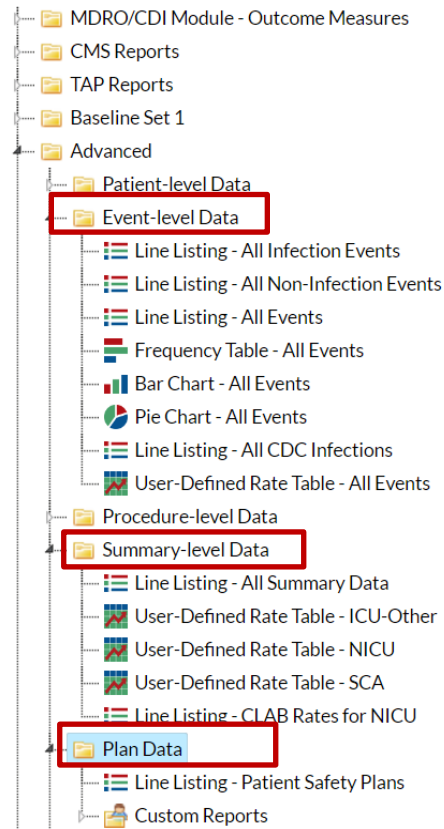
Analysis→Reports→Advanced→Event-level Data
- Line Listing—All Infection Events

Analysis→Reports→Advanced→Summary-level Dat
- Line Listing—All Summary Data

Analysis→Reports→Advanced→Plan Data→
- Line Listing—Patient Safety Plans

Glossary of Acronyms

Abbreviation	Description
CAUTI	catheter-associated urinary tract infection
CDC	Centers for Disease Control and Prevention
CDI	Clostridioides difficile infection
CLABSI	central line-associated bloodstream infection
CMS	The Centers for Medicare & Medicaid Services
ICP	infection control practitioner
ED	emergency department
IPPS	Inpatient Prospective Payment System
IQR	Inpatient Quality Reporting program
MDRO	Multi-drug resistant organisms
MRSA	Methicillin-resistant Staphylococcus aureus
NHSN	National Healthcare Safety Network
OPPS	Outpatient Prospective Payment System
PA	Procedure Associated
OQR	Outpatient Quality Reporting
SIR	standardized infection ratio
SSI	surgical site infection

Data Reporting Resources

- QualityNet HAI Webpage
https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228760487021

- QualityNet Specifications Manual
https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetHomepage&cid=1120143435363

- CDC NHSN Tracking Infections in Acute Care Hospitals/Facilities https://www.cdc.gov/nhsn/acute-care-hospital/index.html

- CMS guidance for NHSN Users https://www.cdc.gov/nhsn/cms/index.html

- Operational Guidance for Acute Care Hospitals to Report Central Line-Associated Bloodstream Infection (CLABSI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements https://www.cdc.gov/nhsn/pdfs/cms/Final-ACH-CLABSI-Guidance-508.pdf

- Operational Guidance for Acute Care Hospitals to Report Catheter Associated Urinary Tract Infection (CAUTI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements https://www.cdc.gov/nhsn/pdfs/cms/Final-ACH-CAUTI-Guidance-508.pdf

- Operational Guidance for Acute Care Hospitals to Report Facility-Wide Inpatient (FacWideIN) *Clostridioides difficile* Infection (CDI) Laboratory-Identified (LabID) Event Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Requirements https://www.cdc.gov/nhsn/pdfs/cms/final-ach-cdi-guidance.pdf

- Operational Guidance for Acute Care Hospitals to Report Facility-Wide Inpatient (FacWideIN) Methicillin-Resistant *Staphylococcus aureus* (MRSA) Blood Specimen (Bacteremia) Laboratory-Identified (LabID) Event Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Requirements https://www.cdc.gov/nhsn/pdfs/cms/FINAL-ACH-MRSA-Bacteremia-Guidance.pdf

- Operational Guidance for Reporting Surgical Site Infection (SSI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements https://www.cdc.gov/nhsn/pdfs/cms/ssi/Final-ACH-SSI-Guidance.pdf

References

Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN). Tracking infections in acute care hospitals/facilities. Available at: https://www.cdc.gov/nhsn/acute-care-hospital/index.html Accessed on February 3, 2022.

CDC NHSN. Operational guidance for acute care hospitals. Available at: https://www.cdc.gov/nhsn/cms/. Accessed on February 3, 2022.