

Troubleshooting your SSI SIR

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: 2006-2008
- Risk adjustment used for the All SSI model and the Complex A/R model:
http://www.cdc.gov/nhsn/PDFs/pscManual/SSI_ModelPaper.pdf
- Complex 30 day model for CMS IPPS uses only age and ASA score in the risk adjustment.

➤ **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 errors). 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 2:** 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. Exclusion criteria can be found in Appendix C:
http://www.cdc.gov/nhsn/PDFs/Newsletters/NHSN_NL_OCT_2010SE_final.pdf
- **Step 3:** 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 (found on page 4 from the link above). Inclusion criteria for the Complex 30 day 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 3a:** To further investigate, run the "Line Listing- All Procedures", found in the Advanced folder of the Analysis options in NHSN. Using the Modify option, limit the line list to the appropriate time period and add the appropriate "modelRisk" variable to the line list, depending on the SSI model you are using (i.e., "modelRiskALL", "modelRiskComplex", or "modelRiskComplex30d").
- **Step 3b:** Any procedure record in which the modelRisk variable is not calculated, indicated by ".", is excluded from the SIR. Review all materials above to determine cause for exclusion.
- **Step 4:** If appropriate, you may need to check your monthly reporting plan to ensure that each procedure 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 events entered, or the 'No Events' box checked.

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

Solution: Which model are you running? Review the event inclusion criteria for each SSI model, found on page 4 of the NHSN newsletter above. Event inclusion criteria for the Complex 30 day model (for CMS IPPS) are shown below. Run the "Line Listing- All SSI Events" for the appropriate time period to review details about each SSI.

- Deep incisional primary and organ/space SSIs
- SSIs identified within 30 days of the procedure date