

Understanding NHSN Analysis Features and the BSI SIR for Performance Measurement

Bria Jarrell, MPH

Alissa Kapke, MS, Arbor Research Collaborative for Health

Centers for Disease Control and Prevention
National Center for Emerging and Zoonotic Infectious Disease
Division of Healthcare Quality Promotion
Surveillance Branch

October 29, 2024



Objectives

- Identify methods for dialysis module data quality checks
- Run analysis reports
- Define a Standardized Infection Ratio (SIR)
- Know the contributing factors of an SIR
- Apply the SIR formula
- How to better use NHSN for performance evaluation
- How the BSI SIR impacts the ESRD QIP Total Performance Score

Scoring Criteria

Qualifying to receive a score

Reporting Requirements

- **Facility Exclusions**

- Facilities that do not offer in-center hemodialysis.
- Facilities that treat fewer than 11 in-center hemodialysis patients during the performance period.
- Facilities with approved Extraordinary Circumstances Exception (ECE).

- **Patient Exclusions**

- Patients receiving only inpatient hemodialysis during the reporting month.
- Patients receiving only home hemodialysis or peritoneal dialysis during the reporting month.

Minimum Data Requirements

12 consecutive months of data reported to NHSN. Facilities that do not submit 12 months of data in accordance with the Dialysis Event Protocol receive zero points for the measure.

To have a complete data, a facility must (for every month):

1. Select the 'DE' box on the Monthly Reporting Plan
2. Complete Summary Data Form
3. Report at least 1 event of each of the three Dialysis Event types (IV antimicrobial start, positive blood culture, pus/redness/increased swelling)
OR Select the appropriate 'Report No Events' box on their summary form if they truly did not have any events to report

Ensuring Data Quality

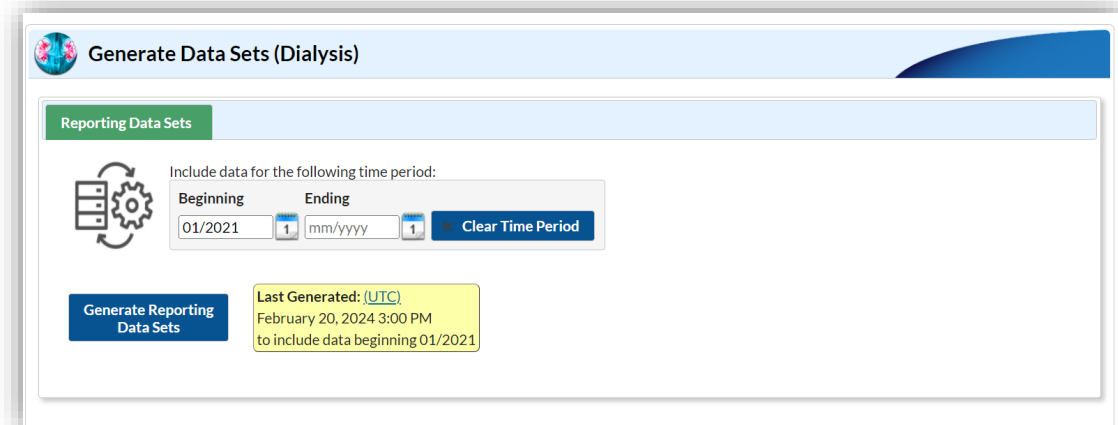
Tools available to ensure an accurate score

Types of NHSN Reports

- **Line Listing*** – displays a list of details entered on the corresponding NHSN form (e.g., Dialysis Events, Denominators for Dialysis Events, etc)
- **Frequency Table** – displays the count and percent of occurrence of types of Dialysis Events in the form of a table
- **Pie Chart** – displays the count and percent of occurrence of types of Dialysis Events in the form of a chart
- **Run Chart** – displays the count and percent of occurrence of types of Dialysis Events over time in the form of a chart
- **Rate Table*** – displays the count and percent of occurrence of types of Dialysis Events per 100 patient-months
- **SIR*** – displays the ratio of observed bloodstream infections to predicted bloodstream infections and the values used to calculate that ratio

Locate and Generate Reports in NHSN

- From the NHSN navigation bar, select **Analysis**.
 - **Datasets** are the files that NHSN uses to create reports for your facility or group.
 - **Generating new data sets ensures reports include complete, up-to-date information.**
 - Each user is responsible for generating his or her own analysis data sets.
 - Data sets may take several minutes to generate, but the user can work elsewhere in NHSN while data sets are generating or minimize the application and check back later.



