Hospital Improvement Innovation Network

Improve Quality and Patient Safety at your Hospital and Impact National Health Outcomes

Encyclopedia of Measures (EOM)

Program Core Evaluation Measures and Additional Required Measures
Version 1.3
Last updated: 8/21/2017

Summary of 8/21/2017 changes – Version 1.3

- Updated the specifications link and footnote for Pressure Ulcer Rate, Stage 3+
- Update the AHRQ PSI links to updated v6
- Added clarifying note to the numerator for Readmission within 30 Days (All Cause) Rate

Summary of 11/10/2016 changes – Version 1.2

- EXISTING Harm Events Related to Workplace Violence measure (HIIN-WS-1c)
  - Updated "data source"
- Updated Pressure Ulcer topic name to Pressure Ulcer/Injury
- EXISTING Hospital-Wide All-Cause Unplanned Readmissions – Medicare measure (HIIN-READ-2)
  - Added a note that clarifies that this measure is a subset of the "Readmission within 30 Days (All Cause) Rate" measure (HIIN-READ-1)

Summary of 10/27/2016 changes – Version 1.1

- EXISTING Overall Sepsis Mortality Rate measure (HIIN-SEPSIS-1c)
  - Changed name to "Hospital-Onset Sepsis Mortality Rate"
  - Clarified that denominator is limited to hospital-onset sepsis mortality
  - Added note and footnotes defining "hospital-onset"
- NEW Measure Added
  - Overall Sepsis Mortality Rate measure (HIIN-SEPSIS-1d)
  - Denominator includes hospital-onset, post-operative sepsis, and any cases that present with sepsis to the hospital (for example, those cases coming in as transfers, or presenting in the emergency department).
- EXISTING Standardized Infection Ratio (SIR) – MRSA Bacteremia measure (HIIN-MRSA-1)
  - Corrected denominator description
- EXISTING Infection-Related Ventilator-Associated Complication (IVAC) measure (HIIN-VAE-2)
  - Updated "data sources"
- EXISTING Post-Operative Pulmonary Embolism or Deep Vein Thrombosis Rate (HIIIN-VTE-1)
  - Corrected applicability verbiage

Summary of 10/17/2016 – Version 1.0

- Initial Release

Contents

*Indicates additional required measure. All other measures are core evaluation measures.

Measure Applicability (determined at enrollment)

Adverse Drug Events (ADE)	
Excessive Anticoagulation	ALL hospitals
Hypoglycemia in Inpatients Receiving Insulin	ALL hospitals
Adverse Drug Events due to Opioids	ALL hospitals
Catheter-Associated Urinary Tract Infection (CAUTI)	
SIR – All units excluding NICUs	Hospitals **reporting to NHSN**
SIR – All ICUS excluding NICUs	Hospitals **with an ICU** and **reporting to NHSN**
Rate– All units excluding NICUs	ALL hospitals
Rate – All ICUS excluding NICUs	Hospitals **with an ICU**
Urinary catheter utilization – all units excluding NICUs	ALL hospitals
Urinary catheter utilization – all ICUS excluding NICUs	Hospitals **with an ICU**
Central Line-Associated Bloodstream Infections (CLABSI) *Hospitals that **place and/or manage central lines***	
SIR – All units	Hospitals that **place and/or manage central lines** and **reporting to NHSN**
SIR – All ICUs	Hospitals that **place and/or manage central lines**, **with an ICU** and **reporting to NHSN**
Rate – All units	Hospitals that **place and/or manage central lines**
Rate – All ICUs	Hospitals that **place and/or manage central lines**, **with an ICU**
Central line utilization – all units	Hospitals that **place and/or manage central lines**
Central line utilization – all ICUs	Hospitals that **place and/or manage central lines**, **with an ICU**
c. Difficile	
SIR – facility wide	Hospitals **reporting to NHSN**
Facility-wide *c. Difficile* rate	ALL hospitals
Falls	
Falls with injury	ALL hospitals
Methicillin-resistant Staphylococcus aureus (MRSA)	
SIR – MRSA bacteremia	Hospitals **reporting to NHSN**
Hospital-onset MRSA bacteremia events	ALL hospitals
Pressure Ulcers	
Pressure Ulcer Rate	**Non-critical access** hospitals Note: CAHs highly encouraged to report
Hospital-Acquired Pressure Ulcer Prevalence	ALL hospitals
Readmissions	
All-cause, 30-day readmissions	All hospitals
All-cause, 30-day readmissions, Medicare FFS	Hospitals **that serve Medicare FFS beneficiaries**

Measure Applicability, continued (determined at enrollment)

Sepsis	
Postoperative Sepsis Rate	Hospitals that **perform inpatient surgeries**
Hospital-Onset Sepsis Mortality Rate	ALL hospitals
Overall Sepsis Mortality Rate	ALL hospitals
Surgical site infections *Hospitals that **perform inpatient surgeries***	
SSI SIR – colon surgeries	Hospitals **performing colon surgeries** and **reporting to NHSN**
SSI SIR – abdominal hysterectomies	Hospitals **performing abdominal hysterectomies** and **reporting to NHSN**
SSI SIR – total knee replacement surgeries	Hospitals **total knee replacement surgeries** and **reporting to NHSN**
SSI SIR – total hip replacement surgeries	Hospitals **performing total hip replacement surgeries** and **reporting to NHSN**
SSI rate – colon surgeries	Hospitals **performing colon surgeries**
SSI rate – abdominal hysterectomies	Hospitals **performing abdominal hysterectomies**
SSI rate – total knee replacement surgeries	Hospitals **total knee replacement surgeries**
SSI rate – total hip replacement surgeries	Hospitals **performing total hip replacement surgeries**
Venous Thromboembolism (VTE) *Hospitals that **perform inpatient surgeries***	
Post-Operative Pulmonary Embolism (PE) or Deep Vein Thrombosis (DVT) Rate	Hospitals **that perform inpatient surgeries**
Ventilator-Associated Events (VAE) *Hospitals **that use ventilators***	
Ventilator Associated Condition (VAC) Rate	Hospitals **that use ventilators**
Infection-Related Ventilator-Associated Complication (IVAC)	Hospitals **that use ventilators**
Culture of Safety: Worker Safety	
Worker harm events related to patient handling	All hospitals
Worker harm events related to workplace violence	All hospitals

