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CLABSI - CAUTI - SSI

In a time when clinical data is being used for research, development of care guidelines, identification of trends and reimbursement, the quality of the data is of vital importance. **Data quality** refers to the accuracy, completeness, validity and consistency of the information that is collected and entered into the database. In order to ensure data quality, it is vital to develop and follow a framework of procedures and processes.

This guide was developed as a quick-reference resource to assist you in this endeavor, and to help improve the quality of your NHSN data.

DATA QUALITY BASICS

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Standardized definitions – The CDC provides standardized definitions for each of the HAI elements. It is important that you are very familiar with the definitions and adhere to them. Each person involved with the data collection process should know these definitions. In addition, you should re-review these definitions to ensure you are compliant and keep up with any changes. Review any Errata documents for each HAI module.
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Inter-Rater Reliability – This is defined as the degree of agreement among two or more persons independently abstracting data elements from the same chart. Typically, inter-rater reliability should be assessed on approximately 10% of charts abstracted per quarter.
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Accuracy – The data that is abstracted is accurate in comparison to the standardize definitions and specifications. This is measured by inter-rater reliability.
 - **Interpretation Errors** – definitions not applied accurately
 - **Documentation Errors** – chart documentation does not correlate to what is in the chart
 - **Coding Errors** – clinical data does not match coding data
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Completeness – Each month and prior to data deadlines, run reports to ensure data is complete. This means that no records are left unfinished and that every patient, procedure and event is entered.
 - Develop an internal, facility-specific process to track all cases that would qualify for the HAI public reporting.
 - Cross reference what has been coded, collected by the ICP and has been entered into NHSN.

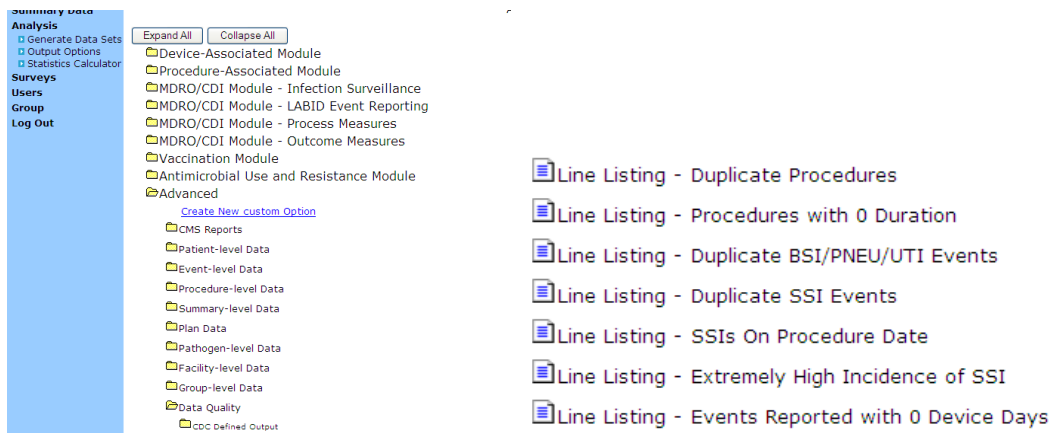
QUALITY TIPS

Tip: Review your reports with enough time to make needed adjustments.

Print out the CLABSI/CAUTI and SSI checklists (on pages 3-4) and keep them handy for monthly reporting. Time your reports to be run monthly, after the data entry is completed, and a couple of weeks before the quarterly data submission deadlines. This will allow the opportunity to identify and issues and make corrections before NHSN takes the “final snapshot” of the data for CMS.

Tip: Download troubleshooting tips on the NHSN site.

Access the NHSN Data Quality Trouble Shooting Reports at www.cdc.gov/nhsn:
Analysis → Output Options → Advanced → Data Quality → CDC Defined Output



The screenshot shows a web interface for NHSN Data Quality Troubleshooting Reports. On the left is a navigation menu with categories: Summary Data, Analysis, Surveys, Users, Group, and Log Out. Under 'Analysis', there are sub-items: Generate Data Sets, Output Options, and Statistics Calculator. The 'Output Options' sub-item is expanded, showing a tree view of modules: Device-Associated Module, 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, and Antimicrobial Use and Resistance Module. Below these is an 'Advanced' section with a 'Create New Custom Option' link and a list of reports: CMS Reports, Patient-level Data, Event-level Data, Procedure-level Data, Summary-level Data, Plan Data, Pathogen-level Data, Facility-level Data, Group-level Data, Data Quality, and CDC Defined Output. On the right side of the screenshot, a list of report titles is displayed, each with a document icon: Line Listing - Duplicate Procedures, Line Listing - Procedures with 0 Duration, Line Listing - Duplicate BSI/PNEU/UTI Events, Line Listing - Duplicate SSI Events, Line Listing - SSIs On Procedure Date, Line Listing - Extremely High Incidence of SSI, and Line Listing - Events Reported with 0 Device Days.

GLOSSARY OF TERMS

- **CAUTI** – catheter-associated urinary tract infection
- **CDC** – Centers for Disease Control and Prevention
- **CLABSI** – central line-associated bloodstream infection
- **CMS** – The Centers for Medicare & Medicaid Services
- **ICP** – infection control practitioner
- **IPPS** – CMS Inpatient Prospective Payment System
- **IQR** – CMS Inpatient Quality Reporting program
- **NHSN** – CDC National Healthcare Safety Network
- **OPPS** – CMS Outpatient Prospective Payment System
- **OQR** – CMS Outpatient Quality Reporting program
- **SSI** – surgical site infection

CMS IPPS CLABSI/CAUTI Data Quality Checklist

Tip: *The following steps should be completed several weeks prior to the quarterly CMS Reporting deadlines.*

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.

