# Table of Contents

**Version History** ......................................................................................................................... 6

**Measures** .................................................................................................................................. 7

**Compass HIIN Data Reporting** .................................................................................................. 16

<table>
<thead>
<tr>
<th>IHC HIIN Data Sources</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide Databases (IPOP)</td>
<td>18</td>
</tr>
<tr>
<td>National Safety Healthcare Network (NHSN)</td>
<td>18</td>
</tr>
<tr>
<td>Self-Reported</td>
<td>18</td>
</tr>
<tr>
<td>Sampling</td>
<td>19</td>
</tr>
<tr>
<td>Reporting Deadlines</td>
<td>19</td>
</tr>
</tbody>
</table>

**PFP Compass HIIN Reporting Database** ..................................................................................... 20

<table>
<thead>
<tr>
<th>On-Demand Reports</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Login and Registration Screen</td>
<td>20</td>
</tr>
<tr>
<td>Data Entry/Month Management (Facility Homepage)</td>
<td>20</td>
</tr>
<tr>
<td>Work Plan</td>
<td>21</td>
</tr>
<tr>
<td>Metric Selection Screen</td>
<td>22</td>
</tr>
<tr>
<td>Data Entry Screen</td>
<td>23</td>
</tr>
<tr>
<td>Import Function</td>
<td>24</td>
</tr>
</tbody>
</table>

**Core Focus Areas** .................................................................................................................... 28

<table>
<thead>
<tr>
<th>PFE Person and Family Engagement</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended PFE Team Members</td>
<td>29</td>
</tr>
<tr>
<td>PFE Metric One</td>
<td>29</td>
</tr>
<tr>
<td>PFE Metric Two</td>
<td>30</td>
</tr>
<tr>
<td>PFE Metric Three</td>
<td>31</td>
</tr>
<tr>
<td>PFE Metric Four</td>
<td>31</td>
</tr>
<tr>
<td>PFE Metric Five</td>
<td>32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adverse Drug Events</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse Drug Event Rate</td>
<td>34</td>
</tr>
<tr>
<td>Adverse Drug Events Originating During Hospital Stay (AHRQ)</td>
<td>35</td>
</tr>
<tr>
<td>Manifestations of Poor Glycemic Control</td>
<td>36</td>
</tr>
</tbody>
</table>
Opioid-Related Adverse Drug Event Rate .......................................................... 37
Blood Glucose Less than 5 ........................................................................... 41
INRs Greater than 5 ..................................................................................... 42
Stat Naloxone Administration – Inpatient .................................................. 43
Stat Naloxone Administration – Emergency Department ......................... 45
Opioid Therapy Treatment Plan .................................................................. 46
Prevalence of Naloxone Usage in Community Setting Prior to Admission .... 47

**Clostridium difficile** .................................................................................. 50
Healthcare Facility-Onset Clostridium difficile Infection Rate ....................... 50
Clostridium difficile Prevalence ................................................................. 52
Hand Hygiene Compliance .......................................................................... 53
Contact Precaution Compliance .................................................................. 55

**Catheter-Associated Urinary Tract Infection** ............................................ 57
Catheter-Associated Urinary Tract Infection Rate ........................................ 57
Unnecessary Urinary Catheters .................................................................... 59
Urinary Catheter Utilization Ratio ............................................................... 60
Emergency Department Catheter Utilization .............................................. 61

**Central-Line Associated Blood Stream Infections** ................................ 63
Central Line-Associated Blood Stream Infection Rate .................................. 63
Central Line Utilization Ratio ...................................................................... 64
Central Line Insertion Compliance ............................................................ 65

**Falls and Immobility** ............................................................................... 67
Fall Resulting in Fracture or Dislocation (CMS HAC) .................................. 67
Fall Resulting in No Apparent Injury Rate ................................................... 69
Fall Resulting in Minor Injury Rate ............................................................. 70
Fall Resulting in Moderate Injury Rate ....................................................... 71
Fall Resulting in Major Injury Rate ............................................................. 72
Fall Resulting in Death Rate ........................................................................ 73
Total Fall Rate ............................................................................................. 73
Count of Assisted Falls ................................................................................ 74
Total Non-Assisted Falls Rate ..................................................................... 75
Fall Risk Assessment on Admission ............................................................ 76

**Pressure Ulcers** ..................................................................................... 78
Pressure Ulcer Rate, Stage 3+ (AHRQ PSI 03) ............................................ 78
Acute Inpatients with a Hospital-Acquired Pressure Ulcer Stage II .............. 80
At-Risk Patients Receiving Full Pressure Ulcer Preventative Care .............. 82
Readmissions and Care Coordination ................................................................. 83
Unplanned All-Cause, 30-Day Readmissions to Any Hospital ........................................ 83
Unplanned All-Cause, 30-Day Readmissions to the Same Hospital ........................................ 86
Patient Teach-Back ........................................................................................................... 89
Community Provider Involvement in Identifying Post-Discharge Needs ................................. 90
Post-Hospital Follow-Up Appointment ........................................................................... 91
Handover Communication .............................................................................................. 93
Severe Sepsis and Septic Shock ...................................................................................... 95
Postoperative Sepsis Rate (AHRQ PSI 13) ........................................................................ 95
Severe Sepsis and Septic Shock 3-Hour Management Bundle Compliance (NQF 0500). ......................... 97
Severe Sepsis and Septic Shock 6-Hour Management Bundle Compliance (NQF 0500). ......................... 98
Surgical Site Infection ...................................................................................................... 100
Colon Surgical Site Infection Rate .................................................................................... 100
Abdominal Hysterectomy Surgical Site Infection Rate ...................................................... 101
Hip Replacement Surgical Site Infection Rate ...................................................................... 102
Knee Replacement Surgical Site Infection Rate .................................................................... 104
Surgery Patients with Perioperative Temperature Management ........................................ 105
Surgical Safety Checklist Compliance ........................................................................... 106
Ventilator Associated Events .......................................................................................... 107
Ventilator-Associated Condition (VAC) ........................................................................ 107
Infection-Related Ventilator-Associated Complication (IVAC) .............................................. 108
Possible/Probable Ventilator-Associated Pneumonia ......................................................... 109
Ventilator Bundle Compliance ....................................................................................... 110
Venous Thromboembolism .............................................................................................. 112
Post-Operative Pulmonary Embolism (PE) or Deep Venous Thrombosis (DVT) Rate, (AHRQ PSI-12), (NQF 0450) ......................................................................................................................................................... 112
VTE Appropriate Prophylaxis ........................................................................................... 114
Safety Across the Board .................................................................................................. 116
All-Cause Harm – CMS Hospital Acquired Conditions ..................................................... 116
Additional Focus Areas .................................................................................................. 117
Multi-drug Resistant Organism .................................................................................... 118
Carbapenem-Resistant Enterobacteriaceae (CRE) Prevalence ........................................ 118
Standardized Antimicrobial Administration Ratio (SAAR) ............................................... 119
Antimicrobial Days of Therapy (DOT) .............................................................................. 120
Antibiotic Time Out .......................................................................................................... 121
Hospital Culture of Safety .............................................................................................. 123
## Version History

<table>
<thead>
<tr>
<th>Date</th>
<th>Version Number</th>
<th>Update History</th>
</tr>
</thead>
</table>
| March 2019 | V1.2           | • Added version history  
• Added Compass HIIN Measures List  
• Added reporting deadlines  
• Added data entry instructions  
• Added Custom Hospital Dashboard function and instructions  
• Refreshed language and instructions within Data Sources and Compass HIIN Reporting Database to reflect updated programming  
• Revised current measure names in some instances for consistency and clarity, including: Stat Naloxone Administration-Inpatient, Stat Naloxone Administration-Emergency Department, Handover Communication  
• Added Safety Across the Board focus area and associated composite measures (composite component measures are located with their respective care focus area), including: All-Cause Harm, Opioid Adverse Drug Event Rate, Manifestations of Poor Glycemic Control and Hospital Acquired Pressure Ulcer Stage II  
• Replaced safe patient Handling Program Equipment Checklist Compliance measure with Safe patient Handling Mobility (SPHM) Equipment Checklist Compliance  
• Replaced Antimicrobial Agent Days measure with Antimicrobial Days of Therapy (DOT)  
• Replaced three process measures in Undue Exposure to Radiation focus area with one new measure, CT Radiation Dose Capture and Documentation  
• Toolkit has been expanded to include all program measures details (with the except of SIRs)  
• Removed VTE Warfarin Therapy Discharge Instructions measure, as CMS has retired this metric  
• Complimentary Initiatives have been expanded from previous version.  
• Recommended team members have been reviewed and updated by measure  
• TIPS/Tricks sections have been reviewed and updated by measure  
• Resources sections have been reviewed and updated by measure  
• Amended Antibiotic Time out measure |
| Dec. 2017  | V1.1           | • Rebranded from HEN to HIIN  
• Added Data Import option and instructions  
• Added Work Plan functionality and instructions  
• Amended CEO Dashboard report to HIIN Dashboard with instructions  
• Added new measures in ADE focus area, including: Opioid Therapy Treatment Plan and Prevalence of naloxone usage in community setting prior to admission  
• Added new measures in Clostridium Difficile focus area, including: Clostridium Difficile Prevalence, Hand Hygiene Compliance and Contract Precaution Compliance  
• Added a new Severe Sepsis and Septic Shock focus area and associated measurements, including: Post-operative Sepsis Rate, 3 Hour Management Bundle and 6 Hour Management Bundle  
• Added a new measure for VTE, including: Venous Thromboembolism Warfarin Therapy Discharge Instructions  
• Added new MDRO/Antimicrobial Stewardship Focus Area and associated measurements, including: CRE, SAAR, Antibiotic Time Out and Antimicrobial Agent Days  
• Added Focus Area Infographics  
• Added Communication and Optimal Resolution (CANDOR) resources  
• Added Diagnostic Error resources |
| Nov. 2016  | V1.0           | Initial Release |
# Compass HIIN

## Core Measures

<table>
<thead>
<tr>
<th>Focus Area</th>
<th>Measure Name</th>
<th>Measure Type</th>
<th>Numerator Description</th>
<th>Denominator Description</th>
<th>Data Source</th>
</tr>
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<tbody>
<tr>
<td>Adverse Drug Events</td>
<td>Adverse Drug Event Rate</td>
<td>O</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation adverse drug events that reach the patient (NCC MERP Scale categories D-I)</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation patient days</td>
<td>*</td>
</tr>
<tr>
<td>Adverse Drug Events</td>
<td>Adverse Drug Events Originating During Hospital Stay (AHRQ Statistical Brief #109)</td>
<td>O</td>
<td>Number of coded Acute Care adverse drug events that cause harm (NCC MERP Scale categories E-I)</td>
<td>Number of Acute Care, SNF and Swing Bed discharges</td>
<td>**</td>
</tr>
<tr>
<td>Adverse Drug Events</td>
<td>Manifestations of Poor Glycemic Control</td>
<td>O</td>
<td>Number of patients with ICD10 diagnosis code for poor glycemic control</td>
<td>Number of discharges for Acute Care patients, ≥ 18 y/o</td>
<td>**</td>
</tr>
<tr>
<td>Adverse Drug Events</td>
<td>Opioid-Related Adverse Drug Event Rate</td>
<td>O</td>
<td>Number of patients with non-POA secondary ICD-10 code(s) for opioid-related adverse drug event</td>
<td>Number of discharges for Acute Care patients, ≥ 18 y/o</td>
<td>**</td>
</tr>
<tr>
<td>Adverse Drug Events</td>
<td>Blood Glucose Less Than 50</td>
<td>P</td>
<td>Number of blood glucose measurements (per lab reports, FSBG, EMR, Charge Data, etc.) for Acute Care, SNF, Swing Bed and Observation patients where blood glucose &lt; 50</td>
<td>Number of blood glucose measurements (per lab reports, FSBG, EMR, Charge Data, etc.) for Acute Care, Skilled Nursing Care, Swing Bed and Observation patients</td>
<td>*</td>
</tr>
<tr>
<td>Adverse Drug Events</td>
<td>INRs Greater Than 5</td>
<td>P</td>
<td>Number of lab measurements for Acute Care, SNF, Swing Bed and Observation patients on Warfarin where documented INR &gt; 5</td>
<td>Number of INR lab measurements for Acute Care, SNF, Swing Bed and Observation patients on Warfarin</td>
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</tr>
<tr>
<td>Adverse Drug Events</td>
<td>Stat Naloxone Administration – Emergency Department</td>
<td>P</td>
<td>Number of doses a reversal agent (e.g. Naloxone) is administered to a patient in the Emergency Department</td>
<td>Number of Emergency Department visits</td>
<td>*</td>
</tr>
<tr>
<td>Adverse Drug Events</td>
<td>Stat Naloxone Administration – Inpatient</td>
<td>P</td>
<td>Number of doses when a reversal agent (e.g. Naloxone) is administered to Acute Care, SNF, Swing Bed and Observation patients who have been prescribed and administered opioids during their inpatient stay</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation patients prescribed opioids</td>
<td>*</td>
</tr>
<tr>
<td>Adverse Drug Events</td>
<td>Prevalence of Naloxone Usage in Community Setting Prior to Admission</td>
<td>P</td>
<td>Number of patients who received Naloxone in a community setting prior to admission</td>
<td>Number of Acute Care admissions</td>
<td>*</td>
</tr>
<tr>
<td>Adverse Drug Events</td>
<td>Opioid Therapy Treatment Plan</td>
<td>P</td>
<td>Number of patients discharged from a hospital on opioids with patient-specific goals of therapy at discharge</td>
<td>Number of patients discharged on opioids from an acute hospital stay</td>
<td>*</td>
</tr>
<tr>
<td>Clostridium Difficile</td>
<td>ACS-CDC CDIFF SIR</td>
<td>O</td>
<td>Observed number of Clostridium difficile infections based on NHSN aggregate data</td>
<td>Expected number of Clostridium difficile infections based on NHSN aggregate data</td>
<td>***</td>
</tr>
<tr>
<td>Clostridium Difficile</td>
<td>Healthcare Facility-Onset Clostridium Difficile Infection Rate</td>
<td>O</td>
<td>Number of healthcare facility-onset Clostridium difficile infections</td>
<td>Number of Acute Care inpatient days</td>
<td>***</td>
</tr>
<tr>
<td>Clostridium Difficile</td>
<td>Clostridium Difficile Prevalence</td>
<td>O</td>
<td>Number of Clostridium difficile Lab ID events</td>
<td>Number of Acute Care inpatient admissions</td>
<td>***</td>
</tr>
<tr>
<td>Clostridium Difficile</td>
<td>Hand Hygiene Compliance</td>
<td>P</td>
<td>Number of observations where appropriate handwashing technique was applied</td>
<td>Number of handwashing observations</td>
<td>*</td>
</tr>
<tr>
<td>Topic</td>
<td>Indicator</td>
<td>Type</td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-----------</td>
<td>------</td>
<td>-------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clostridium difficile</strong></td>
<td>Contact Precaution Compliance</td>
<td>P</td>
<td>Number of contact precautions performed consistent with guidelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Catheter-Associated Urinary Tract Infection</strong></td>
<td>Observed number of CAUTI infections for ICU units excluding NICU based on NHSN aggregate data</td>
<td>O</td>
<td>Expected number of CAUTI infections for ICU units excluding NICU based on NHSN aggregate data</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Catheter-Associated Urinary Tract Infection</strong></td>
<td>Observed number of CAUTI infections for ICU units plus other units based on NHSN aggregate data</td>
<td>O</td>
<td>Expected number of CAUTI infections for ICU units plus other units based on NHSN aggregate data</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Catheter-Associated Urinary Tract Infection</strong></td>
<td>Number of hospital-acquired urinary tract infections</td>
<td>O</td>
<td>Number of Acute Care urinary catheter days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Catheter-Associated Urinary Tract Infection</strong></td>
<td>Number of ICU inpatient days with urinary catheter in place</td>
<td>P</td>
<td>Number of ICU inpatient days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Catheter-Associated Urinary Tract Infection</strong></td>
<td>Number of Acute Care, SNF and Swing Bed inpatient days with urinary catheter in place</td>
<td>P</td>
<td>Number of Acute Care, SNF and Swing Bed inpatient days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Catheter-Associated Urinary Tract Infection</strong></td>
<td>Number of Acute Care, SNF and Swing Bed inpatients with new indwelling urinary catheters inserted without appropriate indication</td>
<td>P</td>
<td>Number of Acute Care, SNF and Swing Bed inpatient days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Catheter-Associated Urinary Tract Infection</strong></td>
<td>Number of coded Emergency Department indwelling urinary catheter placements in the Emergency Department</td>
<td>P</td>
<td>Number of Emergency Department visits</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Central Line-Associated Blood Stream Infection</strong></td>
<td>Observed number of CLABSI infections for ICU units excluding NICU based on NHSN aggregate data</td>
<td>O</td>
<td>Expected number of CLABSI infections for ICU units excluding NICU based on NHSN aggregate data</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Central Line-Associated Blood Stream Infection</strong></td>
<td>Observed number of CLABSI infections for ICU units plus other units based on NHSN aggregate data</td>
<td>O</td>
<td>Expected number of CLABSI infections for ICU units plus other units based on NHSN aggregate data</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Central Line-Associated Blood Stream Infection</strong></td>
<td>Number of hospital-acquired, central line-associated bloodstream infections</td>
<td>O</td>
<td>Number of Acute Care central line catheter days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Central Line-Associated Blood Stream Infection</strong></td>
<td>Number of ICU central line days</td>
<td>P</td>
<td>Number of ICU inpatient days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Central Line-Associated Blood Stream Infection</strong></td>
<td>Number of central line days</td>
<td>P</td>
<td>Number of Acute Care, SNF and Swing Bed inpatient days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Central Line-Associated Blood Stream Infection</strong></td>
<td>Number of Acute Care, SNF and Swing Bed inpatients with full PICC line and/or central line catheter insertion bundle compliance</td>
<td>P</td>
<td>Number of Acute Care, SNF and Swing Bed inpatient days</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Version 1.2 – April 2019 8
<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Denominator</th>
<th>Measure Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALLS</td>
<td>Count of Assisted Falls</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation events where the patient is assisted to the floor</td>
<td>No denominator for this measure</td>
</tr>
<tr>
<td>FALLS</td>
<td>Total Non-Assisted Falls Rate</td>
<td>Total number of non-assisted falls for acute care, SNF, swing bed and observation patients</td>
<td>Total number of non-assisted falls for Acute Care, SNF, Swing Bed and Observation patients-exclude newborn and respite patients</td>
</tr>
<tr>
<td>FALLS</td>
<td>Falls Resulting in No Apparent Injury Rate</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in no visible sign of injury, stable vital signs and patient denial of pain or discomfort</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td>FALLS</td>
<td>Fall Resulting in Minor Injury Rate</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in minor cuts, minor bleeding, minor skin abrasions, minor swelling and minor contusions or bruising</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td>FALLS</td>
<td>Fall Resulting in Moderate Injury Rate</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in excessive bleeding, lacerations requiring sutures, temporary loss of consciousness or moderate head trauma</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td>FALLS</td>
<td>Fall Resulting in Major Injury Rate</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in fracture, subdural hematoma, other major head trauma, cardiac arrest OR patient is transferred to the ICU OR OR</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td>FALLS</td>
<td>Fall Resulting in Death Rate</td>
<td>Number of Acute Care, Skilled Nursing, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in death</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td>FALLS</td>
<td>Fall Rate Resulting in Fracture or Dislocation (CMS HAC)</td>
<td>Number of Acute Care inpatient discharges with ICD-10 fracture or dislocation code(s) not present on admission</td>
<td>Number of Acute Care discharges</td>
</tr>
<tr>
<td>FALLS</td>
<td>Fall Risk Assessment on Admission</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation patients assessed for fall risk on admission</td>
<td>Number of admitted Acute Care, Skilled Nursing Care, Swing Bed and Observation patients</td>
</tr>
<tr>
<td>PRESSURE ULCER</td>
<td>Acute Inpatients with a Hospital-Acquired Pressure Ulcer Stage II</td>
<td>Hospitalized patients with a Secondary ICD-10 diagnosis code of a Stage II pressure ulcer and a POA indicator value of ‘N’ or ‘U’</td>
<td>Acute care inpatients ≥ 18 years old discharged during time period</td>
</tr>
<tr>
<td>PRESSURE ULCER</td>
<td>Pressure Ulcer Rate, Stage 3+, (AHRQ PSI-03)</td>
<td>Number of patients with non-POA secondary ICD-10 code(s) for pressure ulcer AND secondary ICD-10 diagnosis code(s) for Stage III, Stage IV or unstageable pressure ulcer</td>
<td>Number of discharges for Acute Care, Skilled Nursing and Swing Bed patients</td>
</tr>
<tr>
<td>PRESSURE ULCER</td>
<td>At-Risk Patients Receiving Full Pressure Ulcer Preventative Care</td>
<td>Number of at-risk patients receiving full pressure ulcer preventative care</td>
<td>Number of at-risk patients identified for Acute Care, Skilled Nursing Care and Swing Bed patients</td>
</tr>
<tr>
<td>READMISSIONS</td>
<td>Unplanned All-Cause, 30-Day Readmissions Any Hospital</td>
<td>Number of Acute Care inpatient discharges that meet criteria inclusion as a readmission to any hospital using unplanned, 30-day, all-cause, all-payer methodology</td>
<td>Number of Acute Care inpatient discharges meeting eligibility for inclusion as an index admission</td>
</tr>
<tr>
<td>READMISSIONS</td>
<td>Requirement</td>
<td>Description</td>
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</tr>
<tr>
<td>--------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Unplanned All-Cause, 30-Day Readmissions Same</strong></td>
<td><strong>O</strong> Number of Acute Care inpatient discharges that meet criteria inclusion as a readmission to the same hospital using unplanned, 30-day, all-cause, all-payer methodology</td>
<td>Number of Acute Care inpatient discharges meeting eligibility for inclusion as an index admission</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
<td><strong>P</strong> Number of observations of nurses where teach-back is used to assess patient understanding</td>
<td>Number of observations of nurse teaching</td>
</tr>
<tr>
<td><strong>Post-Hospital Follow-Up Appointment</strong></td>
<td><strong>P</strong> Number of Acute Care, SNF and Swing Bed inpatient discharges with follow-up appointment scheduled before discharge in accordance with risk assessment</td>
<td>Number of discharges for Acute Care, Skilled Nursing Care and Swing Bed inpatient discharges</td>
<td></td>
</tr>
<tr>
<td><strong>Community Provider Involvement in Identifying Post-Discharge Needs</strong></td>
<td><strong>P</strong> Number of Acute Care, SNF and Swing Bed inpatient discharges where community providers (e.g., home care, primary care, nurses, skilled nursing) were included in assessing post discharge needs</td>
<td>Number of discharges for Acute Care, Skilled Nursing Care and Swing Bed inpatient discharges</td>
<td></td>
</tr>
<tr>
<td><strong>Handover Communication</strong></td>
<td><strong>P</strong> Number of Acute Care, SNF and Swing Bed inpatient discharges where critical information is transmitted to the next site of care (e.g., office, LTC, HH) or person continuing care</td>
<td>Number of discharges for Acute Care, Skilled Nursing Care and Swing Bed inpatient discharges</td>
<td></td>
</tr>
<tr>
<td><strong>Safety Across the Board New</strong></td>
<td><strong>O</strong> Acute Inpatients that experienced a hospital acquired condition or infection as defined by CMS HAC measures 1-14</td>
<td>All acute care inpatients discharged during time period</td>
<td></td>
</tr>
<tr>
<td><strong>SEVERE SEPSIS AND SEPTIC SHOCK</strong></td>
<td><strong>O</strong> Number of Acute Care elective surgical inpatient discharges with any secondary ICD-10 diagnosis code for sepsis</td>
<td>Number of Acute Care elective surgical inpatient discharges with any listed ICD-10 procedure code for an operating room procedure and admission type recorded as elective</td>
<td></td>
</tr>
<tr>
<td><strong>SEVERE SEPSIS AND SEPTIC SHOCK</strong></td>
<td><strong>P</strong> Number of patients in the denominator population who receive all elements of the 3 hour Severe Sepsis and Septic Shock Management Bundle</td>
<td>Number of patients presenting with severe shock or septic shock (exclude patients comfort care only, where central line cannot be placed or is contraindicated, or where clinical condition precludes total measure completion)</td>
<td></td>
</tr>
<tr>
<td><strong>SEVERE SEPSIS AND SEPTIC SHOCK</strong></td>
<td><strong>P</strong> Number of patients in the denominator population who receive all elements of the 6 hour Severe Sepsis and Septic Shock Management Bundle</td>
<td>Number of patients presenting with severe shock or septic shock (exclude patients comfort care only, where central line cannot be placed or is contraindicated, or where clinical condition precludes total measure completion)</td>
<td></td>
</tr>
<tr>
<td><strong>SURGICAL SITE INFECTION</strong></td>
<td><strong>O</strong> Observed number of Colon SSI infections based on NHSN aggregate data</td>
<td>Expected number of Colon SSI infections based on NHSN aggregate data</td>
<td></td>
</tr>
<tr>
<td>Focus area optional depending on hospital services</td>
<td><strong>O</strong> Observed number of Abdominal Hysterectomy SSI infections based on NHSN aggregate data</td>
<td>Expected number of Abdominal Hysterectomy SSI infections based on NHSN aggregate data</td>
<td></td>
</tr>
<tr>
<td><strong>CDC Harmonized Procedure-Specific SSI SIR - Colon Surgeries, (CMS IQR xx), (NQF 0753)</strong></td>
<td><strong>O</strong> Observed number of Total Hip SSI infections based on NHSN aggregate data</td>
<td>Expected number of Total Hip SSI infections based on NHSN aggregate data</td>
<td></td>
</tr>
<tr>
<td><strong>CDC Harmonized Procedure-Specific SSI SIR - Total Knee</strong></td>
<td><strong>O</strong> Observed number of Total Knee SSI infections based on NHSN aggregate data</td>
<td>Expected number of Total Knee SSI infections based on NHSN aggregate data</td>
<td></td>
</tr>
<tr>
<td>Focus area optional depending on hospital services.</td>
<td>Replacements, (NQF 0753)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>SURGICAL SITE INFECTION</strong> Focus area optional depending on hospital services.</td>
<td><strong>Colon Surgical Site Infection Rate</strong> O</td>
<td>Number of hospital-acquired colon surgical site infections Number colon surgical episodes ***</td>
<td></td>
</tr>
<tr>
<td><strong>SURGICAL SITE INFECTION</strong> Focus area optional depending on hospital services.</td>
<td><strong>Abdominal Hysterectomy Surgical Site Infection Rate</strong> O</td>
<td>Number of hospital-acquired abdominal hysterectomy surgical site infections Number abdominal hysterectomy surgical episodes ***</td>
<td></td>
</tr>
<tr>
<td><strong>SURGICAL SITE INFECTION</strong> Focus area optional depending on hospital services.</td>
<td><strong>Hip Replacement Surgical Site Infection Rate</strong> O</td>
<td>Number of hospital-acquired hip replacement surgical site infections Number hip replacement surgical episodes ***</td>
<td></td>
</tr>
<tr>
<td><strong>SURGICAL SITE INFECTION</strong> Focus area optional depending on hospital services.</td>
<td><strong>Knee Replacement Surgical Site Infection Rate</strong> O</td>
<td>Number of hospital-acquired knee replacement surgical site infections Number knee replacement surgical episodes ***</td>
<td></td>
</tr>
<tr>
<td><strong>SURGICAL SITE INFECTION</strong> Focus area optional depending on hospital services.</td>
<td><strong>Perioperative Temperature Management</strong> P</td>
<td>Number of surgical inpatients for whom either active warming was used intraoperatively or who had at least one body temperature equal to or greater than 96.8F/36C within 30 minutes immediately prior to or 15 minutes immediately after anesthesia end time Number of surgical inpatients undergoing procedure under general or neuraxial anesthesia of greater than or equal to 60 minutes duration **</td>
<td></td>
</tr>
<tr>
<td><strong>SURGICAL SITE INFECTION</strong> Focus area optional depending on hospital services.</td>
<td><strong>Surgical Safety Checklist Compliance</strong> P</td>
<td>Number of surgical inpatient procedures in which the surgical safety checklist was used Number of surgical inpatient operating procedures during observed time period **</td>
<td></td>
</tr>
<tr>
<td><strong>Ventilator Associated Events</strong> Focus area optional depending on hospital services.</td>
<td><strong>Ventilator-Associated Conditions (VAC)</strong> O</td>
<td>Number of events that meet VAC criteria Number of ventilator days ***</td>
<td></td>
</tr>
<tr>
<td><strong>Ventilator Associated Events</strong> Focus area optional depending on hospital services.</td>
<td><strong>Infection-Related Ventilator-Associated Complication (IVAC)</strong> O</td>
<td>Number of events that meet IVAC criteria Number of ventilator days ***</td>
<td></td>
</tr>
<tr>
<td><strong>Ventilator Associated Events</strong> Focus area optional depending on hospital services.</td>
<td><strong>Possible/Probable Ventilator-Associated Pneumonia</strong> O</td>
<td>Number of events that meet possible/probable Ventilator-Associated Pneumonia criteria Number of ventilator days ***</td>
<td></td>
</tr>
<tr>
<td><strong>Ventilator Associated Events</strong> Focus area optional depending on hospital services.</td>
<td><strong>Ventilator Bundle Compliance</strong> P</td>
<td>Number of ICU patients on mechanical ventilation with full ventilator-associated prevention bundle compliance Number of ICU patients on mechanical ventilation on day of week sample **</td>
<td></td>
</tr>
<tr>
<td><strong>Venous Thromboembolism</strong> Focus area optional depending on hospital services.</td>
<td><strong>Post-Operative Pulmonary Embolism (PE) or Deep Venous Thrombosis (DVT) Rate, (AHRQ PSI-12), (NQF 0450)</strong> O</td>
<td>Number of Acute Care surgical inpatients with secondary (ICD-10 code(s) for DVT or PE that were not present on admission Number of Acute Care surgical inpatient discharges **</td>
<td></td>
</tr>
<tr>
<td>Venous Thromboembolism</td>
<td>VTE Appropriate Prophylaxis</td>
<td>P</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation patients who received appropriate VTE prophylaxis or have documentation why no VTE prophylaxis was given</td>
</tr>
<tr>
<td>Focus Area</td>
<td>Measure Name</td>
<td>Measure Type</td>
<td>Numerator Description</td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
<td>--------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>HOSPITAL CULTURE OF SAFETY/WORKER SAFETY</td>
<td>Work-Related Back Injuries</td>
<td>O</td>
<td>Number of work-related back injuries</td>
</tr>
<tr>
<td>HOSPITAL CULTURE OF SAFETY/WORKER SAFETY</td>
<td>Needlesticks</td>
<td>O</td>
<td>Number of needlestick/sharp injury events</td>
</tr>
<tr>
<td>HOSPITAL CULTURE OF SAFETY/WORKER SAFETY</td>
<td>Safe Patient Handling Mobility (SPHM) Equipment Checklist Compliance</td>
<td>P</td>
<td>Number of SPHM Checklists with 100% compliance</td>
</tr>
<tr>
<td>MBQIP - EDTC COMPOSITE</td>
<td>ED Transfer Communication All or None</td>
<td>P</td>
<td>Number of ED patients transferred to another healthcare facility where all relevant elements for each of the 7 sub-measures were documented and communicated to the receiving facility within 60 minutes of discharge</td>
</tr>
<tr>
<td>MBQIP - EDTC SUB 1</td>
<td>ED Transfer Communication Administrative Communication</td>
<td>P</td>
<td>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that both health care facility to health care facility communication and physician to physician communication occurred prior to transfer</td>
</tr>
<tr>
<td>MBQIP - EDTC SUB 2</td>
<td>ED Transfer Communication Patient Information</td>
<td>P</td>
<td>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all Patient Information (name, address, age, gender, significant other contact info and insurance information) was communicated within 60 minutes of discharge</td>
</tr>
<tr>
<td>MBQIP - EDTC SUB 3</td>
<td>ED Transfer Communication Vital Signs</td>
<td>P</td>
<td>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated all Vital Signs (pulse, respiratory rate, blood pressure, oxygen saturation, temperature and Glasgow Coma Scale/neuro assessment) was communicated within 60 minutes of discharge</td>
</tr>
<tr>
<td>MBQIP - EDTC SUB 4</td>
<td>ED Transfer Communication Medication Information</td>
<td>P</td>
<td>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated all Medication information (medications administered in ED, allergies and home medications) was communicated within 60 minutes of discharge</td>
</tr>
<tr>
<td>MBQIP - EDTC SUB 5</td>
<td>ED Transfer Communication Physician or</td>
<td>P</td>
<td>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all Practitioner-</td>
</tr>
<tr>
<td>Focus area optional depending on hospital services.</td>
<td>Practitioner Generated Information</td>
<td>Generated Information (history and physical/ED provider note, reason for transfer and/or plan of care) was communicated within 60 minutes of discharge</td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>MBQIP - EDTC SUB 6 Eligible Iowa CAHs</td>
<td>ED Transfer Communication Nurse Generated Information</td>
<td>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all the Nurse-Generated Information (nursing assessments/interventions/response, sensory status, catheters/IV, immobilizations, respiratory support and oral limitations) was communicated within 60 minutes of departure</td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td>MBQIP - EDTC SUB 7 Eligible Iowa CAHs</td>
<td>ED Transfer Communication Procedures and Tests</td>
<td>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all Tests and Procedures (both completed and results sent) was communicated within 60 minutes of discharge</td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td>MDRO/ANTIMICROBIAL STEWARDSHIP</td>
<td>Carbapenem-resistant Enterobacteriaceae (CRE) Prevalence</td>
<td>Number of LabID CRE events</td>
<td>Number of Acute Care Inpatient days</td>
</tr>
<tr>
<td>MDRO/ANTIMICROBIAL STEWARDSHIP</td>
<td>Standardized Antimicrobial Administration Ratio (SAAR)</td>
<td>Number of observed days of antimicrobial therapy reported by a healthcare facility for a specified category of antimicrobial agents used in a patient care location or group of locations</td>
<td>Number of days of antimicrobial therapy predicted for a health care facility's use of a specified category of antimicrobial agents in a patient care location or group of locations, calculated by applying negative binomial regression modeling to nationally aggregated AU data</td>
</tr>
<tr>
<td>MDRO/ANTIMICROBIAL STEWARDSHIP</td>
<td>Antimicrobial Days of Therapy (DOT)</td>
<td>Aggregate sum of antimicrobial days for which any amount of a specific antimicrobial agent was administered to individual patients as documented in the patient record for acute, SNF, Swing beds and OB inpatient days.</td>
<td>Days present defined as the aggregate number of patients housed in a patient care location or facility anytime throughout a day during a calendar month</td>
</tr>
<tr>
<td>MDRO/ANTIMICROBIAL STEWARDSHIP</td>
<td>Antibiotic Time Out</td>
<td>Number of patients administered antibiotics/antimicrobials that have an antibiotic &quot;time out&quot; within 72 hours to reassess antimicrobial therapy</td>
<td>Number of patients administered antibiotic therapy</td>
</tr>
<tr>
<td>OBSTETRICAL ADVERSE EVENTS</td>
<td>Early Elective Delivery</td>
<td>Number of elective maternal deliveries between 37-39 weeks gestation with no medical indication</td>
<td>All deliveries between 37-39 weeks gestation</td>
</tr>
<tr>
<td>OBSTETRICAL ADVERSE EVENTS</td>
<td>Primary Cesarean Delivery Rate, Uncomplicated (IQI 33)</td>
<td>Number of maternal inpatients with either MS-DRG code for Cesarean delivery or any-listed ICD-10 procedure code(s) for Cesarean delivery without any listed ICD-10 procedure code(s) for hysterotomy</td>
<td>Number of deliveries</td>
</tr>
<tr>
<td>OBSTETRICAL ADVERSE EVENTS</td>
<td>Birth Trauma Rate - Injury to Neonate (AHRQ PSI 17)</td>
<td>Number of Newborns with ICD-10 code(s) for birth trauma</td>
<td>Number of newborns</td>
</tr>
<tr>
<td>OBSTETRICAL ADVERSE EVENTS</td>
<td>Obstetric Trauma Rate - Vaginal Delivery with</td>
<td>Number of vaginally-delivered, instrument-assisted Moms with ICD-10 code(s) for 3rd or 4th degree obstetric trauma</td>
<td>Number of vaginal deliveries with ICD-10 procedure code(s) for instrument-assisted delivery</td>
</tr>
<tr>
<td>Instrument (AHRQ PSI 18)</td>
<td>Obstetric Trauma Rate - Vaginal Delivery without Instrument (AHRQ PSI 19)</td>
<td><strong>O</strong></td>
<td>Number of vaginally-delivered, non-instrument-assisted Moms with ICD-10 code(s) for 3rd or 4th degree obstetric trauma</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>UNDUE EXPOSURE TO RADIATION</td>
<td>Abdomen CT - Use of Contrast Material</td>
<td><strong>O</strong></td>
<td>Number of abdomen CT studies with and without contrast ('combined studies')</td>
</tr>
<tr>
<td>UNDUE EXPOSURE TO RADIATION</td>
<td>Thorax CT - Use of Contrast Material</td>
<td><strong>O</strong></td>
<td>Number of thorax CT studies with and without contrast ('combined studies')</td>
</tr>
<tr>
<td>UNDUE EXPOSURE TO RADIATION</td>
<td>CT Radiation Dose Capture and Documentation</td>
<td><strong>P</strong></td>
<td>Total number of CTs in which the radiation dose (DLP, CTDIvol and/or SSDE) is recorded and transferred to the Picture Archiving and Communication Systems (PACS)</td>
</tr>
</tbody>
</table>
Compass HIIN Data Reporting
During the Hospital Engagement Network (HEN), the Iowa Healthcare Collaborative (IHC) HEN built a web-based Partnership for Patients (PfP) HEN Reporting Database (the Database) to track and monitor progress toward the campaign PfP Aims. This PfP Reporting Database design supported the improvement work of network hospitals and allowed hospitals to monitor trends in Process and Outcomes measures.

