

**California Department of Public Health
Surgical Site Infection (SSI)
Quality Assurance/Quality Control Report**

Using NHSN Analysis to Review and/or Correct “Excluded Procedures”

The surgical procedures identified as Excluded Procedures on your CDPH QA/QC report need to be reviewed and/or corrected so that your hospital SSI SIRs can be calculated accurately. Procedures meeting the exclusion criteria for IQR5 do not need to be corrected if duration is correct. To locate and correct the Excluded Procedures (formerly “incomplete procedures”), you will need to run a report using NHSN Analysis features. In this document, we will demonstrate how to locate and run a line listing of excluded procedures so that you can correct errors.

SAMPLE: SSI QA/QC Report sent to a hospital by CDPH

PROCEDURE CODE	PROCEDURE DESCRIPTION	MONTHS IN PLAN	MONTHS REPORTED	COMPLEX EVENTS	COMPLETE PROCEDURES	EXCLUDED PROCEDURES	TOTAL PROCEDURES
CARD	Cardiac surgery	6	6	0	21	0	21
CBGB	Coronary bypass graft with chest incision	6	6	0	54	0	54
CHOL	Gallbladder surgery	6	6	0	146	1	147
COLO	Colon surgery	6	6	0	63	0	63
CSEC	Cesarean section	6	6	1	508	0	508
FUSN	Spinal fusion	6	6	1	15	7	147
FX	Open reduction of fracture	6	6	3	95	0	95

Please note: the examples provided in this document contain screenshots from a fictitious facility with fictitious data.

One way to identify if you have missing (excluded) procedures is to review the Action Items tab when you log onto NHSN. Note if you have an Alert for “missing procedures.”

NHSN Patient Safety Component Home Page

Use the Navigation bar on the left to access the features of the application.

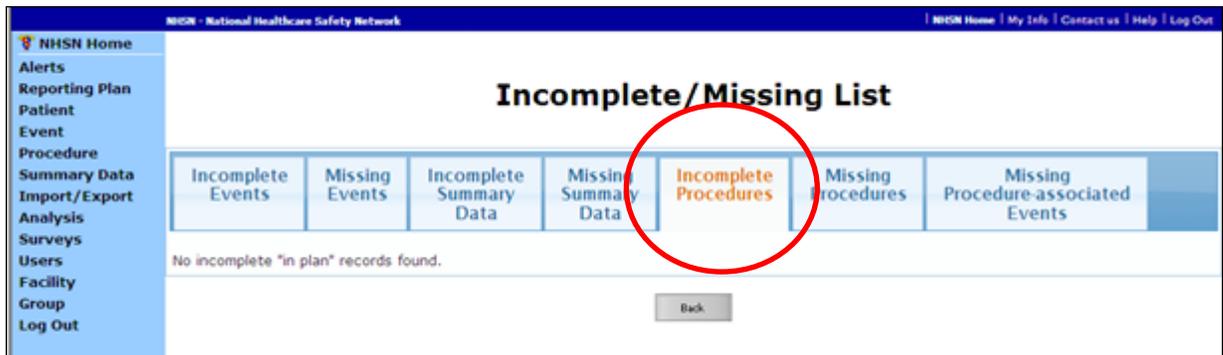
Action items

You must complete these items.

Alerts

- You have 9 missing events
- You have 1 incomplete summary item
- You have 1 missing summary item
- You have 106 missing procedures**
- You have 11 missing Procedure-associated events

By clicking on the “missing XX Procedures” hyperlink (in this example, the number 106), NHSN will take you to a list of the incomplete procedures.



Note: Even if you have no missing procedure Alerts on your NHSN home page and “no incomplete ‘in plan’ records found” on the Incomplete Procedures tab (accessed through the home page Alerts) does not necessarily mean you have no incomplete procedure records. If a procedure category is not in plan in your monthly Reporting Plan, incomplete procedures will not show up as Alerts.

