

# Related and Competing Measures: Patient Safety

## Related and Competing Measures (tabular format)

### Comparison of 0555 and 2732e

0555 INR Monitoring for Individuals on Warfarin		2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge
Steward	Centers for Medicare & Medicaid Services	Centers for Medicare & Medicaid Services
Description	Percentage of individuals at least 18 years of age as of the end of the measurement period with at least 56 days of warfarin therapy who receive at least one International Normalized Ratio (INR) test during each 56-day interval with active warfarin therapy.	Percentage of adult inpatient hospital discharges to home for which the individual was on warfarin and discharged with a non-therapeutic International Normalized Ratio (INR) who had an INR test within 14 days of hospital discharge
Type	Process	Process
Data Source	Claims	Claims, Electronic Health Data, Electronic Health Records, Other
Level of Analysis	Health Plan	Facility
Care Setting	Outpatient Services	Inpatient/Hospital
Numerator Statement	The number of individuals in the denominator who receive at least one INR monitoring test during each 56-day interval with active warfarin therapy. The number of individuals in the denominator who receive at least one INR monitoring test during each 56-day interval with active warfarin therapy.	Individuals in the denominator who had an INR test within 14 days of discharge
Denominator Statement	Continuously enrolled individuals, at least 18 years of age at of the end of the measurement period, with at least 56 days of warfarin therapy during the measurement period.	Adult inpatient discharges to home for which the individual had active warfarin therapy within 1 day prior to discharge and the last monitored INR within 7 days of discharge was <=1.5 or >= 4
Exclusions	<b>Denominator Exclusions:</b>  1. Individuals who are monitoring INR at home. These individuals are excluded because the claims associated with home INR monitoring are associated with up to four INR tests per claim. Therefore, a single claim for home INR monitoring would not be representative of a single INR test and would prohibit being able to distinguish if the home INR test was within the 56-day timeframe specified by the numerator of this measure.  2. Individuals who have first or last warfarin claims with missing days’ supply.	<b>Denominator Exclusions:</b>  The following inpatient discharges are excluded from the denominator.  The following exclusion is identified from the Medication Administration Record (MAR) within the patient’s EHR.  1)           Inpatient discharges for which the individuals received dabigatran, rivaroxaban, or apixaban within one day prior to discharge  The following exclusions are identified from Part A and Part B Medicare Administrative Claims.  2)           Inpatient discharges for which the individuals are monitoring INR at home 3)           Inpatient discharges for which the individuals expired within 14 days post-discharge 4)           Inpatient discharges for which the individuals received hospice care within 14 days post-discharge 5)           Inpatient discharges for which the individuals had a hospital inpatient admission within 14 days post-discharge 6)           Inpatient discharges for which the individuals were admitted to a skilled nursing facility (SNF) within 14 days post-discharge 7)           Inpatient discharges for which the end date of the 14-day follow-up period occurs after the end of the measurement period 8)           Inpatient discharges for which the individual is not enrolled in Medicare Part A and Part B at the time of discharge and during the 14-day follow-up period post discharge.