Adverse Drug Events – Excessive Anticoagulation

ADE: HIIN Evaluation Measure	
Excessive Anticoagulation with Warfarin - Inpatients	
Measure type	Outcome
Numerator	Inpatients experiencing excessive anticoagulation with warfarin
Denominator	Inpatients receiving warfarin anticoagulation therapy
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 100$
Specifications/definitions Sources/Recommendations	See references below for guidance
Data source (s)	Numerator: incident reporting systems, trigger tools, pharmacists' intervention systems, medical record review Denominator: billing systems
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-ADE-1a
AHA/HRET HEN 2.0	HEN2-ADE-1a

The definition of an adverse drug event is any injury resulting from medication use, including physical harm, mental harm or loss of function[1]. Data can be collected through incident reporting, trigger tools, pharmacists' intervention data or administrative data.

The Institute for Healthcare Improvement's (IHI) trigger tool includes a list of known ADE triggers and instructions for measuring the number and degree of harmful medication events. The tool is available online at the following link:
http://www.ihi.org/resources/Pages/Tools/TriggerToolforMeasuringAdverseDrugEvents.aspx

The Partnership for Patients has gathered many resources for ADE prevention and measurement. These resources are catalogued online at the following link:
http://partnershipforpatients.cms.gov/p4p_resources/tsp-adversedrugevents/tooladversedrugeventsade.html

[1] Bates, D.W., Cullen, D.J., Laird, N., et al. (1995). Incidence of adverse drug events and potential adverse drug events. Implications for prevention. ADE Prevention Study Group. *JAMA*, 274(1), 29-34.

Adverse Drug Events – Hypoglycemia in Inpatients Receiving Insulin

ADE: HIIN Evaluation Measure	
Hypoglycemia in Inpatients Receiving Insulin	
Measure type	Outcome
Numerator	Hypoglycemia in inpatients receiving insulin or other hypoglycemic agents
Denominator	Inpatients receiving insulin or other hypoglycemic agents
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 100$
Specifications/definitions Sources/Recommendations	See references below for guidance
Data source (s)	Numerator: incident reporting systems, trigger tools, pharmacists' intervention systems, medical record review Denominator: billing systems
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-ADE-1b
AHA/HRET HEN 2.0	HEN2-ADE-1b

The definition of an adverse drug event is any injury resulting from medication use, including physical harm, mental harm or loss of function[2]. Data can be collected through incident reporting, trigger tools, pharmacists' intervention data or administrative data.

The Institute for Healthcare Improvement's (IHI) trigger tool includes a list of known ADE triggers and instructions for measuring the number and degree of harmful medication events. The tool is available online at the following link:
http://www.ihi.org/resources/Pages/Tools/TriggerToolforMeasuringAdverseDrugEvents.aspx

The Partnership for Patients has gathered many resources for ADE prevention and measurement. These resources are catalogued online at the following link:
http://partnershipforpatients.cms.gov/p4p_resources/tsp-adversedrugevents/tooladversedrugeventsade.html

[2] Bates, D.W., Cullen, D.J., Laird, N., et al. (1995). Incidence of adverse drug events and potential adverse drug events. Implications for prevention. ADE Prevention Study Group. *JAMA*, 274(1), 29-34.

Adverse Drug Events due to Opioids

ADE: HIIN Evaluation Measure	
Adverse Drug Events due to Opioids	
Measure type	Outcome
Numerator	Number of patients treated with opioids who received naloxone
Denominator	Number of patients who received an opioid agent
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 100$
Specifications/definitions Sources/Recommendations	See references below for guidance
Data source (s)	Numerator: incident reporting systems, trigger tools, pharmacists' intervention systems, medical record review Denominator: billing systems
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-ADE-1c
AHA/HRET HEN 2.0	HEN2-ADE-1c

The definition of an adverse drug event is any injury resulting from medication use, including physical harm, mental harm or loss of function[3]. Data can be collected through incident reporting, trigger tools, pharmacists' intervention data or administrative data.

The Institute for Safe Medication Practices has assembled a number of tools related to drug safety, which can be accessed online at the following link: http://ismp.org/tools/default.asp

The Partnership for Patients has gathered many resources for ADE prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-adversedrugevents/tooladversedrugeventsade.html

[3] Bates, D.W., Cullen, D.J., Laird, N., et al. (1995). Incidence of adverse drug events and potential adverse drug events. Implications for prevention. ADE Prevention Study Group. *JAMA*, 274(1), 29-34.