Generate Data Sets (Dialysis)

Reporting Data Sets

Include data for the following time period:

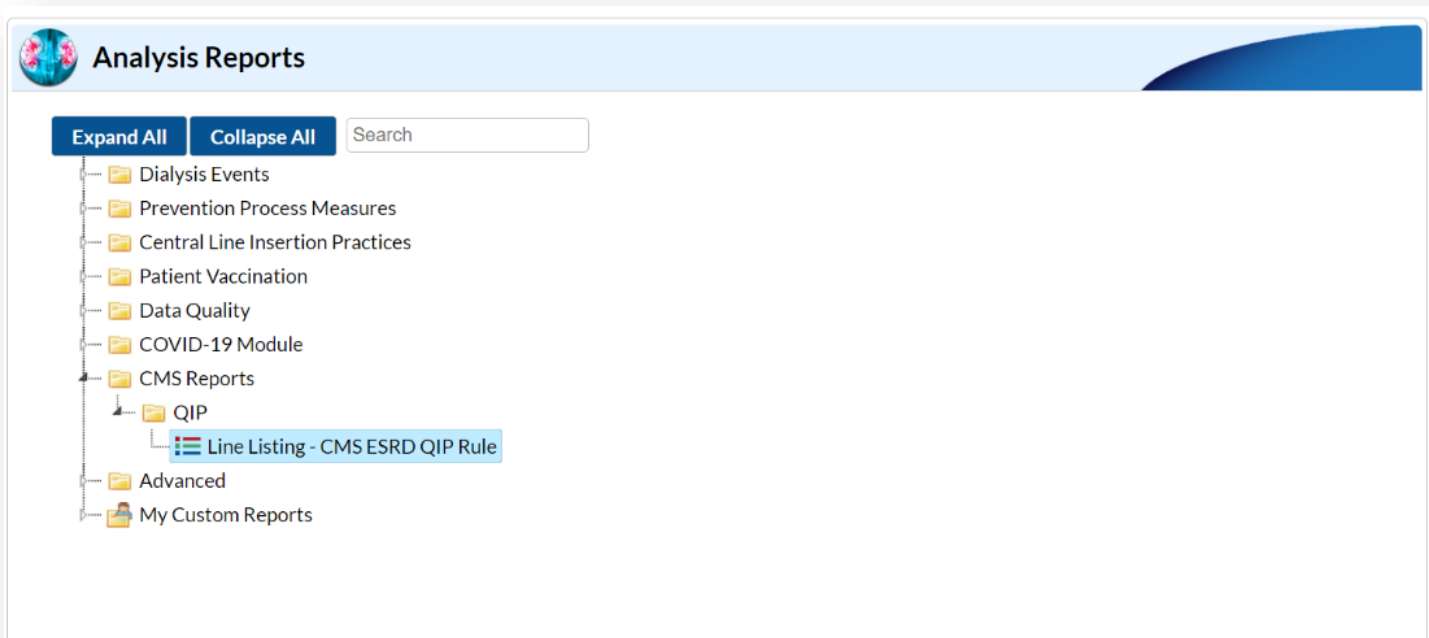
Beginning 01/2021 **Ending** mm/yyyy **Clear Time Period**

Generate Reporting Data Sets

Last Generated: (UTC)
February 20, 2024 3:00 PM
to include data beginning 01/2021

Locate and Generate Reports in NHSN

- To run analysis reports in NHSN, users must first generate analysis data sets (**Analysis > Generate Data Sets**). After generating datasets, users can generate reports (**Analysis > Reports**).



The screenshot displays the 'Analysis Reports' interface. At the top, there is a header with a globe icon and the text 'Analysis Reports'. Below the header, there are two buttons: 'Expand All' and 'Collapse All', followed by a search input field labeled 'Search'. The main content area shows a tree view of report categories. The categories listed are: Dialysis Events, Prevention Process Measures, Central Line Insertion Practices, Patient Vaccination, Data Quality, COVID-19 Module, CMS Reports, QIP, Line Listing - CMS ESRD QIP Rule, Advanced, and My Custom Reports. The 'Line Listing - CMS ESRD QIP Rule' item is highlighted with a blue background.

Line Listing – CMS ESRD QIP Rule (CMS Reports > QIP)

- **DE on Reporting Plan = Y:** if “DE” is checked on the Monthly Reporting Plan, indicating Dialysis Event data will be collected according the [Dialysis Event Protocol](#).
- **Dialysis Event Numerator Reported = Y:** if (for each dialysis event type) at least 1 dialysis event was reported that month *or* the corresponding “Report No Events” checkbox was selected on the Denominators for Outpatient Dialysis form to confirm there were zero events of that type for the month.
- **Dialysis Event Denominator Reported = Y:** if the Denominators for Outpatient Dialysis census form was completed for the month.

National Healthcare Safety Network Line Listing for CMS ESRD QIP Rule

As of: September 18, 2024 at 3:23 PM UTC
Date Range: All DE_CMSQIP

Run the "Rate Table - Bloodstream Infection Data" to view BSI rates

Facility Org ID	CMS Certification Number	Facility Name	Location	CDC Location Description	Summary Year/Month	DE on Reporting Plan	Dialysis Event Numerator Reported	Dialysis Event Denominator Reported	Criteria Met this Month
44166	99999	TEST DIALYSIS CLINIC A	CLINIC	Outpatient Hemodialysis Clinic	2021M01	N	N	N	N
44166	99999	TEST DIALYSIS CLINIC A	CLINIC	Outpatient Hemodialysis Clinic	2021M02	N	N	N	N

Line Listing – Dialysis Events (Dialysis Events > Numerator)

- Check all dialysis events are correctly reported. Review the “Data Validity Check PBC ABX Description” column and check if IV antimicrobial starts or positive blood cultures were missed.

