Patient Safety Component – Trouble shooting Surgical Site Infection SIR – How to examine excluded procedures

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Objectives

At the end of this presentation, the participant will be able to identify procedures that are excluded from the Surgical Site Infection (SSI) Standardized Infection Ratio (SIR) models and understand why these procedures were excluded.
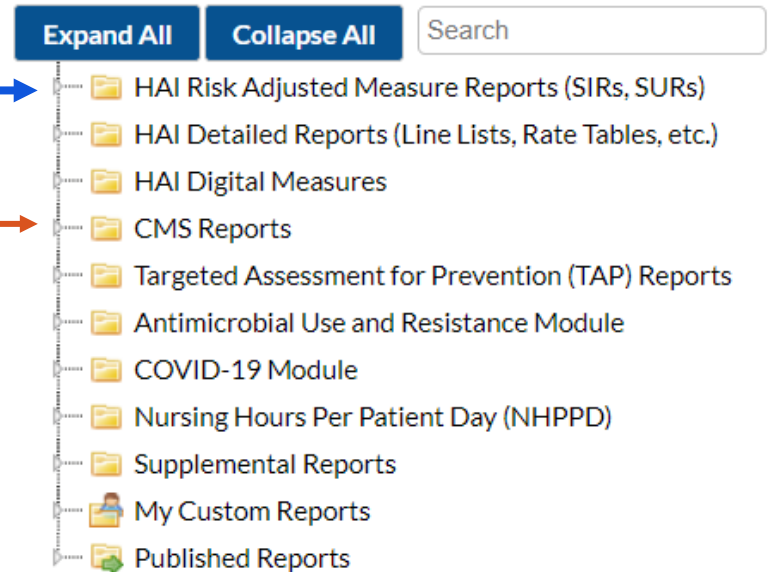
- The presenter will use scenarios to demonstrate the following:
    - how to recognize that procedures are excluded from the SSI SIR and
    - how to generate the list of procedures excluded from the SSI SIR using various Analysis Reports

Please note "Fictitious data used for illustrative purposes only."

The Surgical site infection (SSI) SIR models

- NHSN uses the Standardized Infection Ratio (SIR) as a summary measure used to track HAIs at a national, state, or local level.

- SSIs have seven SIR model reports in the NHSN Patient Safety Module

  - Complex Admission/Readmission (A/R) SSI SIR

  - Complex Pediatric Admission/Readmission (A/R) SSI SIR

  - Adult All SSI SIR

  - Pediatric All SSI SIR

  - Adult All Outpatient SSI SIR

  - Pediatric All Outpatient SSI SIR

  - Adult Complex 30-Day SSI SIR

Expand All **Collapse All** Search

- 📁 HAI Risk Adjusted Measure Reports (SIRs, SURs)
- 📁 HAI Detailed Reports (Line Lists, Rate Tables, etc.)
- 📁 HAI Digital Measures
- 📁 CMS Reports
- 📁 Targeted Assessment for Prevention (TAP) Reports
- 📁 Antimicrobial Use and Resistance Module
- 📁 COVID-19 Module
- 📁 Nursing Hours Per Patient Day (NHPPD)
- 📁 Supplemental Reports
- 📁 My Custom Reports
- 📁 Published Reports

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SSI SIR numerator inclusion criteria by model

