Using the "SIR - CDI FacWideIN LabID Data for LTCHQR" Report

The NHSN Analysis Report, "SIR - CDI FacWideIN LabID Data for LTCHQR" was created in order to allow long term acute care facilities (also known as Long Term Care Hospitals, or LTCHs) to review those *C. difficile* LabID data that would be submitted to CMS on their behalf. It's important to keep in mind the following as you begin to use this report:
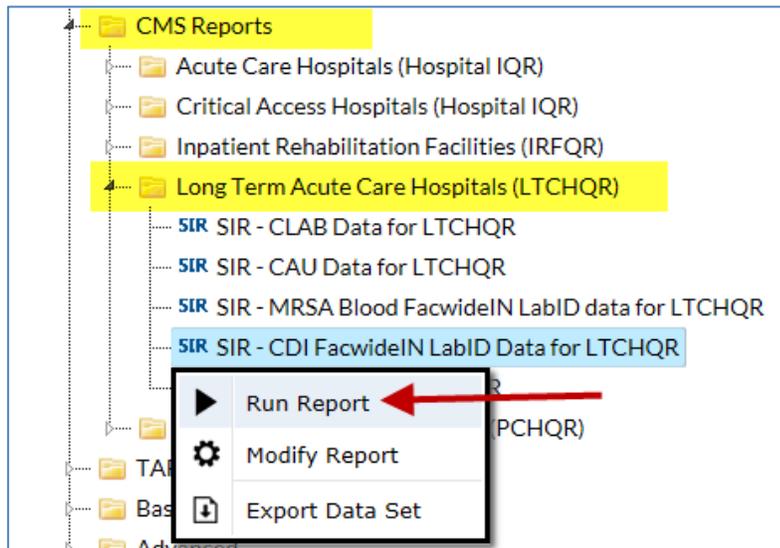
- These data will only be submitted for those facilities that are participating in the CMS Long Term Care Hospital Quality Reporting (LTCHQR) Program, as indicated by their CCN recorded in NHSN.

- **The SIRs generated in this output will be calculated using the 2015 national baseline data**. To learn more about the standardized infection ratio (SIR) under the 2015 baseline as it pertains to CDI data, please see: https://www.cdc.gov/nhsn/2015rebaseline/.

- This report will only include **in-plan FacWideIN CDI LabID data beginning with January 2015**. Earlier years for which you may have reported these data will not be included in this output. Data that have previously been submitted to CMS for participation in a Quality Reporting Program can be found at the following folders: Baseline Set 1 > CMS - Long Term Acute Care Hospitals (LTCHQR) > Rate Table - CDI LabID Data for LTCH PPS.

- **IMPORTANT!** Facilities must appropriately **Report No Events** for those FacWideIN months for which no CDI LabID events were identified in an inpatient location(s).

- This output option represents an SIR report for each hospital, not each CCN. If your hospital shares a CCN with another facility, the SIR will only represent the data that your hospital has contributed to the overall SIR for all hospitals that share the CCN. You may wish to use the Group feature in NHSN to obtain a single SIR for all the hospitals that share a CCN. More information about the Group feature can be found here: http://www.cdc.gov/nhsn/group-users/index.html.

- The data in this report will represent data current as of the last time you generated datasets. **NOTE:** Quarterly data are frozen as of the final submission date for that quarter (e.g., first quarter (Q1) data will be frozen as of 3am ET on August 16th); any changes made to these data in NHSN after the final submission deadline will not be reflected in the data submitted to CMS.

- The information in this document should be used in conjunction with the document, "How to Set Up NHSN Reporting for Facility-Wide Inpatient MRSA Bacteremia and *C. difficile* LabID events for the CMS Long Term Care Hospital Quality Reporting Program", available at: https://www.cdc.gov/nhsn/pdfs/cms/ltac/setting-up-and-reporting-labid-event_ltch.pdf

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Example of the "SIR - CDI FacWideIN LabID Data for LTCHQR": Interpretation and Data Checking

Before running this output option, remember to generate your datasets for the most up-to-date data reported to NHSN by your facility! To generate datasets, go to Analysis > Generate Data Sets, then click "Generate Reporting Data Sets".