A

Org ID	Event ID	Patient ID	Transient	Event Date	IV Anti-microbial Start	IV Vanco-mycin Start	Positive Blood Culture	Pus Redness Swelling Event	Data Validity Check PBC ABX Description
10856	32403	0322	Y	01/20/2014	Y	Y	N	N	Is This Antimicrobial Start w/o PBC Valid?
10856	30936	1234	N	02/01/2014	N	N	Y	N	Is This PBC w/o Antimicrobial Start Valid?

Line Listing – All DE Denominators (Dialysis Events > Denominator)

- Review denominator data across months. For each vascular access type, verify minimum and maximum values are reasonable and the numbers of patient-months are consistent with the facility’s census.

B

Org ID	Location	Summary Year/Month	No Dialysis Events	Number of Patients: AV Fistula	Number of Buttonhole Patients	Number of Patients: AV Graft	Number of Patients: Tunneled Central Line	Number of Patients: Nontunneled Central Line	Number of Patients: Other Access Device	Patient-months	Number of Fistulas and Grafts	Number of All Central Lines
10856	DIALYSIS	2014M01	Y	38	0	32	12	2	0	84	70	14
10856	DIALYSIS	2014M02	N	38	0	33	12	1	0	84	71	13

Rate Table – Bloodstream Infection (Dialysis Events > Rates)

- This report allows users to view infection rates over time and benchmark their rates against national rates.
 - **Access Type:** vascular access type that applies to the respective row
 - **Summary Year/QRT:** the year and quarters that apply to the respective rows
 - **Months:** number of months that include data during the quarter
 - **Number of BSIs:** number of blood stream infections reported during the quarter
 - **Patient Months:** number of patients by access type during the quarter
 - **Bloodstream infection rate/100 patient months:** bsi rate for the quarter

National Healthcare Safety Network
Rate Table for Bloodstream Infection
 Facility-level Rate Data
 As of: September 18, 2024 at 3:28 PM UTC
 Date Range: All PBC_RATES

Bloodstream Infection: Any positive blood culture.

Facility Org ID	CMS Certification Number	State	Location	Access Type	Summary Yr/Qtr	Months	Number Bloodstream Infections	Patient-months	Bloodstream Infection Rate/100 patient-months	NHSN Bloodstream Infection Pooled Mean Rate/100 patient-months	Incidence Density p-value	Incidence Density Percentile
44166	99999	GA	CLINIC	Nontunneled Central Line	2023Q3	1	0	0	0.00	.	.	.
44166	99999	GA	CLINIC	Tunneled Central Line	2023Q3	1	0	0	0.00	.	.	.
44166	99999	GA	CLINIC	All	2023Q3	1	0	0	0.00	0.30	.	.
44166	99999	GA	CLINIC	Fistula	2023Q3	1	0	0	0.00	0.12	.	.
44166	99999	GA	CLINIC	Button	2023Q3	1	0	0	0.00	0.64	.	.
44166	99999	GA	CLINIC	Graft	2023Q3	1	0	0	0.00	0.22	.	.
44166	99999	GA	CLINIC	Other Access	2023Q3	1	0	0	0.00	0.30	.	.
44166	99999	GA	CLINIC	Any CVC	2023Q3	1	0	0	0.00	0.82	.	.
44166	99999	GA	CLINIC	Nontunneled Central Line	2023Q4	3	0	0	0.00	.	.	.
44166	99999	GA	CLINIC	Tunneled Central Line	2023Q4	3	2	0	0.00	.	.	.

Rate Table – Bloodstream Infection (cont)

A p-value and percentile are provided to assist with interpretation of rate comparison.

- A p-value < 0.05 indicates statistical significance.

Comparing Rates Using Percentiles and p-values

- The percentile indicates how a facility ranks for the event among all NHSN facilities. The lower the percentile, the better the facility is ranked for that event.
- A p-value is a measure of statistical significance that indicates the probability that any difference between the facility’s rate and NHSN’s aggregate rate is due only to chance.

National Healthcare Safety Network
Rate Table for Bloodstream Infection
 Facility-level Rate Data
 As of: September 18, 2024 at 3:28 PM UTC
 Date Range: All FBC_RATES

Bloodstream Infection: Any positive blood culture.

Facility Org ID	CMS Certification Number	State	Location	Access Type	Summary Yr/Qtr	Months	Number Bloodstream Infections	Patient-months	Bloodstream Infection Rate/100 patient-months	NHSN Bloodstream Infection Pooled Mean Rate/100 patient-months	Incidence Density p-value	Incidence Density Percentile
44166	99999	GA	CLINIC	Nontunneled Central Line	2023Q3	1	0	0	0.00		-	-
44166	99999	GA	CLINIC	Tunneled Central Line	2023Q3	1	0	0	0.00		-	-
44166	99999	GA	CLINIC	All	2023Q3	1	0	0	0.00		0.30	-
44166	99999	GA	CLINIC	Fistula	2023Q3	1	0	0	0.00		0.12	-
44166	99999	GA	CLINIC	Button	2023Q3	1	0	0	0.00		0.64	-
44166	99999	GA	CLINIC	Graft	2023Q3	1	0	0	0.00		0.22	-
44166	99999	GA	CLINIC	Other Access	2023Q3	1	0	0	0.00		0.30	-
44166	99999	GA	CLINIC	Any CVC	2023Q3	1	0	0	0.00		0.82	-
44166	99999	GA	CLINIC	Nontunneled Central Line	2023Q4	3	0	0	0.00		-	-
44166	99999	GA	CLINIC	Tunneled Central Line	2023Q4	3	2	0	0.00		-	-