2015 national baseline

All SSI SIR Model (inpatient adult and pediatric patients)	Complex Admission/Readmission (A/R) SSI Model (inpatient adult and pediatric patients)	Complex 30-Day SSI model (used for CMS IPPS) (inpatient adult patients)	All Outpatient SSI SIR (outpatient adult patients)
• Only inpatient procedures • Includes Superficial, Deep & Organ/Space SSIs • Superficial & Deep Incisional SSIs limited to primary incisional SSIs • Identified on admission, readmission & via post-discharge surveillance	• Only inpatient procedures • Only Deep Incisional Primary SSIs & Organ /Space SSIs • Only SSIs identified on Admission/Readmission to the original facility • Used for the annual CDC publication of national benchmarks	• Only in-plan inpatient COLO and HYST procedures in adult patients • Only Deep Incisional Primary SSIs and Organ /Space SSIs with an event date within 30 days of the procedure • Includes SSIs of any detection method • Used only for CMS IPPS* reporting and for public reporting on CMS Care Compare^	• Includes only hospital outpatient procedures • Includes Superficial Deep & Organ/Space SSIs • Superficial & Deep Incisional SSIs limited to primary incisional SSIs only • Includes SSIs identified on admission, readmission & via post-discharge surveillance

*Centers for Medicare and Medicaid Services – Inpatient Prospective Payment System
^ https://www.medicare.gov/care-compare/

When is a procedure excluded from the SIR calculation?

Universal Exclusion Criteria – Applies to SSI SIR Models

2015 national baseline

General Exclusions	Exclusions due to potential data quality issues or outliers	Facility-level Exclusions
• Gender= 'Other' • Outpatient procedures and resulting SSIs (for inpatient SSI SIR models only) • Present at time of surgery (PATOS) is 'Yes' • SSIs that are reported as superficial incisional secondary (SIS) or deep incisional secondary (DIS)	• Age at the time of procedure is greater than 109 years • Missing risk factors from the procedure form • Adult patients $\geq$ 18 years: if BMI is less than 12 or greater than 60 • Pediatric patients < 18 years: if BMI less than 10.49 or greater than 65.79. (BMI exclusions are applied after biological plausibility is established, based on the child's age, gender, height, weight) • Procedure duration less than 5 minutes • Procedure duration is greater than IQR5 (please see Table 4 in the SSI Section for more information)	• Data from ambulatory surgery centers (ASCs), public health emergency facilities (PHE), inpatient rehabilitation facilities (IRFs), and long-term acute care hospitals (LTACHs)

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How can you tell if a procedure has been excluded from an SSI SIR model calculation?
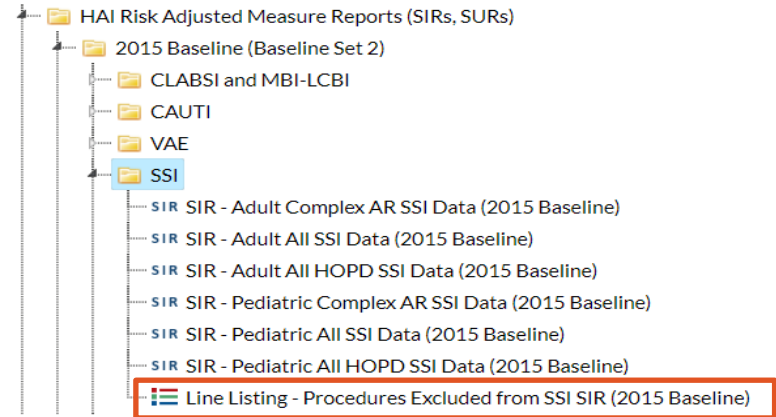
- **Incomplete Table in SIR Report**

National Healthcare Safety Network
Incomplete and Custom Procedures not Included in SIR
As of: January 23, 2024 at 2:26 PM
Date Range: BS2_SIR_ADULTALLSSIPROC summaryYr 2022 to 2022

orgID=10018 medType=U

summaryYM	orgID	ccn	procCode	proccount	infCountAdultAll
2022M11	10018	66666	BRST	1	0
2022M01	10018	66666	COLO	2	0
2022M02	10018	66666	COLO	1	0
2022M03	10018	66666	COLO	1	0
2022M04	10018	66666	COLO	1	0
2022M01	10018	66666	FUSN	1	0
2022M01	10018	66666	HPRO	1	0
2022M01	10018	66666	HYST	2	0