To verify that all your Procedure records are complete, always perform the following ‘double-check.’

Always begin by generating a data set prior to using the Analysis features to ensure all data are current.

1. In the NHSN Portal, on the left blue navigation bar, click Analysis → Output Options → Procedure-Associated Module → SSI → CDC-Defined Output → Line Listing – Procedures Excluded from SSI SIR → Modify

Patient Safety Component
Analysis Output Options

Expand All Collapse All

1 Patient
2 Event
3 Procedure
4 Summary Data
5 Import/Export
6 Analysis
7 Surveys
8 Users
9 Facility
10 Group
11 Log Out

12 Device-Associated Module
13 Procedure-Associated Module 3
14 All Procedure-Associated Events
15 4 SSI
16 5 CDC Defined Output
17 Line Listing - All SSI Events
18 Frequency Table - All SSI Events
19 Bar Chart - All SSI Events
20 Pie Chart - All SSI Events
21 SIR - Complex AR SSI Data by Procedure
22 SIR - Complex AR SSI Data by Surgeon
23 SIR - In-plan Complex AR SSI data by Procedure
24 SIR - In-plan Complex AR SSI data by Surgeon
25 SIR - All SSI Data by Procedure
26 SIR - All SSI Data by Surgeon
27 SIR - In-plan All SSI Data by Procedure
28 SIR - In-plan All SSI data by Surgeon
29 6 Line Listing - Procedures Excluded from SSI SIR
30 Run Modify 7
31 Post-Procedure PNEU
32 MDRO/CDI Module - Infection Surveillance
33 MDRO/CDI Module - LABID Event Reporting
34 MDRO/CDI Module - Process Measures

Click in order:

1. Analysis
2. Output Options
3. Procedure-Associated Module
4. SSI
5. CDC Defined Output
6. Line Listing – Procedures Excluded from SSI SIR
7. Modify

2. After clicking “Modify”,
 - Give your Output a name if you wish.
 - Select output format. “HTML” format is the default and looks the nicest. However, select “CSV” format if you plan to export your analysis to an Excel spreadsheet.
 - Check the box Use Variable Labels for ease of reading column headers.
 - Choose your time period
 - Date Variable: procDateYM
 - Beginning: 01/2012
 - Ending: 06/2012

Frequency Table

Analysis Data Set: SSI_Events

Modify Attributes of the Output:

Last Modified On: **09/17/2012**

Output Type: **Line Listing**

Output Name:

Output Title:

Select output format:

Output Format:

Use Variable Labels

Select a time period or Leave Blank for Cumulative Time Period:

Date Variable Beginning Ending

Enter Date variable/Time period at the time you click the Run button

- Select a Date Variable. Since we are referencing a short time period, months (procDateYM) would be best.
- Use 01/2012 and 06/2012 for your beginning and ending dates

3. Go to the “Specify Other Selection Criteria”

- Column 1: Select “cmpx_incomplete” from the dropdown, chose “= Y” for the cell directly below
- Column 2: Select “outpatient”, chose “= N” as a modifier
- Column 3: Here is an option to select “procCode” if you want to select specific procedure(s) you wish to follow up on (in this example, FUSN) –OR- you can leave it blank to get all procedures

Output Title:

Select output format:
Output Format:

Use Variable Labels

Select a time period or Leave Blank for Cumulative Time Period
Date Variable: Beginning: Ending:

Enter Date variable/Time period at the time you click the Run button

Specify Other Selection Criteria:
[Show Criteria](#) [Column +](#) [Row +](#) [Clear Criteria](#)