### Comparison of 0753 and 3025

0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure		3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure
Steward	Centers for Disease Control and Prevention (CDC)	Centers for Disease Control and Prevention (CDC)
Description	Facility adjusted Standardized Infection Ratio (SIR) and Adjusted Ranking Metric (ARM) for deep incisional and organ/space Surgical Site Infections (SSI) at the primary incision site among adult patients aged >= 18 years as reported through the CDC National Health and Safety Network (NHSN).	This measure is for the risk-adjusted Standardized Infection Ratio (SIR) for all Surgical Site Infections (SSI) following breast procedures conducted at ambulatory surgery centers (ASCs) among adult patients (ages 18 - 108 years) and reported to the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN). The measure compares the reported number of surgical site infections observed at an ASC with a predicted value based on nationally aggregated data. The measure was developed collaboratively by the CDC, the Ambulatory Surgery Center Quality Collaboration (ASC QC), and the Colorado Department of Public Health and Environment. CDC is the measure steward.
Type	Outcome	Outcome
Data Source	Electronic Health Data, Electronic Health Records, Other, Paper Medical Records	Electronic Health Records, Other, Paper Medical Records
Level of Analysis	Facility, Other, Population : Regional and State	Facility
Care Setting	Inpatient/Hospital	Outpatient Services
Numerator Statement	Deep incisional primary (DIP) and organ/space SSIs during the 30-day postoperative period among patients = 18 years of age, who undergo inpatient colon surgeries or abdominal hysterectomies. SSIs will be identified before discharge from the hospital, upon readmission to the same hospital, or during outpatient care or admission to another hospital (post-discharge surveillance).  Numerator Exclusion SSI events with PATOS* field = yes.  Infection present at time of surgery (PATOS): PATOS denotes that there is evidence of an infection or abscess at the start of or during the index surgical procedure (in other words, it is present preoperatively). PATOS is a YES/NO field on the SSI Event form. PATOS does not apply if there is a period of wellness between the time of a preoperative condition and surgery. The evidence of infection or abscess must be noted/documentd intraoperatively in an operative note or report of surgery. Only select PATOS = YES if it applies to the depth of SSI that is being attributed to the procedures (e.g., if a patient has evidence of an intraabdominal infection at the time of surgery and then later returns with an organ/space SSI the PATOS field would be selected as a YES. If the patient returned with a superficial or deep incisional SSI the PATOS field would be selected as a NO). The patient does not have to meet the NHSN definition of an SSI at the time of the primary procedure but there must be notation that there is evidence of an infection or abscess present at the time of surgery. PATOS is not necessarily diagnosis driven.	Surgical site infections (SSIs) during the 30-day (superficial SSI) and 90-day (deep and organ/space SSI) postoperative periods following breast procedures in Ambulatory Surgery Centers.

0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure		3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure
Denominator Statement	<p>An NHSN Operative Procedure is a procedure:</p> <ul style="list-style-type: none"><li>that is included in the ICD-10-PCS or CPT NHSN operative procedure code mapping. And</li><li>takes place during an operation where at least one incision (including laparoscopic approach and cranial Burr holes) is made through the skin or mucous membrane, or reoperation via an incision that was left open during a prior operative procedure And</li><li>takes place in an operating room (OR), defined as a patient care area that met the Facilities Guidelines Institute’s (FGI) or American Institute of Architects’ (AIA) criteria for an operating room when it was constructed or renovated. This may include an operating room, C-section room, interventional radiology room, or a cardiac catheterization lab.</li></ul> <p>Exclusions: Otherwise eligible procedures that are assigned an ASA score of 6 are not eligible for NHSN SSI surveillance.</p> <p>Using multivariable logistic regression models for colon surgeries and abdominal hysterectomies, the predicted number of SSIs is obtained. These predicted numbers are summed by facility and surgical procedure and used as the denominator of this measure (see also 2a.8).</p>	Breast procedures, as specified by the operative codes that comprise the breast procedure category of the NHSN Patient Safety Component Protocol, performed at ambulatory surgery centers.
Exclusions	<p><b>Denominator Exclusions:</b> Denominator data are excluded from the SSI measure due to various reasons related to data quality, data outlier and data errors. The complete list of universal exclusion criteria applied to denominator are listed in the SSI section of the SIR guide that is referenced above. These exclusions include but are not limited to procedures associated with SSI events where the PATOS = yes, and those with ASA Class VI (6). The measure specific denominator exclusions for the Complex 30-day SSI, are off plan colon and abdominal hysterectomy procedures, procedures performed on persons under the age of 18, and procedure performed on an outpatient basis. .</p> <p>Note: Under the 2015 baseline, both primarily closed procedures and those that are not closed primarily are included in the denominator data. Persons under the age of 18, those having a procedure performed on an outpatient basis, procedures associated with SSI events where the PATOS = yes, those with ASA Class VI (6) are excluded.</p> <p>Note: Both primarily closed procedures and those that are not closed primarily are included in the denominator data.</p>	<p><b>Denominator Exclusions:</b> Hospital inpatients and hospital outpatient department patients, pediatric patients and very elderly patients, and brain-dead patients whose organs are being removed for donor purposes</p>