- **Line Listing – Procedures Excluded from SSI SIR Report**

- HAI Risk Adjusted Measure Reports (SIRs, SURs)
  - 2015 Baseline (Baseline Set 2)
    - CLABSI and MBI-LCBI
    - CAUTI
    - VAE
    - SSI
      - SIR SIR - Adult Complex AR SSI Data (2015 Baseline)
      - SIR SIR - Adult All SSI Data (2015 Baseline)
      - SIR SIR - Adult All HOPD SSI Data (2015 Baseline)
      - SIR SIR - Pediatric Complex AR SSI Data (2015 Baseline)
      - SIR SIR - Pediatric All SSI Data (2015 Baseline)
      - SIR SIR - Pediatric All HOPD SSI Data (2015 Baseline)
      - Line Listing - Procedures Excluded from SSI SIR (2015 Baseline)

1. Run SIR Report →
2. Observe last table on SIR report with summary of excluded procedures →
3. Run line list of procedures for details of exclusion

"Fictitious data used for illustrative purposes only."

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D3- Donnelly – Trouble Shooting SSI SIR – Q1:

- How many of you have used the Line Listing – Procedures Excluded from SSI SIR Report to examine why a procedure may have been excluded from the SSI SIR calculation?

  – Yes

  – No

Excluded Procedure and Event Scenarios

Scenario 1 – Trouble shooting universal exclusion criteria

Facility infection preventionist (IP) indicates the facility reported 73 COLO procedures in 2022. Of these, four had an SSI event. The facility knows that two SSIs were present at time of surgery (PATOS).

The SIR-ACH Complex 30-Day SSI Data for CMS IPPS report is showing 1 SSI event.

- ✓ Shouldn't the report list 2 SSI events, as the 2 PATOS infections are excluded?

- ✓ Why was the other SSI Excluded?

Scenario 1 – Trouble shooting universal exclusion criteria

Step 1. Run the Line Listing – All Infection Events

Modify Reports Options

Scenario 1 – Trouble shooting universal exclusion criteria

Step 1. Run the Line Listing – All Infection Events → **Modify Reports Options** → **Select Display Variables**

Modify "Line Listing - All SSI Events"

☑ Show descriptive variable names (Print List)   Analysis Data Set: SSI_Events   Type: Line Listing   Last Generated: January 24, 2

| Title/Format | Time Period | Filters | **Display Variables** | Sort Variables | Display Options |

Display Variables:

Available Variables:
- Surgeon Middle Name
- Surgeon Status
- Suspected COVID-19
- Swelling or inflammation?
- Transplant?
- Trauma
- Type of Approach
- Type of Hip~Prosthesis Procedure
- Type of HPRO/KPRO procedure
- Type of HPRO/KPRO procedure Description
- Type of Knee Prosthesis Procedure
- Vomiting?
- Wound Class
- Wound Class~Description
- Wound spontaneously dehisces?

Buttons: All ▶, Selected ▶, ◀ Selected, ◀ All

Selected Variables:
- Facility Org ID
- Patient ID
- Event Type
- Specific Event
- Procedure Date
- Procedure Code
- Date of Birth
- Age on Proc Date
- Gender
- Duration of~Procedure - hr
- Duration of~Procedure - min
- Outpatient?
- Closure Technique
- SSI Event Detected
- Record Excluded from Adult All SSI Model

Buttons: Up, Down, Undo

Some additional Variables to consider adding,

Infection Present at the Time of Surgery
Specific Event Description
When Detected Description

"Fictitious data used for illustrative purposes only."