Self-Review Data Regularly

- **Monthly**

- Ensure all data has been reported
- Ensure the accuracy of reported data

- **Quarterly**

- Investigate potential data quality errors
- Ensure all months are within Dialysis Reporting Protocol
- Ensure all summary data (denominator data) is in alignment with dialysis event data (numerator data), especially in the case of late added events and/or edited events.

- A more detailed breakdown of analysis reports in the dialysis component + unique report capabilities can be found at:

- <https://www.cdc.gov/nhsn/pdfs/dialysis/dialysis-analysis-manual.pdf>

Data Quality Checks

Optimizing CDC's Assistance

Data Quality Checks

- As previously stated, all facilities that do not submit 12 consecutive months of data in accordance with the **Dialysis Event Protocol** receive zero points for the measure. To assist with this, the NHSN Dialysis team completes regular data quality checks.
- **Data quality checks** are performed to identify potential reporting errors in data reported by facilities in the NHSN application such as:
 - Data that violate NHSN business rules
 - Data that violate reporting guidelines set by the Dialysis Event Protocol
 - Incomplete or missing data which may result in score reductions for CMS QIP
 - Inconsistent or improbable values on numerator or denominator records

Data Quality Checks

- If a facility is identified as having a data quality error, the **facility administrator (FA)** as listed on the facility's NHSN profile will be emailed with a PDF document detailing the identified error and how to correct it.
- It is **essential** FA contact information is up to date in NHSN.

Summary Data – Report No Events Checkboxes Missing

The Org ID(s) below indicate at least one "Report No Events" checkbox is missing in the specified monthly Summary Data. Please review the Dialysis Events reported for the specified month and make corrections to the Report No Events checkboxes as necessary.

Facility OrgID	Facility Name	Facility Administrator	Summary Year	Summary Month	No Antibiotic Start Events Reported	No Pus/Redness/Swelling Events Reported	No Positive Blood Culture Events Reported
[REDACTED]	[REDACTED]	[REDACTED]	2023	12 - December	Missing	Missing	Missing

Facilities.pdf
200 KB

Dear NHSN User,

One or more of your facilities is directly impacted by the **CCN Data Quality issue(s)** described below:

Recent data quality checks found at least one facility for which you have entered or modified data with issues regarding the quality of its data in NHSN. This Data Quality Check is current as of January 31, 2022, so any changes made after this date may not be reflected. Please see attachments to view facilities and events in question.

We encourage you to review the data in question and make any necessary corrections as soon as possible.

Failure to correct 4th Quarter 2021 errors by the next quarterly deadline of **March 31, 2022** could negatively impact your facility's CMS ESRD QIP score.

Please email the [NHSN helpdesk](#) with 'Dialysis Data Quality' in the subject line with any questions.

Thank you,
The NHSN Dialysis Team

Data Quality Checks

- **Although these checks are done on a quarterly basis, please note:**
 - Data quality emails are sent a month before the deadline; however, data is captured for checks two months before the deadline. **Thus, all errors in that two-month span cannot be accounted for.**
 - The specific date of data capture is also shared in all data quality check emails.
 - These checks only account for a specific set of **common data quality errors** and may not capture all potential data quality errors.
 - **Engaging in regular self-checks (monthly and quarterly) in combination with CDC's Data Quality Checks is highly suggested to ensure all potential data quality errors are identified and adjusted.**

Costly Errors

- **RNE Checkbox Error:** indicate at least one “Report No Events” checkbox is missing in the specified monthly Summary Data. All checkboxes **MUST** be properly checked or greyed (e.g. cannot be checked) to receive credit for the month.
- When editing event data for a previous month, **it is essential to check the summary data form for the respective month** to ensure checkbox accuracy.

Mandatory fields marked with *

Facility ID *: Test Dialysis Clinic A (44166)
Location Code *: CLINIC - CLINIC
Month *: January
Year *: 2024

Report No Events

No IV antimicrobial start events:

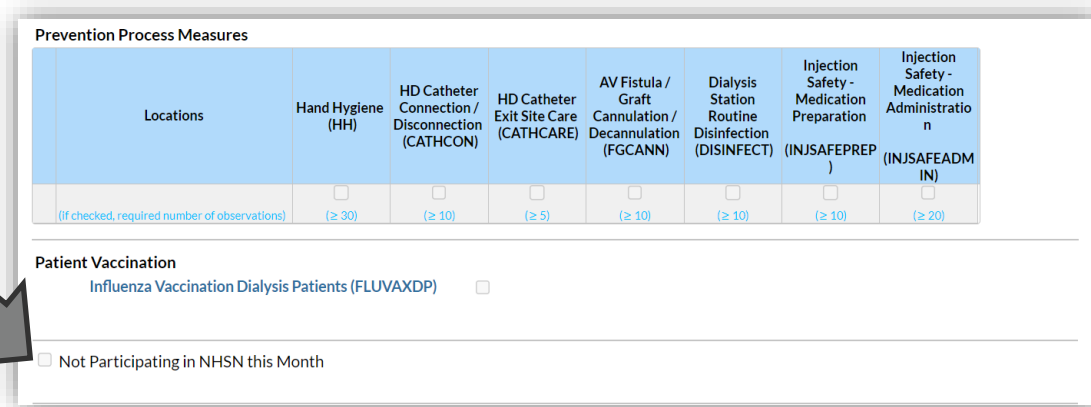
No Positive blood culture events:

No Pus, redness or increased swelling at vascular access site events:



Costly Errors

- The only time a facility should check the “Not Participating in NHSN this Month” box is if their facility is **closed for the entire month due to factors outside of the facility’s control**. If the facility is closed only a short period during the month, this box should **not** be checked.
- It is important to note that selecting this box will lead to your facility **not receiving credit for reporting that month as well as a score of 0 points** for the NHSN Bloodstream Infection (BSI) clinical measure.



Prevention Process Measures

Locations	Hand Hygiene (HH)	HD Catheter Connection / Disconnection (CATHCON)	HD Catheter Exit Site Care (CATHCARE)	AV Fistula / Graft Cannulation / Decannulation (FGCANN)	Dialysis Station Routine Disinfection (DISINFECT)	Injection Safety - Medication Preparation (INJSAFEPREP)	Injection Safety - Medication Administration (INJSAFEADMIN)
(If checked, required number of observations)	<input type="checkbox"/> (≥ 30)	<input type="checkbox"/> (≥ 10)	<input type="checkbox"/> (≥ 5)	<input type="checkbox"/> (≥ 10)	<input type="checkbox"/> (≥ 10)	<input type="checkbox"/> (≥ 10)	<input type="checkbox"/> (≥ 20)

Patient Vaccination

Influenza Vaccination Dialysis Patients (FLUVAXDP)

Not Participating in NHSN this Month

Extraordinary Circumstances Exception

- The Centers for Medicare & Medicaid Services (CMS) offers a process for facilities to request an extraordinary circumstances exception (ECE) from certain quality reporting and value-based purchasing program requirements due to extraordinary circumstances resulting in the facility not participating for the month.
- Such circumstances may include, but are not limited to, natural disasters (such as a hurricane or flood) or systemic problems with CMS data collection systems that **directly affect a facility's ability to submit data**.
- An approved ECE is necessary to avoid penalties for non-participation in a month for the ESRD QIP NHSN DE and BSI measures. Further information related to exceptions can be found at:
 - <https://qualitynet.cms.gov/esrd/esrdqip/participation>.

Centers for Medicare and Medicaid Services (CMS) Quality Incentive Program (QIP) NHSN Calendar Year 2024/2025 Deadlines

Dialysis Component



Quarter	Months Reported	Deadline
1	January-March 2024	July 1, 2024
2	April-June 2024	September 30, 2024
3	July-September 2024	December 31, 2024
4	October-December 2024	March 31, 2025

Standardized Infection Ratio (SIR) Overview

A detailed breakdown of the ESRD BSI SIR

What is the SIR?

- **The standardized infection ratio (SIR) is risk-adjusted summary score that reflects a facility's bloodstream infection incidence.**
 - Facilities following the NHSN Dialysis Event Protocol are required to report **all bloodstream infections (BSIs) for their hemodialysis outpatients**, including those specimens collected as an outpatient or collected on the day of or the day after a hospital admission.
 - Although other dialysis event types are reported to NHSN and calculated from the data, the BSI measure only assesses the number of positive blood cultures reported by a facility using a **standardized infection ratio (SIR)**.

The SIR Formula

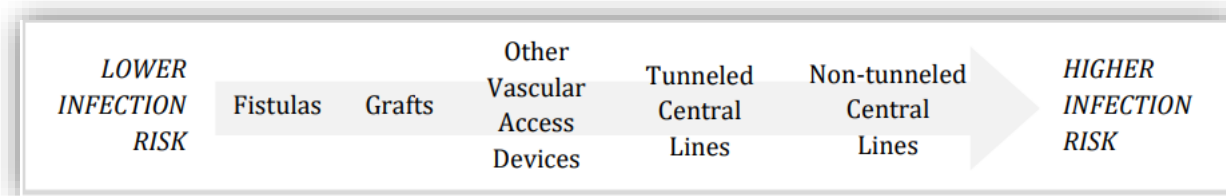
SIR = Observed (O) HAIs / Predicted (P) HAIs

NHSN Bloodstream Infection Calculations:

- **Number of Observed BSIs**: the total number of positive blood cultures that were reported by the facility to NHSN during a certain timeframe (e.g., calendar year 2023).
 - *This is the facility's number of incidents*
- **Number of Predicted BSIs**: a number calculated by multiplying the national aggregate BSI rates stratified by varying factors they may impact the number of infections a facility and their served patient populations may experience.
 - *This is where risk is taken into account*

Current Calculation of Predicted Events

- Predicted BSIs are calculated using the following:
 - **Patient Total (Patient-Months):** the total number of qualifying patients the facility had for the by patient access type is multiplied by the national aggregate NHSN BSI rate from the baseline year (i.e. 2014).
 - The predicted number for each access type is totaled to produce the predicted BSIs for the entire facility year.
- **Patient access type** incorporated into each facility SIR ensures a fairer comparison. The number of patients treated by access type accounts for the differing risk of blood stream infections among patients.