Comparison of 1716 and 1717

1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure		1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure
Steward	Centers for Disease Control and Prevention	Centers for Disease Control and Prevention
Description	Standardized infection ratio (SIR) and Adjusted Ranking Metric (ARM) of hospital-onset unique blood source MRSA Laboratory-identified events (LabID events) among all inpatients in the facility	Standardized infection ratio (SIR) and Adjusted Ranking Metric (ARM) of hospital-onset CDI Laboratory-identified events (LabID events) among all inpatients in the facility, excluding well-baby nurseries and neonatal intensive care units (NICUs).
Type	Outcome	Outcome
Data Source	Electronic Health Data, Electronic Health Records, Other, Paper Medical Records	Electronic Health Data, Electronic Health Records, Other, Paper Medical Records
Level of Analysis	Facility, Other, Population : Regional and State	Facility, Other, Population : Regional and State
Care Setting	Emergency Department and Services, Inpatient/Hospital, Post-Acute Care	Emergency Department and Services, Inpatient/Hospital, Post-Acute Care
Numerator Statement	Total number of observed hospital-onset unique blood source MRSA LabID events among all inpatients in the facility per NHSN protocols.	Total number of observed hospital-onset incident CDI LabID events among all inpatients in the facility, excluding NICU, Special Care Nursery, babies in LDRP, well-baby nurseries, or well-baby clinics.
Denominator Statement	Total number of predicted hospital-onset unique blood source MRSA LabID events, calculated from a negative binomial regression model and risk adjusted for facility’s number of inpatient days, inpatient community-onset MRSA prevalence rate, average length of patient stay in the hospital, medical school affiliation, facility type, number of critical care beds in the hospital, and outpatient community-onset MRSA prevalence rate from emergency departments and observation units.	Total number of predicted hospital-onset CDI LabID events, calculated using the facility’s number of inpatient days, facility type, CDI event reporting from Emergency Department and 24 hour observation units, bed size, ICU bed size, affiliation with medical school, microbiological test method used to identify C. difficile, and community-onset CDI admission prevalence rate.
Denominator Exclusions	<p><b>Denominator Exclusions:</b></p> <p>Denominator counts exclude data from inpatient rehabilitation units and inpatient psychiatric units with different CMS Certification Numbers (CCN) from the acute care facility.</p>	<p><b>Denominator Exclusions:</b></p> <p>Data from patients who are not assigned to an inpatient bed are excluded from the denominator counts, including outpatient clinics, 24-hour observation units, and emergency department visits. Inpatient rehab locations and inpatient psychiatric locations that have their own Centers for Medicare and Medicaid Services (CMS) Certification Number (CCN) are excluded. Additionally, data from NICU, SCN, babies in LDRP, well-baby nurseries, or well-baby clinics are excluded from the denominator count.</p>

## Related and Competing Measures (narrative format)

### Comparison of 0555 and 2732e

0555 INR Monitoring for Individuals on Warfarin

2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge

#### *Steward*

##### **0555 INR Monitoring for Individuals on Warfarin**

Centers for Medicare & Medicaid Services

##### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

Centers for Medicare & Medicaid Services

#### *Description*

##### **0555 INR Monitoring for Individuals on Warfarin**

Percentage of individuals at least 18 years of age as of the end of the measurement period with at least 56 days of warfarin therapy who receive at least one International Normalized Ratio (INR) test during each 56-day interval with active warfarin therapy.

##### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

Percentage of adult inpatient hospital discharges to home for which the individual was on warfarin and discharged with a non-therapeutic International Normalized Ratio (INR) who had an INR test within 14 days of hospital discharge

#### *Type*

##### **0555 INR Monitoring for Individuals on Warfarin**

Process

##### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

Process

#### *Data Source*

##### **0555 INR Monitoring for Individuals on Warfarin**

Claims

##### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

Claims, Electronic Health Data, Electronic Health Records, Other

#### *Level of Analysis*

##### **0555 INR Monitoring for Individuals on Warfarin**

Health Plan

##### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

Facility

#### *Care Setting*

##### **0555 INR Monitoring for Individuals on Warfarin**

Outpatient Services

##### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

Inpatient/Hospital

## *Numerator Statement*

### **0555 INR Monitoring for Individuals on Warfarin**

The number of individuals in the denominator who receive at least one INR monitoring test during each 56-day interval with active warfarin therapy. The number of individuals in the denominator who receive at least one INR monitoring test during each 56-day interval with active warfarin therapy.

### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

Individuals in the denominator who had an INR test within 14 days of discharge

## *Denominator Statement*

### **0555 INR Monitoring for Individuals on Warfarin**

Continuously enrolled individuals, at least 18 years of age at the end of the measurement period, with at least 56 days of warfarin therapy during the measurement period.

### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

Adult inpatient discharges to home for which the individual had active warfarin therapy within 1 day prior to discharge and the last monitored INR within 7 days of discharge was  $\leq 1.5$  or  $\geq 4$

## *Exclusions*

### **0555 INR Monitoring for Individuals on Warfarin**

#### **Denominator Exclusions:**

1. Individuals who are monitoring INR at home. These individuals are excluded because the claims associated with home INR monitoring are associated with up to four INR tests per claim. Therefore, a single claim for home INR monitoring would not be representative of a single INR test and would prohibit being able to distinguish if the home INR test was within the 56-day timeframe specified by the numerator of this measure.
2. Individuals who have first or last warfarin claims with missing days' supply.

### **2732e INR Monitoring for Individuals on Warfarin after Hospital Discharge**

#### **Denominator Exclusions:**

The following inpatient discharges are excluded from the denominator.

The following exclusion is identified from the Medication Administration Record (MAR) within the patient's EHR.

- 1) Inpatient discharges for which the individuals received dabigatran, rivaroxaban, or apixaban within one day prior to discharge

The following exclusions are identified from Part A and Part B Medicare Administrative Claims.

- 2) Inpatient discharges for which the individuals are monitoring INR at home
- 3) Inpatient discharges for which the individuals expired within 14 days post-discharge
- 4) Inpatient discharges for which the individuals received hospice care within 14 days post-discharge
- 5) Inpatient discharges for which the individuals had a hospital inpatient admission within 14 days post-discharge
- 6) Inpatient discharges for which the individuals were admitted to a skilled nursing facility (SNF) within 14 days post-discharge
- 7) Inpatient discharges for which the end date of the 14-day follow-up period occurs after the end of the measurement period
- 8) Inpatient discharges for which the individual is not enrolled in Medicare Part A and Part B at the time of discharge and during the 14-day follow-up period post discharge.

## Comparison of 0753 and 3025

0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure

3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure

### *Steward*

**0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

Centers for Disease Control and Prevention (CDC)

**3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

Centers for Disease Control and Prevention (CDC)

### *Description*

**0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

Facility adjusted Standardized Infection Ratio (SIR) and Adjusted Ranking Metric (ARM) for deep incisional and organ/space Surgical Site Infections (SSI) at the primary incision site among adult patients aged  $\geq 18$  years as reported through the CDC National Health and Safety Network (NHSN).