Scenario 1 – Trouble shooting universal exclusion criteria

Reviewing the Report Output

National Healthcare Safety Network
Line Listing for All Surgical Site Infection Events
As of: February 9, 2024 at 3:25 PM
Date Range: SSI_EVENTS procDateYr 2022 to 2022
if (((procCode = "COLO")))

Facility Org ID	Patient ID	Event Type	Specific Event	Procedure Date	Procedure Code	Date of Birth	Age on Proc Date	Gender	Duration of Procedure - hr	Duration of Procedure - min	Outpatient?	Closure Technique	SSI Event Detected	Record Excluded from Adult All SSI Model	Record Excluded from Ped All SSI Model	Record Excluded from Adult Complex AR Model	Record Excluded from Ped Complex AR Model	COLO/HYST Excluded from Complex 30 day Model
10018	JA-012	SSI	DIP	01/12/2022	COLO	05/04/1941	80	M	3	43	N	PRI	A	0	1	0	1	0
10018	JA-019	SSI	DIP	01/25/2022	COLO	03/16/1950	71	F	1	20	N	PRI	A	1	1	1	1	1
10018	JA-036	SSI	DIP	02/13/2022	COLO	08/23/1984	37	F	9	5	N	PRI	A	1	1	1	1	1
10018	JA-062	SSI	SIP	03/14/2022	COLO	07/15/1951	70	M	5	56	N	PRI	A	0	1	0	1	0

Information about the patient and the event.

Denotes if the event was excluded one of the SSI SIR models (1 = Yes, No =0)

"Fictitious data used for illustrative purposes only."

Scenario 1 – Trouble shooting universal exclusion criteria

Reviewing the Report Output

National Healthcare Safety Network
Line Listing for All Surgical Site Infection Events
As of: February 9, 2024 at 3:25 PM
Date Range: SSI_EVENTS procDateYr 2022 to 2022
if (((procCode = "COLO")))

All SSI SIR Event	Pediatric All SSI SIR Event	Complex AR SSI Event	Pediatric Complex AR SSI Event	Complex 30-day SSI Event	Infection Present at the Time of Surgery	Specific Event Description	When Detected Description
1	0	1	0	1	N	DIP - Deep Incisional Primary	A - Admission
0	0	0	0	0	Y	DIP - Deep Incisional Primary	A - Admission
0	0	0	0	0	Y	DIP - Deep Incisional Primary	A - Admission
1	0	0	0	0	N	SIP - Superficial Incisional Primary	A - Admission

Information about which SSI SIR models the event is included in

Displays the fields added in the Display Variable

1) The facility reported 4 COLO SSI events for 2022.
2) Two were considered Infection Present at the time of surgery (PATOS)
3) One is a deep incisional primary SSI event
4) One is a superficial incisional primary (SIP) SSI event

The PATOS and SIP events are excluded from this report.
Rationale: For the Complex 30-day SSI SIR model only Deep Incisional Primary SSIs and Organ /Space SSIs within 30 days of the procedure are included.

"Fictitious data used for illustrative purposes only."

Scenario 1 – Trouble shooting universal exclusion criteria

National Healthcare Safety Network
SIR for Complex 30-Day SSI Data in Acute Care Hospitals for CMS IPPS by Procedure (2015 Baseline) - By OrgID/ProcCode
As of: January 24, 2024 at 8:20 PM
Date Range: BS2_SIR_CMPX30DSSIPROC summaryYr 2022 to 2022
if (((procCode = "COLO")))

orgid=10018 medType=M

orgid	ccn	proccode	procCount	summaryYM	infCountComplex30d	numPredComplex30d	SIRComplex30d	SIRComplex30d_pval	SIRComplex30d95CI
10018	66666	COLO	24	2022M01	1	0.81	.		.
10018	66666	COLO	22	2022M02	0	0.701	.		.
10018	66666	COLO	25	2022M03	0	0.84	.		.

The final Complex 30-Day SSI SIR report shows 1 SSI event in January 2022

Remember an SSI SIR will not be calculated if the number of predicted SSIs is less then 1.0

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D3- Donnelly – Trouble Shooting SSI SIR – Q2:

- The purpose of the Incomplete Procedure Table at the end of the SSI SIR report out is;

  a. To alerts users that they have incomplete procedures that need to updated

  b. To provide users a summary of procedures that meet the universal exclusions that are applied prior to calculating the SSI SIR

  c. I have never noticed this table before

Scenario 2 – Interpreting the "Incomplete and Custom Procedures not Included in SIR" table

- IP ran an SSI SIR for 2022. For COLO procedures, there was a table at the end of the report saying there were incomplete procedures. The IP thought that all the reports were complete. How can the IP find out with procedures were incomplete?