Now in the Hospital Improvement Innovation Network (HIIN), the PfP Compass HIIN Reporting Database will continue to allow identified HIIN network hospital leadership (e.g. quality director, infection preventionist, etc.) to securely and privately enter hospital performance metric data and quality improvement (QI) project data. Importantly, the Database serves as a Quality Measurement and Reporting System (QMRS) for the HIIN program. The Database can be accessed, through a secure login, by hospitals and Compass.

The Database allows Clinical Quality Consultants (CQCs) and HIIN program staff to accomplish a variety of project management functions. It allows IHC and South Dakota Association of Healthcare Organization (SDAHO) to assist hospital project management designees in monitoring, tracking data, management and improvement activities. HIIN program staff utilize the Database reporting functions to communicate program performance to hospital leadership and to support Compass HIIN contract program management and reporting functions.

Hospital staff can access on-demand run charts, goal attainment reports and dashboards for all measures after completing monthly data entry requirements. These reports are vital tools that can be shared during hospital team meetings to track and to drive clinical improvement efforts.

Compass HIIN network hospitals are expected to:

1. Complete a work plan to begin reporting.
2. Select from a menu of measures to comply with submission of at least one outcome and one process measure for each focus area that applies to the hospital services.
3. Confer National Healthcare Safety Network (NHSN) rights for all applicable measures.
4. Select from menu of optional focus areas (MDRO/Antimicrobial stewardship, Hospital Worker Safety and Undue Exposure to Radiation).
Statewide Databases (IPOP)
Where available, IHC will process monthly data to return point-in-time monthly data points utilizing available submitted information on or around the 20th of each month. This data will be grouped utilizing:

1. Agency for Healthcare Research and Quality (AHRQ) quality indicator grouping methodology.
2. Existing relevant codes to identify records with ICD-10 codes identifying numerators.
3. Patient-linking capabilities to identify readmissions.

For facilities where statewide databases are not accessible, see self-reported below.

National Safety Healthcare Network (NHSN)
Hospital must confer rights for all applicable measures to the Iowa Healthcare Collaborative. On or around the 20th of each month, IHC will download updated NHSN information for all HIIN hospitals. The data is uploaded into the HIIN Database for HIIN contacts to use for process improvement.

Self-Reported
Measures requiring data mining/abstraction may utilize sampling methodologies. Contact your clinical quality consultant for assistance selecting a statistically significant and measure compliant sample population. Monthly data is due 45 days after the end of a month. Users can access the Compass HIIN Reporting Database through a secure login to input hospital information. Reports will immediately display updated information.
Sampling
Measurement should speed improvement, not slow it down. Often, organizations get bogged down in the measurement phase and delay making changes until they have collected all the data they believe may be required. Measurement is not the goal; improvement is the goal. In order to move forward to the next step, a team needs just enough data to make a sensible judgment as to next steps. Instead of measuring the entire process (e.g. all patients waiting in the clinic during a month; all transfers from the ICU to the floor), measuring a sample (e.g. every sixth patient for one week; the next eight patients) is a simple, efficient way to help a team understand how a system is performing. Sampling saves time and resources while accurately tracking performance. The recommended sample size is 15-20 percent of the population being sampled. The larger the sample, the more valid and accurate the study because a larger sample size is more likely to represent the population.

Sampling has several primary purposes:
- Providing a logical way of making statements about a larger group based on a smaller group.
- Allowing researchers to make inferences or generalize from the sample to the population if the selection process has been random and systematic.

Sampling Types
- Simple random sampling – the entire population has a chance of being selected (e.g. pulling a name out of a hat).
- Systematic sampling – after picking the first patient, using every nth patient (e.g. picking every fifth patient).
- Stratified random sampling – picking a specific group or stratum from the population and then randomly picking from that subpopulation (e.g. sex, diagnosis, department, etc.)
- Cluster sampling – dividing the population into groups and then taking a random sample from the group of interest (e.g. take all hospitals, divide them into individual hospitals and then draw randomly from the individual hospital).


Sampling Resource
- IHI Sampling
  Directions for Systematic and Block Sampling (login required with free access to information).

Reporting Deadlines
Monthly data is due 45 days after the end of a month:
- Self-reported measures must be entered into the data-collection database as explained in this document.
- Where available, the statewide database/claims data statewide inpatient database (SID), statewide outpatient database (SOD) will be utilized for populating select measures.
- Hospital quality leads/primary HIIN contacts are encouraged to work with inpatient/outpatient data submission personnel in their facilities to make results available in a timely manner.
- NHSN metrics that are conferred to IHC and entered within 45 days after the end of a month will be downloaded for inclusion into the Database. Monthly reports will be refreshed during any subsequent month.
- Reporting for each month is due on the 15th of the month two months later (e.g. January reporting is due March 15).
If reporting is delinquent a 60-day reminder may be sent to the hospital’s CEO in addition to the quality lead. These reminders are sent out on the 1st of the month three months following the deadline (e.g. January reminder is sent out on April 1).

Follow the narrative below for login and database navigation instructions.

First, access the **PFP HIIN Reporting Database**.

**Login and Registration Screen**

**Login for Existing Users**
If HIIN user, enter full email address and password used previously in the HIIN Reporting Database.

**Login for New Users**
1. Click the “New User Registration” link on the HIIN Reporting Database login page.
2. Enter a full email address and secure password. Password is capital sensitive.
3. All user registrations must be approved by the system administration (Compass HIIN staff) prior to the user being granted access to the database.
4. A confirmation email will alert user when access is confirmed.

**Forgot Password**
1. Click the “Forgot Password” link on the login page.
2. Enter user email address and click “submit”.
3. A current password will automatically be emailed to that address.

**Dual Authentication**
1. Access to the HIIN reporting database requires dual authentication.
2. Each user will be prompted to enter a “captcha” phrase after entering login information.
3. Users will need to fill in the phrase with each login.

**Data Entry/Month Management (Facility Homepage)**
The Data Entry/Month Management screen allows the user to:

- Access to select metrics for open months.
• Access for entry of data in open months.
• Informational messaging on monthly data entry status.
• Access to on-demand reports.
• Access to the Compass HIIN Reporting Toolkit.
• Link to contact IHC Helpdesk to request technical assistance.

See screenshot below:

**Work Plan**

All hospitals are required to complete an initial work plan prior to being able to enter data. Compass HIIN encourages hospitals to use the work plan as a living document and update it often as your work progresses. Compass HIIN may elect to schedule a required work plan review/update at any given time.

The following is a screen shot of a collapsed workplan that has each section successfully completed as indicated by the green “Complete” following each heading.
Metric Selection Screen
Hospitals are required to report on at least one process and at least one outcome measure for each focus area (with the exception of ADE and Falls areas of focus) that match their service delivery (e.g. hospitals that do not care for ventilator patients are excluded from the requirement to submit data on Ventilator Associated Events).

Selection of Metrics
Each hospital will determine measure and data collection options. Mark the checkbox to the left of the desired metrics. Choices will be continued in any subsequent month but changes to reporting options are available at any time.

*Hospitals must report on all ADE process and Falls outcome measures.

Navigation buttons at the top and bottom of the page include (see image below):
- Save and Home – saves any changes and takes user back to the homepage.
- Save and Enter Data – saves any changes and takes user to the data entry page.
- Home – does not save changes and takes user to the homepage.
- Reset – resets to the previous month’s structure.
### General rules applying to all metrics:
- All facilities must report on at least one process and at least one outcome measure per focus area, with the exception of ADE process and falls outcome measures.
- Interventions may be entered for each month in which they occur (this information will appear on Run Charts).
- Fields are numeric only. Do not use decimals or characters.
- Please note that on PFE metrics only a Yes/No choice is available.
- Edits will apply only upon selection of “Check Data.”
- Discharges are reported in the month of the discharge date.

### Navigation buttons at the top and bottom of the page include:
- **Save** – saves any changes and user remains on data entry page.
- **Save and Home** – saves any changes and takes user to the homepage.
- **Check Data** – saves all changes, communicates that data entry is done for the month, applies system edits against all fields and returns data entry problems, takes user to the homepage if no data issues are found. If edits are highlighted, they must be corrected in order to save data entered.

**Remember to save after each update. If the information is not saved, the user will be prompted to save before leaving the page through a popup alert.**
Import Function
The import function available in the Compass HIIN Database is optional for those that choose to use this collection and data entry method. It is not required that users utilize this function; manual data entry is still available.

Importing Data
1. Users will click the “Import Data” link located on the facility homepage, under “Helpful Links” (see image below).
2. Once on the import page, users will choose the Upload template that is specified for their reporting group (see image below).
   • Self-Report Partial List – all Iowa and South Dakota hospitals (measures pulled from claims data and NHSN will not be included on this template).
   • Self-Report Complete List – all other hospitals (measures pulled from NHSN will not be included on this template).
3. Download and save the upload template.
4. Once the template is downloaded/saved, enter monthly numerator and denominator data into the appropriate cell for each measure and month. Enter numbers as whole numbers without decimals or signals.
5. Choose the saved file on the Import Screen.
6. Click “Upload”.
7. Once the file is uploaded, data will appear on the screen by measure and by month.
8. Confirm data pulled from the file correctly. Click “Check Data” to run edits.
9. Click “Save and Submit” once all data is reviewed.

If you choose to use the import function please note that imported data will override previously entered data, inclusive of IPOP and NHSN data.
Run Chart
Run or control charts are graphic displays of data points over time.

Run charts, available within the Compass HIIN Reporting Database, are customizable allowing users to add upper and lower control limits, add a trend line, and/or add data-point labels to the run chart. Users are able to run the report format as a PDF or export data into excel format to allow for further customization and workability.

Select “Run Charts” on the homepage to generate hospital-specific reports:
- On-demand reports display monthly data points for all reported months.
- Comparative results are displayed within run charts.

Control Limit
Control limits of your run chart represent your process variation and help indicate when your process is out of control. It is important to know that variation is expected and predictable and is referred to as random or common-cause variation. A process is said to be “in control” if the variation is within the computed upper and lower limits and no variation occurs when activity falls outside the controls limits and no trends are evident. There is no need to take action if a process is in control. Special cause variation occurs when activity falls outside the control limits or there is an obvious non-random pattern around the central line. This type of variation should be interpreted as a trend and investigated. Control limits are used to detect signals in data that indicate that a process is not in control and, therefore, not operating predictably. The upper and lower control limits are based on the variation in your facility data.

Trend Line
The trend line can help you identify when there is a trend.

Goal Attainment Report
Data are populated into the Goal reports from multiple sources (Statewide Databases, NHSN or self-reported). Hospital-level results are provided within this report to allow users to determine facility performance.

Goal reports are customizable by measure and performance period and can be populated on-demand by hospital quality staff from within the PfP Compass HIIN Reporting Database.
Goals Reports contain baseline and performance data (including numerator and denominator data) pertinent to the performance time frame specified by the user. Baseline periods included within the goal reports are based on a 12-month time period. Performance period will be populated as a three-month time frame based on the performance-end data selected by the user. Within the Goal Report improvement percentages (e.g. percent changed from baseline period) are calculated per measure.

Please note that there may be blank cells on the Goal Reports. Blank cells indicate no data were present in the timeframes designated for baseline and/or performance. If no data are populated in the baseline and/or performance column(s), then the improvement column will also be blank. Please contact your clinical quality consultant if cells are blank. They will assist with identifying the reason for blank cells.

Goal Reports can be found on the homepage along with other HIIN reports.

**HIIN Dashboard**

The HIIN dashboard provides a “stoplight” view of current hospital progress toward HIIN program goals.

HIIN dashboards can be found on the homepage along with other HIIN reports.

Data are populated into HIIN dashboard reports from multiple sources (Statewide Databases, NHSN or self-reported). In addition to hospital-level results, comparative data are provided to allow users to determine facility performance compared to peer group, statewide averages and Compass HIIN network averages. Peer groups are divided by hospital Medicare class and are combined into two groups:

1. Critical Access + Rural
2. Rural Referral + Urban

Within the dashboard improvement percentages (e.g. percent changed from baseline period) are calculated per measure. A positive number is an improvement, while a negative number signifies a decline in performance. Please keep in mind that the performance period is a moving target and actual performance may change from month to month. HIIN Dashboards are customizable by measure and performance period and can be populated on-demand by hospital quality staff from within the PfP Compass HIIN Reporting Database. Improvement targets within the...
dashboard are based specifically on attainment of HIIN goals of 20 percent reduction in HACs, and 12 percent reduction in readmissions. Breakdown of levels of achievement are as follows:

- Red – less than 0 percent.
  No improvement, or performing below 0 percent improvement, or worsening for all Healthcare Acquired Conditions (HACs) and readmissions.
- Yellow – 0 to 19 percent for all HACs. 0 to 11 percent for readmissions.
  This means hospitals are showing progress toward goals but have not yet reached the program goals.
- Green – 20 percent or greater for all HACs. 12 percent or greater for readmissions.
  Hospital has met or is exceeding the program goal. Hospitals that have maintained a rate of “0” events will be included in this category.

Please note that there may be blank cells on the HIIN Dashboard. Blank cells indicate no data were present in the time-frames designated for baseline and/or performance. If no data are populated in the baseline and/or performance column(s), then the improvement column will also be blank. Please contact your clinical quality consultant if cells are blank. They will assist with identifying the reason for blank cells.

**Compass HIIN Reporting Database-Updates March 2019 Overview** is a short tutorial of the 2019 database enhancements and new reporting “Hospital Custom Dashboard” reporting tool.

**Hospital Custom Dashboard**
This new Hospital Custom Dashboard lets hospitals set specific improvement goals that align with their organization. The functionality mirrors that of the HIIN Dashboard with the following customizable enhancements:

New requirements to select:
- Baseline Start – Select a start date for your customized baseline period.
- Baseline End – Select an end date for your customized baseline period.
- Performance Goal – Enter a custom numerical improvement goal of 1-100 percent.
Person and family engagement, sometimes used interchangeably with patient and family engagement, entails recipients of healthcare services, their families or other representatives and healthcare professionals working in an active partnership across the healthcare system to improve health and quality and safety of care. Studies show that there are measurable benefits with this type of partnership, including but not limited to: improved patient satisfaction, decreased length of stay, reduced costs, effective transitions of care and decreased readmissions.

Five PFE metrics have been developed to ensure that hospitals have structures and practices that enable active patient and family partnerships at the point of care, during policy and protocol development and organizational governance. The five metrics are collected and reported monthly to allow for the most current status to be reflected.

**Recommended PFE Team Members**

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Doctor Office/Clinic Staff
- Nursing Home
- Home Care
- Community Workers
- Patient Liaisons
- CEO/CNO
- Nurse Navigators
- Patient Experience Professionals

**PFE Metric One**

Hospital has a physical planning checklist that is discussed with every patient who has a scheduled admission.

**Tips and Tricks**

- Implementation of modified discharge checklist for use for all admissions.
- Utilize CMS Discharge Planning Checklist as a guide.
- Implement the planning checklist for all skilled nursing and/or swing bed admissions.
- Educate and ensure that information related to the importance of patient and family education and shared decision making is provided at new employee orientation and that ongoing education is provided throughout the year (e.g. monthly staff meetings and competency/skill fairs).

**Resources**

- **AHRQ Strategy 4: Care Transitions from Hospital to Home – IDEAL Discharge Planning**
  
  Patient and family as full partners in the discharge planning process. Five key areas to prevent problems at home and documents on discharge planning.
PFE Person and Family Engagement

- **CMS Discharge Planning Checklist**
  Sample of discharge planning with resources to consider.

- **AHRQ Communicating to Improve Quality**
  Documents to encourage patient participation in care.

- **NAQC Fostering Successful Patient and Family Engagement: Nursing’s Critical Role**
  What is patient engagement, why is patient engagement a nursing priority? Model and roadmap for nurse contribution to patient engagement.

- **PfP Preadmissions Checklist Sample (English and Spanish)**
  PFE Metric 1 HIIN Pilot Summary and associated preadmission checklist.

**PFE Metric Two**
Hospital conducts shift change huddles and/or does bedside reporting with patients and family members in all feasible cases.

**Tips and Tricks**
- Implement and maintain consistency of daily huddles.
- Implement and utilize huddle boards.
- Implement and review bedside report checklist.
- Utilize scripting for bedside reporting.
- Daily huddles could include: fall risk, Braden score, VTE prophylaxis, patients on warfarin, opioids or high-risk medications and expected discharge dates.
- Provide patient and family with information on bedside shift report to encourage participation.

**Resources**
- **AHRQ Strategy 3: Nurse Bedside Shift Report**
  Bedside checklist, training and education.

- **AHRQ Nurse Bedside Shift Report Implementation Handbook**
  Rationale, implantation and case studies for bedside shift report.

- **AHRQ Nurse Bedside Shift Report Brochure**
  Brochure for patient and family education.

- **AHRQ Bedside Shift Report Checklist**
  Checklist including SBAR.

- **AHRQ Training PowerPoint**
  Nurse bedside shift report training. Education on patient and family engagement, components of bedside shift report, HIPAA information and practice exercises.

- **AHRQ Training PowerPoint - PDF Format**

- **PFP Metric 2 – Shift Change Huddles and Bedside Reporting Implementation Resources**
  Tools and resources to facilitate meeting the intent of Metric 2.
PFE Metric Three
Hospital has a dedicated individual (or individuals) with leadership responsibility and accountability for PFE.

Tips and Tricks
• Consider staff that may be unofficially acting in the capacity as lead for PFE and make it an official responsibility. Typical titles of PFE leaders in hospitals include:
  - Patient Experience Specialist
  - Quality Coordinator
  - Director of Communications
  - Risk Management Coordinator
  - Social Work Supervisor
  - Clinical Nurse Specialist
  - Chief Clinical Officer/Director of Nursing
• Create a staff liaison to develop the infrastructure for the patient and family advisors.
• Provide education and prepare hospital leadership.
• Create a patient and family advisory council or start with a short-term project that involves patient and family advisors.

Resources
• **AHRQ Working with Patients and Families as Advisors - Implementation Handbook**
  Resources include identifying a staff liaison, opportunities for PFAC, recruiting, selecting and training.
• **AHRQ Guide to Patient and Family Engagement in Hospital Quality and Safety**
  Four primary strategies for promoting patient/family engagement in hospital safety and quality of care.
• **PfP Metric 3 – PFE Leader of Functional Area**
  Tools and resources to facilitate meeting the intent of Metric 3.

PFE Metric Four
Hospital has an active Patient and Family Advisory Council (PFAC) or at least one patient who serves on a patient safety or quality improvement committee or team.

Tips and Tricks
• In the absence of a PFAC:
  - invite and engage a patient representative to serve on your patient safety or quality committee
  - seek patient representatives to serve on routine focus groups with the intent to use their feedback to inform change
• Utilize the below resources to invite and train patient and family advisors.

Resources
Patient and Family Advisor Tools
• **PfP Metric 4 – PFAC or Representative on Quality Improvement Team**
  Tools and resources to facilitate meeting the intent of Metric 4.
• **Patient and Family Advisor - Orientation Manual**
  Responsibilities, expectations, tips for being an engaged advisor.
• **AHRQ Patient and Family Advisor Application Form**
PFE Person and Family Engagement

- Become a Patient and Family Advisor - Brochure
- Am I Ready to Become an Advisor - Checklist
- Confidentiality Statement for Advisors
- Patient and Family Participation Interests
- Do You Have Ideas to Help Improve our Hospital? - Postcard
- Readiness to Partner with Patient and Family Advisors
- Sample Letter of Invitation for Advisory Council Applicants
- Sharing My Story: A Planning Worksheet
- Working with Patient and Family Advisors
- Working with Patient and Family Advisors on Short-Term Projects
- Become a Patient and Family Advisor: Information Session
- Working with Patient and Family Advisors: Introduction and Overview

Comprehensive Toolkits and Protocols:
- **PFCC Go Shadow**
  Patient and Family Centered Care Methodology and Practice. Build care teams, develop high-performance care teams, drive change and innovation.
- **National Academy of Medicine**
  Guiding Framework for Patient and Family Engaged Care.
- **Partnering with Patients and Families to Enhance Safety and Quality: A Mini Toolkit**
  Patient and family advisor’s vision and applications.
- **BJC Healthcare Patient and Family Advisory Council: Getting Started Toolkit**

### PFE Metric Five
Hospital has one or more patient(s) who serve on a governing and/or leadership board as a patient representative.

#### Tips and Tricks
- Create and implement the PFE Roadmap.
- Determine what the current hospital culture is regarding patient and family engagement.
- Recommendations to meet the intent of this measure are:
  - The Board has at least one position designated for a patient or family member who represents the patient perspective on all matters before the board
  - If the Board does not allow for a patient representative, they may:
    - Have a line item on the agenda for PFAC input, which may include a PFAC report
    - Assign a Board member the role and responsibility of patient/family voice and assure that is clearly communicated and understood by the entire Board
    - Document Board member activities that connect them closer to patients and families, such as visits to particular units, attending PFAC meetings, etc.

#### Resources
- **The Power of Having the Board on Board**
  Six crucial activities for boards.
- **H2Pi Effecting Safety Across the Board Through Patient and Family Partnership Councils for Quality and Safety (PEPCQS)**
  Tools, assessment of your organization, roadmap to success, strategic planning.
• **Engaging Health Care Users: A Framework for Health Individuals and Communities Guide**
  Strategies at the community, organization, healthcare team and individual levels.

• **How-to Guide: Governance Leadership (Get Boards on Board)**
  Guidance and on how hospitals can undertake six key governance leadership activities to improve quality and reduce harm in their hospitals.

• **PfP Metric 5 – Patient and Family Engagement Advisor on Board**
  Tools and resources to facilitate meeting the intent of Metric 5.
An adverse drug event (ADE) is an injury resulting from the use of a medication. ADEs in hospitals can be caused by medication errors, such as accidental overdoses or providing a drug to the wrong patient, or by adverse drug reactions, such as allergic reactions or excessive bleeding after treatment with the intended dose of a drug that prevents dangerous blood clots.

These measures look at the number of adverse drug events in the acute care, skilled nursing, swing bed and observation units. In addition, these measures look at the number of lab measurements, blood glucose measurements and electronically entered medications ordered in the inpatient setting.