**3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

This measure is for the risk-adjusted Standardized Infection Ratio (SIR) for all Surgical Site Infections (SSI) following breast procedures conducted at ambulatory surgery centers (ASCs) among adult patients (ages 18 - 108 years) and reported to the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN). The measure compares the reported number of surgical site infections observed at an ASC with a predicted value based on nationally aggregated data. The measure was developed collaboratively by the CDC, the Ambulatory Surgery Center Quality Collaboration (ASC QC), and the Colorado Department of Public Health and Environment. CDC is the measure steward.

### *Type*

**0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

Outcome

**3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

Outcome

### *Data Source*

**0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

Electronic Health Data, Electronic Health Records, Other, Paper Medical Records

**3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

Electronic Health Records, Other, Paper Medical Records

### *Level of Analysis*

**0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

Facility, Other, Population : Regional and State

### **3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

Facility

#### *Care Setting*

#### **0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

Inpatient/Hospital

#### **3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

Outpatient Services

#### *Numerator Statement*

#### **0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

Deep incisional primary (DIP) and organ/space SSIs during the 30-day postoperative period among patients = 18 years of age, who undergo inpatient colon surgeries or abdominal hysterectomies. SSIs will be identified before discharge from the hospital, upon readmission to the same hospital, or during outpatient care or admission to another hospital (post-discharge surveillance).

Numerator Exclusion SSI events with PATOS\* field = yes.

Infection present at time of surgery (PATOS): PATOS denotes that there is evidence of an infection or abscess at the start of or during the index surgical procedure (in other words, it is present preoperatively). PATOS is a YES/NO field on the SSI Event form. PATOS does not apply if there is a period of wellness between the time of a preoperative condition and surgery. The evidence of infection or abscess must be noted/documented intraoperatively in an operative note or report of surgery. Only select PATOS = YES if it applies to the depth of SSI that is being attributed to the procedures (e.g., if a patient has evidence of an intraabdominal infection at the time of surgery and then later returns with an organ/space SSI the PATOS field would be selected as a YES. If the patient returned with a superficial or deep incisional SSI the PATOS field would be selected as a NO). The patient does not have to meet the NHSN definition of an SSI at the time of the primary procedure but there must be notation that there is evidence of an infection or abscess present at the time of surgery. PATOS is not necessarily diagnosis driven.

#### **3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

Surgical site infections (SSIs) during the 30-day (superficial SSI) and 90-day (deep and organ/space SSI) postoperative periods following breast procedures in Ambulatory Surgery Centers.

#### *Denominator Statement*

#### **0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

An NHSN Operative Procedure is a procedure:

- that is included in the ICD-10-PCS or CPT NHSN operative procedure code mapping. And
- takes place during an operation where at least one incision (including laparoscopic approach and cranial Burr holes) is made through the skin or mucous membrane, or reoperation via an incision that was left open during a prior operative procedure And
- takes place in an operating room (OR), defined as a patient care area that met the Facilities Guidelines Institute's (FGI) or American Institute of Architects' (AIA) criteria for an operating room when it was constructed or renovated. This may include an operating room, C-section room, interventional radiology room, or a cardiac catheterization lab.

Exclusions: Otherwise eligible procedures that are assigned an ASA score of 6 are not eligible for NHSN SSI surveillance.



Using multivariable logistic regression models for colon surgeries and abdominal hysterectomies, the predicted number of SSIs is obtained. These predicted numbers are summed by facility and surgical procedure and used as the denominator of this measure (see also 2a.8).

### **3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

Breast procedures, as specified by the operative codes that comprise the breast procedure category of the NHSN Patient Safety Component Protocol, performed at ambulatory surgery centers.

#### *Exclusions*

#### **0753 American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure**

**Denominator Exclusions:** Denominator data are excluded from the SSI measure due to various reasons related to data quality, data outlier and data errors. The complete list of universal exclusion criteria applied to denominator are listed in the SSI section of the SIR guide that is referenced above. These exclusions include but are not limited to procedures associated with SSI events where the PATOS = yes, and those with ASA Class VI (6). The measure specific denominator exclusions for the Complex 30-day SSI, are off plan colon and abdominal hysterectomy procedures, procedures performed on persons under the age of 18, and procedure performed on an outpatient basis. .