Catheter-Associated Urinary Tract Infection (CAUTI) Standardized Infection Ratio (SIR) National Health Safety Network (NHSN) Reporting Facilities ONLY

CAUTI: CMS Evaluation Measure – NHSN Reporting Facilities ONLY – NQF 0138	
Catheter-associated Urinary Tract Infection (CAUTI) Standardized Infection Ratio (SIR) • *ICUs (excluding NICUs) + Other Inpatient Units* • *ICUs excluding NICUs*	
Measure type	Outcome
Numerator	Number of observed infections
Denominator	Number of predicted infections
SIR calculation	$\frac{Numerator}{Denominator}$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN NQF: National Quality Forum (NQF) 0138 Additional resources: CDC
Data source (s)	NHSN
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[4]
Baseline period	Preferred: Calendar year 2015 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period between January 2015 and October 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-CAUTI-1a: ICUs (excluding NICUs) + Other Inpatient Units HIIN-CAUTI-1b: ICUs excluding NICUs
Notes	This measure is only required for hospitals submitting data to NHSN and conferring rights to the HRET HIIN group, or a state group.
AHA/HRET HEN 2.0 Measure ID	HEN2-CAUTI-1a: ICUs (excluding NICUs) + Other Inpatient Units HEN2-CAUTI-1b: ICUs excluding NICUs

Hospitals **not** reporting to NHSN will not report this measure. Data elements to calculate this ratio will be extracted from NHSN for hospitals that confer rights to the HRET HIIN group, or a state group.

The Partnership for Patients has also gathered many resources for CAUTI prevention and measurement. These resources are catalogued online at the following link: https://partnershipforpatients.cms.gov/p4p_resources/tsp-catheterassociatedurinarytractinfections/toolcatheter-associatedurinarytractinfectionscauti.html

[4] Hospitals are required to confer rights to CAUTI data for all inpatient locations excluding Neonatal Intensive Care Units (NICUs).

Catheter-Associated Urinary Tract Infection (CAUTI) Rate

CAUTI: HIIN Evaluation Measure	
Catheter-Associated Urinary Tract Infection (CAUTI) rates, reported separately for • *ICUs (excluding NICUs) + Other Inpatient Units* • *ICUs excluding NICUs*	
Measure type	Outcome
Numerator	Total number of observed healthcare-associated CAUTI among patients in bedded inpatient care locations[5]
Denominator	Total number of indwelling urinary catheter days for each location under surveillance for CAUTI during the data period
Rate Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN Additional resources: CDC
Data source (s)	NHSN OR In-hospital infection prevention surveillance systems & billing systems
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[6]
Baseline period	Preferred: Calendar year 2015 Alternate: Alternate: Oldest 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-CAUTI-2a: ICUs (excluding NICUs) + Other Inpatient Units HIIN-CAUTI-2b: ICUs excluding NICUs
AHA/HRET HEN 2.0	HEN2-CAUTI-2a: ICUs (excluding NICUs) + Other Inpatient Units HEN2-CAUTI-2b: ICUs excluding NICUs

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators for ICUs excluding NICUs **and** also for ICUs excluding NICUs + Other Inpatient Units, separately, following the CDC specifications to define CAUTI.

The Partnership for Patients has also gathered many resources for CAUTI prevention and measurement. These resources are catalogued online at the following link: https://partnershipforpatients.cms.gov/p4p_resources/tsp-catheterassociatedurinarytractinfections/toolcatheter-associatedurinarytractinfectionscauti.html

[5] Extracted from NQF Quality Positioning System: http://www.qualityforum.org/QPS/0138
[6] Hospitals are required to confer rights to CAUTI data for all inpatient locations excluding Neonatal Intensive Care Units (NICUs).

Urinary Catheter Utilization Ratio

CAUTI: CMS Evaluation Measure	
Urinary Catheter Utilization Ratio • *ICUs (excluding NICUs) + Other Inpatient Units* • *ICUs excluding NICUs*	
Measure type	Process
Numerator	Total number of indwelling urinary catheter days for bedded inpatient care locations under surveillance (excluding patients in Level II or III NICUs)
Denominator	Total number of patient days for bedded inpatient care locations under surveillance (excluding patients in Level II or III NICUs)
Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 100$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN Additional resources: CDC
Data source (s)	NHSN OR In-hospital infection prevention surveillance systems & billing systems
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[7]
Baseline period	Preferred: Calendar year 2015 Alternate: Alternate: Oldest 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-CAUTI-3a: ICUs (excluding NICUs) + Other Inpatient Units HIIN-CAUTI-3b: ICUs excluding NICUs
AHA/HRET HEN 2.0	HEN2-CAUTI-3a: ICUs (excluding NICUs) + Other Inpatient Units HEN2-CAUTI-3b: ICUs excluding NICUs

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators for ICUs excluding NICUs **and** also for ICUs excluding NICUs + Other Inpatient Units, separately, following the CDC specifications to define CAUTI.

The Partnership for Patients has also gathered many resources for CAUTI prevention and measurement. These resources are catalogued online at the following link: https://partnershipforpatients.cms.gov/p4p_resources/tsp-catheterassociatedurinarytractinfections/toolcatheter-associatedurinarytractinfectionscauti.html

[7] Hospitals are required to confer rights to CAUTI data for all inpatient locations excluding Neonatal Intensive Care Units (NICUs).

Central Line-Associated Blood Stream Infection (CLABSI) Standardized Infection Ratio (SIR) NHSN Reporting Facilities ONLY

CLABSI: CMS Evaluation Measure – NHSN Reporting Facilities ONLY – NQF 0139	
Central Line-Associated Bloodstream Infection (CLABSI) Standardized Infection Ratio (SIR) • *All Inpatient Units* • *All ICUs*	
Measure type	Outcome
Numerator	Number of observed infections
Denominator	Number of predicted infections
SIR calculation	$\frac{Numerator}{Denominator}$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN NQF information: NQF 0139 Additional resources: CDC
Data source (s)	NHSN
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[8]
Baseline period	Preferred: Calendar year 2015 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period between January 2015 and October 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-CLABSI-1a: All Inpatient Units HIIN-CLABSI-1b: All ICUs
Notes	This measure will only be collected for hospitals submitting data to NHSN and conferring rights to the HRET HIIN group, or a state group.
AHA/HRET HEN 2.0	HEN2-CLABSI-1a: All Inpatient Units HEN2-CLABSI-1b: All ICUs

Hospitals **not** reporting to NHSN will not report this measure. Data elements to calculate this ratio will be extracted from NHSN for hospitals that confer rights to the HRET HIIN group, or a state group.