These measures help to determine how many and how often patients are harmed by ADEs.

--- Outcome Measures ---

### Adverse Drug Event Rate

<table>
<thead>
<tr>
<th><strong>Adverse Drug Events: Adverse Drug Event Rate</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td>Number of Acute Care, SNF, Swing Bed and Observation adverse drug events that reach the patient (NCC MERP Scale categories D-I)</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td>Number of Acute Care, SNF, Swing Bed and Observation patient days</td>
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<tr>
<td><strong>Multiplier</strong></td>
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<tr>
<td>1000</td>
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<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
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<td><strong>Data Source</strong></td>
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<tr>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
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<td><strong>Baseline period</strong></td>
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<tr>
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</table>

### Recommended Team Members

- Quality Team
- Prescribers
- Pharmacist
- Department Managers/Directors
- Nurses
- Certified Medication Aides
- Patients and Families
- Clinical IT

### Tips and Tricks

- Assemble an interdisciplinary team and develop an AIM statement that reflects organizational ADE goals.
- Educate and ensure that ADE education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Implement use of NCC MERP Scale Categories D-I for categorization of adverse drug events.
- Utilize the NCC MERP algorithm.
- “0” denominator not allowed.
Adverse Drug Events

• Provide nursing education on ADE reporting and the importance of reporting near misses; utilizing Just Culture concepts.

Resources
• **HRET Top Ten Checklist for ADE**
  Top ten evidence-based interventions for ADE.
• **The National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP)**
  Medication errors definition, taxonomy and index for categorizing medication errors.
• **NCC MERP Index for Categorizing Medication Errors**
• Pie chart demonstrating medication errors categories A-I.
• **NCC MERP Index for Categorizing Medication Error Algorithm**
  Algorithm to categorize medication errors.
• **University of Southern California School of Pharmacy**
• **Agency for Healthcare Research and Quality (AHRQ)**
  H-CUPs Statistical Brief #109 Medication-Related Adverse Outcomes in U.S. Hospitals and emergency departments (ED). Provides characteristics and medications most commonly involved in ADEs.
• **Office of Disease Prevention and Health Promotion**

### Adverse Drug Events Originating During Hospital Stay (AHRQ)

<table>
<thead>
<tr>
<th><strong>Adverse Drug Events: Adverse Drug Events Originating During Hospital Stay, (AHRQ Statistical Brief #109)</strong></th>
</tr>
</thead>
<tbody>
<tr>
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<td><strong>Data Source</strong></td>
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<td><strong>Baseline period</strong></td>
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<td><strong>Outcome or Process</strong></td>
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<td><strong>HIIN Measure ID</strong></td>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
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### Recommended Team Members
• Quality Team
• Prescribers
• Pharmacist
• Department Managers/Directors
• Nurses
• Certified Medication Aides
• Patients and Families
Adverse Drug Events

- Clinical IT
- HIM

Tips and Tricks
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s ADE goals.
- Educate and ensure that ADE education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Ensure that your pharmacist is communicating with coders to ensure proper coding (applicable for claims data).
- “0” denominator not allowed.
- Provide nursing education on ADE reporting and the importance of reporting near misses as well as reporting situations that cause harm.

Resources
- Partnership for Patients: ADE Prevention and Measurement Resources
- Agency for Healthcare Research and Quality (AHRQ)
  Medication Errors and Adverse Drug Events: Strategies to Prevent Adverse Drug Events.
- Institute for Safe Medication Practices (ISMP)
  Medication Safety Guidelines: ISMP website provides a variety of topics for treating high risk patients, use of safe technology and details specific high-alert medications.

Manifestations of Poor Glycemic Control

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of patients with ICD-10 diagnosis code for poor glycemic control</th>
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<tbody>
<tr>
<td>Denominator</td>
<td>Number of discharges for Acute Care, ≥18 y/o</td>
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<td>Link/Notes on measure specifications if applicable</td>
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<td>Data Source</td>
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<td>Core or Optional Measure</td>
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</table>

Recommended Team Members
- Quality Team
- Prescribers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT
- Community Partners: nursing homes, home care, clinics, etc.
Adverse Drug Events

- Respiratory/Therapy Staff
- Physical/Occupational/Speech Therapy Staff
- Lab
- Doctor Office/Clinic Staff

Tips and Tricks
- Hospital Acquired manifestations of poor glycemic control which includes diabetic ketoacidosis, nonketotic hyperosmolar coma and hypoglycemic coma

Resources
- Numerator ICD-10-CM Diagnoses

<table>
<thead>
<tr>
<th>ICD-10-CM Code</th>
<th>ICD-10-CM Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E08.00</td>
<td>DM d/t Underlying Condition with Hyperosmolarity without Nonketotic Hyperglycemic-Hyperosmolar Coma</td>
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<tr>
<td>E08.01</td>
<td>DM d/t Underlying Condition with Hyperosmolarity with Coma</td>
</tr>
<tr>
<td>E08.10</td>
<td>DM d/t Underlying Condition with Ketoacidosis without Coma</td>
</tr>
<tr>
<td>E09.00</td>
<td>Drug Or Chemical Induced DM with Hyperosmolarity without Nonketotic Hyperglycemic-Hyperosmolar Coma</td>
</tr>
<tr>
<td>E09.01</td>
<td>Drug Or Chemical Induced DM with Hyperosmolarity with Coma</td>
</tr>
<tr>
<td>E09.10</td>
<td>Drug Or Chemical Induced DM with Ketoacidosis without Coma</td>
</tr>
<tr>
<td>E10.10</td>
<td>Type 1 DM with Ketoacidosis without Coma</td>
</tr>
<tr>
<td>E11.00</td>
<td>Type 2 DM with Hyperosmolarity without Nonketotic Hyperglycemic-Hyperosmolar Coma</td>
</tr>
<tr>
<td>E11.01</td>
<td>Type 2 DM with Hyperosmolarity with Coma</td>
</tr>
<tr>
<td>E13.00</td>
<td>Other Specified DM with Hyperosmolarity without Nonketotic Hyperglycemic-Hyperosmolar Coma</td>
</tr>
<tr>
<td>E13.01</td>
<td>Other Specified DM with Hyperosmolarity with Coma</td>
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<tr>
<td>E13.10</td>
<td>Other Specified DM with Ketoacidosis without Coma</td>
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<tr>
<td>E15</td>
<td>Nondiabetic Hypoglycemic Coma</td>
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Opioid-Related Adverse Drug Event Rate

<table>
<thead>
<tr>
<th>Adverse Drug Events: Opioid-Related Adverse Drug Event Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
</tr>
<tr>
<td>Denominator</td>
</tr>
<tr>
<td>Multiplier</td>
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<td>Data Source</td>
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<tr>
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</tr>
<tr>
<td>HIIN Measure ID</td>
</tr>
<tr>
<td>Core or Optional Measure</td>
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</tbody>
</table>
Recommended Team Members

- Quality Team
- Prescribers
- Pharmacist
- Department Managers/Directors
- Nurses
- Certified Medication Aides
- Patients and Families
- Clinical IT

Tips and Tricks

- The rate of adverse events likely caused by administration of an opioid during a hospital stay
- Educate and ensure that ADE education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Provide nursing education on ADE reporting and the importance of reporting near misses; utilizing Just Culture concepts.

Resources

- **Office of Disease Prevention and Health Promotion: Pathways to Safer Opioid Use**
  This is an online training intended for physicians, nurses, pharmacists, health educators. This course will aid in applying health literacy strategies to help patients understand prevention of opioid related ADEs. Identify risk factors of opioids and utilize a multidisciplinary team-based approach for treating patients with chronic pain.
- **Iowa Healthcare Collaborative**
  A compendium of IHC Comfort Resource tools, Opioid Iowa County Flyers and IHC Pain Management Toolkit.
- **The Pain Management Toolkit**
  IHC has created an Iowa Pain Management Toolkit to assist prescribers in navigating treatment and management of pain. The toolkit includes information on the art of difficult conversations, tapering tips and how to treat chronic and acute pain. Additional tools and resources are also addressed in the Iowa Pain Management Toolkit.
- **The Opioid Implementation Guide**
  uses team-based strategies to engage patients, families, clinicians and communities in addressing opioid risks. The intent of this guide is to share proven methods of implementing an Opioid Stewardship Program. Much of the guide was developed from our learnings in the two Compass HIIN Opioid Guardianship Quality improvement projects.
- **Webinar – Opioids: Helping Nurses Understand the Crisis**
  The intent of this IHC webinar is to provide nursing staff with a general understanding of opioids, current statistics and legislation related to the crisis, as well as tools, resources and strategies that can be used when working with patients and their families on pain management.
## Adverse Drug Events

- **Numerator ICD-10-CM Diagnoses**

<table>
<thead>
<tr>
<th>ICD-10-CM Code</th>
<th>ICD-10-CM Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F11.10</td>
<td>Opioid abuse, uncomplicated</td>
</tr>
<tr>
<td>F11.11</td>
<td>Opioid abuse, in remission</td>
</tr>
<tr>
<td>F11.120</td>
<td>Opioid abuse with intoxication, uncomplicated</td>
</tr>
<tr>
<td>F11.121</td>
<td>Opioid abuse with intoxication delirium</td>
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<tr>
<td>F11.122</td>
<td>Opioid abuse with intoxication with perceptual disturbance</td>
</tr>
<tr>
<td>F11.129</td>
<td>Opioid abuse with intoxication, unspecified</td>
</tr>
<tr>
<td>F11.14</td>
<td>Opioid abuse with opioid-induced mood disorder</td>
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<tr>
<td>F11.150</td>
<td>Opioid abuse with opioid-induced psychotic disorder with delusions</td>
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<tr>
<td>F11.151</td>
<td>Opioid abuse with opioid-induced psychotic disorder with hallucinations</td>
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<td>F11.159</td>
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<tr>
<td>F11.181</td>
<td>Opioid abuse with opioid-induced sexual dysfunction</td>
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<td>F11.182</td>
<td>Opioid abuse with opioid-induced sleep disorder</td>
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<td>F11.188</td>
<td>Opioid abuse with other opioid-induced disorder</td>
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<td>F11.19</td>
<td>Opioid abuse with unspecified opioid-induced disorder</td>
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<tr>
<td>F11.20</td>
<td>Opioid dependence, uncomplicated</td>
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<tr>
<td>F11.21</td>
<td>Opioid dependence, in remission</td>
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<tr>
<td>F11.220</td>
<td>Opioid dependence with intoxication, uncomplicated</td>
</tr>
<tr>
<td>F11.221</td>
<td>Opioid dependence with intoxication delirium</td>
</tr>
<tr>
<td>F11.222</td>
<td>Opioid dependence with intoxication with perceptual disturbance</td>
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<tr>
<td>F11.229</td>
<td>Opioid dependence with intoxication, unspecified</td>
</tr>
<tr>
<td>F11.23</td>
<td>Opioid dependence with withdrawal</td>
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<tr>
<td>F11.24</td>
<td>Opioid dependence with opioid-induced mood disorder</td>
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<td>Opioid use, unspecified with intoxication, uncomplicated</td>
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</tr>
<tr>
<td>F11.950</td>
<td>Opioid use, unspecified with opioid-induced psychotic disorder with delusions</td>
</tr>
</tbody>
</table>
ADE process measures for blood glucose, INR and opioids are surrogate measures for measuring harm. These measures may include an Adverse Drug Event (ADE) or Potential Adverse Drug Event (pADE). It is critical that the HIIN hospital team evaluate all data and assess level of harm according to the NCC-MERP scale.

Hospitals must report on all required ADE process measures. Required ADE process measures include Stat naloxone administration in multiple settings: inpatient, emergency department and community administration, Blood Glucose less than 50 and INR greater than 5.
## Adverse Drug Events

### Blood Glucose Less than 50

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of blood glucose measurements (per lab reports, FSBG, EMR, Charge Data, etc.) for Acute Care, SNF, Swing Bed and Observation patients where blood glucose &lt;50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of blood glucose measurements (per lab reports, FSBG, EMR, Charge Data, etc.) for Acute Care, Skilled Nursing Care, Swing Bed and Observation patients</td>
</tr>
<tr>
<td>Multiplier</td>
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<tr>
<td>Link/Notes on measure specifications if applicable</td>
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<tr>
<td>Core or Optional Measure</td>
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</table>

### Recommended Team Members
- Quality Team
- Providers
- Endocrinologist
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT
- Lab
- Diabetic Educator
- Health Coach
- Dietitian
- Primary Care Physician

### Tips and Tricks
- “0” denominator not allowed.
- Exclude ED patients.
- Exclude newborn patients.
- Include blood glucose measurements less than 50 that occur only after a patient is admitted to an inpatient unit, exclude ER blood glucose measurements less than 50. This includes all lab results and blood glucometer (FSBG) readings.
- Utilize two person checks for Insulin to include pharmacy dispensing, nursing administration of injections and infusion pump set up.
- Standardize insulin protocols utilizing guidelines for calculating dosing and establish standardized scales for correction doses.
Adverse Drug Events

- Engage Dietitian/Health Coach/Diabetic Educator in providing diabetic education to newly diagnosed patients; include families/significant others in ongoing diabetic education.

Resources
- **Healthcare Communities**
  Basal Bolus Insulin Therapy – Inpatient Management.
- **Institute for Safe Medication Practices**
  Guidelines for Optimizing Safe Subcutaneous Insulin Use in Adults (2017). This guideline was developed to aid in insulin error prevention and provide patient and employee safety focus.

### INRs Greater than 5

<table>
<thead>
<tr>
<th>Adverse Drug Events: INRs Greater Than 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td>Number of lab measurements for Acute Care, SNF, Swing Bed and Observation patients on Warfarin where documented INR &gt;5</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td>Number of INR lab measurements for Acute Care, SNF, Swing Bed and Observation patients on Warfarin</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td>N/A</td>
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<tr>
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<td><strong>Baseline period</strong></td>
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<td><strong>Core or Optional Measure</strong></td>
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</table>

**Recommended Team Members**
- Quality Team
- Prescribers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT
- Community Partners: nursing homes, home care, clinics, etc.
- Respiratory/Therapy Staff
- Physical/Occupational/Speech Therapy Staff
- Lab
- Doctor Office/Clinic Staff

**Tips and Tricks**
- “0” denominator not allowed.
- Exclude ED patients.
• Engage pharmacists to practice to the fullest extent of their licensure and consider utilization of pharmacy driven Warfarin dosing.
• Utilize pharmacy-led warfarin management of inpatients.

Resources
  This self-assessment covers eight key elements that most significantly influence safe medication use specific to antithrombotic therapy.
  This resource provides the eight elements of performance to reduce the likelihood of patient harm associated with the use of anticoagulant therapy.

Stat Naloxone Administration – Inpatient

<table>
<thead>
<tr>
<th>Adverse Drug Events: Inpatient Stat Naloxone Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td>Number of doses when a reversal agent (e.g. Naloxone) is</td>
</tr>
<tr>
<td>administered to Acute Care, SNF, Swing Bed and Observation</td>
</tr>
<tr>
<td>patients who have been prescribed and administered opioids</td>
</tr>
<tr>
<td>during their inpatient stay</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td>Number of Acute Care, SNF, Swing Bed and Observation</td>
</tr>
<tr>
<td>patients prescribed opioids</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<td>1714</td>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
</tr>
<tr>
<td>Core</td>
</tr>
</tbody>
</table>

Recommended Team Members
• Quality Team
• Providers
• Pharmacist
• Department Managers/Directors
• Surgical Department (Surgeons, Anesthesiologists, Registered Nurses)
• Post Anesthesia Care Unit (PACU) Nurses & Managers
• Registered Nurses
• Patients and Families
• Clinical Informatics

Tips and Tricks
• Exclude ED patients and others who are not inpatient status.
• Exclude naloxone administration that is not given as a reversal agent (naloxone given for pruritis or other symptoms is excluded from this measure).
• Exclude naloxone given to a patient who the hospital has not prescribed and administered opioids (patients who overdose on opioids that have been brought into the hospital and have self-administered are excluded from this measure).
• It is the intent of this metric to capture cases where the hospital has over administered an opioid and a reversal agent must be used.
• Assess patient for opioid naïve or tolerance prior to administration of narcotics.
• Identify an evidenced-based assessment tool to use for preventing unintended sedation.
• Develop a care plan or step-down treatment plan for decreasing and discontinuing narcotics.

Resources

• **Office of Disease Prevention and Health Promotion: Pathways to Safer Opioid Use**
  This is an online training intended for physicians, nurses, pharmacists, health educators. This course will aid in applying health literacy strategies to help patients understand prevention of opioid related ADEs. Identify risk factors of opioids and utilize a multidisciplinary team-based approach for treating patients with chronic pain.

• **Iowa Healthcare Collaborative**
  A compendium of IHC Comfort Resource tools, Opioid Iowa County Flyers and IHC Pain Management Toolkit.

• **The Pain Management Toolkit**
  IHC has created an Iowa Pain Management Toolkit to assist prescribers in navigating treatment and management of pain. The toolkit includes information on the art of difficult conversations, tapering tips and how to treat chronic and acute pain. Additional tools and resources are also addressed in the Iowa Pain Management Toolkit.

• **The Opioid Implementation Guide** uses team-based strategies to engage patients, families, clinicians and communities in addressing opioid risks. The intent of this guide is to share proven methods of implementing an Opioid Stewardship Program. Much of the guide was developed from our learnings in the two Compass HIIN Opioid Guardianship Quality improvement projects.

• **Webinar – Opioids: Helping Nurses Understand the Crisis**
  The intent of this IHC webinar is to provide nursing staff with a general understanding of opioids, current statistics and legislation related to the crisis, as well as tools, resources and strategies that can be used when working with patients and their families on pain management.

• **Medication Management and Opioid (MMO) Pledge Initiative**
  Provider Pledge to align with national goals to improve medication management and opioid misuse.
Adverse Drug Events

Stat Naloxone Administration – Emergency Department

<table>
<thead>
<tr>
<th>Adverse Drug Events: Emergency Department Naloxone Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
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<tr>
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<td><strong>HIIN Measure ID</strong></td>
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**Recommended Team Members**
- Quality Team
- ED Providers
- Pharmacist
- ED Manager
- ED Nurses
- Patients and Families

**Tips and Tricks**
- This measure is only for emergency department naloxone administration.
- Identify emergency department protocols for opioid prescribing e.g. limits in opioid Rx, pain management specialist referrals, etc.

**Resources**
- **CDC Improve Opioid Prescribing**
  Improving the way opioids are prescribed through clinical practice guidelines can ensure patients have access to safer, more effective chronic pain treatment while reducing the number of people who misuse, abuse, or overdose from these drugs (CDC, 2017).
- **Pain Assessment and Management Initiative (PAMI)**
  This link provides resources to aid in meeting The Joint Commission Standards related to pain assessment and management.
- **Iowa Healthcare Collaborative**
  A compendium of IHC Comfort Resource tools, Opioid Iowa County Flyers and IHC Pain Management Toolkit
- **The Pain Management Toolkit**
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• **Webinar – Opioids: Helping Nurses Understand the Crisis**
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### Opioid Therapy Treatment Plan

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td>Number of patients discharged from a hospital on opioids with patient-specific goals of therapy at discharge</td>
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<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td>Number of patients discharged on opioids from an acute hospital stay</td>
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<td><strong>Multiplier</strong></td>
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<td>100</td>
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<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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### Recommended Team Members

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Nurses
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Pain Management Team
- Primary Care Office/Care Teams
- Community Partners: nursing home, home care, mental health practitioners, etc.

### Tips and Tricks

- Exclude ED patients.
- Assess patient for opioid naïve or tolerance prior to administration of opioids.
- Pharmacy-led education on discharge medications (medication reconciliation) is ideal to allow patient/family opportunity to ask questions specific to medication regimen.
- Develop a care plan step down treatment plan for decreasing and discontinuing opioids.
• Request that IT builds the treatment plan into EHR.
• Involvement of pharmacist in the treatment plan is favorable.

Resources
• **Use of Opioids for the Treatment of Chronic Pain**
  The American Academy of Pain Medicine provides pain guidelines and consensus recommendations for pain management.
• **Pain Assessment and Management Initiative (PAMI)**
• **Michigan OPEN**
  Michigan OPEN was founded in an effort to develop a preventive approach to the opioid epidemic in the state of Michigan by tailoring postoperative and acute care opioid prescribing.
• **Iowa Department of Public Health Iowa Naloxone Brochure**
  An infographic for patient education on overdose risk factors and how to respond to overdose; inclusive of how to administer naloxone.
• **Iowa Healthcare Collaborative**
  A compendium of IHC Comfort Resource Tools, Opioid Iowa County Flyers and IHC Pain Management Toolkit.
• **The Pain Management Toolkit**
  IHC has created an Iowa Pain Management Toolkit to assist prescribers in navigating treatment and management of pain. The toolkit includes information on the art of difficult conversations, tapering tips and how to treat chronic and acute pain. Additional tools and resources are also addressed in the Iowa Pain Management Toolkit.
• **The Opioid Implementation Guide** uses team based strategies to engage patients, families, clinicians and communities in addressing opioid risks. The intent of this guide is to share proven methods of implementing an Opioid Stewardship Program. Much of the guide was developed from our learnings in the two Compass HIIN Opioid Guardianship Quality improvement projects.
• **Webinar – Opioids: Helping Nurses Understand the Crisis**
  The intent of this IHC webinar is to provide nursing staff with a general understanding of opioids, current statistics and legislation related to the crisis, as well as tools, resources and strategies that can be used when working with patients and their families on pain management.

### Prevalence of Naloxone Usage in Community Setting Prior to Admission

| Adverse Drug Events: Community Naloxone Administration Prior to Hospital Admission |
|---------------------------------|----------------------------------------------------------------------------------|
| **Numerator**                   | Number of patients who received Naloxone in a community setting prior to admission |
| **Denominator**                 | Number of Acute Care admissions                                                  |
| **Multiplier**                  | 100                                                                             |
| **Link/Notes on measure specifications if applicable** | N/A |
| **Data Source**                 | Self-Reported in PfP Compass HIIN Reporting Database                             |
| **Baseline period**             | CY2014                                                                          |
| **Outcome or Process**          | Process                                                                         |
| **HIIN Measure ID**             | 10011                                                                           |
| **Core or Optional Measure**    | Core                                                                            |
Recommended Team Members

- Quality team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Community Partners: nursing home, home health, mental health practitioners, pharmacies, schools, etc.
- Doctor Office/Clinic Staff
- Local EMS
- Local Law Enforcement

Tips and Tricks

- Request that IT builds the treatment plan into EHR.
- Partner with community leaders and entities to curb the opioid crisis using a comprehensive community approach.
- Collaborate with your local EMS and Law Enforcement.
- Educate patients, families, caregivers and community on naloxone. Communicate where there are standing orders in your community.
- Partner with local pharmacies and community leaders to educate all on proper disposal of unused opioids and communicate where consumers can dispose of these in your community.
- Consider holding a community meeting to bring local awareness to the opioid epidemic and collaborate on local solutions.

Resources

- **CDC Opioid Overdose Prevention**
  This site provides overdose presentation tools to include improved opioid prescribing, reducing exposure to opioids, prevention of misuse and treatment guidelines in opioid use disorder.

- **Prescribe ToPrevent.org**
  An online resource to assist health care providers in educating patients to reduce risk of overdose and use of naloxone.

- **Iowa Healthcare Collaborative**
  A compendium of IHC Comfort Resource Tools, Opioid Iowa County Flyers and IHC Pain Management Toolkit

- **The Pain Management Toolkit**
  IHC has created an Iowa Pain Management Toolkit to assist prescribers in navigating treatment and management of pain. The toolkit includes information on the art of difficult conversations, tapering tips and how to treat chronic and acute pain. Additional tools and resources are also addressed in the Iowa Pain Management Toolkit.

- The **Opioid Implementation Guide** uses team based strategies to engage patients, families, clinicians and communities in addressing opioid risks. The intent of this guide is to share proven methods of implementing
an Opioid Stewardship Program. Much of the guide was developed from our learnings in the two Compass HIIN Opioid Guardianship Quality Improvement projects.

- **Webinar – Opioids: Helping Nurses Understand the Crisis**
  The intent of this IHC webinar is to provide nursing staff with a general understanding of opioids, current statistics and legislation related to the crisis, as well as tools, resources and strategies that can be used when working with patients and their families on pain management.
Clostridium difficile

Clostridium difficile, also known as Clostridioides difficile (C. diff) results from disruption of normal healthy bacteria in the colon, often from antibiotics. C. diff can also be transmitted from person to person by spores. C. diff is responsible for a spectrum of C. diff infections (CDI), including uncomplicated diarrhea, pseudomembranous colitis, and toxic megacolon, which can, in some instances, lead to sepsis and even death. Although C. diff infections represent a subset of gastrointestinal tract infections in the current CDC definitions for HAIs, specific standard definitions for C. Diff Infections should be incorporated to obtain a more complete understanding of how C. diff is being transmitted in a hospital. These measures look at prevalence and healthcare facility acquired c-diff as well as process measures to reduce the spread of C-diff.


--- Outcome Measures ---

### Healthcare Facility-Onset Clostridium difficile Infection Rate

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of healthcare facility-onset Clostridium difficile infections</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of Acute Care inpatient days</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>100</td>
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<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<td><strong>Data Source</strong></td>
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<td><strong>Core or Optional Measure</strong></td>
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</tbody>
</table>

### Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Environmental Services
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Nursing Home
• Home care
• Hospice
• Lab
• Doctor Office/Clinic Staff
• Dietitian

Tips and Tricks

• Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s C. diff goals.
• Educate and ensure that C. diff prevention and handwashing education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
• Confer NHSN rights to IHC.
• Develop and implement an Antimicrobial Stewardship Program and work to progress from basic to intermediate and finally advanced strategies within each of the core elements.
• Ensure that all doctors, nurses and other healthcare providers clean their hands with soap and water before and after caring for patients with C. diff.
• Select antimicrobials associated with a lower risk of CDI when possible and avoid antimicrobial exposure if patients do not have a condition for which antimicrobials are indicated.
• Ensure a physician leader dedicates a portion of their time to the design, implementation and function of an antimicrobial stewardship program and is accountable for the program’s outcomes.
• Provide C. diff infection information for patients and family members.
• Develop and implement appropriate protocols for sporicidal chemical sterilization of equipment and the environment.
• Ensure that personnel responsible for environmental cleaning and disinfection have been appropriately trained and are using the correct personal protective equipment.
• Ensure that pharmacists conduct a daily review of targeted antimicrobials for appropriateness and contact prescribers with recommendations for alternative therapy (antibiotic time-out).

Resources

• Strategies to Prevent Clostridioides difficile Infection in Acute Care Facilities
  Information on the basic principles and interventions for the prevention of C. difficile infection in acute care facilities provided by the CDC.
• CDC MDRO and CDI Module
  NHSN multi drug resistant organism & clostridium difficile infection module.
• FAQs about Clostridium difficile (CDC)
  Fact sheet for patients to have as a resource when they are discharged.
• Guide to Preventing Clostridium Difficile Infections
  APIC Implementation Guide is meant to help quality and infection prevention staff apply best practices to achieve targeted outcomes and enhance patient safety.
• Toolkit for Reduction of Clostridium Difficile Infections Through Antimicrobial Stewardship
  The Toolkit for Reduction of Clostridium difficile Infections Through Antimicrobial Stewardship assists hospital staff and leadership in developing an effective Antimicrobial Stewardship Program with the potential to reduce C. diff events.
Clostridium difficile Prevalence

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of Clostridium difficile Lab ID events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of Acute Care inpatient admissions</td>
</tr>
<tr>
<td>Multiplier</td>
<td>100</td>
</tr>
<tr>
<td>Link/Notes on measure specifications if applicable</td>
<td><a href="http://www.cdc.gov/nhsn/pdfs/pscmanual/pcsmanual_current.pdf">http://www.cdc.gov/nhsn/pdfs/pscmanual/pcsmanual_current.pdf</a></td>
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<td>Outcome or Process</td>
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Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Environmental Services
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Nursing Home
- Home Care
- Hospice
- Lab
- Doctor Office/Clinic Staff
- Dietitian

Tips and Tricks

- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s C. diff goals.
- Educate and ensure that C. diff education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Ensure your rights are conferred in NHSN to IHC.
- Develop and implement an Antimicrobial Stewardship Program within your hospital.
- Ensure that all doctors, nurses and other healthcare providers clean their hands with soap and water before and after caring for patients.
- Select antimicrobials associated with a lower risk of CDI when possible and avoid antimicrobial exposure if patients do not have a condition for which antimicrobials are indicated.
**Clostridium difficile**

- Ensure a physician leader dedicates a portion of their time to the design, implementation and function of an antimicrobial stewardship program and is accountable for the program’s outcomes.
- Provide clostridium difficile infection information for patients, family and caregivers.
- Develop and implement appropriate protocols for sporicidal chemical sterilization of equipment and the environment.
- Ensure that personnel responsible for environmental cleaning and disinfection have been appropriately trained and are using the correct personal protective equipment.
- Ensure that pharmacists conduct a daily review of targeted antimicrobials for appropriateness and contact prescribers with recommendations for alternative therapy (antibiotic time-out).
- Clostridium difficile Standardized Infection Ratio (SIRs) will be obtained from NHSN information conferred to IHC and included in the analysis of statewide and national results for each eligible facility and all reported units.