1. After selecting Analysis > Reports, navigate through the following folders: CMS Reports > Long Term Acute Care Hospitals (LTCHQR) > SIR - CDI FacWideIN LabID Data for LTCHQR. After clicking the title of the report, click "Run" on the subsequent pop-up menu.

2. By default, the results will appear in an HTML window. If a second window does not pop-up, please be sure to check your pop-up blocker and allow pop-ups from *.cdc.gov.
3. Within the output, there may be multiple tables, each described below. ***Data presented below are fictitious.***

a. **SIR Example Report:**
   "SIR - CDI FacWideIN Data for LTCHQR"

   The table represents an overall single SIR for your facility, per calendar quarter. This is the information that will be submitted to CMS for each facility, as indicated by the facility's CCN.

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SIR for CDI FacwideIN for LTCHQR (2015 baseline)

As of: December 2, 2019 at 8:57 AM
Date Range: BS2_LABID_RATESCDIFLTAC_CMS summaryYQ 2018Q1 to 2018Q2
if (((cdifLabIDPlan = "Y")))

orgID	location	summaryYQ	months	CDIF_facIncHOCount	numPred	numpatdays	SIR	SIR_pval	sir95ci
10451	FACWIDEIN	2018Q1	3	0	0.673	936	.	.	

1. This report includes facility-wide inpatient data from LTACs for 2015 and forward.
2. The SIR is only calculated if number predicted (numPred) is >= 1. Lower bound of 95% Confidence Interval only calculated when number of observed events > 0.
3. The # of predicted events is calculated based on national 2015 NHSN data. It is adjusted for inpatient community-onset CDI prevalence rate, percent of annual admissions on a ventilator, CDI test type, and percent of rooms that are single occupancy.
4. Events from rehabilitation wards and behavioral health/psych wards with a unique CCN are excluded. Information on how to determine which events are counted in the SIR can be found here: http://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/mrsacdi_tips.pdf
5. If any risk factor data are missing, the record is excluded from the SIR.
Source of aggregate data: 2015 NHSN CDI LabID Data

Using the table above, we can conclude the following:

o For the first quarter of 2018, this facility reported three months of CDI LabID (*months*).
o The facility identified 0 incident healthcare facility-onset (HO) CDI LabID events (*CDIF_facIncHoCount)* among 936 patient days (*numpatdays*). For more information about which events are counted in the numerator of the SIR, refer to the LabID SIR Troubleshooting document (see Additional Resources below).
o The number of predicted FacWideIN incident, HO CDI LabID events (*numPred*) was 0.673.
o The SIR cannot be calculated when the number of predicted events is less than 1. This is the minimum precision criterion used throughout all of NHSN's SIR calculations. More information can be found in the SIR Guide (see Additional Resources below).
o The p-value (*SIR_pval*) and 95% confidence interval (*sir95ci*) are not calculated because the SIR is not available.

NOTE: If the number of predicted events is less than 1, an SIR, p-value, and 95% confidence interval will not be calculated. However, assuming all other reporting requirements are met, the SIR data are considered "complete" and will still be submitted to CMS in order to comply with Quality Reporting Programs.

o Be sure to read the footnotes beneath the SIR report for important information about the SIR calculation.

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b. SIR Risk Factors Example Report
"Risk Adjustment Factors for LTAC FacWideIN CDI SIR"

The table below presents the SIR-associated risk factors used in the calculation of your facility's SIR for each calendar quarter. This information is provided to help a facility understand their SIR calculation and ensure accuracy of each risk adjustment variable. These data are **not** submitted to CMS. Additional details regarding the SIR risk factors can be found in the SIR Guide (see Additional Resources below).

