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We suggest that you review the [General Tips for NHSN Analysis](#) document before reviewing this troubleshooting guide any further. This guide assumes recent dataset generation and no 'Alerts' on the home screen.

➢ **SSI SIR general information:**

- SSI baseline time period: 2015-present
- Factors used in the risk adjustment the SSI SIR models summarized in the SSI section of the NHSN Standardized Infection Ratio (SIR) Guide to the SIR: [https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf.](https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf) Also find the inclusion and exclusion criteria for SSI data in the SIR Guide.
- The All-SSI Data and the Complex Admission/Readmission SSI Data reports are in the SSI sub folder of the Procedure associated Module folder. The Complex 30-day SSI Data is in the Acute Care Hospital sub folder of the CMS folder, both under Analysis tab in NHSN

➢ **Problem #1: The SIR output shows fewer procedures than I have entered in NHSN.**
   Solution:

Step 1: Check to see if you have any excluded procedures due to outlier or missing values (potential data entry error). Excluded procedures can be found at the bottom of the SSI SIR output, in a table called "Incomplete and Custom Procedures not included in the SIR".

Step 1a: If you have excluded procedures, run the "Line Listing - Procedures Excluded from SSI SIR" to investigate the reason each procedure was excluded. If there is a data entry error, make appropriate changes to the procedure records and re-generate datasets. If the data are correct and no changes are needed, note that those procedures will continue to be excluded from the SIR. A step by step guide on how to generate and interpret the "Line Listing - Procedures Excluded from SSI SIR" report can be found here: [Line List: Procedures Excluded from the SIRs (cdc.gov)](#).

Step 2: If you do not have excluded procedures but your procedure count in the SIR is still too low, review the procedure inclusion criteria for the SSI model you are currently using. Please see Table 1 of the SSI section, located in the SSI section of the SIR Guide for summary of SSI inclusion criteria. Remember, if an event is excluded from the SSI SIR the linked procedure will also be excluded from the SSI SIR. Inclusion criteria for the Complex 30-day SSI SIR model, used for CMS IPPS, are shown below:

- **In-plan** and **inpatient** COLO and HYST procedures
- Patient ≥ 18 years of age on procedure date

Step 2a: To further investigate, run the "Line Listing- All Procedures", found in the Supplemental Reports folder of the Analysis options in NHSN. Using the Modify option, limit the line listing to the appropriate time period and add the appropriate "bs2_modelRisk" variable to the line list, depending on the SSI model you are using (i.e., "bs2_modelRiskAdultAll", "bs2_modelRiskAdultCmpx, "bs2_modelRiskComplex30", "bs2_modelRiskPedAll", or "bs2_modelRiskPedCmpx").

Step 2b: Any procedure record in which the bs2_modelRisk variable is not calculated, indicated by ".", is excluded from the SIR. Review all materials above to determine the cause(s) for exclusion.

Step 3: If appropriate, you may need to check your monthly reporting plan to ensure that each procedures category is listed for each month. In addition, each procedure category and each patient setting (inpatient vs. outpatient) in your monthly reporting plans must have either event entered, or the "No Events" box checked.

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Problem #2: The SIR output shows fewer events than I have entered in NHSN.

Solution: Since each SSI SIR model/report includes different events, it is important to start troubleshooting this problem with confirming which SSI SIR model/report you are running. Then run the "Line Listing – All SSI Events" for the appropriate time period to review details about each SSI event. Then review the event inclusion criteria for each SSI model using the event indicator. A step by step guide on how to generate and interpret the SSI inclusion criteria can be found here: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/ssi-events-line-list-qrg.pdf

An important aspect of this problem to note is that the SIR output may show fewer events because the events are "present at time of surgery (PATOS) = Yes events". Under the 2015 baseline, PATOS=Yes events are excluded from all the SSI SIR numerators and the procedures they are associated with are also excluded from all SSI SIR denominators.

Additional Resources:

Standardized Infection Ratio (SIR) Table, Surgical Sire Infections:
https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/sirtablesssi.pdf

FAQs: NHSN SSI Rebaseline:
https://www.cdc.gov/nhsn/pdfs/rebaseline/faq-ssi-rebaseline.pdf