National Healthcare Safety Network

Incomplete and Custom Procedures not Included in SIR

As of: January 24, 2024 at 9:08 PM
Date Range: BS2_SIR_ADULTALLSSIPROC summaryYr 2022 to 2022
if (((procCode = "COLO")))

orgID=10018 medType=M

summaryYM	orgID	ccn	procCode	proccount	infCountAdultAll
2022M01	10018	66666	COLO	1	0
2022M02	10018	66666	COLO	1	0
2022M03	10018	66666	COLO	1	0

> This table is included at the bottom of all SSI SIR reports to let users know some procedures were not included in the SSI SIR calculation due to exclusion criteria, not because they are incomplete.

Scenario 2 – Interpreting the "Incomplete and Custom Procedures not Included in SIR" table

- Then NHSN application has a specific report that lists those procedures that have been excluded from the SSI SIR models and why they have been excluded.
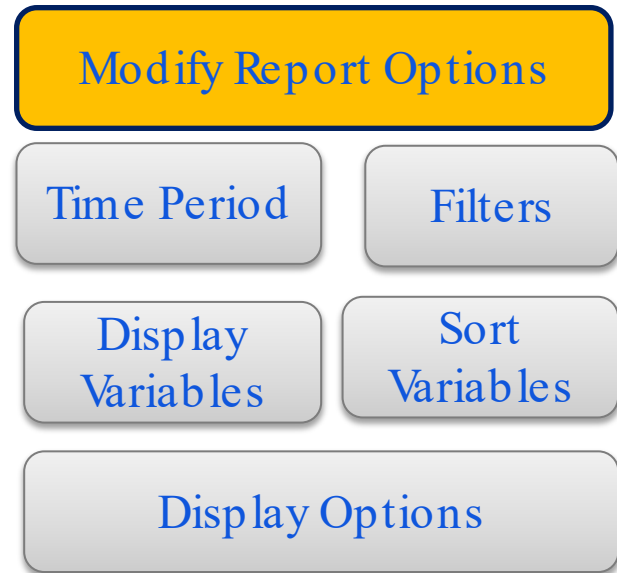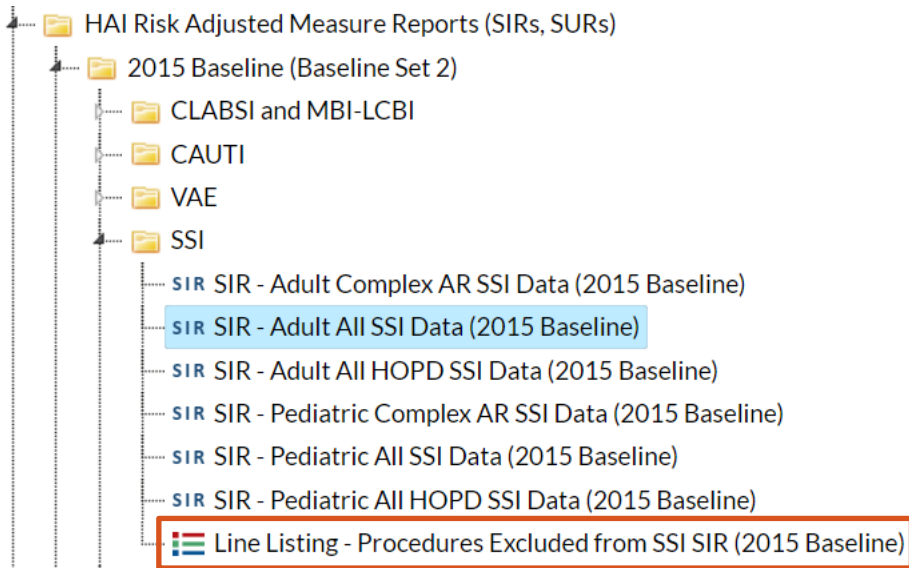
"Fictitious data used for illustrative purposes only."