Future Calculation of the Predicted BSIs

- **Rationale**
 - As the body of research for tracking bloodstream infections among outpatient dialysis patients has evolved, CDC's NHSN surveillance data collection has expanded that may require more flexible methods for estimating infection incidence.
 - While access type has traditionally been the single factor used to calculate the predicted number of BSIs for the SIR, additional factors will be assessed for independent associations with BSI incidence. This requires a more flexible regression model approach to calculating the predicted number of BSIs to produce BSI SIRs in the future.

Why an SIR score instead of an overall BSI rate?

- **The SIR and corresponding rates serve different purposes.**
- **The SIR compares the number of BSIs that a facility reported compared to the number of infections predicted** for that facility based on national aggregate data, across **several** vascular access type strata.
 - Those data are summarized into a single number, which makes the SIR easier to use for evaluation purposes.
 - In contrast, vascular access-specific BSI rates provide more detailed information about BSI occurrence in the different strata and can be meaningful in infection prevention efforts.

SIR Interpretation

- SIRs have a lower limit of zero but are not bounded by any upper limit.
 - SIR **less than** 1.0.
 - This means the facility observed fewer reported BSIs than the predicted number of BSIs.
 - 0 means the facility reported **no BSIs**.
 - SIR **greater than** 1.0.
 - This means the facility observed more reported BSIs than the predicted number of BSIs.
 - SIR **equal to** 1.0.
 - This means the facility observed the same reported BSIs as the predicted number of BSIs.

How to Better Use SIR for Performance Evaluation

- **Within facilities comparison: comparing with yourself**
 - Facilities are recommended to evaluate their SIR performance themselves over years. This is particularly recommended for clinics treating a high number of patients with wounds.
 - Being able to track the facilities' progress in infection prevention as the years go by will be beneficial when providing feedback to staff and engaging in quality improvement.
 - Further, facility comparison creates realistic and measurable goals.
- **Between facilities comparison: comparing to others**
 - This is recommended when comparing between different states, counties, etc. ensure all months are within Dialysis Reporting Protocol

Impact of NHSN BSI Clinical Measure on ESRD QIP Total Performance Score (TPS)

- The NHSN BSI Clinical measure uses the SIR to calculate an Achievement and Improvement score.
 - Scores range from 0 to 10 points.
 - Facilities must meet the **minimum data requirements** (i.e. must treat at least 11 eligible patients and offer in-center hemodialysis during performance year).
 - Eligible facilities that do not meet **reporting requirements** (i.e. 12 months of data in accordance with the Dialysis Event Protocol) receive zero points for the measure are assigned a score of 0 points.
 - The higher of the Achievement and Improvement Score is assigned.

Achievement Score Determination

- Each facility's SIR is compared to a set of values derived from all facilities nationally.
- Achievement points are awarded based on facility performance relative to the **achievement threshold**, defined as the 15th percentile of facilities during the baseline period (CY 2022 for PY 2026) and **benchmark**, defined as the 90th percentile of facilities during the baseline period.
- A facility will receive an **Achievement Score** of 0 points if its performance on that measure falls below the achievement threshold, 1–9 points if the facility's performance falls within this range, and 10 points if it is at or above the benchmark.

Achievement Scoring Equation:

$$9 \times \left[\frac{\text{Facility's Performance Period Rate} - \text{Achievement Threshold}}{\text{Benchmark} - \text{Achievement Threshold}} \right] + 0.5$$

Improvement Score Determination

- Each facility's performance year SIR is compared to their SIR in the improvement year (CY 2023 for PY 2026).
- The improvement range begins at the **improvement threshold** (facility's performance in baseline year) and ends at the **benchmark** (90th percentile of performance rates nationally (CY 2022 for PY 2026)).
- If a facility's performance is below the improvement threshold, it receives 0 points for its Improvement Score. If it is between the improvement threshold and benchmark, 1-9 points are assigned.
- If a facility's performance is above the improvement range, the facility already received the full 10 points for Achievement.

