

Using the “SIR – CAU Data for CMS LTCH PPS” Output Option

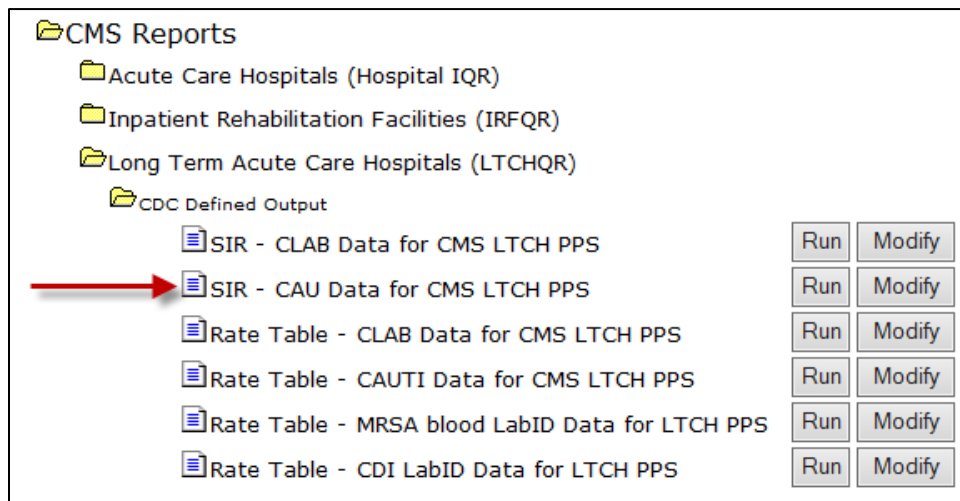
The NHSN Analysis Output Option, “SIR – CAU Data for CMS LTCH PPS” was created in order to allow long term care hospitals (known as long term acute care hospitals, or LTACHs, in NHSN) to review those data that would be submitted to CMS on their behalf if they are participating in the CMS LTCH Quality Reporting Program. It’s important to keep in mind the following as you begin to use this report:

- a. These data will only be submitted for those facilities that are participating in the CMS Long Term Care Hospital Quality Reporting Program, as indicated by their CCN recorded in NHSN.
- b. This report will only include **in-plan CAUTI data for each LTACH ICU and ward location beginning with January 2014 data**. Earlier time periods for which you may have reported CAUTI data will not be included in this output. Note that rates were used through 2013 for CMS submission.
- c. **IMPORTANT!** Facilities must appropriately **Report No Events** for those locations and months for which no CAUTI events were identified.
- d. This output option provides an SIR for each LTACH, not each CCN. If your LTACH shares a CCN, the SIR will only represent the data that your LTACH has contributed to the overall SIR for all LTACHs that share the CCN. You may wish to use the Group function in NHSN to be able to view the SIR for all LTACHs that share a CCN. More information about the Group function can be found here: <http://www.cdc.gov/nhsn/group-users/index.html>.
- e. The SIR that will be shared with CMS and presented in this output option is calculated at the facility-level. Separate SIRs will be calculated for each LTACH location to allow for data accuracy checks.
- f. The data in this report will represent data current as of the last time you generated datasets. Data changes made in NHSN will be reflected in the next monthly submission to CMS. **EXCEPTION:** Quarterly data are frozen as of the final submission date for that quarter (e.g., Q1 data will be frozen as of 1am ET on May 16th); any changes made to these data in NHSN after the final submission deadline will not be reflected in data shared with CMS.
- g. The information in this document should be used in conjunction with the document, “Helpful Tips for CAUTI Reporting for the Centers for Medicare and Medicaid Services’ Long Term Care Hospital Quality Reporting Program”, available at <http://www.cdc.gov/nhsn/PDFs/CMS/Helpful-Tips-CAUTI-LTAC.pdf>.

Example of the “SIR – CAU Data for CMS LTCH PPS” Output Option:

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 New”.

1. After selecting Analysis > Output Options, navigate through the following folders: CMS Reports > Long Term Acute Care Hospitals (LTCHQR) > CDC-Defined Output. Click “Run” next to “SIR – CAU Data for CMS LTCH PPS”, as shown below:



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. There will be four tables within the output, each described below:
 - i. **“SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS” – By OrgID**

The first table presents an SIR for each calendar-year quarter, for the entire facility. This is the information that will be submitted to CMS for your facility.