- Mandated reporting modules included
- Mandated reporting units included
- Inpatient and/or Lab ID

www.cdc.gov/nhsn/forms/57.106_PSReportPlan_BLANK.pdf

IMPORTANT: NHSN will only submit data to CMS that is included in the monthly reporting plan.

Enter and Review the Summary Data

Verify that all denominator data is included:

- Total Patient Days
- Central Line Days
- Urinary Catheter Days

Include summary data for all adult and pediatric intensive care units, per the CMS requirement.

No Infections/“No Events” Entered Properly

If you did not have infections for the month, you **must** report “Report No Events” on the Summary page. Failure to do so will cause your data to **not** be submitted to CMS.

www.cdc.gov/nhsn/PDFs/CMS/how-to-report-No-Events-CLAB-CAU.pdf

Tip: *The following reports are important for validating data quality for CMS IPPS NHSN submissions.*

CMS Analysis Reports in NHSN

(Analysis → Output Options → Advanced → CMS Reports → CDC Defined Output)

- SIR – CLAB Data for CMS IPPS
- SIR – CAUTI Data for CMS IPPS

www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-CLABSI-SIR.pdf

www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-CAUTI-SIR.pdf

IMPORTANT: These reports will show exactly what data will be submitted by NHSN to CMS.

Additional Recommended Analysis Reports

(Analysis → Output Options → Advanced → Plan Data → CDC Defined Output)

- Line Listing – Patient Safety Plans

(Analysis → Output Options → Advanced → Summary-Level Data → CDC Defined Output)

- Line Listing – All Summary Data

(Analysis → Output Options → Advanced → Event-Level Data → CDC Defined Output)

- Line Listing – All Infections Data

Data Quality for CMS IPPS SSI

Tip: *The following steps should be completed several weeks prior to the quarterly CMS Reporting deadlines.*

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.

- Mandated reporting modules included
- Mandated reporting units included
- Inpatient and/or Lab ID

www.cdc.gov/nhsn/PDFs/pscManual/3PSC_MonthlyReportingPlanCurrent.pdf

IMPORTANT: NHSN will only submit data to CMS that is included in the monthly reporting plan.

Report “No Procedures”

If you did not have any SSI Colon or SSI Hysterectomy for the month, you must report “No Procedures Performed” on the “Missing Procedures” tab on the “Alerts Screen.”

No Infections/ “No Events” Entered Properly

If you 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 will cause your data to not be submitted to CMS.

www.cdc.gov/nhsn/PDFs/CMS/How-to-Report-No-Events-SSI.pdf

Tip: *The following reports are important for validating data quality for the CMS IPPS NHSN submissions.*

CMS Analysis Reports in NHSN

(Analysis → Output Options → Advanced → CMS Reports → CDC Defined Output)

- SIR – Complex 30-Day SSI Data for CMS IPPS Output Options

www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-SSI-SIR.pdf

IMPORTANT: These reports will show exactly what data will be submitted by NHSN to CMS.

Additional Recommended Analysis Reports

(Analysis → Output Options → Advanced → Plan Data → CDC Defined Output)

- Line Listing – Patient Safety Plans

(Analysis → Output Options → Advanced → Summary-Level Data → CDC Defined Output)

- Line Listing – All Summary Data

(Analysis → Output Options → Advanced → Event-Level Data → CDC Defined Output)

- Line Listing – All Infections Data

DATA REPORTING RESOURCES

- **QualityNet HAI Webpage**
www.qualitynet.org/dcs/ContentServer?c=Page&pagename=OnetPublic%2FPage%2FQnetTier2&cid=1228760487021
- **QualityNet Specifications Manual**
www.qualitynet.org/dcs/ContentServer?c=Page&pagename=OnetPublic%2FPage%2FQnetTier2&cid=1141662756099
- **CDC NHSN Tracking Infections in Acute Care Hospitals/Facilities**
www.cdc.gov/nhsn/acute-care-hospital/index.html
- **Operational Guidance for Acute Care Hospitals to Report Central Line-Associated Bloodstream Infection (CLABSI) Data to CEC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements**
www.cdc.gov/nhsn/PDFs/FINAL-ACH-CLABSI-Guidance.pdf
- **Operational Guidance for Acute Care Hospitals to Report Catheter Associated Urinary Tract Infections (CAUTI) Data to CEC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements**
www.cdc.gov/nhsn/PDFs/FINAL-ACH-CAUTI-Guidance.pdf
- **Operational Guidance for Reporting Surgical Site Infections (SSI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements**
www.cdc.gov/nhsn/PDFs/FINAL-ACH-SSI-Guidance.pdf

REFERENCES

Arts DGT, De Keizer NF, Scheffer G. Defining and improving data quality in medical registries: A literature review, case study and generic framework. *Journal of the American Medical Informatics Association*. 2002; 9(6), 600-611. Available at: <http://jamia.bmj.com/content/9/6/600.full.pdf+html>. Accessed April 22, 2013.

Centers for Disease Control and Prevention. National Healthcare Safety Network (NHSN): Tracking infections in acute care hospitals/facilities. Available at: www.cdc.gov/nhsn/acute-care-hospital/index.html. Accessed April 22, 2013.