The Partnership for Patients has also gathered many resources for CLABSI prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-centralline-associatedbloodstreaminfections/toolcentralline-associatedbloodstreaminfectionsclabsi.html

[8] Hospitals are required to confer rights to CLABSI data for all inpatient locations.

Central Line-Associated Blood Stream Infection (CLABSI) Rate

CLABSI: HIIN Evaluation Measure – All Facilities	
Central Line-Associated Bloodstream Infection (CLABSI) Rates • *All Inpatient Units* • *All ICUs*	
Measure type	Outcome
Numerator	Total number of observed healthcare-associated CLABSI among patients in bedded inpatient care locations[9]
Denominator	Total number of central line days for each location under surveillance for CLABSI during the data period
Rate Calculation	$\left(\frac{Numerator}{Denominator}\right) x1{,}000$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN Additional resources: CDC
Data source (s)	NHSN OR In-hospital infection prevention surveillance systems & billing systems
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[10]
Baseline period	Preferred: Calendar year 2015 Alternate: Oldest 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-CLABSI-2a: All Inpatient Units HIIN-CLABSI-2b: All ICUs
AHA/HRET HEN 2.0	HEN2-CLABSI-2a: All Inpatient Units HEN2-CLABSI-2b: All ICUs

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators for All Inpatient Units **and** also for All ICUs separately, following the CDC specifications to define CLABSI.

The Partnership for Patients has also gathered many resources for CLABSI prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-centralline-associatedbloodstreaminfections/toolcentralline-associatedbloodstreaminfectionsclabsi.html

[9] Extracted from NQF Quality Positioning System: http://www.qualityforum.org/QPS/0139
[10] Hospitals are required to confer rights to CLABSI data for all inpatient locations.

Central Line Utilization Ratio
All Facilities

CLABSI: CMS Evaluation Measure	
Central Line Utilization Ratio • *All Inpatient Units* • *All ICUs*	
Measure type	Process
Numerator	Total number of central line days for bedded inpatient care locations under surveillance
Denominator	Total number of patient days for bedded inpatient care locations under surveillance
Calculation	$\left(\frac{Numerator}{Denominator}\right) x100$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN Additional resources: CDC
Data source (s)	NHSN OR in-hospital infection prevention surveillance systems & billing systems
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[11]
Baseline period	Preferred: Calendar year 2015 Alternate: Oldest 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-CLABSI-3a: All Inpatient Units HIIN-CLABSI-3b: All ICUs
AHA/HRET HEN 2.0	HEN2-CLABSI-3a: All Inpatient Units HEN2-CLABSI-3b: All ICUs

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators for All Inpatient Units **and** also for All ICUs separately, following the CDC specifications to define CLABSI.

The Partnership for Patients has also gathered many resources for CLABSI prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-centralline-associatedbloodstreaminfections/toolcentralline-associatedbloodstreaminfectionsclabsi.html

[11] Hospitals are required to confer rights to CLABSI data for all inpatient locations.

Standardized Infection Ratio (SIR) for Patients with *C. difficile*
NHSN Reporting Facilities ONLY

***C. difficile*: HIIN Evaluation Measure - NQF 1717**	
Standardized Infection Ratio (SIR) for patients with *C. difficile*	
Measure type	Outcome
Numerator	Total number of observed hospital-onset *C. difficile* lab identified events among all inpatients in the facility, excluding well-baby nurseries and NICUs
Denominator	Expected cases of patients with *C. difficile*
SIR Calculation	$\frac{Numerator}{Denominator}$
Specifications/Definitions/ Sources/Recommendations	Available from the Centers for Disease Control and Prevention
Data source(s)	NHSN
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group
Notes	This measure is only required for hospitals submitting data to NHSN and conferring rights to the HRET HIIN group, or a state group.
Baseline period	Preferred: Calendar year 2015 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period between January 2015 and October 2016 *If measure not tracked prior to HIIN, report quarterly as early as possible beginning with October 2016.*
Monitoring period	Quarterly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-CDI-1a
AHA/HRET HEN 2.0	HEN2-CDI-1a

Hospitals **not** reporting to NHSN will not report these measures. Data elements to calculate the SIRs will be extracted from NHSN for hospitals that confer rights to the HRET HIIN group, or a state group.

The Centers for Disease Control and Prevention (CDC) provides extensive *C. difficile* resources for patients, clinicians, facilities and settings. These resources are available online at the following links:

http://www.cdc.gov/hai/organisms/cdiff/Cdiff_settings.html
http://www.cdc.gov/nhsn/acute-care-hospital/cdiff-mrsa/index.html

Facility-wide c. *Difficile* Rate

***c. Difficile*: HIIN Evaluation Measure**	
Facility-wide c*. Difficile* Rate	
Measure type	Outcome
Numerator	Total number of observed hospital-onset *C. difficile* lab identified events among all inpatients in the facility, excluding well-baby nurseries and NICUs
Denominator	Patient days (facility-wide)
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 10{,}000$
Specifications/Definitions/ Sources/Recommendations	Available from the Centers for Disease Control and Prevention
Data source(s)	NHSN, infection surveillance systems
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-CDI-1b
AHA/HRET HEN 2.0	HEN2-CDI-1b

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators, following the CDC specifications to define *c. Difficile*.