Risk Adjustment Factors for LTAC FacwideIN CDI SIR
As of: December 2, 2019 at 9:34 AM
Date Range: BS2_LABID_RATESCDIFLTAC_CMS summaryYQ 2018Q1 to 2018Q2
if (((cdifLabIDPlan = "Y")))

summaryYQ	CDI_COprevRate	cdiTestType	pctVentAdm	pctSingleOccRm	numpatdays
2018Q1	0.000	EIA	1.882461	13.333333	936

1. The table above displays the values that are included in the calculation of your LTAC's CDI LabID Event SIR.
2. If any risk factor data are missing, the record is excluded from the SIR.

c. Incomplete Quarters
"CDI Data – Months Excluded from SIR Due to Missing CDI Test Type"

An additional table may appear if there are any incomplete/partial quarters of CDI LabID data entered in NHSN. The CDI SIR can only be calculated at the end of a quarter, once CDI Test Type has been reported. If CDI test type has not yet been entered in NHSN for a quarter, any months for which data *have* been entered into NHSN for that quarter will be identified in the table below. These data are **not** submitted to CMS.

CDI Data - Months Excluded from SIR Due to Missing CDI Test Type
As of: December 2, 2019 at 9:34 AM
Date Range: BS2_LABID_RATESCDIFLTAC_CMS summaryYQ 2018Q1 to 2018Q2
if (((cdifLabIDPlan = "Y")))

orgID	location	summaryYM	CDIF_facIncHOCount	numPatDays	numAdms	cdiTestType
10451	FACWIDEIN	2018M04	0	1652	200	
10451	FACWIDEIN	2018M05	0	1245	100	

1. This table displays months that are excluded from the SIR report. These months will be included in the SIR once reporting for the entire quarter has been completed and CDI test type has been reported.

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Using the table above, we can conclude the following:

- o This facility has entered April and May 2018 CDI LabID data into NHSN, but *has not yet entered June 2018 data*. In April and May, there were 0 incident, healthcare-onset CDI LabID events reported.
- o The facility reported 1,652 patient days in April and 1,245 patient days in May. The facility reported 200 admissions in April and 100 admissions in May.
- o April and May are currently excluded from the facility's SIR because CDI test type is missing for 2018 Q2 (i.e., June data have not been reported). Once CDI test type is reported on the June FacWideIN denominator form, these months will be included in the SIR.

4. What can be done if a quarter does not appear in the table, if one or more months are missing, or if the data are inaccurate?
   a. Check that the summary data for the FacWideIN location have been entered for each month in the quarter and double-check the accuracy of these data, which includes patient days and admissions.
   b. If summary data have been entered, double-check your monthly reporting plan for each month in the quarter. Check to make sure that CDI LabID surveillance is included in your monthly reporting plan for the location FacWideIN.
   c. If summary data have been entered and no CDI LabID events have been identified in a month, be sure to check the 'Report No Events' box on the summary record or through the "Missing Events" alerts tab.
   d. If the number of events is less than you reported *and* you've confirmed that the summary data have been entered in-plan, double check the CDI LabID events in NHSN using CDIF LabID Events line list.

REMEMBER: If you have made any changes to your data, regenerate your datasets in order to review your output options with the most up-to-date data in NHSN.

Additional Resources:

Troubleshooting MRSA and CDI LabID Event SIR:
https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/mrsacdi_tips.pdf

CMS Resources for NHSN Users:
http://www.cdc.gov/nhsn/cms/index.html

Operational Guidance for LTACHs to report CDI:
https://www.cdc.gov/nhsn/pdfs/cms/ltac/ltch-cdi-op-guidance.pdf

Analysis Quick Reference Guides:
http://www.cdc.gov/nhsn/PS-Analysis-resources/reference-guides.html

NHSN's Guide to the SIR:
https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf

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