**Resources**

- **Strategies to Prevent Clostridioides difficile Infection in Acute Care Facilities**
  Information on the basic principles and interventions for the prevention of C. difficile infection in acute care facilities provided by the CDC.
- **CDC MDRO and CDI Module**
  NHSN Multi drug resistant organism & clostridium difficile infection module.
- **FAQs about Clostridium difficile (CDC)**
  Fact sheet for patients to have as a resource when they are discharged.
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  APIC Implementation Guide is meant to help quality and infection prevention staff apply best practices to achieve targeted outcomes and enhance patient safety.
- **Toolkit for Reduction of Clostridium Difficile Infections Through Antimicrobial Stewardship**

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**Process Measures**

**Hand Hygiene Compliance**

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Clostridium Difficile: Hand Hygiene Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of observations where appropriate handwashing technique was applied</td>
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</table>

<table>
<thead>
<tr>
<th>Denominator</th>
<th>Number of handwashing observations</th>
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</thead>
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<table>
<thead>
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Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff (nurses, aids, laboratory, radiology, physical therapy, etc.)
- Environmental services
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Anyone with direct patient contact

Tips and Tricks

- Educate and ensure that handwashing education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Provide demonstration and live validation to ensure method of handwashing is effective.
- Ensure that all doctors, nurses and other healthcare providers clean their hands with soap and water or an alcohol-based hand rub before and after caring for patients.
- Leverage effective placement of alcohol-based hand hygiene dispensers to increase visitor use.
- Train team members participating in hand washing observations/audits in a standard way to reduce variation in audits.
- Teach observers or champions to provide effective feedback when they observe an opportunity to improve hand hygiene.
- Utilize a standard form that everyone uses for observations, include all staff that have patient interaction.
- Post hand washing audit results in an area that is highly visible by the care team so that performance and feedback is communicated to those being evaluated.
- Provide hand washing audit results to the medical staff in conjunction with relevant infection related outcomes data.

Resources

- [CDC Hand Hygiene in Healthcare Settings](#)
  Hand hygiene basics, training, guidelines and measurement.
- [Hand Hygiene Observation Record](#)
  This sample form can be used when performing hand hygiene observations.
- [Clean Care is Safer Care](#)
  WHO hand hygiene tools and resources.
- [WHO Guidelines on Hand Hygiene in Health Care](#)
  WHO hand hygiene tools and resources.
- [Your 5 Moments for Hand Hygiene Poster](#)
  WHO hand hygiene tools and resources.
- [SOAP UP! Toolkit and Resource Guide](#)
  Implementing appropriate hand hygiene to reduce the spread of infection. This toolkit developed in December 2017 by the Florida Hospital Association HIIN provides a variety of tools, resources and education to help increase hand hygiene awareness.
Contact Precaution Compliance

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<tr>
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Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Environmental Services
- Department Managers/Directors
- Frontline Staff (nurses, aids, laboratory, radiology, physical therapy, etc.)
- Patient Transport
- Patients and Families
- Respiratory Therapy Staff
- Physical/Occupational/Speech Therapy Staff
- Lab

Tips and Tricks

- Educate and ensure that contact precaution education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- **Isolation Precaution Guidelines** (click link to access Guidelines per the CDC).
- Provide demonstration and require annual staff competency to ensure method of contact isolation is effective.
- Utilize a standard form that everyone uses for observations.
- Ensure easy access and availability of gloves, gowns, masks and other protective items.
- Train the care team to utilize the appropriate cleaning products for equipment entering and leaving the room (ex. portable x-ray machine).
- Utilize appropriate signage to signal to the care team and visitors that contact precautions are necessary.
- When placing orders for the patient that will require other departments to access the room, patient or require transport of a patient with contact precautions to another area of the hospital consider a process for effectively communicating what precautions are necessary.
- Train team members participating in contact precautions observations/audits in a standard way to reduce variation in audits.
- Teach observers or champions to provide effective feedback when they observe an opportunity to improve contact precaution compliance.
- Post hand contact precaution compliance audit results in an area that is highly visible by the care team so that performance and feedback is communicated to those being evaluated.
- Provide contact precaution compliance audit results to the medical staff in conjunction with relevant infection related outcomes data.

Resources
- **CDC Precautions to Prevent Spread of MRSA**
  Information on standard and contact precautions.
- **Hand Hygiene/Contact Precautions Monitoring Tool**
  This sample form can be used when performing contact precautions observations.
- **Transmission Based Precautions**
  This article from the CDC discusses different types of precautions and the guidelines for necessary equipment.

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**Clostridium difficile**
A catheter-associated urinary tract infection (CAUTI) can develop either during or after placement of a urinary catheter. A CAUTI is a serious infection that has been shown to increase patient morbidity and mortality, increase length of stay and add to the cost of care.

These measures look at unnecessary catheter placement and catheter utilization in inpatient settings and within the emergency department. The Outcome measure focuses on the number of hospital-acquired urinary tract infections that occur.


### Catheter-Associated Urinary Tract Infection Rate

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<tr>
<th>CAUTI: Catheter-Associated Urinary Tract Infection Rate</th>
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### Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Patient Transport

### Tips and Tricks

- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s CAUTI goals.
- Educate and ensure that CAUTI education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
• Include discussion of patients with indwelling catheters in place at your daily huddles or multi-disciplinary rounds. Evaluate necessity of continued catheter use daily.
• Ensure your rights are conferred in NHSN to IHC.
• Request that IT build the acceptable indications for inserting an indwelling catheter into your EHR. Consider a hard stop where documenting an appropriate indication(s) is required to place the order.
• Implement a system for documenting the following in the patient record: physician order for catheter placement, indications for catheter insertion, date and time of catheter insertion, name of individual who inserted catheter, nursing documentation of placement, daily presence of a catheter and maintenance care tasks, and date and time of catheter removal.
• Educate patients and families about CAUTIs and how they can be prevented.
• Assemble a team to address cultural barriers to CAUTI prevention using the comprehensive unit-based safety program (CUSP).
• Implement a policy/procedure for catheter care and maintenance guidelines including proper aseptic technique and the mechanics of drainage.

Resources

- **CDC Device-associated Module – CAUTI**
  Urinary tract infection (catheter-associated urinary tract infection (CAUTI) and non-catheter-associated urinary tract infection (UTI)) and other urinary system infection (USI) events, criteria and SIRs.
- **CDC HICPAC**
  CAUTI guidelines, strategies for prevention of CAUTI, CAUTI surveillance.
- **NHSN Urinary Tract Infection Form**
  This form expires 11/30/2021.
- **Toolkit for Reducing Catheter-Associated Urinary Tract Infections in Hospital Units: Implementation Guide**

CAUTI Standardized Infection Ratios (SIR) will be obtained from NHSN information conferred to IHC and included in the analysis of Compass HIIN network and national results for each eligible facility and reported for two cohorts – one for ICUs and another for ICUs with other reporting units.
Unnecessary Urinary Catheters

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**Recommended Team Members**
- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT

**Tips and Tricks**
- This measure excludes straight catheters and quick catheters.
- Educate and ensure that urinary catheter insertion criteria education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Criteria should include at a minimum:
  - Perioperative use for selected surgical procedures.
  - Urine output monitoring in critically ill patients.
  - Management of acute urinary retention and urinary obstruction.
  - Assistance in pressure ulcer healing for incontinent patients.
  - As an exception, at patient request to improve comfort (SHEA-IDSA) or for comfort during end-of-life care (CDC).
- Hospitals may add to or modify these criteria for local needs; criteria may be defined in policies or procedures.
- Ensure access to a bladder scanner. The bladder scanner should be kept in the same location when it is not in use to ensure prompt availability.
- Request that IT build the acceptable indications for inserting an indwelling catheter into your EHR. Consider a hard stop where documenting an appropriate indication(s) is required to place the order.
- Utilize a straight catheter when indicated instead of an indwelling catheter.
Resources

- **Toolkit for Reducing Catheter-Associated Urinary Tract Infections in Hospital Units: Implementation Guide**
  These tools are designed to support implementation of evidence-based practices and elimination of catheter-associated urinary tract infections in your hospital unit. Resources consist of appropriate catheter use, proper catheter insertion and maintenance and prompt catheter removal.

- **American Nurses Association**
  Nurse-driven CAUTI prevention tool to utilize key practices strategies of:
  1. Fewer catheters used.
  2. Timely removal.
  3. Insertion maintenance and post-removal care.

- **Reducing unnecessary urinary catheter use and other strategies to prevent catheter-associated urinary tract infection: an integrative review**
  This article discusses interventions to reduce unnecessary urinary catheter use and CAUTI prevention strategies.

### Urinary Catheter Utilization Ratio

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<thead>
<tr>
<th><strong>CAUTI: Catheter Utilization Ratio - ICU</strong></th>
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<tr>
<td><strong>Numerator</strong></td>
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<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of Acute Care, SNF and Swing Bed inpatient days with urinary catheter in place</td>
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<tr>
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<td>Number of Acute Care, SNF and Swing Bed inpatient days</td>
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Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT

Tips and Tricks

- Provide physician and nurse education on catheter utilization.
- Include discussion of patients with indwelling catheters in place at your daily huddles or multi-disciplinary rounds.
- Request IT put a counter in the EHR for catheter days.
- Pilot and spread a nurse-driven removal protocol using the electronic health record system.
- Document the ongoing need for the catheter based on a CDC-approved indication at every shift.

Resources

- Algorithm for Removal of Foley Catheter
  Algorithm from MercyOne Des Moines, Iowa.
- CAUTI Prevention Policy
  Urinary catheterization and CAUTI prevention policy document.
- Toolkit for Reducing Catheter-Associated Urinary Tract Infections in Hospital Units: Implementation Guide
  These tools are designed to support implementation of evidence-based practices and elimination of catheter-associated urinary tract infections in your hospital unit. Resources consist of appropriate catheter use, proper catheter insertion and maintenance and prompt catheter removal.
- Nurse-Initiated Removal of Unnecessary Urinary Catheters in the Non-Intensive Care Units
  AHRQ funded toolkit that includes appropriate use of urinary catheters and how to promote a urinary catheter removal program.

Emergency Department Catheter Utilization

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</table>
Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT
- HIM

Tips and Tricks

- Educate ED staff on indications for inserting indwelling urinary catheters.
- Utilize bladder scanners.
- Remove unnecessary catheters before transferring to the inpatient room.
- Be aware of charging and coding for urinary catheters placed in ED.
- AMA CPT codes that will be utilized to identify catheters inserted in the Emergency Department: 51702, 51703.
- Partner with your HIM department to better understand your local coding practices for this measure.

Resources

- **Nurse Driven CAUTI Protocol**
  Nursing urinary catheter removal protocol includes steps of care leading to catheter removal.

- **Facing the Facts About CAUTI in Hospitals: Focus on the Emergency Department**
  Infographic that discusses strategies and change ideas to decrease the use of indwelling urinary catheters in the emergency department.
A central line-associated Blood Stream infection (CLABSI) is a serious infection that occurs when bacteria enters the Blood Stream through a central line.

These measures look at CLABSI infection rate, insertion compliance and utilization.


--- Outcome Measures ---

### Central Line-Associated Blood Stream Infection Rate

<table>
<thead>
<tr>
<th>CLABSI: Central Line-Associated Blood Stream Infection Rate</th>
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**Recommended Team Members**
- Quality Team
- Infection Preventionist
- Chief Medical Officer (CMO)
- Pharmacist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Lab

**Tips and Tricks**
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s CLABSI goals.
- Educate and ensure that CLABSI prevention education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Include discussion of patients with central-line catheters in place at your daily huddles or multi-disciplinary rounds and remove them if possible.
- Educate patients and families about CLABSI and how it can be prevented.
Central-Line Associated Blood Stream Infections

Resources

- **CDC Device-associated Module - BSI**

- **Checklist for Prevention of Central Line-Associated Blood Stream Infections**
  Checklist for providers and facilities.

- **Institute for Healthcare Improvement**

- **FAQs About Catheter-Associated Blood Stream Infections**
  This CDC fact sheet can be used to educate patients about CLABSI. This fact sheet is also available in Spanish. To access the Spanish version of this fact sheet, visit [http://www.cdc.gov/HAI/pdfs/bsi/ SPAN_CA-BSI.pdf](http://www.cdc.gov/HAI/pdfs/bsi/ SPAN_CA-BSI.pdf). CLABSI Standardized Infection Ratios (SIR) will be obtained from NHSN information conferred to IHC and included in the analysis of statewide and national results for each eligible facility and reported for two cohorts – one for ICUs and another for ICUs with Other Reporting Units.

### Central Line Utilization Ratio

**CLABSI: Central Line Utilization Ratio - ICU**

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**CLABSI: Central Line Utilization Ratio - All Units**

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Central-Line Associated Blood Stream Infections

**Recommended Team Members**
- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Lab
- Pharmacist

**Tips and Tricks**
- Include discussion of patients with central line catheters in place at your daily huddles or multi-disciplinary rounds and remove them if possible.
- Perform a daily review of necessity with prompt removal of unnecessary lines and documentation.

**Resources**
- **Joint Commission CVC Maintenance Bundles**
  Maintenance Bundles to reduce CLABSI rates.
- **CLABSI Toolkit-Preventing Central-Line Associated Blood Stream Infections: Useful tools, An International Perspective**
  A tool kit from The Joint Commissions aimed at reducing CLABSI in the domestic and international arenas.

### Central Line Insertion Compliance

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<td>Number of Acute Care, SNF and Swing Bed inpatients with full PICC line and/or central line catheter insertion bundle compliance</td>
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**Recommended Team Members**
- Quality Team
- Infection Preventionist
- Insertion Team (anesthesiology, PICC team, etc.)
- Providers
- Department Managers/Directors
Central-Line Associated Blood Stream Infections

- Frontline staff
- Patients and families
- Lab

**Tips and Tricks**
- Request IT build the CVC insertion and maintenance bundles into your EHR and have the nurse complete while the provider inserts the central line or maintaining the line.
- Audit bundle compliance. Evaluate which bundle elements you see “fall out” on and target those for additional education and performance improvement.
- Adapt a central line insertion checklist to your organization and pilot its use.
- Avoid femoral insertion of central lines whenever possible.
- Bundle supplies to ensure central line supplies are readily available for use when needed.
- Ensure proper hand hygiene before manipulation of the IV system.
- Utilize proper procedures for catheter site dressing monitoring/changes.
- Practice “Scrub the Hub” protocol.

**Resources**
- [Joint Commission CVC Insertion Bundles](#)
  Insertion bundle components.
- [CDC Checklist for Prevention of Central Line-Associated Blood Stream Infections](#)
  Includes insertion, maintenance and hospital specific interventions.
Falls are the most commonly reported incidents within the healthcare setting and can increase patient risk for hospital-acquired injuries and/or immobility. Each year, between 700,000 and 1,000,000 people in the United States fall in the hospital. A fall may result in fractures, lacerations or internal bleeding, leading to increased healthcare utilization. Research shows that close to one-third of falls can be prevented. Providers can help to reduce the incidence of falls by utilizing evidence-based guidelines and providing patient education.

Fall-related deaths for older Iowans are increasing and are higher than the national average. In 2016, older Iowan’s who died from a fall was 13.3 compared to 9.1 per 100,000 population nationally (CDC WISQARS, 2018). From 2012 to 2016, Iowa had on average 515 fall-related deaths each year (CDC WISQARS, 2018). Falls were the leading cause of all unintentional injury deaths for persons aged 65 or older in both Iowa and nationally. In 2016, falls accounted for more than 73 percent of injury-related hospitalizations for Iowans 65 or older, which is higher than the national rate of 62 percent (CDC WISQARS, 2018; IDPH, 2018).

The HIIN fall measures look at inpatient falls resulting in fracture or dislocation, no injury, minor injury, moderate injury, major injury, death, count of assisted falls and fall risk assessment. See below for more detailed information about each measure.

These measures help to determine how many and how often patients are falling in the inpatient setting as well as how many are harmed when a fall occurs.

<table>
<thead>
<tr>
<th>Outcome Measures</th>
</tr>
</thead>
</table>

**Fall Resulting in Fracture or Dislocation (CMS HAC)**

<table>
<thead>
<tr>
<th>FALLS: Fall Rate Resulting in Fracture or Dislocation (CMS HAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td>Number of Acute Care inpatient discharges with ICD-10 fracture or dislocation code(s) not present on admission</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td>Number of Acute Care discharges</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
</tr>
<tr>
<td>1000</td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td><strong>Data Source</strong></td>
</tr>
<tr>
<td>Statewide Database (if available), otherwise Self-Reported</td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
</tr>
<tr>
<td>Q42015 - Q32016</td>
</tr>
<tr>
<td><strong>Outcome or Process</strong></td>
</tr>
<tr>
<td>Outcome</td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
</tr>
<tr>
<td>10043</td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
</tr>
<tr>
<td>Core</td>
</tr>
</tbody>
</table>

**Recommended Team Members**

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
Falls and Immobility

- Patients and Families
- Health Coach
- Social Worker/Case Manager
- HIM
- Nursing Home
- Home Care
- Hospice
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff

Tips and Tricks
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s fall prevention goals.
- Conduct a facility self-assessment.
- Educate and ensure that fall prevention education is provided at new employee orientation and ongoing education throughout the year (e.g., monthly staff meetings and competency/skill fairs).
- Engage leadership on the importance of creating a just culture that allows front-line staff to be empowered to fill out incident reports when falls occur.
- Include discussion of patients with fall risk at your daily huddles and individualize their interventions for safety.
- Support teams in posting their “days since last fall” data.
- Implement intentional rounding.
- Educate on and implement post fall huddles.
- Show the falls videos from the Iowa Fall Prevention Task Force on your facility TV Station.
- Adjust your staffing according to fall risk acuity.
- Implement the “no pass rule” for all employees.
- Consider sleep cycles for inpatients. Improve light and sound levels during the night and encourage patient to be awake and active during the day if possible.

Resources
- HRET Preventing Harm from Injuries from Falls and Immobility: Falls with Injury Change Package (2017)
  This change package is intended for hospitals participating in the Hospital Improvement Innovation Network (HIIN) project led by the Centers for Medicare & Medicaid Services (CMS) and Partnership for Patients (PFP); it is meant to be a tool to help you make patient care safer and improve care transitions.
- IHC HEN Falls-Dislocation Codes
  Complete list of ICD-10-CM Codes for Falls.
- Institute for Healthcare Improvement
  Transforming Care at the Bedside How-to Guide: Reducing Patient Injuries from Falls (login required with free access to information).
- CMS Hospital Acquired Conditions
  ICD-10-CM Codes for Falls.
- Agency for Healthcare Research and Quality (AHRQ)
  Bundle of Interventions Targeting High-Risk Patients Reduces Falls and Fall-Related Injuries on Medical-Surgical Units.
• **Fall Prevention in Hospitals Training Program: AHRQ developed the Fall Prevention in Hospitals** Training Program to support the training of hospital staff on how to implement AHRQ’s Preventing Falls in Hospitals Toolkit.

• **Medscape – Managing Falls in Older People With Cognitive Impairment** Patient Safety Authority.

• **Hospital Engagement Network Falls Reduction and Prevention Collaboration Self-Assessment Tool**

• **Falls Prevention Process Measures Audit Tool**

• **Pennsylvania Hospital Engagement Network: Falls Reduction and Prevention Investigation Tool**


• **Fall T.I.P.S** The Fall TIPS Collaborative has created this site to guide you through the complete process of implementing Fall TIPS, assessing results, providing feedback to staff and making ongoing improvements.

### Fall Resulting in No Apparent Injury Rate

<table>
<thead>
<tr>
<th>Numerator</th>
<th>FALLS: Falls Resulting in No Apparent Injury Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Acute Care, Skilled Nursing, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in no visible sign of injury, stable vital signs and patient denial of pain or discomfort</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Denominator</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
<td></td>
</tr>
</tbody>
</table>

| Multiplier | 1000 |

| Link/Notes on measure specifications if applicable | N/A |

| Data Source | Self-Reported in PfP Compass HIIN Reporting Database |

| Baseline period | CY2014 |

| Outcome or Process | Outcome |

| HIIN Measure ID | 10026 |

| Core or Optional Measure | Core |

### Recommended Team Members

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Nursing Home
Falls and Immobility

- Home Care
- Hospice
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff

Tips and Tricks
- “0” denominator not allowed

## Fall Resulting in Minor Injury Rate

<table>
<thead>
<tr>
<th><strong>FALLS: Fall Resulting in Minor Injury Rate</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td>Number of Acute Care, Skilled Nursing, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in minor cuts, minor bleeding, minor skin abrasions, minor swelling and minor contusions or bruising</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
</tr>
<tr>
<td>1000</td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td>N/A</td>
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<tr>
<td><strong>Data Source</strong></td>
</tr>
<tr>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
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<tr>
<td>CY2014</td>
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<td><strong>Outcome or Process</strong></td>
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<td><strong>HIIN Measure ID</strong></td>
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<td>10028</td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
</tr>
<tr>
<td>Core</td>
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</table>

### Recommended Team Members
- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Nursing Home
- Home Care
- Hospice
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff

### Tips and Tricks
- “0” denominator not allowed.
- Severity of patient injury (as defined by the National Quality Forum): minor: injury that results in application of dressing, ice, cleaning of a wound, limb elevation or topical medication.
# Fall Resulting in Moderate Injury Rate

<table>
<thead>
<tr>
<th><strong>FALLS: Fall Resulting in Moderate Injury Rate</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of Acute Care, Skilled Nursing, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in excessive bleeding, lacerations requiring sutures, temporary loss of consciousness or moderate head trauma</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>1000</td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td><strong>Data Source</strong></td>
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<tr>
<td><strong>Baseline period</strong></td>
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<td><strong>Outcome or Process</strong></td>
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## Recommended Team Members
- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Nursing Home
- Home Care
- Hospice
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff

## Tips and Tricks
- “0” denominator not allowed.
- Severity of patient injury (as defined by the National Quality Forum): moderate: injury that results in suturing, steri-strips, fracture or splinting.
Falls and Immobility

Fall Resulting in Major Injury Rate

<table>
<thead>
<tr>
<th>FALLS: Fall Resulting in Major Injury Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td>Number of Acute Care, Skilled Nursing, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in fracture, subdural hematoma, other major head trauma, cardiac arrest OR patient is transferred to the ICU or OR</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
</tr>
<tr>
<td>1000</td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td>N/A</td>
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<tr>
<td><strong>Data Source</strong></td>
</tr>
<tr>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
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<tr>
<td><strong>Baseline period</strong></td>
</tr>
<tr>
<td>CY2014</td>
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<td><strong>Outcome or Process</strong></td>
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<td>Outcome</td>
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<td><strong>HIIN Measure ID</strong></td>
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</table>

**Recommended Team Members**

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Nursing Home
- Home Care
- Hospice
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff

**Tips and Tricks**

- “0” denominator not allowed.
- Severity of patient injury (as defined by the National Quality Forum): major: injury that results in surgery, casting or traction.
Falls and Immobility

Fall Resulting in Death Rate

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of Acute Care, Skilled Nursing, Swing Bed and Observation patients that have an unplanned descent to the floor resulting in death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of Acute Care, SNF, Swing Bed and Observation Patient Days</td>
</tr>
<tr>
<td>Multiplier</td>
<td>1000</td>
</tr>
<tr>
<td>Link/Notes on measure specifications if applicable</td>
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<tr>
<td>Data Source</td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
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<tr>
<td>Baseline period</td>
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<td>10031</td>
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<td>Core or Optional Measure</td>
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</table>

Recommended Team Members

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Nursing Home
- Home Care
- Hospice
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff

Tips and Tricks

- “0” denominator not allowed.
- Severity of patient injury (as defined by the National Quality Forum): death: death as a result of a fall.
- Do not include patients assisted or eased to the floor.

Total Fall Rate

- This measure does not need to be reported separately by the hospital.
- Total fall rate is an auto populated sum data from self-reported measures that include no injury, minor injury, moderate injury and major injury.
Count of Assisted Falls

<table>
<thead>
<tr>
<th>FALLS: Count of Assisted Falls</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td><strong>Data Source</strong></td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
</tr>
<tr>
<td><strong>Outcome or Process</strong></td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
</tr>
</tbody>
</table>

- Count of Assisted Falls is not auto populated into the total falls measure, it is a stand-alone measure. The purpose of this measure is to aid the hospital in identification of those falls that are witnessed and assisted. Data can support opportunities for improvement with focus area work around this measure.

**Recommended Team Members**
- Quality team
- Providers
- Pharmacist
- Department managers/directors
- Frontline staff
- Patients and families
- Health coach
- Social worker/case manager
- Clinical IT
- Nursing home
- Home care
- Hospice
- Physical/occupational/speech therapy staff
- Doctor office/clinic staff

**Tips and Tricks**
- Ensure that when a patient fall is included in this category that it is not counted in any other category.
Total Non-Assisted Falls Rate

<table>
<thead>
<tr>
<th>FALLS: Total Non-Assisted Falls Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<td><strong>Data Source</strong></td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
</tr>
<tr>
<td><strong>Outcome or Process</strong></td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
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</tbody>
</table>

**Recommended Team Members**

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical It
- Nursing Home
- Home Care
- Hospice
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff
### Fall Risk Assessment on Admission

<table>
<thead>
<tr>
<th><strong>FALLS: Fall Risk Assessment on Admission</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of Acute Care, Skilled Nursing, Swing Bed and Observation patients assessed for fall risk on admission</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of admitted Acute Care, Skilled Nursing Care, Swing Bed and Observation patients</td>
</tr>
<tr>
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<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<td><strong>Data Source</strong></td>
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<tr>
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<tr>
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<td>23</td>
</tr>
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<td><strong>Core or Optional Measure</strong></td>
<td>Core</td>
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</tbody>
</table>

#### Recommended Team Members
- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Nursing Home
- Home Care
- Hospice
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff

#### Tips and Tricks
- Educate and ensure that fall risk assessment education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Include the patient and family in discussions on patient safety and normal bathroom and sleep schedules.
- Initial fall risk assessment should be completed upon admission and recommended to reassess every shift or with any change of condition.
Falls and Immobility

Resources

- **AHRQ – Quality Tool**
  Fall TIPS (Tailoring Interventions for Patient Safety) Morse Fall Scale competency manual, fall prevention behavior scale, fall prevention self-efficacy scale.

- **Morse Fall Scale**
  Morse Fall Scale, with information on patient safety factors and patient education.

- **Falls Teach back Tool**
  A teach back tool to guide nurses in key components of teaching fall prevention to patients and families. Provides teach back questions that can be used to evaluate the patient's understanding.

- **CDC Stopping Elderly Accidents, Deaths & Injuries (STEADI) Toolkit**
  Materials for providers and patients. Checklists, brochures, education, algorithm for fall assessment and interventions, video for tug test, 30 second chair stand test and four stage balance test.

- **STEADI: The Pharmacist’s Role in Older Adult Fall Prevention**
  Training developed in collaboratively with CDC & American Pharmacists Association (APhA).

- **Iowa Falls Prevention Coalition Videos**

- **AHRQ Fall Prevention in Hospitals Training Program (2017)**
  This program is to support the training of hospital staff on how to implement AHRQ’s Preventing Falls in Hospitals Toolkit. The content of the Training Program and supporting materials help hospitals become familiar with each of the components of the Toolkit and learn how to overcome the challenges associated with developing, implementing and sustaining a fall prevention program.
Patients in the hospital are at risk of developing pressure ulcers, when skin is exposed to unrelieved pressure. The injuries to the skin and underlying tissue are painful and increase risk for infection or other complications. Pressure ulcers are staged on severity and are localized to the skin and tissue.

These measures look at the number of inpatients (acute care, skilled nursing, swing bed) receiving full preventive care and the number who have a pressure ulcer diagnosis code. See below for more detailed information about each measure.

--- Outcome Measures ---

**Pressure Ulcer Rate, Stage 3+ (AHRQ PSI 03)**

<table>
<thead>
<tr>
<th>PRESSURE ULCER: Pressure Ulcer Rate, Stage 3+, (AHRQ PSI-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
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<tr>
<td><strong>Denominator</strong></td>
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<td><strong>Multiplier</strong></td>
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<tr>
<td><strong>HIIN Measure ID</strong></td>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
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</tbody>
</table>

**Recommended Team Members**

- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- HIM
- Nursing Home
- Home Care
- Hospice
- Wound/Ostomy Staff
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff
- Dietitian
Tips and Tricks

- Refer to **AHRQ PSI 03** technical specifications for inclusions and exclusions.
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's pressure ulcer goals with annual review of policies/procedures/protocols for recommendations based on best practices and organizational data e.g. wound measurement (i.e. frequency, photograph use, etc.), referral processes to wound nurse, physical therapy, nutritional support etc.
  - Assure utilization of best practices for prevention
    - Comprehensive skin assessment
    - Standardized risk assessment
    - Patient centered, individualized care planning
- Provide pressure ulcer education to assure competency upon hire and with regular intervals based on learner needs.
- Include discussion of patients with pressure ulcers at your daily huddles and ensure they are receiving the full pressure ulcer preventative care.
- Ensure that your providers and nurses are consistent with documentation of pressure ulcers. Utilization of a two-person skin inspection/assessment aids in consistency and mitigates risk upon admission assessment.

Resources

- **HRET Top Ten Checklist for Pressure Ulcer**
  Checklist to review current or initiate new interventions for HAPU prevention.
- **National Pressure Ulcer Advisory Panel**
  NPUAP Pressure Ulcer stages/categories
- **ARHQ – Preventing Pressure Ulcers in Hospitals**
  Skin assessment, pressure ulcer risk assessment and planning and implementation ideas.
- **AHRQ’s Pressure Injury Prevention in Hospitals Training Program**
  Can help prevent pressure injuries. The program is designed for those who want to launch an evidence-based, structured pressure injury prevention initiative based on QI principles.
- **National Pressure Ulcer Advisory Panel - Quick Reference Guide**
  Prevention, Interventions and Treatment of Pressure Ulcers.
- **Agency for Healthcare Research and Quality (AHRQ)**
  Pressure Ulcer Rate Patient Safety Indicators #3.
Acute Inpatients with a Hospital-Acquired Pressure Ulcer Stage II

<table>
<thead>
<tr>
<th>PRESSURE ULCER: Acute Inpatients with a Hospital-Acquired Pressure Ulcer Stage II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
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<tr>
<td><strong>Denominator</strong></td>
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<td><strong>Multiplier</strong></td>
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<td><strong>Baseline period</strong></td>
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<td><strong>Core or Optional Measure</strong></td>
</tr>
</tbody>
</table>

**Recommended Team Members**

- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- HIM
- Nursing Home
- Home Care
- Hospice
- Wound/Ostomy Staff
- Physical/Occupational/Speech Therapy Staff
- Doctor Office/Clinic Staff
- Dietitian
- Diabetic Educator

**Tips and Tricks**

- Acute Inpatients with Hospital Acquired Pressure Ulcers Stage II
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's pressure ulcer goals with annual review of policies/procedures/protocols for recommendations based on best practices and organizational data e.g. wound measurement (i.e. frequency, photograph use, etc.), referral processes to wound nurse, physical therapy, nutritional support etc.
  - Assure utilization of best practices for prevention
    - Comprehensive skin assessment
    - Standardized risk assessment
    - Patient centered, individualized care planning
Pressure Ulcers

- Provide pressure ulcer education to assure competency upon hire and with regular intervals based on learner needs.
- Include discussion of patients with pressure ulcers at your daily huddles and ensure they are receiving the full pressure ulcer preventative care.
- Ensure that your providers and nurses are consistent with documentation of pressure ulcers. Utilization of a two-person skin inspection/assessment aids in consistency and mitigates risk upon admission assessment.