Scenario 2 – Interpreting the "Incomplete and Custom Procedures not Included in SIR" table

National Healthcare Safety Network

Line Listing for Procedures Excluded from SSI SIR (2015 Baseline)

As of: January 25, 2024 at 12:38 PM
Date Range: PROCEDURES procDateYr 2022 to 2022
if (((excluded = "Y") AND (procCode = "COLO")))

orgID	patID	procID	procCode	bs2_allAdultExcl	bs2_allPedExcl	bs2_cmpxAdultExcl	bs2_cmpxPedExcl	bs2_cmpx30dExcl	procDate	dob	gender	procDurationHr	procDurationMin
10018	JA-019	114524	COLO	1	1	1	1	1	01/25/2022	03/16/1950	F	1	20
10018	JA-036	114541	COLO	1	1	1	1	1	02/13/2022	08/23/1984	F	9	5
10018	JA-052	114557	COLO	1	1	1	1	1	03/03/2022	08/21/1964	M	11	46

Information about the procedure and Patient

These columns indicate which SSI SIR model the procedure was excluded from. The value 1 means the procedure was excluded.

Information about the procedure and the patient

bs2_allAdultExcl	bs2_allPedExcl	bs2_cmpxAdultExcl	bs2_compxPedExcl	bs2_compx30dExcl
Adult All SSI SIR	Pediatric All SSI SIR	Adult Complex A/R SSI SIR	Pediatric Complex A/R SSI SIR	Adult Complex 30-Day SSI SIR

Scenario 2 – Interpreting the "Incomplete and Custom Procedures not Included in SIR" table

National Healthcare Safety Network

Line Listing for Procedures Excluded from SSI SIR (2015 Baseline)

As of: January 25, 2024 at 12:38 PM
Date Range: PROCEDURES procDateYr 2022 to 2022
if (((excluded = "Y") AND (procCode = "COLO")))

exclMissingVarInd	exclMissingVarList	exclDurThresholdInd	exclAgeGT109Ind	exclOutpatientInd	exclPedIndcmpx30d	exclGenderOth	exclInvalidJointRepHemi	exclBMIThresholdInd	exclude_ssi	excluded
N		N	N	N	N	N	N	N	N	Y
N		N	N	N	N	N	N	N	N	Y
N		Y	N	N	N	N	N	N	N	Y

These columns indicate the universal exclusion criteria that caused the procedure to be excluded. For example, procedure 114557 was excluded due to the procedure duration (exclDurThresholdInd) being 5 times greater than the procedure interquartile range (highlighted in the yellow box). Please note that the other two procedures do not have a reason but are still excluded. This is because the procedures are linked to SSI events that are reported as PATOS=Yes, which is noted in the linked event.

Scenario 2 – Interpreting the "Incomplete and Custom Procedures not Included in SIR" table

View Event

Mandatory fields marked with *

Fields required for record completion marked with **

Fields required when in Plan marked with >

Event Information

Event Type *: SSI - Surgical Site Infection

Date of Event *: 02/22/2022

NHSN Procedure Code *: COLO - Colon surgery

Select button for system used

○ ICD-10 PCS

Outpatient Procedure *: N - No

○ CPT Code

Procedure Date *: 02/13/2022   ✓ Event Linked

MDRO Infection Surveillance *: No, this infection's pathogen/location are not in-plan for Infection Surveillance in the MDRO/CDI Module
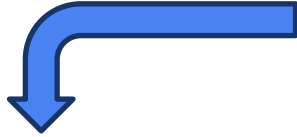
Location :

Date Admitted to Facility *: 02/12/2022

Event Details

Specific Event *: DIP - Deep Incisional Primary

Infection present at the time of surgery *: Y - Yes

PATOS is noted in the Event Detail section of the NHSN application.