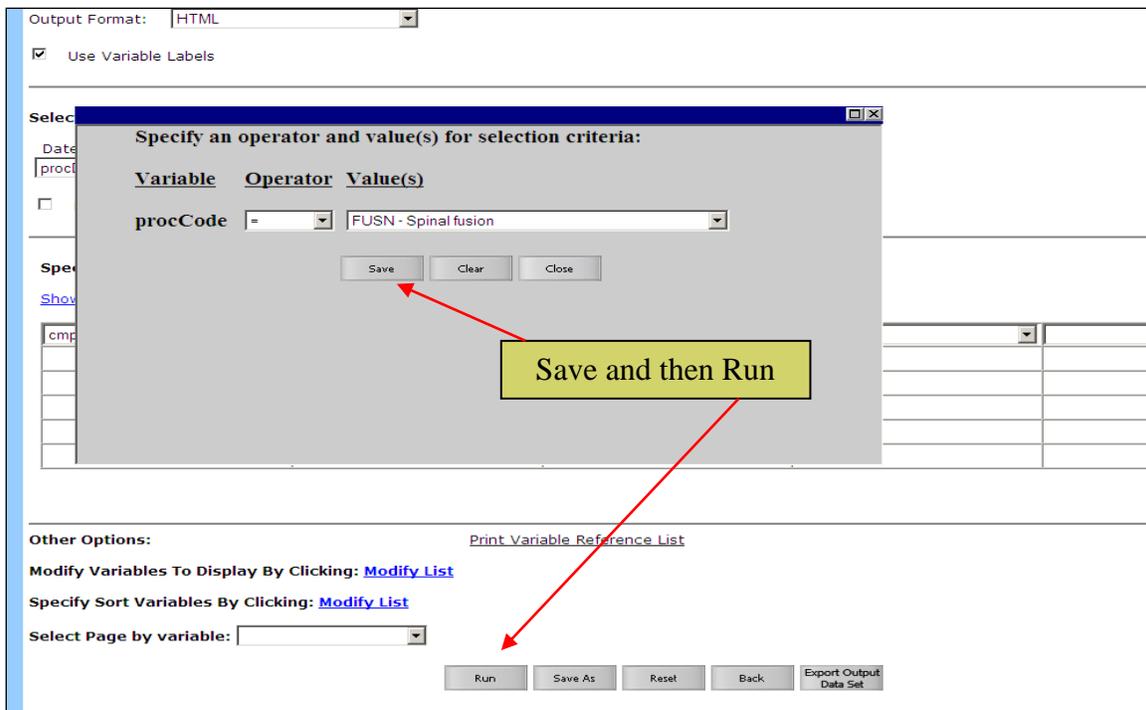
Variable	Value	Variable	Value	Variable	Value
cmpx_incomplete	= y	outpatient	= N	procCode	= FUSN

Other Options: [Print Variable Reference List](#)
Modify Variables To Display By Clicking: [Modify List](#)

NOTE: Why do you choose “cmpx_incomplete” when modifying data?

“Cmpx_incomplete” identifies your procedure records that are missing or have errant values in one or more of the denominator data fields needed to calculate the Complex A/R SIR.

- Click “Save” if you have selected specific procedures. Finally, click “Run” to produce the report.



Per CA statute, required procedure categories listed in All Facilities Letter (AFL) 11-32 performed in your hospital *must be included in your NHSN monthly reporting plans*. For all AFL 11-32 designated procedure categories, per SB 1058, CDPH is only required to publicly report deep incisional and organ/space surgical site infections. In NHSN, “Complex A/R” analysis options include *“only inpatient procedures and Deep Incisional Primary and Organ/Space SSIs that were identified during admission (A) or readmission to your facility (R).”*

4. Analysis output results for the FUSN example are shown below.

all_incomplete	cmpx_incomplete	procDate	procCode	dob	gender	procDurationHr	procDurationMin	anesthesia	approach	asa
Y	Y	01/06/2012	FUSN	.		4	30	Y	N	2
Y	Y	01/03/2012	FUSN	.		6	36	Y	N	2
Y	Y	01/05/2012	FUSN	.		4	48	Y	N	3
Y	Y	01/06/2012	FUSN	.		1	26	Y	N	1
Y	Y	01/11/2012	FUSN	.		3	26	Y	N	1
Y	Y	01/25/2012	FUSN	.		2	19	Y	N	3
Y	Y	01/17/2012	FUSN	.		0	56	Y	N	2