The Centers for Disease Control and Prevention (CDC) provides extensive *C. difficile* resources for patients, clinicians, facilities and settings. These resources are available online at the following links:

http://www.cdc.gov/hai/organisms/cdiff/Cdiff_settings.html
http://www.cdc.gov/nhsn/acute-care-hospital/cdiff-mrsa/index.html

Falls with Injury

Falls: CMS Evaluation Measure (NQF 0202)	
All Documented Patient Falls with an Injury Level of Minor or Greater	
Measure type	Outcome
Numerator	Total number of patient falls of injury level minor or greater (whether or not assisted by a staff member) by eligible hospital unit during the measurement period[12]
Denominator	Patient days in eligible units during the measurement period[13]
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/definitions Sources/Recommendations	Available from NQF 0202
Data source (s)	Billing systems, medical records, surveillance systems
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-Falls-1
AHA/HRET HEN 2.0	HEN2-Falls-1

These data elements shall be submitted by all hospitals. The total patient days can be collected from billing systems. The number of patient falls could be collected from electronic clinical data or medical records, fall surveillance systems, injury reports, event tracking systems or other similar sources.

The Agency for Healthcare Research & Quality (AHRQ) has developed a comprehensive resource for measuring fall rates and fall prevention practices. The resource is available online at the following link: http://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/index.html

The American Nurses Association (ANA) has published an article about measuring fall program outcomes. The article is available online at the following link: http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume122007/No2May07/ArticlePreviousTopic/MeasuringFallProgramOutcomes.html

The Partnership for Patients has also gathered many resources for falls prevention and measurement. These resources are catalogued online at the following link: https://partnershipforpatients.cms.gov/p4p_resources/tsp-injuriesandfallsfromimmobility/toolinjuriesandfallsfromimmobility.html

[12] Extracted from NQF Quality Positioning System: http://www.qualityforum.org/QPS/0202

[13] Includes inpatients, short stay patients, observation patients, and same day surgery patients who receive care on eligible inpatient units for all or part of a day on the following unit types: adult critical care, step-down, medical, surgical, medical-surgical combined, critical access and adult rehabilitation inpatient units.

*Standardized Infection Ratio (SIR) – MRSA Bacteremia

Methicillin-resistant Staphylococcus aureus (MRSA) : HIIN Evaluation Measure	
SIR – MRSA Bacteremia	
Measure type	Outcome
Numerator	MRSA bacteremia events
Denominator	Expected cases of patients with MRSA bacteremia
SIR Calculation	$\frac{Numerator}{Denominator}$
Specifications/Definitions/ Sources/Recommendations	Available from the Centers for Disease Control and Prevention
Data source(s)	NHSN
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group
Notes	This measure is only required for hospitals submitting data to NHSN and conferring rights to the HRET HIIN group, or a state group.
Baseline period	Preferred: Calendar year 2015 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report quarterly as early as possible beginning with October 2016.*
Monitoring period	Quarterly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-MRSA-1
AHA/HRET HEN 2.0	Not Collected

Hospitals **not** reporting to NHSN will not report these measures. Data elements to calculate the SIRs will be extracted from NHSN for hospitals that confer rights to the HRET HIIN group, or a state group.

The Centers for Disease Control and Prevention (CDC) provides extensive *MRSA* resources for patients, clinicians, facilities and settings. These resources are available online at the following links:

http://www.cdc.gov/HAI/organisms/mrsa-infection.html
http://www.cdc.gov/nhsn/acute-care-hospital/cdiff-mrsa/index.html

*Hospital-onset MRSA bacteremia events

Methicillin-resistant Staphylococcus aureus (MRSA) : HIIN Evaluation Measure	
Hospital-onset MRSA bacteremia events	
Measure type	Outcome
Numerator	MRSA bacteremia events
Denominator	Patient days
Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/Definitions/ Sources/Recommendations	Available from the Centers for Disease Control and Prevention
Data source(s)	NHSN
NHSN data transfer	Yes, for hospitals conferring rights to the HRET HIIN group, or a state group
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-MRSA-2
AHA/HRET HEN 2.0	Not Collected

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators, following the CDC specifications to *define MRSA bacteremia events*.

The Centers for Disease Control and Prevention (CDC) provides extensive *MRSA* resources for patients, clinicians, facilities and settings. These resources are available online at the following links:

http://www.cdc.gov/HAI/organisms/mrsa-infection.html
http://www.cdc.gov/nhsn/acute-care-hospital/cdiff-mrsa/index.html

Pressure Ulcer Rate, Stage 3+

Pressure Ulcer/Injury: CMS Evaluation Measure (AHRQ PSI-03)	
Pressure Ulcer Rate, Stages 3+	
Measure type	Outcome
Numerator	Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary diagnosis codes for pressure ulcer and any secondary diagnosis codes for pressure ulcer stage III or IV (or unstageable) [14]
Denominator	Surgical or medical discharges, for patients ages 18 years and older. Surgical and medical discharges are defined by specific DRG or MS-DRG codes [15]
Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/definitions Sources/Recommendations	Available from AHRQ
Data source (s)	Administrative data
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-PrU-1
AHA/HRET HEN 2.0	HEN2-PrU-1

These data elements shall be submitted by all hospitals. Data can be collected through incident reporting, hospital discharge or administrative data.