Resources
- Numerator ICD-10-CM Diagnoses

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<tr>
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At-Risk Patients Receiving Full Pressure Ulcer Preventative Care

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**Recommended Team Members**
- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Wound/Ostomy Staff
- Physical/Occupational/Speech Therapy Staff
- Dietitian

**Tips and Tricks**
- Establish competency assessments following new employee education on Braden scale assessment and pressure ulcer preventative care.
- This measure follows an “all-or-none” format. All components must be performed (or contraindications documented) for compliance to be recorded.
- Request that IT build the pressure ulcer care components into your EHR.

**Resources**
- **Braden Scale**
  Instructions and scoring.
- **Institute for Healthcare Improvement**
  How-to Guide: Prevent Pressure Ulcers (login required with free access to information).
Readmissions and Care Coordination

Each day patients are admitted to acute care hospitals. While most of these hospitalizations are necessary and appropriate, a substantial number of hospitalized patients return to the hospital soon after their previous stay. The rehospitalizations (readmissions) are costly, potentially harmful and often avoidable. A readmission is an episode when a patient who had been discharged from a hospital is admitted again to the same or a different hospital within 30 days of discharge. CMS challenges all hospitals to reduce readmissions by improving discharge planning, care transitions and coordination during the interfaces between care settings.

In an effort to achieve the goal of reducing hospital readmissions, the Compass HIIN measures look at the internal processes (e.g. patient teach-back and communications) used to reduce hospital readmissions, as well as outcome measures, looking at the number of acute care inpatient discharges meeting the Compass HIIN all-cause 30-day readmission criteria.

--- Outcome Measures ---

Unplanned All-Cause, 30-Day Readmissions to Any Hospital

| **Numerator** | Number of Acute Care inpatient discharges that meet criteria inclusion as a readmission to any hospital using unplanned, 30-day, all-cause, all-payer methodology |
| **Denominator** | Number of Acute Care inpatient discharges meeting eligibility for inclusion as an index admission |
| **Multiplier** | 100 |
| **Link/Notes on measure specifications if applicable** | N/A |
| **Data Source** | Statewide Database (if available), otherwise Self-Reported |
| **Baseline period** | Q42015 - Q32016 |
| **Outcome or Process** | Outcome |
| **HIIN Measure ID** | 1700 |
| **Core or Optional Measure** | Core |

Recommended Team Members

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- HIM
- Dietitian
- Discharge Planner
• Primary Care Provider/Clinic Care Team
• Utilization Review/Management
• Nursing Home
• Home Care

Tips and Tricks
• If your hospital submits claims data to IPOP, find out who in your organization is the submitter (likely someone from the HIM department). Because this measure populates from the claims data your hospital submits, this person can be a great resource.
• To decrease lag time in your data, make sure your readmission claims are being submitted monthly vs. quarterly. If you are unsure what frequency your facility submits claims data, ask your IPOP submitter.
• Take an inventory of available readmission related data available to your team. Leverage data driven strategies to help target your efforts towards your facility specific opportunities.
• Utilize data reports available through IHC, QNet, IHA and others to help inform your readmission strategy.
• Consider designing/implementing enhanced services for a targeted population. Use data to demonstrate an ROI from leadership and decision makers.
• Assemble an interdisciplinary team and develop an aim statement that reflects your organization's care transition goals.
• Review readmissions for root cause keeping in mind there is often not one single root cause of readmission. Track and trend review findings and use information to inform your readmission improvement efforts.
• Provide reports that inform providers of their readmissions on a regular basis that includes findings from the review team.
• Utilize an Admissions Planning Checklist for all scheduled admissions that promotes proactive communication with the patients and their families regarding their hospital stay.
• Partner with family caregivers (care partners) in the hospital to help ensure safe and successful care transitions to home or the next site of care.
• Develop and lead a Community Care Coalition to establish effective community partnerships that strengthen transitions of care from setting to setting.
• Ensure that prescriptions are filled prior to discharge.
• Include hospital pharmacist in medication reconciliation and education upon admission and discharge. Provide medication reconciliation (med rec) information to the patient’s retail pharmacy upon discharge.
• Include dietary education for appropriate diagnoses (ex. CHF, diabetes, discharging on Coumadin, etc).
• Encourage patient participation in developing a discharge planning tool to reinforce the discharge plan.
• Implement system for follow-up phone calls to discharged patients within 24-72 hours of discharge regardless of the next site of care (keep in mind that patients discharged to skilled nursing facilities or with home care are usually at a higher risk of readmission not less).
• Ensure that education is provided to the patient and family throughout the enter stay, using the teach-back method.
• Implement “readmission interviews” at the bedside with patients that have been readmitted. Include their family or caregiver (keeping in mind this may be a SNF). The goal of this interaction is to understand from the patient’s perspective what caused them to be readmitted.
• Work with your emergency department to create a process for “flagging” patients who return to the ED within 30 days post an acute care discharge. Design care pathways that thoughtfully return patients when safe and appropriate to their original care setting (home, nursing home, etc.)
Readmissions and Care Coordination

- Create individualized care plans for multi-visit patients who have complex care needs to avoid unnecessary readmissions and provide proactive treatment and care for these individuals.
- Hospitals who self-report readmissions to the HIIN reporting database (portal), carefully read the 30-Day readmission measure methodology report provided below for detailed measure specifications. Please contact the Compass HIIN team for assistance and support.

Resources

- 30-Day Readmission Measure Methodology Report
- Informational Webinar and PowerPoint Slides
- Guidance Document: What is an executive sponsor and why do we need one?
- Readmissions REFUEL Phase One Webinar and PowerPoint Slides
- Readmission Reduction Teams
- AHRQ Aspire Guide and Toolbox
- Guidance Document: Example Patient Populations and Definitions
- Readmissions REFUEL Phase Two Webinar and PowerPoint Slides
- Readmissions Reduction Ideas to Test
- Readmission Interview Conversation Guide Template
- Readmission Interview Conversation: How-To
- Unmet Needs and Enhanced Services Profile Template and Example Document
- Aspire Toolbox
- List of Typical Failures
- QI Toolkit PDSA Worksheet – Institute for Healthcare Improvement
- Webinar 2: Analyze Data and Patient/Caregiver Perspectives
- List of Rapid Cycle Improvement Project Examples and Template
- Readmissions REFUEL Phase Three Webinar and PowerPoint Slides
- How-To Guide: Improving Transitions from the Hospital to Skilled Nursing Facilities to Reduce Avoidable Rehospitalizations
- INTERACT Nursing Capabilities List
- INTERACT SNF to ED Form
- Engaging in the ED in Readmission Reduction Efforts
- Readmissions REFUEL Wrap-Up Webinar and PowerPoint Slides
- IHI Effective Interventions to Reduce Re-Hospitalizations

This document is intended to provide a sampling of the range of effective programs underway to reduce avoidable re-hospitalizations across the US. The 15 programs highlighted in this document are all very promising approaches to improve patient care. For purposes of clarity, the programs that have documented, peer-reviewed evidence of success in reducing re-hospitalizations are distinguished from other programs with less rigorous levels of evidence available to date.

Institute for Healthcare Improvement Overview

The STAAR initiative aims to reduce re-hospitalizations by working across organizational boundaries and by engaging payers, stakeholders at the state, regional and national level, patients and families and caregivers at multiple care sites and clinical interfaces. IHI partners with STAAR states to provide strategic guidance, support and technical assistance to hospital and cross-continuum teams to improve transitions in care and reduce avoidable re-hospitalizations.

National Patient Safety Foundation (NPSF) Post Discharge Tool

Post discharge tool created to help patients and families keep recovery on track. The main focus is to avoid readmissions.
• **SMART Discharge Protocol**
  The SMART Discharge Protocol (signs, medications, appointments, results, and talk to me) was developed to improve care for patients and families and to improve the discharge process. The tools include the SMART Discharge Checklist for patients and families, FAQs for healthcare staff and clinicians about implementing the SMART Discharge Protocol, a presentation and a self-learning packet.

• **Behavioral Health Resource Package: Reduce Medical-Surgical Readmissions Related to Behavioral Health/Substance Abuse**
  This is a resource package developed to assist in efforts to reduce medical surgical readmissions related to behavioral health/substance abuse. Education and resources on the discharge process, policy and protocols, staff education and partnerships.

### Unplanned All-Cause, 30-Day Readmissions to the Same Hospital

<table>
<thead>
<tr>
<th>READMISSIONS: Unplanned All-Cause, 30-Day Readmissions to the Same Hospital</th>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
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</tbody>
</table>

### Recommended Team Members

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- Frontline Staff
- Patients and Families
- Health Coach
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- Home Care
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Readmissions and Care Coordination

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### Process Measures

#### Patient Teach-Back

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<th><strong>Numerator</strong></th>
<th>Number of observations of nurses where teach-back is used to assess patient understanding</th>
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#### Recommended Team Members

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager

#### Tips and Tricks

- Educate and ensure that teach-back education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Create a process or policy for teach-back to ensure that staff are practicing this daily. Ensure that an auditing process is in place.
- Utilize the suggested open-ended questions with patients and families to make sure they correctly understand the instructions and information that has been communicated to them.
- Assessment can be provided via direct observation or someone other than the discharge nurse can go in and assess the patient and family understanding for teach-back.
- Identify nursing champions who can effectively coach others and provide real-time feedback to colleagues.
- Use nursing huddles as opportunities to reinforce teach-back principles.
• Teach patients and families about the teach-back strategy and encourage them to teach-back information to the care team to help them assess whether they have taught the information satisfactorily in a way the patient understood.
• Ensure that the teach-back method is utilized during the entire hospital stay
• Consider documenting teach-back in a field that can be queried for report in the electronic health record.

Resources
• **Teach-Back Training**
  This teach-back module provides a compendium of resources you may use to conduct training for your healthcare team. We encourage you to customize the module to fit your facility’s needs.
• **AHRQ Health Literacy Universal Precautions Toolkit, 2nd Edition**
  Teach-back and health literacy information, includes a **Teach-Back Observation Tool**!
• **Always Use Teach-Back**
  Toolkit that includes interactive teach-back learning modules, coaching to always use teach-back, resources and videos.

| **Community Provider Involvement in Identifying Post-Discharge Needs** |
| --- | --- |
| **Numerator** | Number of Acute Care, Skilled and Swing Bed inpatient discharges where community providers (e.g. home care, primary care, nurses, skilled nursing) were included in assessing post discharge needs |
| **Denominator** | Number of discharges for Acute Care, Skilled Nursing Care and Swing Bed inpatient discharges |
| **Multiplier** | 100 |
| **Link/Notes on measure specifications if applicable** | N/A |
| **Data Source** | Self-Reported in PfP Compass HIIN Reporting Database |
| **Baseline period** | CY2014 |
| **Outcome or Process** | Process |
| **HIIN Measure ID** | 2 |
| **Core or Optional Measure** | Core |

**Recommended Team Members**
• Quality Team
• Providers
• Pharmacist
• Department Managers/Directors
• Frontline Staff
• Patients and Families
• Health Coach
• Social Worker/Case Manager
• Physical/Occupational/Speech Therapy
• Dietitian
Readmissions and Care Coordination

- Nursing home
- Home care
- Hospice
- Clinic staff

Tips and Tricks
- Ensure that the patient to be discharged is assessed for ongoing needs after discharge.
- This measure is met by including at least one of the providers in parentheses, you do not need all resources listed.
- Include documentation of communication of a discharge plan discussed with one of the community providers listed or have the community provider document their participation.
- Consider using Z codes for SDOH clinical documentation.
- Address all social determinants of health possibly affecting follow up care (transportation, shelter, resources for filling prescriptions, etc.)

Resources
- [Becker’s Infection Control and Clinical Quality, Why Improving Communication May Be the Key to Reducing Readmissions](#)

> Preventing readmissions by including post-acute care providers in the discharge plan.

### Post-Hospital Follow-Up Appointment

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<th><strong>Description</strong></th>
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<td>Number of Acute Care, Skilled and Swing Bed inpatient discharges with follow-up appointment scheduled before discharge in accordance with risk assessment</td>
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<tr>
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Recommended Team Members
- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
Tips and Tricks

- Determine what high-risk assessment strategy you will use hospital wide (ex. LACE, BOOST etc.)
- If a risk assessment tool is not utilized, discuss how staff will determine which patients need a post hospital follow up appointment and at what frequency.
- Develop and implement a system for evenings, weekends and holidays and follow up on the next business day, this will meet the measure.
- Develop a system to ensure the communication loop has been closed and the patient has an appointment from the clinic.
- Ensure the discharge appointment process is someone’s responsibility, delegating this responsibility will ensure consistency of the process.
- Consider using a readmissions risk assessment tool to determine readmission risk classification and associated timeline for follow-up appointment.
- Work with your local primary care providers to designate holds on appointment times for post discharge follow-up appointments if availability is a barrier.
- When selecting a risk assessment tool be mindful of what populations of patients you know to be at risk for readmissions in your facility and customize the tool to make sure your risk assessment captures key risk factors (behavioral health needs, poly-pharmacy, etc.)
- If your organization conducts follow-up phone calls post discharge, consider creating a form for callers to use with effective questions that assess how the patient is recovering and if intervention is needed to avert future ED visits or readmissions due to complications. Give callers a process that will help them act if the phone call indicates the patient may need additional education, support or clinical follow up.
- Ensure physician documentation is provided if no follow-up is necessary.

Resources

- Lace Tool
  Index Scoring Tool for risk assessment of hospital readmission.
- Society of Hospital Medicine – Follow-Up Appointments Project BOOST Implementation Toolkit
  Tools and implementation tips for follow-up appointments.
- Patient Engagement Strategies for Post-Discharge Follow-Up Care
  Article discussing Strategies to ensure patients attend their post-discharge appointment. Follow-up care is critical to driving health outcomes.
Readmissions and Care Coordination

Handover Communication

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<tr>
<th><strong>Numerator</strong></th>
<th>Number of Acute Care, Skilled and Swing Bed inpatient discharges where critical information is transmitted to the next site of care (e.g. office, LTC, HH) or person continuing care</th>
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<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of discharges for Acute Care, Skilled Nursing Care and Swing Bed inpatient discharges</td>
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</table>

Recommended Team Members

- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Doctor Office/Clinic Staff
- Nursing Home
- Home Care
- Hospice
- Swing Bed
- Acute Rehab

Tips and Tricks

- Educate staff on hospital’s standardized approach to handover communication.
- Critical information includes: vital signs, medication list, allergies, daily habits (bathroom, ambulatory, dietary, sleep), fall risk, available lab and test results.
- Ensure system for sending pending lab and test results once they are available if not available at the time of transfer.
- Verify with next site of care that they received the information sent.
- Ensure information sent is in a clear format and is accurate.
- Communicate regularly with local community partners to identify barriers and process improvement opportunities that make information transfers most beneficial to the patient.
- Create a Community Coalition that can be utilized to discuss frequent barriers to handover communication, processes to put into place and any other pertinent information.
Readmissions and Care Coordination

Resources

- **AHRQ Handoffs and Sign-outs**
  Includes inpatient and discharge handovers. I-PASS study.

- **INTERACT community tools**
  Tools available to assist in handover communication between hospital to assisted living, hospital to home health and hospital to nursing home.
Sepsis is a potentially life-threatening condition caused by the body’s response to an infection. Sepsis can lead to tissue damage, organ failure and death. Failing to recognize sepsis and septic shock leads to delay in therapy, especially resuscitation and antibiotics, which can worsen outcomes.

These measures focus on the diagnosis of sepsis (postoperative sepsis and sepsis rate) and severe sepsis and septic shock management bundle compliance. The current NHSN Manual – Patient Safety Component is utilized for defining and reporting on these measures. To access the manual, follow this link: https://www.cdc.gov/nhsn/pdfs/pscmanual/pcsmanual_current.pdf. See below for more detailed information about each measure.

--- Outcome Measures ---

**Postoperative Sepsis Rate (AHRQ PSI 13)**

<table>
<thead>
<tr>
<th>SEVERE SEPSIS AND SEPTIC SHOCK: Postoperative Sepsis Rate (AHRQ PSI 13)</th>
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</thead>
<tbody>
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<tr>
<td><strong>Denominator</strong></td>
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</table>

**Recommended Team Members**

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- Surgical Teams
- HIM
- Nursing Home
- Home Care
- Hospice
**Severe Sepsis and Septic Shock**

- Wound/Ostomy Staff
- Lab
- Doctor Office/Clinic Staff
- Dietitian

**Tips and Tricks**

- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's sepsis goals.
- Educate and ensure that sepsis education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Develop and implement a sepsis screening tool.
- Implement strategies to prevent sepsis including infection prevention strategies, infection control practices and handwashing.
- Align infection prevention practices, chronic disease management and appropriate antibiotic use to promote early recognition of sepsis.
- Ensure that staff are monitoring any incisions for signs of infection including:
  - Increased redness or warmth around the incision
  - Pus or other fluid coming from the incision
  - Increased pain around the incision
  - Fever
  - Fatigue
- Ensure that patients are completing deep breathing and coughing exercises post operatively.
- Ensure that patients are getting up and walking as soon as able following a surgical procedure.

**Resources**

- **CDC - Get Ahead of Sepsis**
  Educational materials for patients and healthcare professionals including fact sheets, brochures and shareable videos.
- **NQF-Endorsed Voluntary Consensus Standard for Hospital Care**
  Measure information collected for CMS Voluntary Only – Surgical Care Improvement Project (SCIP).
- **AHRQ Postoperative Sepsis Rate PSI #13**
  Sepsis diagnosis codes and descriptions.
- **AHRQ Selected Best Practices and Suggestions for Improvement PSI 13: Postoperative Sepsis**
  Recommended practices, best processes and educational recommendations.
Severe Sepsis and Septic Shock 3-Hour Management Bundle Compliance (NQF 0500)

<table>
<thead>
<tr>
<th>SEVERE SEPSIS AND SEPTIC SHOCK: Severe Sepsis and Septic Shock 3-Hour Management Bundle Compliance, (NQF 0500)</th>
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</thead>
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<td>Number of patients in the denominator population who receive all elements of the 3-hour Severe Sepsis and Septic Shock Management Bundle</td>
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<tr>
<td><strong>Denominator</strong></td>
<td>Number of patients presenting with severe shock or septic shock (exclude patients comfort care only, where central line cannot be placed or is contraindicated, or where clinical condition precludes total measure completion)</td>
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**Recommended Team Members**
- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- EMS
- Chief Medical Officers
- Emergency Department Staff
- Patients and Families
- Clinical IT
- Lab
- Doctor Office/Clinic Staff

**Tips and Tricks**
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s sepsis goals.
- Educate and ensure that sepsis bundle education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Include discussion of patients at risk or diagnosed with sepsis at your daily huddles or multi-disciplinary rounds.
- This measure is for inpatients and excludes ER. We encourage you to implement all bundles into ER as well as inpatient.
Severe Sepsis and Septic Shock

- Request that IT build a sepsis alert into your triage, admission and nursing assessments.
- Develop a tracking sheet for every person screened with sepsis at triage and/or admission to stay on their chart until discharge or have the order sets built into EHR.
- Ensure the second lactate is ordered the same time as the first lactate.
- Educate patients and families on how to recognize sepsis in yourself and family members.
- Utilize the Surviving Sepsis Campaign Implementation Guide.
- Create a standardized protocol to manage severe sepsis.
- Get a blood lactate level early in patients with suspected infection and sepsis.
- A history of heart failure, liver failure, or renal failure is not a contraindication to fluid resuscitation.
- Utilize dedicated sepsis teams to evaluate how processes are implemented and refine processes related to the three and six-hour bundles based on results.
- Consider the use of a “pocket card” or infographic for all staff to utilize as a reminder of sepsis algorithm.
- Identify sepsis champions.

Resources
- **Sepsis Bundle Project (SEP) – National Hospital Inpatient Quality Measures**
  SEP Measure Set Table, last updated version 5.0a. Sepsis initial patient population algorithm.
- **Surviving Sepsis Campaign**
  Updated bundles in response to new evidence.
- **Evaluation for Severe Sepsis Screening Tool**
  This is an optional tool to assist in screening patients for severe sepsis within three patient care settings: the emergency department, medical/surgical floors or in the ICU.

### Severe Sepsis and Septic Shock 6-Hour Management Bundle Compliance (NQF 0500)

<table>
<thead>
<tr>
<th>SEVERE SEPSIS AND SEPTIC SHOCK: Severe Sepsis and Septic Shock 6-Hour Management Bundle Compliance, (NQF 0500)</th>
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</table>
**Recommended Team Members**

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Department Managers/Directors
- Medical Director or CMO
- Emergency Department Staff
- Frontline Staff
- Patients and Families
- Clinical IT
- Lab
- EMS
- Doctor Office/Clinic Staff

**Tips and Tricks**

- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's sepsis goals.
- Educate and ensure that sepsis bundle education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Include discussion of patients at risk or diagnosed with Sepsis at your daily huddles or multi-disciplinary rounds. This measure is for inpatients and excludes ER. We encourage you to implement all bundles into ER as well as inpatient.
- Request that IT build a sepsis alert into your triage, admission and nursing assessments.
- Develop a tracking sheet for every person screened with sepsis at triage and/or admission to stay on their chart until discharge or have the order sets built into EHR.
- Ensure the second lactate is ordered the same time as the first lactate.
- Educate patients and families on how to recognize sepsis in yourself and family members.
- Utilize the Surviving Sepsis Campaign Implementation Guide.
- Create a standardized protocol to manage severe sepsis.
- Get a blood lactate level early in patients with suspected infection and sepsis.
- A history of heart failure, liver failure, or renal failure is not a contraindication to fluid resuscitation.
- Implement a sepsis screening tool and educate staff on early detection.
- Utilize dedicated sepsis teams to evaluate how processes are implemented and refine processes related to the three- and six-hour bundles based on results.
- Consider the use of a “pocket card” or infographic for all staff to utilize as a reminder of sepsis algorithm.
- Identify sepsis champions.

**Resources**

- **Sepsis Bundle Project (SEP) – National Hospital Inpatient Quality Measures**
  SEP Measure Set Table, last updated version 5.5. Sepsis initial patient population algorithm.
- **Surviving Sepsis Campaign**
  Updated bundles in response to new evidence.
- **Surviving Sepsis Campaign – Tool**
  Evaluation for Severe Sepsis Screening Tool.
- **A Users’ Guide to the 2016 Surviving Sepsis Guidelines**
  Condensed five-page user’s guide provided by the Society of Critical Care Medicine.
Of all the hospital-acquired infections (HAIs) in the United States, surgical site infections (SSIs) are the most common and costly, accounting for 20 percent of all HAIs, with an estimated annual national cost of $3 to $5 billion. The CDC estimates that 50 percent of all SSIs are preventable (CDC, 2017).

A surgical site infection (SSI) occurs after a surgery, in the part of the body where the surgery took place. Surgical site infections can sometimes be superficial infections only involving the skin. Other SSIs are more serious and can involve tissues under the skin, organs or implanted material.

The process measures look at surgical safety checklist compliance and temperature management. The Outcome measures focus on infection rates per number of surgical episodes. See below for more detailed information about each measure.


--- Outcome Measures ---

### Colon Surgical Site Infection Rate

<table>
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<tr>
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</table>

**Recommended Team Members**
- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Lab
- HIM
- Doctor Office/Clinic Staff

**Tips and Tricks**
- Report when your facility performs 10 or more colon surgeries in a year.
Assemble an interdisciplinary team and develop an aim statement that reflects your organization's SSI goals.

*Educate and ensure that SSI education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).

*Develop a system to provide consistent SSI reporting from surgeons.

*Provide patient and family education on SSIs and how they can be prevented.

*Avoid using flash sterilization for convenience, as an alternative to purchasing additional instrument sets or to save time.

*Ensure clinical practice aligns with the most recent guidelines for antimicrobial prophylaxis in surgery.

*Utilize TeamSTEPPS tools such as "check back" when communicating with other healthcare professionals.

### Resources

- **Centers for Disease Control and Prevention Guideline for the Prevention of Surgical Site Infection**  
  Link to 2017 prevention guideline (downloadable).

- **SHEA**  
The Society of Healthcare Epidemiology of America Compendium of Strategies to Prevent Healthcare-Association Infection in Acute Care Hospitals.

- **AORN**  

- **CDC Surgical Site Infection Event**  
  ICD-10-PCS and CPT Mapping, wound classes, SSI criteria and SSI event reporting instructions.

- **Surgical Site Infection (SSI) Toolkit**  
  CDC Toolkit is organized as a PowerPoint document and includes SSI prevention strategies.

- **Frequently Asked Questions About Surgical Site Infections**  
  The CDC provides answers to the most frequently asked questions about SSIs.

### Abdominal Hysterectomy Surgical Site Infection Rate

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### Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
• Department Managers/Directors
• Frontline Staff
• Patients and Families
• Lab
• HIM
• Doctor Office/Clinic Staff

Tips and Tricks
• Report when your facility performs 10 or more abdominal hysterectomy surgeries in a year.
• Assemble an interdisciplinary team and develop an aim statement that reflects your organization's SSI goals.
• Educate and ensure that SSI education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
• Develop a system to provide consistent SSI reporting from surgeons.
• Provide patient and family education on SSI and how they can be prevented.
• Avoid using flash sterilization for convenience, as an alternative to purchasing additional instrument sets or to save time.
• Ensure clinical practice aligns with the most recent guidelines for antimicrobial prophylaxis in surgery.
• Utilize TeamSTEPPS tools such as "check back" when communicating with other health care professionals.

Resources
• SHEA
  The Society of Healthcare Epidemiology of America Compendium of Strategies to Prevent Healthcare-Association Infection in Acute Care Hospitals.
• AORN
• CDC Surgical Site Infection Event
  ICD-10-PCS and CPT Mapping, wound classes, SSI criteria and SSI event reporting instructions.

Hip Replacement Surgical Site Infection Rate

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<tr>
<th>SURGICAL SITE INFECTION: Hip Replacement Surgical Site Infection Rate</th>
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<td><strong>Core or Optional Measure</strong></td>
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</tbody>
</table>
Recommended Team Members

• Quality Team
• Infection Preventionist
• Providers
• Department Managers/Directors
• Frontline Staff
• Patients and Families
• Lab
• HIM
• Doctor Office/Clinic Staff

Tips and Tricks

• Report when your facility performs 10 or more hip replacement surgeries in a year.
• Assemble an interdisciplinary team and develop an aim statement that reflects your organization's SSI goals.
• Educate and ensure that SSI education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
• Develop a system to provide consistent SSI reporting from Surgeons.
• Provide patient and family education on SSI and how they can be prevented.
• Avoid using flash sterilization for convenience, as an alternative to purchasing additional instrument sets or to save time.
• Ensure clinical practice aligns with the most recent guidelines for antimicrobial prophylaxis in surgery.
• Utilize TeamSTEPPS tools such as "check back" when communicating with other healthcare professionals.

Resources

• SHEA
  The Society of Healthcare Epidemiology of America Compendium of Strategies to Prevent Healthcare-Association Infection in Acute Care Hospitals.

• AORN

• CDC Surgical Site Infection Event
  ICD-10- PCS and CPT Mapping, wound classes, SSI criteria and SSI event reporting instructions.

• IHI How to Guide: Prevent Surgical Site Infection for Hip and Knee Arthroplasty
  Evidence supporting interventions and how to implement to prevent SSI for hip and knee arthroplasty.

• Guide to the Elimination of Orthopedic Surgical Site Infections
  This guide created and presented by APIC will help healthcare providers reduce orthopedic SSIs.
Surgical Site Infection

Knee Replacement Surgical Site Infection Rate

<table>
<thead>
<tr>
<th>SURGICAL SITE INFECTION: Knee Replacement Surgical Site Infection Rate</th>
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Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Lab
- HIM
- Doctor Office/Clinic Staff

Tips and Tricks

- Report when your facility performs 10 or more knee replacement surgeries in a year.
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's SSI goals.
- Educate and ensure that SSI education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Develop a system to provide consistent SSI reporting from surgeons.
- Provide patient and family education on SSI and how they can be prevented.
- Avoid using flash sterilization for convenience, as an alternative to purchasing additional instrument sets or to save time.
- Ensure clinical practice aligns with the most recent guidelines for antimicrobial prophylaxis in surgery.
- Utilize TeamSTEPPS tools such as "check back" when communicating with other healthcare professionals.

Resources

- **SHEA**
  The Society of Healthcare Epidemiology of America Compendium of Strategies to Prevent Healthcare-Association Infection in Acute Care Hospitals.
- **AORN**
- **CDC Surgical Site Infection Event**
  ICD-10-PCS and CPT Mapping, wound classes, SSI criteria and SSI event reporting instructions.
• **IHI How to Guide: Prevent Surgical Site Infection for Hip and Knee Arthroplasty**
  Evidence supporting interventions and how to implement to prevent SSI for hip and knee arthroplasty.

• **Guide to the Elimination of Orthopedic Surgical Site Infections**
  This guide created and presented by APIC will help healthcare providers reduce orthopedic SSIs.

—— Process Measures ——

### Surgery Patients with Perioperative Temperature Management

<table>
<thead>
<tr>
<th>SURGICAL SITE INFECTION: Perioperative Temperature Management</th>
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**Recommended Team Members**

- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT

**Tips and Tricks**

- Educate the patient and family prior to the day of surgery of the importance of normothermia. It begins in the home and during the travel to the hospital.
- Educate hospital staff to keep the patient warm prior to and immediately after surgery and document temperature and interventions accordingly.

**Resources**

- **American Society of Anesthesiologists Perioperative Temperature Management**
  Preoperative and intraoperative recommendations and interventions.