Improvement Scoring Equation:

$$10 \times \left[\frac{\text{Facility's Performance Period Rate} - \text{Improvement Threshold}}{\text{Benchmark} - \text{Improvement Threshold}} \right] - 0.5$$

ESRD QIP Domain and Measure Weights

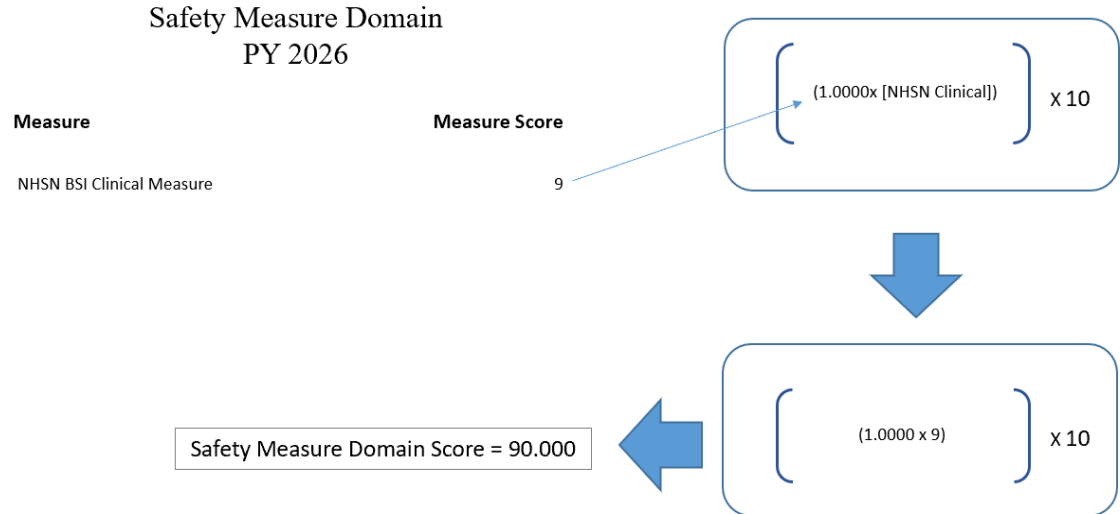
Measure Weights as a Percent of TPS		
Measure Topics by Domain	Measure Weight as a Percent of Domain	Measure Weight as a Percent of TPS
Care Coordination Measure Domain		
Standardized Readmission Ratio	30.00%	9.00%
Standardized Hospitalization Ratio	30.00%	9.00%
Percent Prevalent Patients Waitlisted	20.00%	6.00%
Clinical Depression Screening and Follow-Up	20.00%	6.00%
		30% of TPS
Clinical Care Measure Domain		
Kt/V Dialysis Adequacy - Comprehensive	31.43%	11.00%
Long-term Catheter Rate	34.29%	12.00%
Standardized Transfusion Ratio	34.29%	12.00%
		35% of TPS
Patient & Family Engagement Measure Domain		
ICH CAHPS Survey	100.00%	15.00%
		15% of TPS
Safety Measure Domain		
NHSN BSI in Hemodialysis Patients	100.00%	10.00%
		10% of TPS
Reporting Measure Domain		
Facility Commitment to Health Equity	20.00%	2.00%
Hypercalcemia	20.00%	2.00%
Medication Reconciliation	20.00%	2.00%
NHSN Dialysis Event Reporting	20.00%	2.00%
COVID-19 Healthcare Personnel Vaccination	20.00%	2.00%
		10% of TPS



NHSN BSI is 10% of TPS, when all measures are scored.

Safety Measure Domain Scoring

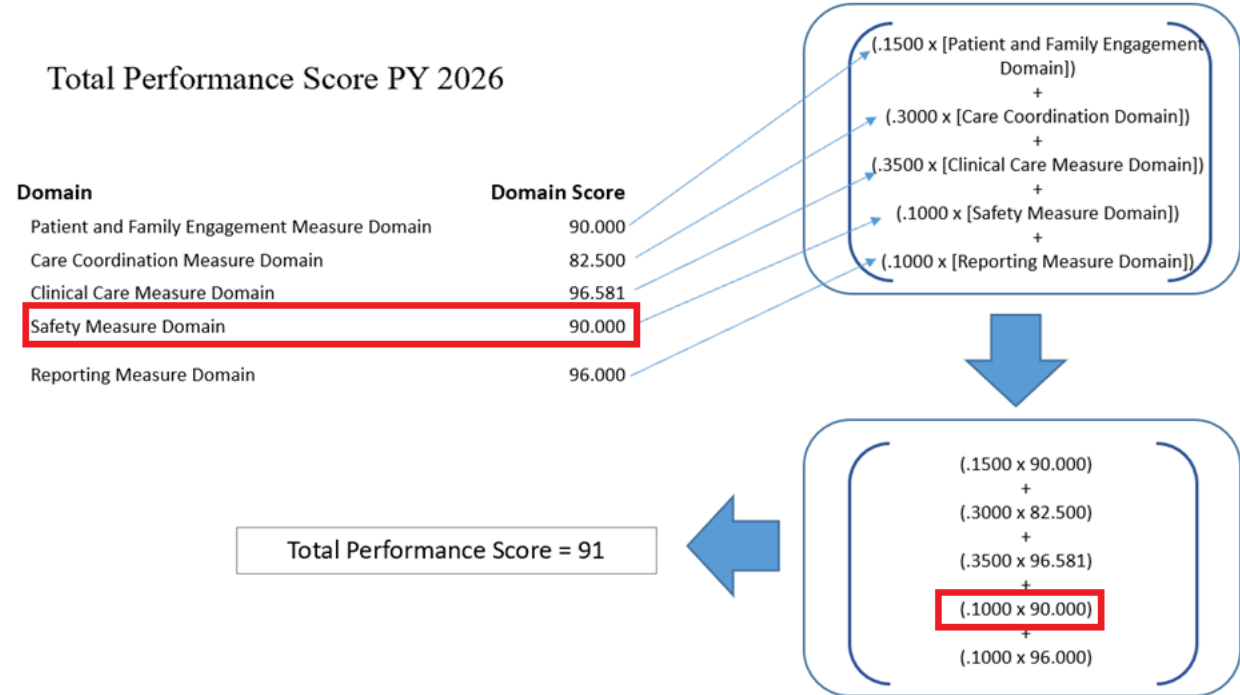
- NHSN BSI measure score is used to calculate Safety Measure Domain Score.
- Domain score ranges from 0 -100 points.
- Safety Measure Domain score is used in TPS calculation:



$$\begin{aligned} \text{TPS} = & (0.15 * \text{Patient and Family Engagement Domain Score}) \\ & + (0.30 * \text{Care Coordination Domain Score}) \\ & + (0.35 * \text{Clinical Care Domain Score}) + (0.10 * \text{Safety Domain Score}) \\ & + (0.10 * \text{Reporting Domain Score}) \end{aligned}$$

Impact of NHSN BSI on TPS, Example 1

- Facility A received Safety Measure Domain Score of 90 points, and high scores on all other domains:



Impact of NHSN BSI on TPS, Example 2

- Facility A received Safety Measure Domain Score of 0 points, and high scores on all other domains:

Total Performance Score PY 2026

Domain	Domain Score
Patient and Family Engagement Measure Domain	90.000
Care Coordination Measure Domain	82.500
Clinical Care Measure Domain	96.581
Safety Measure Domain	0
Reporting Measure Domain	96.000

$$\begin{aligned} & (.1500 \times [\text{Patient and Family Engagement Domain}]) \\ & + \\ & (.3000 \times [\text{Care Coordination Domain}]) \\ & + \\ & (.3500 \times [\text{Clinical Care Measure Domain}]) \\ & + \\ & (.1000 \times [\text{Safety Measure Domain}]) \\ & + \\ & (.1000 \times [\text{Reporting Measure Domain}]) \end{aligned}$$



$$\begin{aligned} & (.1500 \times 90.000) \\ & + \\ & (.3000 \times 82.500) \\ & + \\ & (.3500 \times 96.581) \\ & + \\ & (.1000 \times 0) \\ & + \\ & (.1000 \times 93.352) \end{aligned}$$

Total Performance Score = 81

Scoring Examples, continued

Facility B received average scores on all measures, NHSN BSI=10 (top), NHSN BSI=0 (bottom)

	Eligible for All Domains			Not Eligible for Patient & Family Engagement Domain		
Domain	Weight	Domain Score	Weighted Domain Score	Weight	Domain Score	Weighted Domain Score
Patient & Family Eng.	0.15	50	7.5	N/A	N/A	N/A
Care Coordination	0.3	50	15	0.3375	50	16.875
Clinical Care	0.35	50	17.5	0.3875	50	19.375
Safety	0.1	100	10	0.1375	100	13.75
Reporting	0.1	62	6.2	0.1375	62	8.525
TPS			56			59

No Payment Reduction for either scenario

	Eligible for All Domains			Not Eligible for Patient & Family Engagement Domain		
Domain	Weight	Domain Score	Weighted Domain Score	Weight	Domain Score	Weighted Domain Score
Patient & Family Eng.	0.15	50	7.5	N/A	N/A	N/A
Care Coordination	0.3	50	15	0.3375	50	16.875
Clinical Care	0.35	50	17.5	0.3875	50	19.375
Safety	0.1	0	0	0.1375	0	0
Reporting	0.1	62	6.2	0.1375	62	8.525
TPS			46			45

Payment Reduction=0.5% for both scenarios

Scoring Examples, continued

Facility C received low Scores on all measures, NHSN BSI=10

Domain	Eligible for All Domains			Not Eligible for Patient & Family Engagement Domains		
	Weight	Domain Score	Weighted Domain Score	Weight	Domain Score	Weighted Domain Score
Patient & Family Engagement	0.15	2	0.3	N/A	N/A	N/A
Care Coordination	0.3	20	6	0.3375	20	6.75
Clinical Care	0.35	20	7	0.3875	20	7.75
Safety	0.1	100	10	0.1375	100	13.75
Reporting	0.1	32	3.2	0.1375	32	4.4
TPS			27			33



Payment Reduction=1.0%



Payment Reduction=0.5%

Impact of NHSN BSI on ESRD QIP TPS, Summary

- Each facility's SIR in performance year is compared to:
 - Performance of facilities nationally during the baseline year used to establish performance standards.
 - Facility's performance in year prior (i.e. improvement year).
- The impact of NHSN BSI score on TPS depends on facility's domain eligibility.
 - If a facility is eligible for all domains, NHSN BSI can add a maximum of 10 points to the TPS.
 - The domain weight(s) of ineligible domain(s) is/are equally distributed to all eligible domains.

Questions?

Reach out to nhsn@cdc.gov or submit questions to the <https://servicedesk.cdc.gov/nhsncsp>

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 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.