The AHRQ has developed a comprehensive resource for measuring pressure ulcer rates and prevention practices. The resource is available online at the following link: http://www.ahrq.gov/professionals/systems/hospital/pressureulcertoolkit/putool5.html

[14] Extracted from AHRQ: http://www.qualityindicators.ahrq.gov/Modules/PSI_TechSpec.aspx

[15] The measure specifications exclude stays less than 3 days. While CAHs are required to maintain an annual average length of stay of 96 hours or less (https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/CritAccessHospfctsht.pdf), CAHs are encouraged to use the AHRQ PSI specifications to track pressure ulcers for appropriate inpatient stays in their facilities, even if the inpatient stay is less than 3 days.

Hospital-Acquired Pressure Ulcer Prevalence, Stage 2+

Pressure Ulcer/Injury: CMS Evaluation Measure (NQF 0201)	
Pressure Ulcer Prevalence, Hospital-Acquired-Stage 2+	
Measure type	Outcome
Numerator	Patients that have at least one category/stage II or greater hospital-acquired pressure ulcer on the day of the prevalence measurement episode[16]
Denominator	All patients, 18 years of age or greater, surveyed for the measurement episode
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x100$
Specifications/definitions Sources/Recommendations	Available from NQF 0201
Data source (s)	Surveillance systems
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Preferred: Monthly, beginning Oct 2016 Alternate: Quarterly, beginning with 4Q 2016 (report in last month of each quarter)
HIIN CDS Measure ID(s)	HIIN-PrU-2
AHA/HRET HEN 2.0	HEN2-PrU-2

These data elements shall be submitted by all hospitals. Data can be collected through incident reporting, medical records, hospital discharge or administrative data. Hospitals are strongly encouraged to report pressure ulcer prevalence monthly.

The AHRQ has developed a comprehensive resource for measuring pressure ulcer rates and prevention practices. The resource is available online at the following link:
http://www.ahrq.gov/professionals/systems/hospital/pressureulcertoolkit/putool5.html

The Partnership for Patients has also gathered many resources for pressure ulcer prevention and measurement. These resources are catalogued online at the following link:
http://partnershipforpatients.cms.gov/p4p_resources/tsp-pressureulcers/toolpressureulcers.html

[16] Extracted from NQF Quality Positioning System: http://www.qualityforum.org/QPS/0201

Readmission within 30 Days (All Cause) Rate

Readmission: CMS Evaluation Measure	
Readmission within 30 Days (All Cause)	
Measure type	Outcome
Numerator	Inpatients returning as an acute care inpatient within 30 days of date of discharge, to any facility (Note: Not all hospitals can track readmissions to other facilities. Hospitals should focus on tracking readmissions consistently across time).
Denominator	Total inpatient discharges (excluding discharges due to death)
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x100$
Specifications/definitions Sources/Recommendations	Facilities should follow the CMS definition of a readmission. This definition is explained in the "Frequently asked questions about readmissions" chapter, available on Quality Net. "Chapter 3 – Readmissions Measures," section "Defining readmissions" beginning on page 7
Data source (s)	Administrative data or billing systems or other tracking systems
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-READ-1
AHA/HRET HEN 2.0	HEN2-READ-1

The Partnership for Patients has also gathered many resources for readmissions prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-preventablereadmissions/toolpreventablereadmissions.html

Hospital-Wide All-Cause Unplanned Readmissions – Medicare

Readmission: HIIN Evaluation Measure (NQF 1789)	
Hospital-Wide All Cause Unplanned Readmissions	
Measure type	Outcome
Numerator	An inpatient admission for any cause (with the exception of certain planned readmissions), within 30 days from the date of discharge
Denominator	Medicare patients discharged from the hospital
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x100$
Specifications/definitions Sources/Recommendations	CMS (NQF 1789)
Data source (s)	Administrative data or billing systems or other tracking systems
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-READ-2
AHA/HRET HEN 2.0	Not collected

This measure is currently publicly reported by CMS for those 65 years and older who are Medicare FFS beneficiaries admitted to non-federal hospitals. Hospitals are encouraged to report results for all Medicare inpatients, however, the Medicare FFS results are acceptable to report.

Note: This measure is a subset of the "Readmission within 30 Days (All Cause) Rate" measure (HIIN-READ-1). The only difference between this measure and the "Readmission within 30 Days (All Cause) Rate" is that this measure is limited to Medicare patients.

The Partnership for Patients has also gathered many resources for readmissions prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-preventablereadmissions/toolpreventablereadmissions.html

Postoperative Sepsis Rate
Facilities that perform inpatient surgeries

Sepsis: HIIN Evaluation– AHRQ PSI-13	
Postoperative sepsis cases (secondary diagnosis) per 1,000 elective surgical discharges for patients ages 18 years and older	
Measure type	Outcome
Numerator	Discharges among cases meeting the inclusion and exclusion rules for the denominator, with any AHRQ designated secondary ICD-9-CM or ICD-10 diagnosis codes for sepsis.
Denominator	Elective surgical discharges for patients ages 18 years and older
Rate Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/Definitions/ Sources/Recommendations	Available from AHRQ
Data source(s)	Administrative claims
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-SEPSIS-1a
AHA/HRET HEN 2.0	HEN2-SEPSIS-1a

The Surviving Sepsis Campaign is a joint collaboration of the Society of Critical Care Medicine and the European Society of Intensive Care Medicine committed to reducing mortality from severe sepsis and septic shock worldwide. The campaign provides guidelines, bundles, data collection and other resources: http://www.survivingsepsis.org/Pages/default.aspx

Hospital-Onset Sepsis Mortality Rate
All facilities

Sepsis: HIIN Evaluation Measure	
In-hospital deaths per 1,000 discharges, among patients ages 18 through 89 years or obstetric patients, with hospital-onset sepsis	
Measure type	Outcome
Numerator	Number of in-hospital deaths due to severe sepsis and septic shock
Denominator	Number of patients with hospital-onset severe sepsis / septic shock. Note: hospital-onset is an infection that appears 48 hours or more after admission[17]
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/Definitions/ Sources/Recommendations	For specific diagnosis codes identifying severe sepsis / septic shock, refer to the numerator specifications for AHRQ PSI-13.
Data source(s)	Administrative claims, medical records
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-SEPSIS-1c
AHA/HRET HEN 2.0	HEN2-SEPSIS-1c

The Surviving Sepsis Campaign is a joint collaboration of the Society of Critical Care Medicine and the European Society of Intensive Care Medicine committed to reducing mortality from severe sepsis and septic shock worldwide. The campaign provides guidelines, bundles, data collection and other resources: http://www.survivingsepsis.org/Pages/default.aspx.