Description of perioperative temperature management: Percentage of patients, regardless of age, who undergo surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer for whom at least one body temperature greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) was recorded within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time.

Surgical Safety Checklist Compliance

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<tr>
<td>Number of surgical inpatient procedures in which the surgical safety checklist was used</td>
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<tr>
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<td>Number of surgical inpatient operating procedures during observed time period</td>
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Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT

Tips and Tricks

- This does not include colonoscopy, endoscopy.
- Provide staff education on the importance of the surgical safety checklist.
- Request that IT build the surgical safety checklist into the EHR.
- Audit annually to ensure the surgical safety checklist is being utilized correctly.

Resources

- World Health Organization Patient Safety
  Surgical safety checklist and implementation manual.
Mechanical ventilation is an essential life-saving therapy for patients with critical illness and respiratory failure. Ventilator-associated events (VAEs) are complications that arise during mechanical ventilation and are directly correlated with longer lengths of stay, higher healthcare costs and increased mortality.

These measures look at ventilator bundle compliance and the number of events that meet VAC, IVAC and possible/probable ventilator-associated pneumonia criteria. See below for more detailed information about each measure.


### Ventilator-Associated Condition (VAC)

<table>
<thead>
<tr>
<th>VAE: Ventilator-Associated Conditions (VAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
</tr>
<tr>
<td>Number of events that meet VAC criteria</td>
</tr>
<tr>
<td>Denominator</td>
</tr>
<tr>
<td>Number of ventilator days</td>
</tr>
<tr>
<td>Multiplier</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>Link/Notes on measure specifications if applicable</td>
</tr>
<tr>
<td>Data Source</td>
</tr>
<tr>
<td>NHSN</td>
</tr>
<tr>
<td>Baseline period</td>
</tr>
<tr>
<td>CY2015</td>
</tr>
<tr>
<td>Outcome or Process</td>
</tr>
<tr>
<td>Outcome</td>
</tr>
<tr>
<td>HIIN Measure ID</td>
</tr>
<tr>
<td>1710</td>
</tr>
<tr>
<td>Core or Optional Measure</td>
</tr>
<tr>
<td>Core</td>
</tr>
</tbody>
</table>

### Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Respiratory/Therapy Staff
- Pharmacist
- Physical/Occupational/Speech Therapy Staff

### Tips and Tricks

- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's VAE goals.
- Ensure that VAE education is provided at new employee orientation and throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Avoid intubation and use noninvasive positive pressure ventilation when feasible.
• Develop a clear understanding of the VAE surveillance definitions and work to partially or completely automate VAE detection.
• Implement the ABCDEF bundle to prevent delirium, prolonged ventilation and physical deterioration.
• Discuss patients on mechanical ventilators at your daily huddles to ensure bundle compliance and to assess progress toward extubation.
• Educate and engage family members on best practices; including HOB elevation and active participation in personal cares they feel comfortable assisting with (e.g., oral care, passive range of motion exercises).
• Ensure your rights are conferred in NHSN to IHC.
• Collect and report data monthly to allow for more “real-time” tracking of progress toward goals.

Resources
• **HRET Top Ten Checklist for VAE**
  Top 10 evidence-based interventions.
• **HRET Preventing Ventilator-Associated Events Change Package**
• **ABCDEF Bundle**
• **CDC Device-associated Module**
  Ventilator-Associated Event (VAE).
• **National Healthcare Safety Network**
  Surveillance for Ventilator-Associated Events – resources for NHSN users already enrolled.

### Infection-Related Ventilator-Associated Complication (IVAC)

<table>
<thead>
<tr>
<th>VAE: Infection-Related Ventilator-Associated Complication (IVAC)</th>
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</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
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<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<td><strong>Data Source</strong></td>
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<tr>
<td><strong>Baseline period</strong></td>
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<tr>
<td><strong>Outcome or Process</strong></td>
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<tr>
<td><strong>HIIN Measure ID</strong></td>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
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</tbody>
</table>

### Recommended Team Members
• Quality Team
• Infection Preventionist
• Providers
• Department Managers/Directors
• Frontline Staff
• Patients and Families
• Respiratory/Therapy Staff
Tips and Tricks
In addition to the Tips and Tricks previously mentioned:
• Utilize PDSA cycles as needed; for example: if repeated or continued infections you may consider evaluating the use of available endotracheal tubes if there is good bundle adherence.
• Routinely share IVAC data with staff to enlist engagement and promote adherence to clinical protocols.

Resources
• HRET Preventing Ventilator-Associated Events Change Package
• ABCDEF Bundle
• CDC Device-associated Module
  Ventilator-Associated Event (VAE).
• National Healthcare Safety Network
  Surveillance for Ventilator-Associated Events – resources for NHSN users already enrolled.

Possible/Probable Ventilator-Associated Pneumonia

<table>
<thead>
<tr>
<th>VAE: Possible/Probable Ventilator-Associated Pneumonia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
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<tr>
<td>Number of events that meet possible/probable Ventilator-Associated Pneumonia criteria</td>
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<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td>Number of ventilator days</td>
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<tr>
<td><strong>Multiplier</strong></td>
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<td>100</td>
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<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td><strong>Data Source</strong></td>
</tr>
<tr>
<td>NHSN</td>
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<tr>
<td><strong>Baseline period</strong></td>
</tr>
<tr>
<td>CY2015</td>
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<tr>
<td><strong>Outcome or Process</strong></td>
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<tr>
<td>Outcome</td>
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<tr>
<td><strong>HIIN Measure ID</strong></td>
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<tr>
<td>1712</td>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
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<tr>
<td>Core</td>
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</tbody>
</table>

Recommended Team Members
• Quality Team
• Infection Preventionist
• Providers
• Department Managers/ Directors
• Frontline Staff
• Patients and Families
• Respiratory/Therapy Staff
• Physical/ Occupational/ Speech Therapy Staff
• Lab
• Pharmacist
Tips and Tricks
In addition to the tips and tricks previously mentioned:

- Have a process to ensure the head of the bed is elevated 30 to 45 degrees; include patient transport considerations.
- Implement visual cues to allow for easy identification of proper head of bed elevation (e.g., utilize a line on the wall that can only be seen if the bed is below a 30-degree angle.
- Routinely share Ventilator-Associated Pneumonia data with staff to enlist engagement and promote adherence to clinical protocols.

Resources

- Institute for Healthcare Improvement
  How-to Guide: Prevent Ventilator-Associated Pneumonia, page 27 (login required with free access to information).

--- Process Measures ---

Ventilator Bundle Compliance

<table>
<thead>
<tr>
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<tbody>
<tr>
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<tr>
<td><strong>Baseline period</strong></td>
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<tr>
<td><strong>HIIN Measure ID</strong></td>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
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</table>

Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Respiratory Therapy Staff
- Physical/Occupational/Speech Therapy Staff
Tips and Tricks

• Enlist leadership support for increased hospital-wide awareness and attention to optimizing care for ventilated patients.
• Ensure all staff understand the importance of adhering to Ventilator Bundle Elements.
• Educate and audit staff on the five components of care:
  ∙ Elevation of the head (30-45 degrees)
  ∙ Daily sedative interruption and daily assessment of readiness to extubate
  ∙ Peptic ulcer disease prophylaxis
  ∙ Deep venous thrombosis prophylaxis
  ∙ Daily oral care with chlorhexidine
  NOTE: This measure follows an “all-or-none” format. All components must be performed (or contraindications documented) for compliance to be recorded.
• Build the five components of care into the EHR to increase compliance.
• Share compliance rates with staff to increase awareness, identify educational opportunities and solicit feedback on ideas to improve compliance.
• Educate the patient and family on ventilator use and ventilator bundle elements to create a person-centered approach and to create an environment where questions and concerns are welcomed and responded to.

Resources

• Institute for Healthcare Improvement
  How-to Guide: Prevent Ventilator-Associated Pneumonia, page 10-20 (login required with free access to information).
Venous Thromboembolism (VTE) refers to conditions in which unwanted blood clots form in the body. These clots include both deep vein thrombosis (DVT) and pulmonary embolisms (PE). While persons recovering from surgery and those with impaired mobility may be correlated with an increased risk, it is important to remember that all hospitalized persons are at risk for developing a VTE.

VTE affects nearly 900,000 people annually with nearly 10 percent experiencing premature death as a result. Consistent application of evidence-based strategies and appropriate management of at-risk patients has the potential to reduce hospital acquired VTE by up to 70 percent. (Centers for Disease Control and Prevention).

These measures focus on the number of post-operative PE or DVT and utilization of appropriate VTE prophylaxis. See below for more detailed information about each measure.

--- Outcome Measures ---

**Post-Operative Pulmonary Embolism (PE) or Deep Venous Thrombosis (DVT) Rate, (AHRQ PSI-12), (NQF 0450)**

<table>
<thead>
<tr>
<th>VTE: Post-Operative Pulmonary Embolism (PE) or Deep Venous Thrombosis (DVT) Rate, (AHRQ PSI-12), (NQF 0450)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of Acute Care surgical inpatients with secondary ICD-10 code(s) for DVT or PE that were not present on admission</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of Acute Care surgical inpatient discharges</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>1000</td>
</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
<td>[<a href="https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2018/TechSp">https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2018/TechSp</a> ecs/PSI_12_Periooperative_Pulmonary_Embolism_or_Deep_Vein_Thrombosis_Rat e.pdf](<a href="https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2018/TechSp">https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2018/TechSp</a> ecs/PSI_12_Periooperative_Pulmonary_Embolism_or_Deep_Vein_Thrombosis_Rat e.pdf)</td>
</tr>
<tr>
<td><strong>Data Source</strong></td>
<td>Statewide Database (if available), otherwise Self-Reported</td>
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<tr>
<td><strong>Baseline period</strong></td>
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<td><strong>Core or Optional Measure</strong></td>
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</tbody>
</table>

**Recommended Team Members**

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Social Worker/Case Manager
- HIM
- Nursing Home
- Home Care
• Wound/Ostomy Staff
• Physical/Occupational/Speech Therapy Staff
• Lab
• Doctor Office/Clinic Staff
• Dietitian

Tips and Tricks
• Assemble an interdisciplinary team and develop an aim statement that reflects your organization's VTE goals.
• Develop a process to review published guidelines and stay current with future updates.
• Educate and ensure that VTE education is provided at new employee orientation and that ongoing education is provided throughout the year (e.g. monthly staff meetings and competency/skill fairs).
• Ensure that your pharmacist is involved.
• Utilize a standardized risk assessment for every patient.
• Request that IT builds in a hard stop for both risk assessment and prophylaxis.
• Implement standard protocols for anti-coagulation and include a monitoring process to address variation.
• Implement early mobility protocols for post-operative patients.
• Provide every patient and family with educational materials on VTE risk utilizing the teach-back method to promote self-awareness and confidence with reporting signs of anticoagulation complications, intervention side effects or signs and symptoms of a VTE.

Resources
• **HRET Venous Thromboembolism Change Package**
  A menu of strategies, change concepts and specific actionable items that any hospital can implement.
• **Anticoagulation Forum**
  An organization that helps practitioners and other clinical professionals improve patient care by providing current and relevant best-practices.
• **Agency for Healthcare Research and Quality – Preventing Hospital – Associated Venous Thromboembolism**
  A Guide for Effective Quality Improvement.
• **Agency for Healthcare Research and Quality (AHRQ)**
  Patient Safety Indicator 12 (PSI 12) Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate (June 2018).
Venous Thromboembolism

--- Process Measures ---

### VTE Appropriate Prophylaxis

<table>
<thead>
<tr>
<th>VTE: VTE Appropriate Prophylaxis</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of Acute Care, Skilled, Swing Bed and Observation patients who received appropriate VTE prophylaxis or have documentation why no VTE prophylaxis was given</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of patients admitted to Acute Care, Skilled Nursing Care or Swing Bed with stays of &gt;48 hours</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
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</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td><strong>Data Source</strong></td>
<td>Self-Reported in PIP Compass HIIN Reporting Database</td>
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<td><strong>Core or Optional Measure</strong></td>
<td>Core</td>
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</tbody>
</table>

### Recommended Team Members
- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT
- Lab
- Dietitian

### Tips and Tricks
- Implement a simple risk assessment tool to create adherence and sustainability.
- Simplify screening results by grouping patients in low, medium and high-risk categories that dictate targeted treatment options.
- Risk screen every patient and repeat risk screen when conditions change.
- Build a hard stop for risk assessment and prophylaxis into your EHR.
- Address gaps in risk and prophylaxis during daily huddle assuring that any reason for not starting prophylaxis is documented in the medical record.
- Create and follow your policy on VTE prophylaxis according to your medical director/physician champion.
- Distribute provider-level dashboards, allowing providers to see their VTE prophylaxis ordering rates and compare them to other benchmarks.
- Educate patients and families on the VTE symptoms and treatment options.
- Design and implement an appropriate VTE protocol with standardized order sets.
• Enlist pharmacists to provide real-time decision support for prophylaxis option selection, discuss contraindications and options and assist with protocol development.
• Implement ambulation protocols and use the Braden Four Point Degree of Ambulation Scale to assess ambulation status and determine if the patient should receive more prophylaxis or if prophylaxis can be reduced.

Resources
• **HRET Venous Thromboembolism Change Package**
  A menu of strategies, change concepts and specific actionable items that any hospital can implement.
• **Anticoagulation Forum**
  An organization that helps practitioners and other clinical professionals improve patient care by providing current and relevant best-practices.
• **ARHQ Preventing Hospital-Associated Venous Thromboembolism**
  Categories and characteristics of VTE risk assessment models.
• **Centers for Disease Control and Prevention**
  VTE resources, education, guidelines and statistics
• **National Blood Clot Alliance**
  Community members can use this link to access resources from the National Blood Clot Alliance, an organization that is dedicated to DVT/PE prevention. Resources available include blood clot education for patients and health professionals, links to news articles and various events.
### All-Cause Harm – CMS Hospital Acquired Conditions

<table>
<thead>
<tr>
<th>All-Cause Harm – CMS Hospital Acquired Conditions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Acute Inpatients that experienced a hospital acquired condition or infection as defined by CMS HAC measures 1-14</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>All acute care inpatients discharged during time period</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
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</tr>
<tr>
<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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</tr>
<tr>
<td><strong>Data Source</strong></td>
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<tr>
<td><strong>Baseline period</strong></td>
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</tbody>
</table>

#### Tips and Tricks
- Composite of all the CMS Hospital Acquired Conditions for HACs 1 – 14

#### Resources
- HAC/Measure Descriptions with billing codes

<table>
<thead>
<tr>
<th>HAC</th>
<th>Measure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAC 01</td>
<td>Foreign Object Retained Following Surgery</td>
</tr>
<tr>
<td>HAC 02</td>
<td>Air Embolism</td>
</tr>
<tr>
<td>HAC 03</td>
<td>Blood Incompatibility</td>
</tr>
<tr>
<td>HAC 04</td>
<td>Stage III and IV Pressure Ulcers</td>
</tr>
<tr>
<td>HAC 05</td>
<td>Falls and Trauma</td>
</tr>
<tr>
<td>HAC 06</td>
<td>Catheter-Associated Urinary Tract Infection (CAUTI)</td>
</tr>
<tr>
<td>HAC 07</td>
<td>Vascular Catheter-Associated Infection (CLABSI)</td>
</tr>
<tr>
<td>HAC 08</td>
<td>Surgical Site Infection-Mediastinitis After Coronary Bypass Graft (CABG)</td>
</tr>
<tr>
<td>HAC 09</td>
<td>Manifestations of Poor Glycemic Control</td>
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<tr>
<td>HAC 10</td>
<td>Deep Vein Thrombosis (DVT)/Pulmonary Embolism (PE) With Total Knee or Hip Replacement</td>
</tr>
<tr>
<td>HAC 11</td>
<td>Surgical Site Infection - Bariatric Surgery</td>
</tr>
<tr>
<td>HAC 12</td>
<td>Surgical Site Infection - Certain Orthopedic Procedures of Spine, Shoulder and Elbow</td>
</tr>
<tr>
<td>HAC 13</td>
<td>Surgical Site Infection (SSI) Following Cardiac Implantable Electronic Device (CIED) Procedures</td>
</tr>
<tr>
<td>HAC 14</td>
<td>Iatrogenic Pneumothorax with Venous Catheterization</td>
</tr>
</tbody>
</table>
Optional Focus Areas
Antimicrobial Stewardship is a coordinated program that promotes the appropriate use of antimicrobials (including antibiotics), improves patient outcomes, reduces microbial resistance, and decreases the spread of infections caused by multidrug-resistant organisms.

Misuse and overuse of antimicrobials is one of the most pressing health problems. Infectious organisms adapt to the antimicrobials designed to kill them, making the drugs ineffective. People infected with antimicrobial-resistant organisms are more likely to have longer, more expensive hospital stays and may be more likely to die as a result of an infection.

--- Outcome Measures ---

### Carbapenem-Resistant Enterobacteriaceae (CRE) Prevalence

<table>
<thead>
<tr>
<th><strong>MDRO/ANTI-MICROBIAL STEWARDSHIP: Carbapenem-resistant Enterobacteriaceae (CRE) Prevalence</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
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<tr>
<td><strong>Denominator</strong></td>
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<td><strong>Multiplier</strong></td>
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<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td><strong>Data Source</strong></td>
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<tr>
<td><strong>Baseline period</strong></td>
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<tr>
<td><strong>Outcome or Process</strong></td>
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<tr>
<td><strong>HIIN Measure ID</strong></td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
</tr>
</tbody>
</table>

**Recommended Team Members**

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Nursing Home
- Home Care
- Hospice
- Lab

**Tips and Tricks**

- Follow Iowa Department of Public Health’s reportable disease standards.
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s Antimicrobial Stewardship goals.
• Educate and ensure that MDRO education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
• Identify colonized and infected patients in your facility and ensure precautions are implemented.

Resources
• **CDC MDRO and CDI Module**
  NHSN multi drug resistant organism and clostridium difficile infection module.
• **CDCs Carbapenem-Resistant Enterobacteriaceae Toolkit**
  Facility guidance for control of CRE.

### Standardized Antimicrobial Administration Ratio (SAAR)

<table>
<thead>
<tr>
<th>MDRO/ANTI-MICROBIAL STEWARDSHIP: Standardized Antimicrobial Administration Ratio (SAAR)</th>
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### Recommended Team Members
• Quality Team
• Infection Preventionist
• Providers
• Pharmacist
• Department Managers/Directors
• Frontline Staff
• Patients and Families
• Lab

### Tips and Tricks
• Ensure your rights are conferred in NHSN to IHC.
Multi-drug Resistant Organism

**Resources**
- **Standardized Antimicrobial Administration Ratio (SAAR) Table**
  CDC SAAR Table.
- **Surveillance for Antimicrobial Use and Antimicrobial Resistance Options**
  CDC Training, Protocols, Data Collection Forms, Supporting Material and Analysis.

**Antimicrobial Days of Therapy (DOT)**

<table>
<thead>
<tr>
<th>MDRO/ANTI-MICROBIAL STEWARDSHIP: Antimicrobial Day of Therapy (DOT)</th>
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<tbody>
<tr>
<td><strong>Numerator</strong></td>
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<tr>
<td><strong>Denominator</strong></td>
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**Recommended Team Members**
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- Infection Preventionist
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Clinical IT
- Lab

**Tips and Tricks**
- Days of Therapy is a count of individual microbial agents given to a patient each day. DOT is calculated by calendar day. For example:
  - Administration of Cefazolin as a single dose or as 3 doses given 8 hours apart both represent 1 DOT.
- Single agents are counted separately and then summed. For example:
  - Administration of Vancomycin plus Ceftazidime on the same calendar day would represent 2 DOT for the same calendar day.
- Discuss all patients on antibiotics during huddle or multidisciplinary rounding
- Evaluate trends of antimicrobial usage over time.
- Utilize the CDC AUR Module methodology for guidance in manually calculating DOT.
• For the purposes of HIIN self-reporting of this measure. Pediatric patients may be excluded.
• This self-reported HIIN measure only considers the aggregated sums for days for the inpatient locations noted, not individual break out by patient care location. Compass HIIN encourages tracking data by patient location at the facility level. Please note this measure does not include Observation patients.
• Utilize the CDC AUR Module methodology for guidance in manually calculating “Days Present”.
• This self-reported measure tracks helps track antimicrobial usage. We are not currently monitoring antimicrobial resistance.

Resources
• **CDC Antimicrobial Use and Resistance (AUR) Module**
  Antimicrobial use and resistance requirements and data analysis. Includes antimicrobial groupings for SAAR calculations.
• **The Sane Response to Superbugs: Antibiotic Stewardship**
  This resource created by the Institute for Healthcare Improvement offers tips on minimizing unintended consequences to antibiotic resistance and a link to the “Antibiotic Stewardship in Acute Care: A Practical Playbook”.

### Antibiotic Time Out

<table>
<thead>
<tr>
<th><strong>MDRO/ANTI-MICROBIAL STEWARDSHIP: Antibiotic Time Out</strong></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of patients administered antibiotics/antimicrobials that have an antibiotic “time out” within 72 hours to reassess antimicrobial therapy</td>
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<td><strong>Core or Optional Measure</strong></td>
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</table>

**Recommended Team Members**
• Quality Team
• Infection Preventionist
• Providers
• Pharmacist
• Department Managers/Directors
• Frontline Staff
• Patients and Families
Clinical IT
Lab

Tips and Tricks
• Establish a process to systemically review antibiotics within 72 hours (or lesser set period of initial treatment i.e., “antibiotic/antimicrobial timeout” or “post-prescription review”). This may be done by the treating team and/or the antimicrobial stewardship team.
• Re-evaluate antibiotic needs based on results of diagnostic studies. If diagnostic results are available reassessment is highly encouraged within 48 hours. This benchmark may not always be clinically appropriate when diagnostic testing such as cultures are still pending. Documentation of such is highly encouraged.
• Create a documented policy/procedure for a 48-72 Hour Time Out process that includes the physician, pharmacy, IP and nursing
• Address the following information during the Antibiotic Timeout:
  • Does the patient have an infection that requires an antibiotic?
  • If so, is the patient on the right antibiotic(s) and is it being administered in the correct dose and by the correct route?
  • Is a more targeted antibiotic regimen required to treat the infection?
  • Is the duration of the antibiotic appropriate?
• Create a process for documentation of the antibiotic time out.

Resources
• Core Elements of Hospital Antibiotic Stewardship Programs
  CDC – leadership commitment, accountability and drug expertise, policies and interventions, including Antibiotic “time-outs.”
• Iowa Antimicrobial Stewardship Toolkit
• Antimicrobial Stewardship
  By Keith Hamilton, MD, Associate Hospital Epidemiologist, Director of Antimicrobial Stewardship, Hospital of the University of Pennsylvania.
• National Quality Partners Playbook: Antibiotic Stewardship in Acute Care
  Leadership commitment, accountability, drug expertise, tracking and monitoring antibiotic prescribing, use and resistance.
A Culture of Safety is described by the American Nurses Association (2013) as: The core values and behaviors that come about when there is a collective and continuous commitment by organizational leadership, managers and health care workers to emphasize safety over competing goals (American Nurses Association, 2013).

Hospitals can be one of the most hazardous places to work. Patient lifting, repositioning and transfers represent some of the most common and preventable sources of injury for employees in the healthcare industry. Caregivers feel an ethical duty to “do no harm” to patients. Healthcare workers will often risk their own safety to help a patient.

Culture of Safety Measures focus on patient and worker safety to include work-related back injuries, needle-safety (preventing sharps injuries) and ensuring safe patient handling equipment is available and used by staff.

The outcome measures will help to determine how many and how often staff members are harmed by safety incidents. The process measure will provide hospitals with a checklist to assure employee competency in using prescribed safe patient handling equipment.

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### Outcome Measures

#### Work-Related Back Injuries

<table>
<thead>
<tr>
<th>HOSPITAL CULTURE OF SAFETY/WORKER SAFETY: Work-Related Back Injuries</th>
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**Recommended Team Members**

- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Physical/Occupational/Speech Therapy Staff
- Employee Health
- Risk Management
- Facilities Management
- Patient Transport
### Tips and Tricks
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's worker safety goals.
- Educate and ensure that worker safety education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Review facility policies/procedures on:
  - Patient transfers to assure patient and worker safety focus
  - Execute return demonstration on proper use of hospital lifts
  - Audit safe patient handling (checklist link below)

### Resources
- **Slip, Trip and Fall Prevention for Healthcare Workers**
  This guide is presented by the Department of Health and Human Services, Centers for Disease Control and Prevention and the National Institute for Occupational Safety and Health
- **Worker Safety in Hospitals**
  Safe patient handling, understanding the problem.
- **Safe Patient Handling – Self-Assessment**
  Critical components of a safe patient handling program are included in this self-assessment.
- **Safe Patient Handling and Mobility – Self-Assessment**
  Atlas Lift Tech partnered with the American Nurses Association to develop an online assessment tool to help identify your facility's success and opportunities for improvement (requires registration).
- **Busting the Myths: A Fact Sheet About Moving Patients**
- **Training and Education**
  OSHA website link for training, lift equipment, patient and family, champions and assessments.

### Needlesticks

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</table>
Recommended Team Members

- Quality Team
- Infection Preventionist
- Providers
- Pharmacist
- Department Managers/Directors
- Nurses
- Surgical/Operating Room Employees
- Wound/Ostomy staff
- Lab
- Employee Health
- Risk Management
- Environmental Services

Tips and Tricks

- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's worker safety goals related to sharps injury prevention.
- Educate and ensure proper training on new or continued use of sharp safety products is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs).
- Engage direct users in routine evaluation and selection of sharps with engineered sharps injury prevention devices.
  - Consider best practices for injury prevention to include total elimination of sharps recapping and hand-to-hand passing of contaminated sharps in procedure or operating rooms.
  - Eliminate conventional devices once sharp safety devices are obtained.
  - Assure sharp disposal products are readily accessible in the work environment.

Resources

- **Sharps Safety for Healthcare Settings**
  This safety workbook from the Centers for Disease Control and Prevention (CDC) can help to create or improve an injury prevention program to reduce occupational exposure to bloodborne pathogens from needlesticks and other sharps. Teaching tools are included at the CDC website.

- **Stop Sticks Campaign**
  The CDC and the National Institute for Occupational Safety and Health (NIOSH) provide information on how to stop sharps injuries. This campaign focuses on empowering healthcare providers and workers to be safe when working around sharps.

- **Workbook for Designing, Implementing, and Evaluating a Sharps Injury Prevention Program**
  This workbook details how to create, improve and/or evaluate new or current needlestick injury prevention programs.

- **One & Only Campaign**
  This campaign is an effort led by the Centers for Disease Control and Prevention (CDC) and the Safe Injection Practices Coalition (SPIC) to raise awareness about safe injection practices. The site offers information for healthcare providers and patients. There are links for print materials for patient and healthcare provider education.
Hospital Culture of Safety

- Sharp Safety Videos.
  Links to two sharp safety videos developed for Compass HIIN hospitals:
  - Video 1: This video focuses on sharps safety and blood borne pathogens
  - Video 2: This video continues with sharp safety focus utilizing root cause analysis to aid in PDSA cycle

--- Process Measures ---

Safe Patient Handling Mobility (SPHM) Equipment Checklist Compliance

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Recommended Team Members
- Quality Team
- Department Managers/Directors
- Certified Nurse Aides/Patient Care Technicians
- Registered Nurses & Licensed Practical Nurses
- Patients and Families
- Physical/Occupational/Speech Therapy Staff
- Primary Care Providers (ARNP, PA, MD, etc.)
- Risk Management
- Facilities Management
- Patient Transport

Tips and Tricks
- Utilize the auditing checklist provided.
  - Audit based on volume. Implement auditing on all patient care areas for sound sample size.

Resources
- Safe Patient Handling and Mobility Initial Competency Checklist
- Safe Patient Handling Toolkit - Tampa VA Research and Education Foundation, Inc
  [Click here](#) to download the Safe Patient Handling Toolkit. (Updated July 2016) This downloadable toolkit includes: Assessment Criteria and Care Plan for Safe Patient Handling and Movement, Patient Handling
Equipment Use Status Walk – Through Checklist (This checklist allows for multiple observations and identifies if equipment required, if equipment used, type of equipment, and if the equipment was used properly), Safe Patient Handling – Patient Mobility Tool (algorithm for care planning transfers), and VHA Safe Patient Handling and Mobility Algorithms (2014).

- **Bariatrics Toolkit: Tampa VA Research and Education Foundation, Inc**
  Click here to download the Bariatrics Toolkit.
- **Safe Patient Handling Safety Observation Checklist**
  A checklist to adapt for hospital specific equipment for safe patient handling: refer to your lift equipment manufacturer guidelines when developing checklists.
- **Safe Patient Handling Program Checklist**
- **Training and Education**
  By educating all staff, including providers, about your safe patient handling program, hospitals can reduce instances of a clinician asking or expecting colleagues to move patients in an unsafe way.
Medical Imaging is a rapidly advancing area of diagnostic medicine. While not all medical imaging testing emits radiation (ex: ultrasound or MRI), much of the testing done within a Medical Imaging or Radiology department does expose patients to varying levels of radiation. Computed Tomography (CT) is one of the types of testing performed in the medical imaging department that exposes the patient to significant radiation dose. Benefits of testing often outweigh the risk and a care decision inclusive of patients and their families is encouraged to thoughtfully determine if a CT examination is appropriate. Much can be done to ensure that the radiation the patient receives is as low as possible to achieve a quality test. Medical Imaging professionals, physicians, vendors and quality professionals can work together to carefully select scanning parameters, technical settings, practice shielding and reduce unnecessary (duplicate, rescanning, inappropriate) testing. The following measures focus on CT abdomen and thorax combination scanning and CT dose measurement.