Scenario 3 – Monthly reporting plans and resolving alerts

National Healthcare Safety Network
SIR for Complex 30-Day SSI Data in Acute Care Hospitals for CMS IPPS by Procedure (2015 Baseline)
As of: January 25, 2024 at 4:33 PM
Date Range: BS2_SIR_CMPX30DSSIPROC summaryYr 2022 to 2022

No Records Met Your Criteria.
Please check your time period and/or filter criteria.

National Healthcare Safety Network
Frequency Table for All Procedures
As of: January 25, 2024 at 4:31 PM
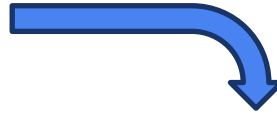Date Range: PROCEDURES procDateYr 2022 to 2022
if (((procCode = "COLO")))

Why are procedures showing as reported using the frequency table and are included in the Complex AR SSI SIR model, but are not showing for the CMS Complex 30 Day SSI SIR Model?

Frequency Row Pct	Table of procDateYM by procCode		
		procCode	
	procDateYM	COLO	Total
	2022M01	25 100.00	25
	2022M02	23 100.00	23
	2022M03	26 100.00	26
	2022M04	1 100.00	1
	Total	75	75

National Healthcare Safety Network
SIR for Adult Complex AR SSI Data by Procedure (2015 Baseline) - By OrgID
As of: January 25, 2024 at 4:29 PM
Date Range: BS2_SIR_ADULTCMPXSSIPROC summaryYr 2022 to 2022
if (((procCode = "COLO")))

orgid=10018 medType=U

orgid	ccn	summaryYM	procCount	infCountAdultCmpx	numPredAdultCmpx	SIRComplex	SIRComplex_pval	SIRComplex95CI	SIR_pctl
10018	66666	2022M01	23	1	1.603	0.624	0.7253	0.031, 3.077	34
10018	66666	2022M02	22	0	1.777	0	0.1692	, 1.686	10
10018	66666	2022M03	25	0	1.736	0	0.1762	, 1.726	10

Scenario 3 – Monthly reporting plans and resolving alerts

What are the differences between the Complex A/R Model and the Complex 30 Day Model?

Complex Admission/Readmission (A/R) SSI Model (inpatient adult and pediatric patients)	Complex 30-Day SSI model (used for CMS IPPS) (inpatient adult patients)
• Only inpatient procedures • Only Deep Incisional Primary SSIs & Organ /Space SSIs • Only SSIs identified on Admission/Readmission to the original facility • Used for the annual CDC publication of national benchmarks	• Only in plan inpatient COLO and HYST procedures in adult patients • Only Deep Incisional Primary SSIs and Organ /Space SSIs with an event date within 30 days of the procedure • Includes SSIs of any detection method • Used only for CMS IPPS* reporting and for public reporting on CMS Care Compare

Scenario 3 – Monthly reporting plans and resolving alerts

Step 1. Review Monthly Reporting Plans

Step 2. Review ALERTS and resolve ALERTS

Step 3. Review Procedure Line Listing to determine if other difference exist

D3- Donnelly – Trouble Shooting SSI SIR – Q3:

- How frequently does your facility resolve Alerts in NHNS?

    a. Weekly

    b. Monthly

    c. Quarterly

    d. Never

Scenario 3 – Problem Solving other reason why procedures are not included in the SSI SIR report

Step1. Review Monthly Reporting Plans

National Healthcare Safety Network

SIR for Complex 30-Day SSI Data in Acute Care Hospitals for CMS IPPS by Procedure (2015 Baseline) - By OrgID/ProcCode

As of: January 25, 2024 at 7:51 PM
Date Range: BS2_SIR_CMPX30DSSIPROC summaryYr 2022 to 2022
if (((procCode = "COLO")))

orgid=10018 medType=U

orgid	ccn	proccode	procCount	summaryYM	infCountComplex30d	numPredComplex30d	SIRComplex30d	SIRComplex30d_pval	SIRComplex30d95CI
10018	66666	COLO	23	2022M01	1	0.767	.		.