Continued

emergency	endoscope	swClass	trauma	wtMetric	htMetric	diabetes	hpro	kpro	hrLabor	medAff	numBeds	spinalLevel
N	N	C	N	.	.	N			.	N	311	N
N	N	C	N	.	.	Y			.	N	311	N
N	N	C	N	.	.	N			.	N	311	N
N	N	C	N	.	.	N			.	N	311	N
N	N	C	N	.	.	N			.	N	311	N
N	N	C	N	.	.	N			.	N	311	N
N	N	C	N	.	.	N			.	N	311	N

5. Compare the NHSN report (above) to your hospital's CDPH QA/QC report (below).

PROCEDURE CODE	PROCEDURE DESCRIPTION	MONTHS IN PLAN	MONTHS REPORTED	COMPLEX EVENTS	COMPLETE PROCEDURES	EXCLUDED PROCEDURES	TOTAL PROCEDURES
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6. The NHSN results can also be exported for further review. You will need to identify missing data and correct your procedure records in NHSN.

The screenshot shows the NHSN web interface. At the top, it says "Department of Health and Human Services, Centers for Disease Control and Prevention". Below that, it says "NHSN - National Healthcare Safety Network". The user is logged in as "SUECHEN" from "California General Hospital". The main heading is "Export Output Options". Underneath, it says "Exporting Option Line Listing - Incomplete Procedures for SSI SIR: Select data export format". A dropdown menu is set to "Excel spreadsheet (*.xls)". There are "Export" and "Back" buttons at the bottom.

ESSENTIAL RESOURCE for Correction of Errant Data

<http://www.cdc.gov/nhsn/newletters.html> is the link to NHSN Newsletters. Print out and keep handy the special edition noted below. There is no shortcut for side-by-side comparison.

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2010

- **October 2010 - NHSN Newsletter** [PDF - 374 KB]
CMS Hospital Inpatient Quality Reporting Program
NHSN Puroses and Confidentiality Assurance Changes
NHSN Application Updates
- **October 2010: Special Edition - NHSN Newsletter** [PDF - 538 KB]
Your Guide to the Standardized Infection Ratio
Central Line-associated Bloodstream Infection (CLABSI) SIRs
Surgical Site Infection (SSI) SIRs
Samples of SIR Output and List of SIR Risk Factors
- **July 2010 - NHSN Newsletter** [PDF - 587 KB]
Biovigilance Component Updates
Case Studies
Patient Safety Manual and Document Updates
Spotlight: CDC/DHQP Visits Facilities in Oregon
Questions and Answers

- On Page 11, **Appendix C** gives a sample of criteria that when present, will exclude that procedure from SIR calculations.
- On page 13, **Appendix D**, mandatory risk factors for Complex A/R SSIs are listed.
- On page 14, **Appendix E** gives time values for surgeries that exceed the maximal time limit.

FINAL NOTES:

If temporarily entering surgical procedure data into NHSN “out of plan,” various data fields will show as optional and will be marked with an (>). When the procedure is put “in plan”, the (>) will change to an asterisk (*), meaning it is now an essential data point. If not filled in, the data point will show as incomplete and the data will be excluded from SIR calculations.

CDPH requires reporting of surgical procedure data and SSIs “in plan.”

Note: The bottom of your QA/QC report has the date the data was downloaded from NHSN. If you have modified your data since this date, your data could be different than the report.

*DO NOT CITE OR DISTRIBUTE: These tables contain DRAFT data which are not yet substantiated.
On September 17, 2012 these data were downloaded from NHSN. If you have any data related questions, please feel free to email HAI_DATA@cdph.ca.gov.*