--- Outcome Measures ---

Abdomen CT — Use of Contrast Material (QualityNet, endorsed by NQF)

| UNDUE EXPOSURE TO RADIATION: Abdomen CT - Use of Contrast Material |
|-------------------------|------------------------------------------------------------------|
| Numerator               | Number of abdomen CT studies with and without contrast ('combined studies') |
| Denominator             | Number of abdomen CT studies performed (with contrast, without contrast or both with and without contrast) |
| Multiplier              | 100 |
| Link/Notes on measure specifications if applicable | http://www.qualitynet.org/dcs/ContentServer?c=Page&pagemenu=QnetPublic&%2FPage%2FQnetTier2&cid=1228695266120 |
| Data Source             | Statewide Database (if available), otherwise Self-Reported |
| Baseline period         | Q42015 - Q32016 |
| Outcome or Process      | Outcome |
| HIIN Measure ID         | 1818 |
| Core or Optional Measure | Optional |

Recommended Team Members

- Radiologist (for protocol development in alignment with QualityNet recommendations)
- Quality Team (to help monitor and track performance and advise on PI plans and activities)
- Ordering Providers (to educate and engage in order testing in accordance with approved imaging protocols and include complete and appropriate documentation when ordering)
- Medical Imaging/Radiology Department Director
- Radiation Safety Officer (RSO)
- Lead CT Technologist
- Chief Medical Officer or other Physician Champion (for assistance with ordering provider education)
- Frontline Staff (including nurses who assist with ordering and medical imaging staff)
- Scheduling and Team Members who do order entry
- Patients and Families
- HIM (for assistance understanding or improving coding practices)
Tips and Tricks

• Assemble an interdisciplinary team and develop an aim statement that reflects your organization's radiation safety goals.
• Educate patients and families about radiation associated with their testing.
• Work with radiologists to create standing CT protocols that are consistent with Quality Net guidelines.
• Provide all ordering providers detailed standing order protocols for CT Abdomen and Thorax procedures that includes when to order the study with contrast, without contrast or with and without contrast.
• Provide ordering providers with education on why the CT protocols you provided most appropriately and accurately provide diagnostic evaluation. Considering utilizing a one sheet guide or providing education at a medical staff meeting. Keep in mind that this measure captures outpatient testing (not inpatient testing) so education to ordering community and emergency department providers is essential.
• Create hard stops or other guidelines that can be used by team members who perform scheduling and order entry duties to ensure the most appropriate examination is ordered given the reason for examination provided and that any clarifications with the ordering provider can be collected and documented in the order prior to the examination being scheduled.
• Educate and empower CT technologist to review all CT orders and consult the ordering provider or radiologist when appropriate to ensure that the correct test in performed on the patient.
• Work with your IPOP submitter for questions you may have on coding. Keep in mind that with that code lists have changed and have been expanded with ICD 10. Reference the code list provided in the resources section below for a complete list.
• Consider evaluating claims (keep in mind this includes all payors outpatient testing only) that fall within the numerator for trends by examination code, reason for examination, ordering provider and ordering location to identify and target areas of improvement opportunity.

Resources

• QualityNet
  Imaging efficiency measures specifications can be found here. Review the Measure Reevaluation Reports for the OIE Measures, OP-10 & OP-11 paying close attention to inclusion and exclusion criteria.
• NQF Endorsed Outpatient Testing Efficiency Measures
• An updated Abdomen-Thorax CT CPT Code exclusion list (Excel spreadsheet) for OP 10 and 11 has been provided by the Iowa Hospital Association (IHA) and can be requested by emailing your Clinical Quality Consultant.
• Choosing Wisely
  This initiative of the ABIM Foundation that seeks to advance a national dialogue on avoiding unnecessary medical tests, treatments and procedures.
• Shared Decision-Making in Radiation Exposure for Patients
  An article from the American College of Cardiology published May 30, 2018
Undue Exposure to Radiation

Thorax CT — Use of Contrast Material (QualityNet, endorsed by NQF)

**UNDUE EXPOSURE TO RADIATION: Thorax CT - Use of Contrast Material**

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<th>Numerator</th>
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</table>

**Recommended Team Members**

- Radiologist (for protocol development in alignment with QualityNet recommendations)
- Quality Team (to help monitor and track performance and advise on PI plans and activities)
- Ordering Providers (to educate and engage in order testing in accordance with approved imaging protocols and include complete and appropriate documentation when ordering)
- Medical Imaging/Radiology Department Director
- Radiation Safety Officer (RSO)
- Lead CT Technologist
- Chief Medical Officer or other Physician Champion (for assistance with ordering provider education)
- Frontline Staff (including nurses who assist with ordering and medical imaging staff)
- Scheduling and Team Members who do order entry
- Patients and Families
- HIM (for assistance understanding or improving coding practices)

**Tips and Tricks**

- Assemble an interdisciplinary team and develop an aim statement that reflects your organization's radiation safety goals.
- Educate patients and families about radiation associated with their testing.
- Work with radiologists to create standing CT protocols that are consistent with QualityNet guidelines.
- Provide all ordering providers detailed standing order protocols for CT Abdomen and Thorax procedures that includes when to order the study with contrast, without contrast or with and without contrast.
- Provide ordering providers with education on why the CT protocols you provided most appropriately and accurately provide diagnostic evaluation. Consider utilizing a one sheet guide or providing education at a medical staff meeting. Keep in mind that this measure captures outpatient testing (not inpatient testing) so education to ordering community and emergency department providers is essential.
- Create hard stops or other guidelines that can be used by team members who perform scheduling and order entry duties to ensure the most appropriate examination is ordered given the reason for examination provided and that any clarifications with the ordering provider can be collected and documented in the order prior to the examination being scheduled.
• Educate and empower CT technologist to review all CT orders and consult the order provider or radiologist when appropriate to ensure that the correct test is performed on the patient.
• Work with your IPOP submitter for questions you may have on coding. Keep in mind that with that code lists have change and been expanded with ICD-10. Reference the code list provided in the resources section below for a complete list.
• Consider evaluating claims (keep in mind this includes all payors outpatient testing only) that fall within the numerator for trends by examination code, reason for examination, ordering provider and ordering location to identify and target areas of improvement opportunity.

Resources
• **QualityNet**
  Imaging efficiency measures specifications can be found here. Review the Measure Reevaluation Reports for the OIE Measures, OP-10 & OP-11 paying close attention to inclusion and exclusion criteria.
• **Outpatient Testing Efficiency Measures Reference**
  An updated Abdomen-Thorax CT CPT Code exclusion list (Excel spreadsheet) for OP 10 and 11 has been provided by the Iowa Hospital Association (IHA) and can be requested by emailing your Clinical Quality Consultant.
• **Choosing Wisely**
  This initiative of the ABIM Foundation that seeks to advance a national dialogue on avoiding unnecessary medical tests, treatments and procedures.
• **Shared Decision-Making in Radiation Exposure for Patients**
  An article from the American College of Cardiology published May 30, 2018.

### CT Radiation Dose Capture and Documentation

<table>
<thead>
<tr>
<th>UNDUE EXPOSURE TO RADIATION: CT Radiation Dose Capture and Documentation</th>
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</table>
Recommended Team Members

- Quality Team
- Providers
- Department Managers/Directors
- Radiation Safety Officer (RSO)
- CT Technologists
- Clinical IT
- PACS Administrator
- Radiologist
- CT Equipment Vendors and Application Specialists
- Medical Physicists

Tips and Tricks

- Talk with your Medical Imaging/Radiology Department manager or lead CT technologist about how each of the CT scanners in their hospital measures dose and which dose values their scanner measures and records.
- Ensure the CT department has an effective process for identifying and reviewing CT examinations that exceeds the recommended dose guidelines.
- Document the process by which the CT scanner sends a dose report to the local PACS system and confirm that the radiologist reviews a dose report is reviewed with the study.
- Educate providers who review CT studies on the PACS system what the dose report means and how they can interpret it.

Resources

- **U.S. Food & Drug Administration-Computed Tomography Information**
- **Managing Dose: Radiation Exposure on the Rise**
  An article published in Imaging Technology news demonstrating how physicians, hospital leadership and vendors have come together to manage dose.
- **American College of Radiology (ACR)**
  ACR recommendations and resources designed to assist you in providing effective imaging while minimizing the potential risk during the exposure to ionizing radiation.
- **Volume CT Dose Index and DLP: What Good Are They?**
Obstetrical adverse events affect mothers and their infants. The events range from perineal tears to maternal or infant death, leading to extensive hospital admissions and/or neonatal intensive care. All pregnant women and their infants are at risk during labor and delivery.

These measures focus on the number of early elective deliveries, uncomplicated primary cesarean delivery rates, birth trauma rates and OB trauma (with and without instrument). See below for more detailed information about each measure.

--- Outcome Measures ---

**Early Elective Delivery**

<table>
<thead>
<tr>
<th>OBSTETRICAL ADVERSE EVENTS: Early Elective Delivery</th>
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**Recommended Team Members**

- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Nurse Midwives
- Social Worker/Case Manager
- Doctor Office/Clinic Staff

**Tips and Tricks**

- Create a perinatal quality/safety nurse position to lead perinatal safety and quality that is supported by a physician champion who is interested in shared governance and leads others via compliance with evidence-based practice.
- Establish a hard-stop policy requiring OB Quality Committee review and approval of scheduled cases for EED prior to 39 weeks gestation.
• Review EED data and perform case reviews, as indicated, to identify opportunities around particular practice patterns, patient demographics and if indicated, patient interviews, timing of EED as it relates to provider and/or midwife availability and other pertinent pieces of information that would offer additional insight into the decision for EED (e.g., lack of availability of 24-hour anesthesia coverage and/or dedicated obstetric anesthesia team).

• Educate patients and families on the effects of EED and engage and activate patients and families regarding decisions related to EED.

• Educate and ensure that obstetrics education is provided at new employee orientation and ongoing education throughout the year (e.g. monthly staff meetings and competency/skill fairs); encourage staff feedback on opportunities to impact EED.

Resources

• **March of Dimes**
  Elimination of Non-Medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age Toolkit.

• **Institute for Healthcare Improvement**
  How-to-Guide: Prevent Obstetrical Adverse Events. Essential elements of prevention, oxytocin bundles, design strategy, forming the team, PDSA worksheet and measurement.

• **CDC: Pregnancy Mortality Surveillance System**
  Trends in pregnancy-related deaths.

• **ACOG**
  Clinical Guidance & Publications.

• **HRET Early Elective Delivery Change Package**
  Elimination of Elective Deliveries Prior to 39 Weeks Gestation.

• **CMQCC Early Elective Deliveries Toolkit**
  Best practices for prevention of early deliveries.

### Primary Cesarean Delivery Rate, Uncomplicated

<table>
<thead>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
</tr>
</tbody>
</table>
Obstetrical Adverse Events

Recommended Team Members

- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- Health Coach
- Nurse Midwives
- Social Worker/Case Manager
- HIM
- Doctor Office/Clinic Staff

Tips and Tricks

- Denominator excludes any diagnosis of abnormal presentation (including breech), preterm, fetal death, multiple gestations, previous Cesarean delivery, or if gender, age, quarter, year or principal diagnosis is missing.
- Review the culture at your hospital to determine if primary C-section being actively prevented, unless medically indicated.
- Track, trend, identify, and educate medical staff on prevalence and contributing factors.
- Consider implementing a safe reduction of primary cesarean birth maternal safety bundle.
- Optimize patient and family engagement in education, informed consent and shared decision making about normal healthy labor and birth throughout the maternity care cycle.

Resources

- Primary Cesarean Delivery Rate, Uncomplicated Technical Specifications – Inpatient Quality Indicators #33
- Institute for Healthcare Improvement
  How-to-Guide: Prevent Obstetrical Adverse Events. Essential elements of prevention, oxytocin bundles, design strategy, forming the team, PDSA worksheet and measurement.
- CDC: Pregnancy Mortality Surveillance System
  Trends in pregnancy-related deaths.
- Council on Patient Safety in Women’s Health Care
  Safe Reduction of Primary Cesarean Birth (+AIM).
- ACOG
  Clinical Guidance & Publications.
- BirthTOOLS.ORG
  Tools for Optimizing the Outcomes of Labor Safely.
Birth Trauma Rate – Injury to Neonate (AHRQ PSI 17)

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of Newborns with ICD-10 code(s) for birth trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of newborns</td>
</tr>
<tr>
<td>Multiplier</td>
<td>100</td>
</tr>
</tbody>
</table>

Link/Notes on measure specifications if applicable: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2018/TechSpecs/PSI_17_Birth_Trauma_Rate-Injury_to_Neonate.pdf

Data Source: Statewide Database (if available), otherwise Self-Reported

Baseline period: Q42015 - Q32016

Outcome or Process: Outcome

HIIN Measure ID: 1723

Core or Optional Measure: Optional

Recommended Team Members

- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Nurse Midwives
- Patients and Families
- HIM
- Doctor Office/Clinic Staff
- Coding Staff

Tips and Tricks

- Denominator excludes preterm infants with birth weight less than 2000 grams, a diagnosis of osteogenesis imperfecta or if gender, age, quarter, year or principal diagnosis is missing.
- Delegate the responsibility to review all cases where neonatal injury is present.
- Review and report commonalities with types of procedure or provider that result in birth trauma; consider presenting a med staff meeting.
- Engage coding staff when there is concern of potential coding errors.
- Gain insight from a patient or family representative who has experience with newborn harm/trauma; use the information and/or ideas as part of your harm prevention programming.

Resources

- Patient Safety Indicators 17 (PSI 17) Birth Trauma Rate – Injury to Neonate (June 2018)
Obstetrical Adverse Events

Obstetric Trauma Rate — Vaginal Delivery with Instrument (AHRQ PSI 18)

<table>
<thead>
<tr>
<th>OBSTETRICAL ADVERSE EVENTS: Obstetric Trauma Rate - Vaginal Delivery with Instrument (AHRQ PSI 18)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
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<tr>
<td><strong>Denominator</strong></td>
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<tr>
<td><strong>Multiplier</strong></td>
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<td><strong>Link/Notes on measure specifications if applicable</strong></td>
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<tr>
<td><strong>Data Source</strong></td>
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<tr>
<td><strong>Baseline period</strong></td>
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<tr>
<td><strong>Outcome or Process</strong></td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
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<tr>
<td><strong>Core or Optional Measure</strong></td>
</tr>
</tbody>
</table>

**Recommended Team Members**
- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- HIM
- Doctor Office/Clinic Staff
- Nursing Midwives
- Coding Staff

**Tips and Tricks**
- Denominator excludes cases with missing gender, age, quarter, year or principal diagnosis.
- Review and report commonalities with types of instrumentation and/or provider that result in the obstetrical trauma; consider presenting at med staff meeting.
- Engage coding staff when there is concern of potential coding errors.
- Gain insight from a patient or family representative who has experience with obstetric harm; use the information and/or ideas as part of your harm prevention programming.

**Resources**
- **Patient Safety Indicators 18 (PSI 18) Obstetric Trauma Rate – Vaginal Delivery With Instrument**
- **Institute for Healthcare Improvement**
  How-to-Guide: Prevent Obstetrical Adverse Events. Essential elements of prevention, oxytocin bundles, design strategy, forming the team, PDSA worksheet and measurement.
- **CDC: Pregnancy Mortality Surveillance System**
  Trends in pregnancy-related deaths.
# Obstetrical Adverse Events

## Obstetric Trauma Rate — Vaginal Delivery without Instrument (AHRQ PSI 19)

<table>
<thead>
<tr>
<th>OBSTETRICAL ADVERSE EVENTS: Obstetric Trauma Rate - Vaginal Delivery without Instrument (AHRQ PSI 19)</th>
</tr>
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<tbody>
<tr>
<td><strong>Numerator</strong></td>
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<tr>
<td><strong>Denominator</strong></td>
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<tr>
<td><strong>Multiplier</strong></td>
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<tr>
<td><strong>Data Source</strong></td>
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<tr>
<td><strong>Baseline period</strong></td>
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<tr>
<td><strong>Outcome or Process</strong></td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
</tr>
</tbody>
</table>

### Recommended Team Members
- Quality Team
- Providers
- Department Managers/Directors
- Frontline Staff
- Patients and Families
- HIM
- Doctor Office/Clinic Staff
- Nursing Midwives
- Coding Staff

### Tips and Tricks
- Denominator excludes any ICD-10-PCS code for instrument-assisted delivery or cases where gender, age, quarter, year or principal diagnosis is missing.
- Review and report commonalities with types of injury and/or provider that result in the obstetrical trauma; consider presenting at med staff meeting.
- Engage coding staff when there is concern of potential coding errors.
- Gain insight from a patient or family representative who has experience with obstetric harm; use the information and/or ideas as part of your harm prevention programming.

### Resources
- **Patient Safety Indicator 19 (PSI 19) Obstetric Trauma Rate – Vaginal Delivery Without Instrumentation (June 2018)**
- **Institute for Healthcare Improvement**
  How-to-Guide: Prevent Obstetrical Adverse Events. Essential elements of prevention, oxytocin bundles, design strategy, forming the team, PDSA worksheet and measurement.
- **CDC: Pregnancy Mortality Surveillance System**
  Trends in pregnancy-related deaths.
• **HRET Obstetrical Harm Change Package Recognition and Prevention of Obstetrical Related Events and Harm**

• **ACOG**
  Clinical Guidance and Publications
Emergency Department Transfer Communication (EDTC) measures are not a part of the HIIN program. However, in effort to reduce reporting burden to hospitals the Compass HIIN reporting database (portal) serves as a repository for hospitals to report MBQIP EDTC data. Compliance for each category means all components have documentation in the ED record. Report up to 45 or less (no more) per quarter to meet Rural Emergency Department Transfer Communication measure.

### ED Transfer Communication

**MBQIP - EDTC COMPOSITE Eligible Iowa CAHs: ED Transfer Communication All or None**

<table>
<thead>
<tr>
<th><strong>Numerator</strong></th>
<th>Number of ED patients transferred to another healthcare facility where all relevant elements for each of the 7 sub-measures were documented and communicated to the receiving facility within 60 minutes of discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>100</td>
</tr>
<tr>
<td><strong>Data Source</strong></td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
<td>CY2015</td>
</tr>
<tr>
<td><strong>Outcome or Process</strong></td>
<td>Process</td>
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<tr>
<td><strong>HIIN Measure ID</strong></td>
<td>1815</td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
<td>Optional</td>
</tr>
</tbody>
</table>

**MBQIP - EDTC SUB 1 Eligible Iowa CAHs: ED Transfer Communication Administrative Communication**

<table>
<thead>
<tr>
<th><strong>Numerator</strong></th>
<th>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that both health care facility to healthcare facility communication and physician to physician communication occurred prior to transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>100</td>
</tr>
<tr>
<td><strong>Data Source</strong></td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
<td>CY2015</td>
</tr>
<tr>
<td><strong>Outcome or Process</strong></td>
<td>Process</td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
<td>1808</td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
<td>Optional</td>
</tr>
</tbody>
</table>
### MBQIP - EDTC SUB 2 Eligible Iowa CAHs: ED Transfer Communication Patient Information

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all Patient Information (name, address, age, gender, significant other contact info and insurance information) was communicated within 60 minutes of departure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td>Multiplier</td>
<td>100</td>
</tr>
<tr>
<td>Data Source</td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td>Baseline period</td>
<td>CY2015</td>
</tr>
<tr>
<td>Outcome or Process</td>
<td>Process</td>
</tr>
<tr>
<td>HIIN Measure ID</td>
<td>1809</td>
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<tr>
<td>Core or Optional Measure</td>
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</tr>
</tbody>
</table>

### MBQIP - EDTC SUB 3 Eligible Iowa CAHs: ED Transfer Communication Vital Signs

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all Vital Signs (pulse, respiratory rate, blood pressure, oxygen saturation, temperature and Glasgow Coma Scale/neuro assessment) was communicated within 60 minutes of discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td>Multiplier</td>
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</tr>
<tr>
<td>Data Source</td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td>Baseline period</td>
<td>CY2015</td>
</tr>
<tr>
<td>Outcome or Process</td>
<td>Process</td>
</tr>
<tr>
<td>HIIN Measure ID</td>
<td>1810</td>
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<tr>
<td>Core or Optional Measure</td>
<td>Optional</td>
</tr>
</tbody>
</table>

### MBQIP - EDTC SUB 4 Eligible Iowa CAHs: ED Transfer Communication Medication Information

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all Medication Information (medications administered in ED, allergies and home medications) was communicated within 60 minutes of departure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td>Multiplier</td>
<td>100</td>
</tr>
<tr>
<td>Data Source</td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td>Baseline period</td>
<td>CY2015</td>
</tr>
<tr>
<td>Outcome or Process</td>
<td>Process</td>
</tr>
<tr>
<td>HIIN Measure ID</td>
<td>1811</td>
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<tr>
<td>Core or Optional Measure</td>
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</tbody>
</table>
### MBQIP - EDTC SUB 5 Eligible Iowa CAHs: ED Transfer Communication Physician or Practitioner Generated Information

<table>
<thead>
<tr>
<th><strong>Numerator</strong></th>
<th>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all Practitioner-Generated Information (history and physical/ED provider note, reason for transfer and/or plan of care) was communicated within 60 minutes of discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>100</td>
</tr>
<tr>
<td><strong>Data Source</strong></td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
<td>CY2015</td>
</tr>
<tr>
<td><strong>Outcome or Process</strong></td>
<td>Process</td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
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<td><strong>Core or Optional Measure</strong></td>
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</tr>
</tbody>
</table>

### MBQIP - EDTC SUB 6 Eligible Iowa CAHs: ED Transfer Communication Nurse Generated Information

<table>
<thead>
<tr>
<th><strong>Numerator</strong></th>
<th>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all the Nurse-Generated Information (nursing assessments/interventions/response, sensory status, catheters/IV, immobilizations, respiratory support and oral limitations) was communicated within 60 minutes of departure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>100</td>
</tr>
<tr>
<td><strong>Data Source</strong></td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
<td>CY2015</td>
</tr>
<tr>
<td><strong>Outcome or Process</strong></td>
<td>Process</td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
<td>1813</td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
<td>Optional</td>
</tr>
</tbody>
</table>

### MBQIP - EDTC SUB 7 Eligible Iowa CAHs: ED Transfer Communication Procedures and Tests

<table>
<thead>
<tr>
<th><strong>Numerator</strong></th>
<th>Number of ED patients transferred to another healthcare facility whose medical record documentation indicated that all Tests and Procedures (both completed and results sent) was communicated within 60 minutes of discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of ED patients transferred to another healthcare facility</td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>100</td>
</tr>
<tr>
<td><strong>Data Source</strong></td>
<td>Self-Reported in PfP Compass HIIN Reporting Database</td>
</tr>
<tr>
<td><strong>Baseline period</strong></td>
<td>CY2015</td>
</tr>
<tr>
<td><strong>Outcome or Process</strong></td>
<td>Process</td>
</tr>
<tr>
<td><strong>HIIN Measure ID</strong></td>
<td>1814</td>
</tr>
<tr>
<td><strong>Core or Optional Measure</strong></td>
<td>Optional</td>
</tr>
</tbody>
</table>
Recommended Team Members

- Quality Team
- Providers
- Pharmacist
- Department Managers/Directors
- Frontline Staff
- Health Coach
- Social Worker/Case Manager
- Clinical IT
- Nursing Home
- Home Care
- Hospice
- Lab
- Doctor Office/Clinic Staff

Tips and Tricks

- To meet HRSA/Flex requirements for MBQIP.
- Compliance for each category means all components have documentation in the ED record. Report up to 45 or less (no more) per quarter to meet Rural Emergency Department Transfer Communication measure.
- Remember that the “All” category must not be higher than the lowest category.
- Please direct all questions on MBQIP measures to Stroudwater Associates:
  - Carla Wilber, cwilber@stroudwater.com Office: (207) 221-8276
  - Paula Knowlton, pknowlton@stroudwater.com Office: (207) 221-8259
  - Gregg Lathrop, glathrop@stroudwater.com Office: (207) 221-8266

Resources

- **Updated MBQIP Measures**
  This chart outlines the current Medicare Beneficiary Quality Improvement Project (MBQIP) measures.

- **Updated MBQIP Measures Fact Sheets**
  MBQIP Measures Fact Sheets provide an overview of the data collection and reporting processes for the MBQIP measures in a basic, one-measure-per-page overview.

- **Updated Quality Improvement Measure Summaries for MBQIP (Part of the Quality Improvement Implementation Guide and Toolkit for CAHs)**
  This resource is specifically focused on the current core measures of MBQIP and provides suggested promising strategies for quality improvement for each.

- **Data Specifications Manual: EDTC Measure**
  The Emergency Department Transfer Communication (EDTC) measure aims to provide a means of assessing how well key patient information is communicated from an emergency department to any healthcare facility. The measure is applicable to patients with a wide range of medical conditions (e.g., acute myocardial infarction, heart failure, pneumonia, respiratory compromise and trauma) and is relevant for both internal quality improvement purposes and external reporting to consumers and purchasers. This guide provides information on the measure, including detailed data specifications for collection.
For the following breakouts, report numerator information matching each area for same denominator as defined above.

- **Administrative Communication**
  Numerator: Number of ED patients transferred to another healthcare facility whose medical record documents indicate that all patient information (name, address, age, gender, significant other contact information and insurance information) was communicated. Data Source:
  - Self-reported

- **Patient Information**
  Numerator: Number of ED patients transferred to another healthcare facility whose medical record documents indicate that all administrative communication (nurse-to-nurse communication and physician-to-physician communication) was communicated. Data Source:
  - Self-reported

- **Patient Information**
  Numerator: Number of ED patients transferred to another healthcare facility whose medical record documents indicate that all vital signs (pulse, respiratory rate, blood pressure, oxygen saturation, temperature and Glasgow Coma Scale/neuro assessment) were communicated. Data Source:
  - Self-reported

- **Patient Information**
  Numerator: Number of ED patients transferred to another healthcare facility whose medical record documents indicate that all medication information (medications administered in ED, allergies and home medications) was communicated. Data Source:
  - Self-reported

- **Patient Information**
  Numerator: Number of ED patients transferred to another healthcare facility whose medical record documents indicate that all practitioner-generated information (history and physical, reason for transfer and plan of care) was communicated. Data Source:
  - Self-reported

- **Patient Information**
  Numerator: Number of ED patients transferred to another healthcare facility whose medical record documents indicate that all nurse-generated information (nursing assessments/interventions/response, sensory status, catheters, immobilizations, respiratory support and oral limitations) was communicated. Data Source:
  - Self-reported

- **Patient Information**
  Numerator: Number of ED patients transferred to another healthcare facility whose medical record documents indicate that all tests and procedures were done, and tests and procedure results sent were communicated. Data Source:
  - Self-reported
BOLD AIM & KEY DRIVERS

ONE in THREE hospital adverse events are ADEs.¹

ADEs affect approximately 2,000,000 hospital stays each year.¹

CASE FOR CHANGE

ADEs Comprise about 2/3 of preventable complications after patient is discharged from the hospital.¹

Hospital stays extended by 1.7 to 4.6 days due to ADEs.¹

RAPID CYCLE INNOVATIONS

Intervention Priorities
- Enlist champions within departments to lead initiatives
- Implement use of NCC MERP Scale Categories D-I for categorization of adverse drug events

Patient Centered
- Address any possible barriers due to social determinants of health (SDH)
- Educate patients with diabetes and family members on the symptoms of hypoglycemia

Monitoring and Surveillance
- Support advancement of surveillance strategies that better identify real world burden and scope of ADEs
- Support development, dissemination, and uptake of optimal acute care management strategies
- Support policies that incentivize optimal acute care management and that minimize payment/coverage barriers to such management
- Support research of management of ADE’s (drug selection, transition among agents, adherence, laboratory testing, and reversal strategies)

KEY LEARNING

- Engage multidisciplinary teams in the process by creating awareness, training, and education around current evidence-based practice and guidelines
- Engage and educate patients and families
- Incorporate anticoagulation, glycemic and opioid order sets into electronic health records (EHRs) for ease of use
- Educate providers and clinical staff (MDs and RNs)
- Integration of medication reconciliation and other care transition models
- Multidisciplinary collaboration; including Pharmacy, Laboratory Services, etc.
- Measure performance by setting baselines, collecting performance data, reviewing data with staff and adapting systems to improve performance and outcomes
- Improve access to more integrated EHR data linking pharmacy, laboratory, and outcomes data

Source:
Last Updated: September 2017
CLOSTRIDIUM DIFFICILE

CASE FOR CHANGE

30 to 50%
Between 30% and 50% of prescribed antibiotics in hospital settings are unnecessary, and increase a patient’s risk for C. difficile infections.1

An estimated 29,000 deaths occur within 30 days of C. diff diagnosis.1

There are an estimated 500,000 cases of Clostridium difficile each year in the United States.1

RAPID CYCLE

INNOVATIONS

Intervention Priorities
- Implementation of antibiotic stewardship programs within healthcare settings
- Use of contact precautions for patients with known or suspected Clostridium difficile infection
- Use of private rooms to reduce the potential spread of C. diff
- Implementation of a robust hand hygiene program
- Implementation of an environmental cleaning and disinfection strategy

Monitoring and Surveillance
- Monitoring of environmental cleaning effectiveness
- Education for environmental services personnel regarding effective cleaning and disinfecting
- Use of NHSN standardized definitions for reporting C. diff infections (CDI)
- Development of method within organization to quickly identify CDI patients

KEY LEARNING

- Engage multidisciplinary teams in the process by creating awareness, training, and education around current evidence-based practices
- Engage and educate patients and families
- Education for environmental services staff regarding effective cleaning and disinfecting
- Implementation of a hand hygiene compliance program
- Implementation of an antibiotic stewardship program

MEASURES

Process:
- Hand hygiene compliance
- Contact precaution compliance

Outcome:
- Healthcare facility-onset C. difficile infection rate
- Clostridium difficile prevalence

PATIENT AND FAMILY ENGAGEMENT

- Education for patients and family members regarding preventing the spread of C. difficile

Source: 1 Centers for Disease Control and Prevention, Healthcare-associated infections (HAIs). Clinicians

Last Updated: September 2017
**CATHETER-ASSOCIATED URINARY TRACT INFECTION**

**CASE FOR CHANGE**

- **In the United States, more than 13,000 annual deaths are attributed to UTIs.**
- **About 75% of UTIs occurring in acute care hospital settings are associated with catheter utilization.**
- **CAUTIs, on average, cost $750 to $1,000 per infection – totaling an estimated cost of care from $340 million to $450 million annually.**