The Society of Critical Care Medicine has many resources available for data collection related to the identification and management of sepsis and septic shock cases. These resources are available online at the following link: http://www.survivingsepsis.org/Data-Collection/Pages/default.aspx

[17] http://www.surgeryencyclopedia.com/Fi-La/Hospital-Acquired-Infections.html#ixzz4O1GlPiWy, http://bmcmedicine.biomedcentral.com/articles/10.1186/1741-7015-12-40, https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-015-0103-6, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3470069/

Overall Sepsis Mortality Rate
All facilities

Sepsis: HIIN Evaluation Measure	
In-hospital deaths per 1,000 discharges, among patients ages 18 through 89 years or obstetric patients, with sepsis	
Measure type	Outcome
Numerator	Number of in-hospital deaths due to severe sepsis and septic shock
Denominator	Number of patients with severe sepsis / septic shock[18]
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/Definitions/ Sources/Recommendations	For specific diagnosis codes identifying severe sepsis / septic shock, refer to the numerator specifications for AHRQ PSI-13.
Data source(s)	Administrative claims, medical records
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-SEPSIS-1d
AHA/HRET HEN 2.0	Not collected

The Surviving Sepsis Campaign is a joint collaboration of the Society of Critical Care Medicine and the European Society of Intensive Care Medicine committed to reducing mortality from severe sepsis and septic shock worldwide. The campaign provides guidelines, bundles, data collection and other resources: http://www.survivingsepsis.org/Pages/default.aspx.

The Society of Critical Care Medicine has many resources available for data collection related to the identification and management of sepsis and septic shock cases. These resources are available online at the following link: http://www.survivingsepsis.org/Data-Collection/Pages/default.aspx

[18] This measure includes hospital-onset sepsis cases, post-operative sepsis cases, AND any cases that present with sepsis to the hospital (for example, those cases coming in as transfers, or presenting in the emergency department). This measure focuses on measuring the management of sepsis patients once they are identified.

Surgical Site Infection (SSI) Standardized Infection Ratio (SIR)
NHSN Reporting Facilities ONLY

SSI: CMS Evaluation Measure – NHSN Reporting Facilities ONLY (NQF 0753)	
Surgical Site Infection (SSI) Standardized Infection Ratio (SIR) – separately for each procedure • *Colon surgeries, abdominal hysterectomies, total knee replacements, total hip replacements*	
Measure type	Outcome
Numerator	Number of observed infections
Denominator	Number of predicted infections
SIR calculation	$\frac{Numerator}{Denominator}$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN Additional resources: CDC
Data source (s)	NHSN
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[19]
Baseline period	Preferred: Calendar year 2015 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period between January 2015 and October 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-SSI-1a: Colon surgeries HIIN-SSI-1b: Abdominal hysterectomies HIIN-SSI-1c: Total knee replacements HIIN-SSI-1d: Total hip replacements
Notes	This measure is only required for hospitals submitting data to NHSN and conferring rights to the HRET HIIN group, or a state group.
AHA/HRET HEN 2.0	HEN2-SSI-1a: Colon Surgeries HEN2-SSI-1b: Abdominal hysterectomies HEN2-SSI-1c: Total knee replacements HEN2-SSI-1d: Total hip replacements

Hospitals **not** reporting to NHSN will not report these measures. Data elements to calculate the SIRs will be extracted from NHSN for hospitals that confer rights to the HRET HIIN group, or a state group.

The Partnership for Patients has also gathered many resources for SSI prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-surgicalsiteinfections/toolsurgicalsiteinfections.html

[19] Hospitals are required to confer rights to SSI data for at least these 4 procedure categories, as applicable.

Surgical Site Infection (SSI) Rate
Facilities that perform inpatient surgeries

SSI: HIIN Evaluation Measures – All Facilities	
Surgical Site Infection (SSI) Rate – separately for each procedure • *Colon surgeries, abdominal hysterectomies, total knee replacements, total hip replacements*	
Numerator	Total number of surgical site infections based on CDC NHSN definition
Denominator	All patients having any of the procedures included in the selected NHSN operative procedure category(s).
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 100$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN Additional resources: CDC
Data source (s)	Infection surveillance systems
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[20]
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-SSI-2a: Colon surgeries HIIN-SSI-2b: Abdominal hysterectomies HIIN-SSI-2c: Total knee replacements HIIN-SSI-2d: Total hip replacements
AHA/HRET HEN 2.0	HEN2-SSI-2a: Colon surgeries HEN2-SSI-2b: Abdominal hysterectomies HEN2-SSI-2c: Total knee replacements HEN2-SSI-2d: Total hip replacements

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators for these four specific surgeries separately, following the CDC specifications to define SSI.

The Partnership for Patients has also gathered many resources for SSI prevention and measurement. These resources are catalogued online at the following link:
http://partnershipforpatients.cms.gov/p4p_resources/tsp-surgicalsiteinfections/toolsurgicalsiteinfections.html

[20] Hospitals are required to confer rights to SSI data for at least these 4 procedure categories, as applicable.