Procedure-Associated Module

Procedures	SSI
COLO - Colon surgery	IN: ☑ OUT: ☐
HYST - Abdominal hysterectomy	IN: ☑ OUT: ☐

The monthly reporting plan did not include COLO or HYST inpatient procedures.

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Scenario 3 – Monthly reporting plans and resolving alerts

Step 2. Review ALERTS and resolve ALERTS

Incomplete Procedures	Missing Procedures	Missing Procedure-associated Events	Unusual Susceptibility Profile	Confirm CDI Test Type	Acknowledge CCN

Confirm that no SSI events have been reported for COLO procedures in February, March, and April 2022

Month/Year ⇕	Procedures	SSI	Report No Events
02/2022	COLO	IN	☑
03/2022	COLO	IN	☑
03/2022	HYST	IN	☐
04/2022	COLO	IN	☑
10/2022	BRST	OUT	☐
10/2022	CARD	IN	☐

Page 1 of 1   100 ∨   View 1 - 14 of 14

Page 1 of 1   100 ∨   View 1 - 14 of 14

Save   **Reset**

Note: Each time you make a change, the data set will have to be updated.

Scenario 3 – Problem Solving other reason why procedures are not included in the SSI SIR report

National Healthcare Safety Network

SIR for Complex 30-Day SSI Data in Acute Care Hospitals for CMS IPPS by Procedure (2015 Baseline) - By OrgID/ProcCode

As of: January 25, 2024 at 8:44 PM
Date Range: BS2_SIR_CMPX30DSSIPROC summaryYr 2022 to 2022
if (((procCode = "COLO")))

orgid=10018 medType=U

orgid	ccn	proccode	procCount	summaryYM	infCountComplex30d	numPredComplex30d	SIRComplex30d	SIRComplex30d_pval	SIRComplex30d95CI
10018	66666	COLO	23	2022M01	1	0.767	.	.	
10018	66666	COLO	22	2022M02	0	0.716	.	.	
10018	66666	COLO	25	2022M03	0	0.84	.	.	
10018	66666	COLO	0	2022M04	0	0	.	.	

Step 3. Review Procedure Line Listing to determine if other difference exist

After a review of the procedure line listing report, both COLO Procedure in April 2022 were pediatric inpatient procedures. The Complex 30-Day SSI SIR for CMS report only includes Adults (inpatients 18 years and older)

Resources

For SSI SIR:

- SIR Guide: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf

Troubleshooting SSI SIR:

- Universal Exclusion Criteria report: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/line-list-procedures-excluded-sir.pdf

- SSI Events Inclusion Criteria report: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/ssi-events-line-list-qrg.pdf

NHSN SSI Information

- NHSN SSI main page: https://www.cdc.gov/nhsn/psc/ssi/index.html

- NHSN Analysis page: https://www.cdc.gov/nhsn/PS-Analysis-resources/reference-guides.html

- Patient Safety Component Quick Reference Guides: https://www.cdc.gov/nhsn/ps-analysis-resources/reference-guides.html

- SSI SIR Training main page: https://www.cdc.gov/nhsn/training/patient-safety-component/ssi.html

For any questions or concerns, contact the NHSN Helpdesk using

NHSN-ServiceNow to submit questions to the NHSN Help Desk. The new portal can be accessed at **https://servicedesk.cdc.gov/nhsncsp**. Users will be authenticated using CDC's Secure Access Management Services (SAMS) the same way you access NHSN. If you do not have a SAMS login, or are unable to access ServiceNow, you can still email the NHSN Help Desk at nhsn@cdc.gov.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov   Web: www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.