National Healthcare Safety Network
 SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS - By OrgID

Date Range: CAU_RATESLTAC summaryYr After and Including 2015
 if (((utiPlan = "Y")))

orgid=10546 CCN=999999

orgid	summaryYQ	infCount	numExp	numcathdays	SIR	SIR_pval	SIR95CI
10546	2015Q1	3	1.484	683	2.022	0.2506	0.514, 5.504

If infCount in this table is less than you reported, aggregate data are not available to calculate numExp.
 Lower bound of 95% Confidence Interval only calculated if infCount > 0. SIR values only calculated if numExp >= 1.
 SIR excludes those months and locations where device days are missing.
 Source of aggregate data: 2013 NHSN Data

From this output, we can conclude the following:

- During the first quarter of 2015 (*summaryYQ*), the facility reported 3 CAUTIs (*infCount*) and 683 urinary catheter days (*numcathdays*).
- Based on the National baseline data, 1.484 CAUTIs were predicted (*numExp*). This results in an SIR of 2.022 (*SIR*).
- The p-value is 0.2506 (*SIR_pval*) and the 95% confidence interval is (0.514, 5.504) (*SIR95CI*); both of these results indicate that the facility's SIR is not statistically significantly different than 1.

ii. **“SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS – By OrgID/CDC Location Type”**

The second table provides an SIR for each quarter and location type. The LTAC Locations are categorized as follows:

Location Type	CDC Location Description	CDC Location Code (<i>locCDC</i>)
CC_LTAC	LTAC ICU	IN:ACUTE:CC:LTAC
CC_LTAC	Pediatric LTAC ICU	IN:ACUTE:CC:LTAC_PED
WARD_LTAC	LTAC Ward	IN:ACUTE:WARD:LTAC
WARD_LTAC	Pediatric LTAC Ward	IN:ACUTE:WARD:LTAC_PED

For example, if your LTAC has both an LTAC Ward and a Pediatric Ward, the data for both of these locations would be combined into the SIR for the WARD_LTAC location type. Note that the SIR is not calculated if the number of expected infections (*numExp*) is less than 1. However, even though the SIR is not calculated, each location's data will contribute to the overall SIR for the LTACH.

National Healthcare Safety Network
SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS - By OrgID/Location Type
 Date Range: CAU_RATESLTAC summaryYr After and Including 2014
 if (((utiPlan = "Y")))

orgid=10546 CCN=999999

orgid	locationtype	summaryYQ	infCount	numExp	numcathdays	SIR	SIR_pval	SIR95CI
10546	CC_LTAC	2015Q1	1	0.588	235	.	.	
10546	WARD_LTAC	2015Q1	2	0.896	448	.	.	

If *infCount* in this table is less than you reported, aggregate data are not available to calculate *numExp*.
 Lower bound of 95% Confidence Interval only calculated if *infCount* > 0. SIR values only calculated if *numExp* >= 1.
 SIR excludes those months and locations where device days are missing.
 Source of aggregate data: 2013 NHSN Data

iii. **“SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS - By OrgID/CDC Location Code”**

The third table provides an SIR for each quarter and CDC location (e.g., pediatric LTAC ward). Note that if your facility reports data for more than one location of the same CDC location code (for example, 2 LTAC Wards), these locations will be grouped into one SIR in this table.

SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS - By OrgID/CDC Location Code								
Date Range: CAU_RATESLTAC summaryYr After and Including 2014 if (((utiPlan = "Y")))								
orgid=10546 CCN=999999								
orgid	loccdc	summaryYQ	infCount	numExp	numcathdays	SIR	SIR_pval	SIR95CI
10546	IN:ACUTE:CC:LTAC	2015Q1	1	0.588	235	.	.	.
10546	IN:ACUTE:WARD:LTAC	2015Q1	2	0.896	448	.	.	.