Note: Under the 2015 baseline, both primarily closed procedures and those that are not closed primarily are included in the denominator data. Persons under the age of 18, those having a procedure performed on an outpatient basis, procedures associated with SSI events where the PATOS = yes, those with ASA Class VI (6) are excluded.

Note: Both primarily closed procedures and those that are not closed primarily are included in the denominator data.

### **3025 Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure**

**Denominator Exclusions:** Hospital inpatients and hospital outpatient department patients, pediatric patients and very elderly patients, and brain-dead patients whose organs are being removed for donor purposes

#### **Comparison of 1716 and 1717**

1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure

1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset *Clostridium difficile* Infection (CDI) Outcome Measure

#### *Steward*

#### **1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure**

Centers for Disease Control and Prevention

#### **1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset *Clostridium difficile* Infection (CDI) Outcome Measure**

Centers for Disease Control and Prevention

#### *Description*

#### **1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure**

Standardized infection ratio (SIR) and Adjusted Ranking Metric (ARM) of hospital-onset unique blood source MRSA Laboratory-identified events (LabID events) among all inpatients in the facility

**1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure**

Standardized infection ratio (SIR) and Adjusted Ranking Metric (ARM) of hospital-onset CDI Laboratory-identified events (LabID events) among all inpatients in the facility, excluding well-baby nurseries and neonatal intensive care units (NICUs).

*Type*

**1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure**

Outcome

**1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure**

Outcome

*Data Source*

**1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure**

Electronic Health Data, Electronic Health Records, Other, Paper Medical Records

**1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure**

Electronic Health Data, Electronic Health Records, Other, Paper Medical Records

*Level of Analysis*

**1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure**

Facility, Other, Population : Regional and State

**1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure**

Facility, Other, Population : Regional and State

*Care Setting*

**1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure**

Emergency Department and Services, Inpatient/Hospital, Post-Acute Care

**1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure**

Emergency Department and Services, Inpatient/Hospital, Post-Acute Care

*Numerator Statement*

**1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure**

Total number of observed hospital-onset unique blood source MRSA LabID events among all inpatients in the facility per NHSN protocols.

**1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure**

Total number of observed hospital-onset incident CDI LabID events among all inpatients in the facility, excluding NICU, Special Care Nursery, babies in LDRP, well-baby nurseries, or well-baby clinics.



## *Denominator Statement*

### **1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure**

Total number of predicted hospital-onset unique blood source MRSA LabID events, calculated from a negative binomial regression model and risk adjusted for facility's number of inpatient days, inpatient community-onset MRSA prevalence rate, average length of patient stay in the hospital, medical school affiliation, facility type, number of critical care beds in the hospital, and outpatient community-onset MRSA prevalence rate from emergency departments and observation units.

### **1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure**

Total number of predicted hospital-onset CDI LabID events, calculated using the facility's number of inpatient days, facility type, CDI event reporting from Emergency Department and 24 hour observation units, bed size, ICU bed size, affiliation with medical school, microbiological test method used to identify C. difficile, and community-onset CDI admission prevalence rate.

## *Denominator Exclusions*

### **1716 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure**

#### **Denominator Exclusions:**

Denominator counts exclude data from inpatient rehabilitation units and inpatient psychiatric units with different CMS Certification Numbers (CCN) from the acute care facility.

### **1717 National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure**

#### **Denominator Exclusions:**

Data from patients who are not assigned to an inpatient bed are excluded from the denominator counts, including outpatient clinics, 24-hour observation units, and emergency department visits. Inpatient rehab locations and inpatient psychiatric locations that have their own Centers for Medicare and Medicaid Services (CMS) Certification Number (CCN) are excluded. Additionally, data from NICU, SCN, babies in LDRP, well-baby nurseries, or well-baby clinics are excluded from the denominator count.