Post-Operative Pulmonary Embolism or Deep Vein Thrombosis Rate
Facilities that perform inpatient surgeries

VTE: CMS Evaluation Measure (AHRQ PSI 12)	
Post-Operative Pulmonary Embolism (PE) or Deep Vein Thrombosis (DVT) Rate	
Measure type	Outcome
Numerator	Number of surgical patients that develop a post-operative PE or DVT
Denominator	All surgical discharges age 18 and older defined by specific DRGs or MS-DRGs and a procedure code for an operating room procedure.
Rate calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/definitions Sources/Recommendations	Available from AHRQ
Data source (s)	Administrative data
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-VTE-1
AHA/HRET HEN 2.0	HEN2-VTE-1

These data elements shall be submitted by all hospitals **that perform inpatient surgeries**. Data can be collected through incident reporting, hospital discharge or administrative data.

The Partnership for Patients has also gathered many resources for venous thromboembolism (VTE) prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-venusthromboembolism/toolvenousthromboembolismvte.html

Ventilator-Associated (VAC)
Facilities that use ventilators

VAE: CMS Evaluation Measure	
Ventilator Associated Condition (VAC)	
Measure type	Outcome
Numerator	Number of events that meet the criteria of VAC; including those that meet the criteria for infection-related ventilator-associated complication (IVAC) and possible/probable ventilator-associated pneumonia (VAP)
Denominator	Number of ventilator days
Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN Additional resources: CDC
Data source(s)	NHSN or infection surveillance systems
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[21]
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-VAE-1
AHA/HRET HEN 2.0	HEN2-VAE-1

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators following the CDC specifications for VAE surveillance.

The Partnership for Patients has also gathered many resources for VAE prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-ventilator-associatedpneumonia/toolventilator-associatedpneumoniavap.html

[21] Hospitals are required to confer rights to all inpatient locations.

Infection-Related Ventilator-Associated Complication (IVAC)
Facilities that use ventilators

VAE: CMS Evaluation Measure	
Infection-Related Ventilator-Associated Complication (IVAC)	
Measure type	Outcome
Numerator	Number of events that meet the criteria of infection-related ventilator-associated condition (IVAC); including those that meet the criteria for Possible/Probable VAP
Denominator	Number of ventilator days
Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 1{,}000$
Specifications/definitions Sources/Recommendations	Reporting protocol: CDC NHSN Additional resources: CDC
Data source(s)	NHSN or infection surveillance systems
NHSN data transfer	YES - for hospitals conferring rights to the HRET HIIN group, or a state group[22]
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-VAE-2
AHA/HRET HEN 2.0	HEN2-VAE-2

For hospitals in an NHSN group, these data elements will be extracted from NHSN and uploaded to HRET. Hospitals that **do not report to NHSN**, or hospitals that have **NOT conferred rights to their NHSN data** must report the numerators and denominators following the CDC specifications for VAE surveillance.

The Partnership for Patients has also gathered many resources for VAE prevention and measurement. These resources are catalogued online at the following link: http://partnershipforpatients.cms.gov/p4p_resources/tsp-ventilator-associatedpneumonia/toolventilator-associatedpneumoniavap.html

[22] Hospitals are required to confer rights to all inpatient locations.

*Harm Events Related to Patient Handling

Worker Safety: HIIN Evaluation Measure	
Number of worker harm events related to patient handling.	
Measure type	Outcome
Numerator	Number of worker harm events related to patient handling
Denominator	Number of full-time equivalents (FTEs)
Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 100$
Specifications/Definitions/ Sources/Recommendations	Available from the Occupational Safety & Health Administration
Data source(s)	Hospital reporting on OSHA form 300
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-WS-1b
AHA/HRET HEN 2.0	HEN2-WS-1b

The Occupational Safety & Health Administration (OSHA) provides a range of resources to improve safety in the hospital, as well as the case for improvement in worker safety in the hospital. Some of these resources are available online at the following links:
https://www.osha.gov/dsg/hospitals/index.html
https://www.osha.gov/dsg/hospitals/documents/1.2_Factbook_508.pdf
https://www.osha.gov/dcsp/compliance_assistance/quickstarts/health_care/

*Harm Events Related to Workplace Violence

Worker Safety: HIIN Evaluation Measure	
Number of worker harm events related to workplace violence.	
Measure type	Outcome
Numerator	Number of associated harm events related to workplace violence
Denominator	Number of full-time equivalents (FTEs)
Calculation	$\left(\frac{Numerator}{Denominator}\right) x\ 100$
Specifications/Definitions/ Sources/Recommendations	Available from the Occupational Safety & Health Administration
Data source(s)	OSHA Violence Incidence Report Form
NHSN data transfer	No
Baseline period	Preferred: Calendar year 2014 Alternate: Oldest 12-, 9-, 6-, or 3-month consecutive period prior to Oct 2016 *If measure not tracked prior to HIIN, report monthly as early as possible beginning with October 2016.*
Monitoring period	Monthly, beginning Oct 2016
HIIN CDS Measure ID(s)	HIIN-WS-1c
AHA/HRET HEN 2.0	HEN2-WS-1c

The Occupational Safety & Health Administration and The Centers for Disease Control and Prevention (CDC)/the National Institute for Occupational Safety and Health (NIOSH) provide general resources about workplace violence and violence in hospitals:
https://www.osha.gov/SLTC/workplaceviolence/
https://www.osha.gov/dte/library/wp-violence/healthcare/
http://www.cdc.gov/niosh/docs/2002-101/
http://www.cdc.gov/niosh/docs/2006-144/pdfs/2006-144.pdf