If infCount in this table is less than you reported, aggregate data are not available to calculate numExp.
Lower bound of 95% Confidence Interval only calculated if infCount > 0. SIR values only calculated if numExp >= 1.
SIR excludes those months and locations where device days are missing.
Source of aggregate data: 2013 NHCN Data

iv. **“SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS – By OrgID/Location”**

The fourth table provides an SIR for each quarter and individual location within your facility. This is also the **only** table that will allow you to see how many months of data are included in each location’s quarterly SIR.

For example, looking at the LTAC Ward location below, we can see that the “months” column shows a value of 3, indicating that three months of data have contributed to the quarterly SIR for this location (as one would expect). However, notice that only two months are indicated for the LTAC CC location. **If less than three months contribute to a quarterly SIR, then this indicates that the SIR for that quarter is incomplete and additional data checking is needed.**

National Healthcare Safety Network									
SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS - By OrgID/Location									
Date Range: CAU_RATESLTAC summaryYr After and Including 2014 if (((utiPlan = "Y")))									
orgid=10546 CCN=999999									
orgid	location	summaryYQ	months	infcount	numExp	numcathdays	SIR	SIR_pval	SIR95CI
10546	LTAC CC	2015Q1	2	1	0.588	235	.	.	.
10546	LTAC WARD	2015Q1	3	2	0.896	448	.	.	.

If infCount in this table is less than you reported, aggregate data are not available to calculate numExp.
Lower bound of 95% Confidence Interval only calculated if infCount > 0. SIR values only calculated if numExp >= 1.
SIR excludes those months and locations where device days are missing.

4. What can be done if data are incomplete or if the number of infections or urinary catheter days is incorrect?
 - i. To pinpoint which month(s) is missing from the quarter, the report can be modified to display by month. To make this modification, after selecting Analysis > Output Options, navigate through the following folders: CMS Reports > Long Term Acute Care Hospitals (LTCHQR) > CDC-Defined Output. Click “Modify” next to “SIR – CAU Data for CMS LTCH PPS.”
 - a. On the Analysis SIR Table modification page, scroll down to the Other Options section of the page. Use the drop down menu next to “Group by” to select “Summary YM” to display the SIR report by month. Click the grey “Run” button to run the report.

Sample output for the fourth table, “SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS – By OrgID/Location” is displayed by month below; this sample output shows that CAUTI data are missing for March 2015 (2015M03) in the LTAC CC location:

National Healthcare Safety Network
SIR for Urinary Catheter-associated UTI Data for CMS LTCH PPS - By OrgID/Location
 Date Range: CAU_RATESLTAC summaryYr After and Including 2014
 if (((utiPlan = "Y"))))

orgid=10546 CCN=999999

orgid	location	summaryYM	infcount	numExp	numcathdays	SIR	SIR_pval	SIR95CI
10546	LTAC CC	2015M01	1	0.393	157	-	-	-
10546	LTAC CC	2015M02	0	0.195	78	-	-	-
10546	LTAC WARD	2015M01	0	0.202	101	-	-	-
10546	LTAC WARD	2015M02	1	0.358	179	-	-	-
10546	LTAC WARD	2015M03	1	0.336	168	-	-	-

If infCount in this table is less than you reported, aggregate data are not available to calculate numExp.
 Lower bound of 95% Confidence Interval only calculated if infCount > 0. SIR values only calculated if numExp >= 1.
 SIR excludes those months and locations where device days are missing.
 Source of aggregate data: 2013 NHSN Data

- ii. Once the missing month(s) has been identified, double check the below data elements:
 - a. Check that the summary data for this location have been entered for the month. This includes urinary catheter days and patient days.

- b. If summary data have been entered, double-check your monthly reporting plan for that month. Check to make sure that each location is included in your monthly reporting plan, with the CAUTI box checked.
- c. If summary data have been entered and no CAUTIs have been identified, be sure to check the 'Report No Events' box either on the summary record, next to the Urinary Catheter days count, or through the "Missing Events" tab on the Alerts page.
- d. If the number of infections is less than you reported *and* you've confirmed that the summary data have been entered in-plan, double check the UTI events in NHSN: if urinary catheter is entered as "Neither", the event is *not* considered a CAUTI and will not appear in this report. Note that you can edit the event with the correct information.

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:

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

Operational Guidance: http://www.cdc.gov/nhsn/PDFs/CMS/LTCH-CAUTI-Guidance_2015.pdf

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