**RAPID CYCLE INNOVATIONS**

**BOLD AIM & KEY DRIVERS**

- **Intervention Priorities**
  - Provide and implement written guidelines for catheter use, insertion, and maintenance
  - Implementation of insertion bundle into all care areas, including the Emergency Department
  - Enlist champions within departments to lead initiatives
  - Explore implementation of Nurse Driven protocols for foley removal in patient care areas
  - Provide staff education regarding the proper use of aseptic technique and indications for insertion and continued foley-catheter use
  - Implementation of a robust hand hygiene program

- **Communication**
  - Explore opportunities for improved communication among care providers and sites of care
  - Utilize a multi-disciplinary team with physician and nursing champions
  - Identify physician champions within Emergency Department to drive change

**KEY LEARNING**

- Engage multidisciplinary teams in the process; create awareness, training, and education around current evidence-based practice
- Engage and educate patients and families
- Implementation of bundle within all patient-care departments

**MEASURES**

**Process:**
- Unnecessary urinary catheters
- Emergency department catheter utilization
- Urinary catheter utilization ratio

**Outcome:**
- CAUTI rate

**MONITORING AND SURVEILLANCE**

- Conduct daily monitoring and review of all foley catheters and foley catheter insertions
- Implement a system for documenting the following information in the patient record: indications for catheter insertion, date and time of catheter insertion, individual who inserted catheter, and date and time of catheter removal
- Use of standardized NHSN definitions for monitoring and surveillance

Sources:
1. Centers for Disease Control and Prevention, Catheter-associated Urinary Tract Infections (CAUTI)
   https://www.cdc.gov/hai/ca_uti/uti.html

Last Updated: September 2017
CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTIONS

CASE FOR CHANGE

12 to 25% 12% - 25% of patients with a central line associated blood-stream infection will die.\(^1\)

An estimated 23,000 bloodstream infections occur in hospitalized patients with central lines each year.\(^1\)

$ The estimated cost per infection ranges from $6,000 - $29,000.\(^2\)

RAPID CYCLE INNOVATIONS

**Intervention Priorities**
- Provide and implement written guidelines for catheter use, insertion, and maintenance
- Implementation of insertion and maintenance bundles, into all care areas
- Implementation of evidence based measures to prevent surgical site infections (use of chlorhexidine baths, needleless connectors, adherence to infection prevention practices at time of insertion and dressing changes)
- Implementation of a robust hand hygiene program

**Communication**
- Explore opportunities for improved communication among care providers and sites of care
- Utilize a multi-disciplinary team with physician and nursing champions
- Provide education of healthcare personnel involved in insertion, care, and maintenance of central lines and regarding CLABSI prevention

**Monitoring and Surveillance**
- Conduct daily monitoring and review of all central lines
- Implement a system for documenting information regarding catheter insertion and maintenance in the patient record
- Use of standardized NHSN definitions for monitoring and surveillance

Sources:

Last Updated: September 2017
**CASE FOR CHANGE**

One out of five individuals who fall suffer from moderate to severe injuries such as lacerations, hip fractures, or head traumas.\(^1\)

The total charges for fall-related hospitalizations in the United States average \$31,000,000,000 annually.\(^1\)

The average charge per hospitalization is over \$30,000.\(^1\)

In addition to medical costs, falls also contribute to a decreased ability to perform household tasks, a reduced quality of life and for those over 65 they may result in loss of independent living.\(^1\)

**BOLD AIM & KEY DRIVERS**

- **Intervention Priorities**
- **Monitoring and Surveillance**
- **Communication and PFE**

**KEY LEARNING**

- Engage multidisciplinary teams in the process by creating awareness, training, and education around current evidence-based practice
- Engage and educate patients and families
- Implement risk assessments on admission and whenever clinical status changes
- Standardize interventions for patients at risk for falling or decreased mobility
- Customize interventions for highest risk patients

**RAPID CYCLE INNOVATIONS**

**Intervention Priorities**
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s Fall Prevention goals
- Educate and ensure that Fall Prevention education is provided at new employee orientation and ongoing education throughout the year (Ex: Monthly staff meetings and competency/skill fairs)

**Monitoring and Surveillance**
- Implement the “no pass rule” for all employees
- Consider sleep cycles for inpatients, improve light and sound levels during the night and encourage patient to be awake and active during the day if possible

**Communication and PFE**
- Identify physical and mental barriers regarding fall prevention
- Discuss normal routine with patient and family to tailor interventions

**MEASURES**

**Process:**
- Fall risk assessment on admission

**Outcome:**
- Fall resulting in fracture or dislocation
- Fall resulting no apparent injury rate
- Fall resulting in minor injury rate
- Fall resulting in moderate injury rate
- Fall resulting in major injury rate
- Fall resulting in death rate
- Count of assisted falls

Source:
The Centers for Disease Control and Prevention (CDC) estimates more than two million people are infected with antibiotic-resistant organisms, resulting in approximately 23,000 deaths annually.¹

Sources:

Last Updated: October 2018
**BOLD AIM & KEY DRIVERS**

**Outcome:**
Reduce early elective deliveries and reduce maternal mortality by **20%** by 2019.

**Patient Centered**
- Identify Maternal Early Warning Criteria, to identify maternal patients who require urgent bedside evaluation

**Community Based**
- Effectively track the implementation of bundles at organizations throughout Iowa
- Be aware of the percentages of Early Elective Inductions that turn in C-sections
- Be aware of provider specific commonalities

**Communication**
- Facility Review: Mini, root-cause analysis for use in all cases of severe maternal morbidity and mortality
- Hard stop policy in place for EED prior to 39 weeks’ gestation

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**CASE FOR CHANGE**

The United States has fallen to 64th in the world on maternal mortality. Adverse events occur in approximately 9% of all deliveries, at a cost of $60 billion annually. Leading causes of maternal death are also the most preventable.

- Obstetric hemorrhage
- Preeclampsia
- Embolism
- Infection

**RAPID CYCLE INNOVATIONS**

**Patient Centered**
- Identify Maternal Early Warning Criteria, to identify maternal patients who require urgent bedside evaluation

**Community Based**
- Effectively track the implementation of bundles at organizations throughout Iowa
- Be aware of the percentages of Early Elective Inductions that turn in C-sections
- Be aware of provider specific commonalities

**Communication**
- Facility Review: Mini, root-cause analysis for use in all cases of severe maternal morbidity and mortality
- Hard stop policy in place for EED prior to 39 weeks’ gestation

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**KEY LEARNING**

- Implementing standardized protocols with checklists
- Trained and activated teams and regular ongoing unit based team drills and education
- Rapid availability of resources and medications
- Assessment of risk on admission
- Early warning tools for vitals and symptoms
- Engage and educate patients and families
- Debriefing and huddles
- Support and encourage consumer prenatal care education, including early access to prenatal care

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**MEASURES**

**Outcome:**
- Early elective delivery
- Primary cesarean delivery rate, uncomplicated
- Birth trauma rate - injury to newborn
- Obstetrical trauma rate - vaginal delivery with instrument
- Obstetrical trauma rate - vaginal delivery without instrument

Sources:

Last Updated: September 2017
Pressure ulcers cost $9.1-$11.6 BILLION per year in the United States. Individual patient care ranges from $20,900 to $151,000 per pressure ulcer.  

Although pressure ulcers are preventable in most every case, the prevalence of pressure ulcers in health care facilities is increasing. 2.5 million Patients per year are affected by pressure ulcers. About 60,000 patients die as a direct result of a pressure ulcer each year.

**BOLD AIM & KEY DRIVERS**

- **Intervention Priorities**
- **Monitoring and Surveillance**
- **Patient Centered**

**KEY LEARNING**

- Engage multidisciplinary teams in the process by creating awareness, training, and education around current evidence-based practice and guidelines
- Engage and educate patients and families
- Measure performance by setting baselines, collecting performance data, reviewing data with staff and adapting systems to improve performance and outcomes

**RAPID CYCLE INNOVATIONS**

**Intervention Priorities**
- Inspect skin daily
- Manage moisture on skin
- Conduct a pressure ulcer admission assessment for all patients
- Minimize pressure
- Optimize nutrition and hydration
- Reassess risk for all patients daily

**Monitoring and Surveillance**
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s Pressure Ulcer goals
- Educate and ensure that Pressure Ulcer education is provided at new employee orientation and ongoing education throughout the year (Ex. Monthly staff meetings and competency/skill fairs)
- Include discussion of patients with pressure ulcers at your daily huddles and ensure they are receiving the full pressure ulcer preventative care
- Ensure that your providers and nurses are consistent with documentation of pressure ulcers

**MEASURES**

**Process:**
- Number of at-risk inpatients receiving full pressure ulcer preventative care

**Outcome:**
- Pressure ulcer rate, stage 3+

**Patient Centered**
- Address any possible social determinants of health (SDH) barriers
- Educate patients and family members regarding prevention

Source:

Last Updated: September 2017
CASE FOR CHANGE

Pressure ulcers cost $9.1-$11.6 BILLION per year in the United States. Individual patient care ranges from $20,900 to $151,000 per pressure ulcer. Although pressure ulcers are preventable in most every case, the prevalence of pressure ulcers in health care facilities is increasing. 2.5 million Patients per year are affected by pressure ulcers. About 60,000 patients die as a direct result of a pressure ulcer each year.

AHRQ Tools and Resources

Link includes tools for:
- Pressure Ulcer Prevention Pathway (3A)
- Elements of a Comprehensive Skin Assessment (3B)
- Pressure Ulcer Identification Pocket Pad (3C)
- The Braden Scale for Predicting Pressure Risk (3D)
- Care Plan (3F)
- Patient and Family Education Booklet (3G)
- Assigning Responsibilities for Using Best Practice Bundle (4A)
- Staff Roles (4B)
- Assessing Staff Education and Training (4C)

FREQUENTLY ASKED QUESTIONS

Q: What stage of pressure ulcers are being counted towards the HIIN measure?

The HIIN measure is specifically looking at hospital acquired Stage III, Stage IV and unstageable pressure ulcers.

Q: How is this information gathered?

This measure is pulled from IPOP or Claims data, based off specific ICD codes.

Q: What are the most current recommendations for pressure ulcer prevention?

- Complete a risk assessment on admission and once a shift
- Consider a 2 RN skin assessment as an option for improvement
- Establish a bowel and bladder program for patients with incontinence, use barrier cream to protect the skin
- Use moisturizers for dry skin
- Identify and correct factors compromising protein/calorie intake consistent with goals of care
- Assess for repositioning, use appropriate mattress and chair cushions. Use appropriate lifting devices, use pillows or foam wedges to keep bony prominences from direct contact with each other
- Use devices that eliminate pressure on the heels
- Educate patient and family or pressure ulcer prevention
- Use no more than 3 layers (clothing, sheets) to aid in friction and shear reduction

QUESTIONS TO CONSIDER

- Do you know what your current data reflects for your hospital’s pressure ulcer rate?
- Do you see any pressure ulcers not being appropriately documented on admission? If so, is this due to lack of documentation or that documentation is not being charted in the appropriate place so that it is properly coded?
- Do you have a nurse champion and/or a wound care nurse for pressure ulcers?
- When a pressure ulcer occurs, is a root causes analysis completed?
- If yes, do you see any trends?
- Does your staff know the frequency with which a skin assessment should be performed?
- If a staff nurse has a concern regarding a possible pressure ulcer forming who do they notify?
- Do you see any specific interventions to prevent pressure ulcers not being completed on a regular basis?
  - Ex. – Scheduled turns not being completed?
- What have you implemented or are planning to implement regarding pressure ulcer prevention?
- What barriers have you encountered and how have you addressed them?

MEASURE

Numerator:
- Number of inpatients with ICD-9/10 codes for pressure ulcer AND secondary ICD 9/10 diagnosis code(s) for Stage III, Stage IV or unstageable pressure ulcer, non-POA

Denominator:
- Number of discharges for acute care, skilled nursing and swing bed patients

Source:
1. Agency for Healthcare Research and Quality: Preventing Pressure Ulcers in Hospitals.
   https://www.ahrq.gov/professionals/systems/hospital/pressureulcertoolkit/putool1.html

Last Updated: September 2017
CASE FOR CHANGE

Currently, nearly twenty percent of all Medicare beneficiaries will be readmitted within 30 days of initial discharge from a hospital.1

One in five patients discharged home from the hospital will have an adverse event within three weeks of being discharged.1

RAPID CYCLE INNOVATIONS

Patient Centered

• Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s Care Transition goals
• Partner with family caregivers in the hospital, to help ensure safe and success care transitions to home or the next site of care
• Include Pharmacist in medication reconciliation and education upon admission and discharge. Provide med rec information to the patient’s retail pharmacy upon discharge

Communication

• Utilize an Admissions Planning Checklist that promotes proactive communication with the patients and their family regarding their hospital stay for all scheduled admissions
• Encourage patient participation in developing a discharge planning tool to reinforce the discharge plan

Community Based

• Develop and lead a community care coalition
• Address all social determinants of health possibly affecting follow-up care

BOLD AIM & KEY DRIVERS

Reduce harm from hospital acquired conditions by 20% by 2019.

KEY LEARNING

• Engage multidisciplinary teams in the process by creating awareness, training, and education around current evidence-based practice
• Engage and educate patients and families
• Involve key community stakeholders in planning and implementation to ensure local needs are met
• Implement admission risk-assessment tool that includes evaluation of social determinants of health
• Utilize teach-back method for education of patients

MEASURES

Process:
• Community-provider involvement in identifying post-discharge needs
• Post-hospital follow-up appointment
• Patient teach-back
• Handover communication

Outcome:
• Unplanned all-cause, 30-day readmissions to any hospital
• Unplanned all-cause, 30-day readmissions to the same hospital

Source:

Last Updated: September 2017

READMISSIONS

20%

COMMUNITY CARE

HOSPITAL IMPROVEMENT INNOVATION NETWORK

INNOVATIONS
Current national mortality rates:¹
- Sepsis: 10% to 20%
- Severe Sepsis: 20% to 50%
- Septic Shock: 40% to 80%

28,692 to 114,770
is the potential number of lives to be saved nationally with a 10% to 40% reduction in sepsis.¹

**CASE FOR CHANGE**

Reduce mortality rates in patients with sepsis by **20 PERCENT** by 2019.

**BOLD AIM & KEY DRIVERS**
- Communication
- Culture and Teamwork
- Tools and Education
- EHR and Data

**LEAPT KEY LEARNING**
- Concurrent management of sepsis bundles
- Develop and broadly implement EHR triggers and warnings
- Collaborate with primary care, emergency management, skilled nursing, LTC and home health
- Engage community to raise public awareness

**SEPSIS**

Current national rates:¹
- Sepsis: 10% to 20%
- Severe Sepsis: 20% to 50%
- Septic Shock: 40% to 80%

28,692 to 114,770
is the potential number of lives to be saved nationally with a 10% to 40% reduction in sepsis.¹

**MEASURES**

Process:
- Severe sepsis and septic shock three hour management bundle compliance
- Severe sepsis and septic shock six hour management bundle compliance

Outcome:
- Postoperative sepsis rate
SEPSIS

RAPID CYCLE INNOVATIONS

EHR and Data
- Utilize electronic health record (EHR) to help identify sepsis, trigger initiation of bundle elements, notify providers of critical lab values, and identify delays and omissions in care
- Drill down the data to link to readmissions and identify opportunity for prevention in previous admission
- Expand scope beyond sepsis, severe sepsis, septic shock and septicemia patient populations and track through data, including patients with pneumonia, bacteremia or a UTI
- Implement the use of a sepsis scorecard to communicate trends in compliance with 3- and 6-hour bundle, integrate outcomes, and measure performance trends for mortality, length of stay (LOS) and costs

Tools and Education
- Implement Surviving Sepsis Campaign’s 3- and 6-hour bundle
- Incorporate sepsis early warning criteria into rapid response protocols and implement in the Emergency Dept.
- Utilize modified early warning score (MEWS) system with the existing sepsis bundle to facilitate identification of sepsis
- Start Early - Emphasize early detection and the Surviving Sepsis Campaign bundles to prevent sepsis progression and to streamline implementation of evidence-based best practices
- Key portions of bundles to implement early (lactic acid, early fluid resuscitation, and antibiotics after blood culture)
- Systemic Inflammatory Response (SIRS) - Must meet two criteria to start Sepsis “clock”
- Incorporate sepsis bundle components in pneumonia care protocols.
- Utilize dedicated sepsis teams to evaluate how processes are implemented and refine processes related to the three and six hour bundles based on results
- Implement standardized sepsis care management tool to facilitate auditing of sepsis cases
- Lesson Learned: Central line and CVP may not be an essential portion of bundle if good peripheral access is obtained, especially in small/ rural hospitals and med-surg units

SPECIALTY POPULATION:
- Develop sepsis education (e-modules and simulation tools) as well as a treatment bundle for use in rural hospitals that does not require invasive monitoring
- Initiate sepsis protocols for special populations (such as immune suppressed) as soon as hypoperfusion is recognized and not delayed pending critical care admission

Communication
- Use tools to educate and remind providers of Code Sepsis and decision algorithm to activate a Code
- Badges for all ED and ICU providers in LEAPT hospitals; posters with algorithms for each hospital
- Create a compelling campaign highlighting the life-saving potential of this work statewide and at the community level. (e.g. “These are my people - 418 lives.”)
- Share research and references to get physician acceptance, especially in area of lactic acid testing
- Say Sepsis: Saying “sepsis” out loud raised immediate urgency which led to better outcomes and, “Tell me why you think it is not sepsis” to rule out sepsis early
- Produce a “Seeing Sepsis” physician simulcast

Culture and Teamwork
- Engage physicians first to pave the way for implementation of sepsis early recognition and treatment protocols
- Utilize a multi-disciplinary team with local physician and nursing champions
- Identify mentor physicians and hospitals to serve as faculty and consult with hospitals beginning the journey
- Engage all stakeholders that can help disseminate/spread and create momentum as a state/nation
- Stakeholders include IDPH, IMS, emergency physician and nursing associations, Telligen, and malpractice insurers
- Conduct regular multi-disciplinary reviews of sepsis cases

Source:

Last Updated: September 2017
Since 1999, there have been over 165,000 DEATHS from overdoses related to prescription opioids.¹

More than 40 people die every day from overdoses involving prescription opioids.¹

4.3 million Americans engaged in non-medical use of prescription opioids in the last month.¹

### FREQUENTLY ASKED QUESTIONS

**Q: Should I be including all patients that received Naloxone in this measure?**

- No. This measure is specific to the inpatient units when Naloxone is used as a reversal agent. This excludes the emergency department and the community as there are separate measure for these areas.

**Q: How can I find this information in the electronic health record?**

- We suggest speaking to your pharmacist. Is there a report that is pulled daily that shows all doses of Naloxone given? Does your hospital complete an event report every time Naloxone is given as a reversal agent?

**Q: If a patient takes a medication/drug that is not on their current hospital medication list and needs Naloxone as a reversal agent, do I count this towards the HIIN measure?**

- No. This measure is intended to look at patients that receive an opioid that is prescribed to them in the hospital and needing Naloxone as a direct result of the medication given.

### CASE FOR CHANGE

Prescription opioids are often used to treat chronic and acute pain and, when used appropriately, can be an important component of treatment. However, serious risks are associated with their use, and it is essential to carefully consider the risks of using prescription opioids alongside their benefits. These risks include misuse, opioid use disorder (addiction), overdoses, and death.

### TOOLS & RESOURCES

- Compass HIIN Hospital Specific Opioid Reports
- Assistance and Training from Clinical Quality Consultants
- Data Support
- HIINnovation
- Coming Soon: Opioid Stewardship Implementation Guide
- IHC Comfort Menu
  - Inpatient
- IHC Comfort Scale
- Post-Op Comfort Plan
  - Acute and Chronic

### QUESTIONS TO CONSIDER

- Do you know what your current data reflects for your Hospital’s Stat Naloxone Administration rate?
- How are you currently collecting data for this measure? Can you confirm that your reported data includes only those cases when naloxone is administered to an inpatient to whom you have prescribed an opioid and it is being administered as a reversal agent?
- Have you seen any trends that might be opportunities for performance improvement and/or staff education? (By controlled substance, by provider, by unit, etc…)
- What other pain treatment options do you offer your patients?
- Do your providers utilize the PMP (Prescription Drug Monitoring Program) prior to prescribing Opioids?
- How are you educating your patients about realistic pain management goals?
- Do you utilize tools such as the comfort menu and the comfort scale?
- When stat Naloxone is used in the hospital, what communication processes are in place to assure those who need the information have the information?
- Do you have data to know how many opioids are prescribed in the hospital?
- What prescribing protocols have you implemented for Opioids?

### MEASURE

**Numerator:**
- Number of episodes when a reversal agent (e.g. Naloxone) is administered to acute care, skilled nursing facility, swing bed and observation patients prescribed opioids

**Denominator:**
- Number of acute care, skilled nursing facility, swing bed and observation patients prescribed opioids


Last Updated: October 2018
Approximately 300,000 surgical site infections occur each year in the United States.¹

Each surgical site infection is associated with roughly 9.7 additional postoperative hospital days.¹

Surgical site infections are the most common and costly of all hospital-acquired infections, accounting for 20 percent of all hospital-acquired infections.¹

Reduce surgical site infection by 20 percent by 2019.

**BOLD AIM & KEY DRIVERS**

- **Intervention Priorities**
  - Implementation of Project Joints
  - Implementation of evidence-based measures to prevent surgical site infections (administration of antimicrobial prophylaxis according to evidence-based standards and guidelines, proper hair removal, blood glucose control, and perioperative normothermia)
  - Use of a checklist based on the World Health Organization (WHO) checklist to ensure compliance with best practices to improve surgical patient safety
  - Implementation of robust hand hygiene program

- **Monitoring and Surveillance**
  - Identify high-risk, high-volume operative procedures to be targeted for SSI surveillance on the basis of a risk assessment of patient populations, operative procedures performed, and available SSI surveillance data
  - Daily monitoring of surgical site by healthcare provider (nurse, physician, infection preventionist)
  - Implementation of a system for collecting data needed to identify SSIs
  - Perform postoperative surveillance for 30 days; extend the postoperative surveillance period to 90 days for certain procedure categories
  - Use of standardized SSI definitions and NHSN reporting

- **Communication**
  - Development of communication strategy among care providers for post-discharge surveillance of patient
  - Education for surgeons and perioperative personnel through continuing education activities directed at minimizing perioperative SSI risk through implementation of recommended process measures

- **Patient and Family Engagement**
  - Educate patients and their families about SSI prevention
  - Provide instructions and information to patients prior to surgery describing strategies for reducing SSI risk

**MEASURES**

**Process:**
- Surgery patients with perioperative temperature management
- Surgical safety checklist compliance

**Outcome:**
- Colon SSI Rate
- Abdominal Hysterectomy SSI rate
- Hip Replacement SSI Rate
- Knee Replacement SSI Rate

**SOURCE:**
1. Loyola University Health System. “Surgical site infections are the most common and costly of hospital infections: Guidelines for preventing surgical site infections are updated.” ScienceDaily. www.sciencedaily.com/releases/2017/01/170119161551.htm (accessed August 15, 2017).

Last Updated: September 2017
**CASE FOR CHANGE**

14,500 future deaths may occur as a result of the nearly 72 million unnecessary CT scans.¹

1,450 – 2,900 potential number of lives saved nationally with a 10% - 20% reduction in undue exposure to radiation.¹

29,000 future cancers may occur as a result of the nearly 72 million unnecessary CT scans.¹

**BOLD AIM & KEY DRIVERS**

- **Right Study**
- **Right Order**
- **Right Dose**

**KEY LEARNING**

- Engage multidisciplinary teams in the process by creating awareness, training, and education around current evidence-based practice using national guidelines from the American College of Radiology (ACR), Image Wisely, and Image Gently
- Engage and educate patients and families
- Utilize the ACR Dose Index Registry to reduce dose indices and optimize protocols
- Collaborate with the health information technology (IT) department for data extraction reports from electronic health records (EHRs) and building of IT solutions
- Collaborate with Laboratory Services to obtain evidence-based lab solutions (D-dimer levels)
- Develop radiation report cards to benchmark and monitor compliance with best practices
- Engage clinicians (MDs and RNs) in reviewing data
- Larger hospitals can provide guidance to smaller community hospitals regarding protocols if they utilize the same group of radiologists for reading studies; smaller hospitals can show how to get it done quickly
- Collaborate with other hospitals to review protocols and determine best practices

**MEASURES**

**Process:**
- Total CT Dose Capture Compliance Dose length product
- Total CT Dose Capture Compliance Volume
- Total CT Dose Capture Compliance CT Dose Index
- Total CT Dose Capture Compliance Size-Specific Dose Estimate

**Outcome:**
- Abdomen CT – Use of Contrast Material
- Thorax CT – Use of Contrast Material

**Key Learning**

14,500 future deaths may occur as a result of the nearly 72 million unnecessary CT scans.¹

1,450 – 2,900 potential number of lives saved nationally with a 10% - 20% reduction in undue exposure to radiation.¹

29,000 future cancers may occur as a result of the nearly 72 million unnecessary CT scans.¹
RAPID CYCLE INNOVATIONS

**Right Study**
- Adopt a standardized risk stratification tool
- Utilize Wells Score\(^1\), to assess the risk of deep vein thrombosis (blood clot) and as a main component of best practice protocol for ruling out a PE (blood clot in the lung)
- Use D-dimer level results to assess pretest probability of PE
  - A negative D-dimer test will virtually rule out a blood clot. Research indicates the most available D-dimer tests with a negative result will reduce the probability of thrombus disease to less than 1%
  - If the D-dimer reading is high, then further testing is required to confirm the presence of thrombus
  - A normal D-dimer level is <0.5
- Implement IT solutions within the EHRs, including building orders, a risk stratification tool and first generation best practice alerts
- Engage clinicians in workflow decisions in regards to best practice alerts, orders, and risk stratification tools

\(^1\) The Wells Tool applies a numeric score to assess the risk of deep vein thrombosis. It is a validated tool in determining pre-test probability of a PE.

**Right Order**
- Use order sets to assist clinicians in choosing the rationale for exam
- Use scripted IT solutions to assist clinicians in clinical decision making in the form of best practice alerts with team consensus on content
- Build quality bundles within the EHR platform
- Automate and standardize Choosing Wisely\(^*\) and Image Gently\(^*\) through building best practice alerts and decision support tools within each pilot site’s EHR (in collaboration with IT)
- Engage with IT for dose tracking in the EHR
- Report to a Radiation Dose Index Registry
- Utilize a Standardized Nomenclature for CT imaging description

**Right Dose**
- To create awareness, document Dose Length Protocols immediately when DLP numbers are out of range rather than waiting a month to find out that DLP numbers were out of range
- Use data (e.g., Dose Length Product), to identify significant variation from hospital to hospital. Individual hospitals are starting to recognize their own outliers and review these incidents for compliance with protocols
- Compare data to gauge to benchmark, and set dose or radiation reduction goals
- Implement a multi-disciplinary team to review cases of high dose radiation studies and monitor ongoing performance
- Implement appropriate shielding protocols to protect patients from unnecessary radiation when other body parts are being studied
- Review CTDIvol data to identify variation and deviation from CTDIvol protocols for specific tests
- Create a radiation report card to assess each technologist and ensure parameters are followed and correct protocol was applied
- Count Potential High Dose Radiation Imaging Studies

Source:
**BOLD AIM & KEY DRIVERS**

- Intervention Priorities
- Monitoring and Surveillance
- Communication
- Patient and Family Engagement

**CASE FOR CHANGE**

According to the CDC, an estimated 160,000 healthcare-associated pneumonias occur in acute care hospitals in the US, 40% of which were ventilator-associated.1

Patients with ventilator associated pneumonia required prolonged periods of mechanical ventilation, extended hospitalizations, excess use of antimicrobial medications and increased medical costs.1

**Rapid Cycle Innovations**

**Intervention Priorities**

- Implement a robust hand hygiene program
- Use noninvasive ventilation when possible
- Minimize the duration of ventilation
- Perform daily assessment of readiness to wean and use weaning protocols
- Educate healthcare personnel who care for patient undergoing ventilation about VAP/VAE
- Implement evidence-based strategies to prevent aspiration (elevate head of bed, spontaneous awakening and breathing trials, oral care, subglottic suctioning)
- Implement ventilator bundle
- Implement policies and practices for disinfection, sterilization, and maintenance of respiratory equipment that are aligned with evidence-based standards

**Monitoring and Surveillance**

- Conduct daily active surveillance of all mechanically ventilated patients
- Use standardized NHSN definitions for monitoring and surveillance
- Implement a system for documenting information regarding ventilator care and maintenance in the patient record

**KEY LEARNING**

- Engage multidisciplinary teams in the process by creating awareness, training, and education around current evidence-based practice
- Engage and educate patients and families
- Implement care bundles for mechanically ventilated patients

**MEASURES**

**Process:**

- Ventilator bundle compliance

**Outcome:**

- Ventilator-associated condition
- Infection-related ventilator-associated complication
- Possible/probable ventilator-associated pneumonia

**Communication**

- Educate healthcare personnel who care for patient undergoing VAP/VAE

**Patient and Family Engagement**

- Provide education to patients and families about smoking cessation
- Encourage family members and patients to speak up about their care (e.g. handwashing, frequency of oral care for the patient, raising the head of the bed)

**Source:**


**Last Updated:** September 2017
VENOUS THROMBOEMOLISM

CASE FOR CHANGE

BOLD AIM & KEY DRIVERS

- Intervention Priorities
- Monitoring and Surveillance
- Patient Centered

RAPID CYCLE INNOVATIONS

Intervention Priorities
- Assemble an interdisciplinary team and develop an aim statement that reflects your organization’s VTE goals
- Educate and ensure that VTE education is provided at new employee orientation and ongoing education throughout the year (Ex. Monthly staff meetings and competency/skill fairs)

Monitoring and Surveillance
- Distribute provider-level dashboards, allowing providers to see their VTE prophylaxis ordering rates and compare them to other benchmarks

Patient Centered
- Identify possible risk factors for VTE
- Include discussion of patients on warfarin therapy at your daily huddles
- Ensure that patients discharged on warfarin therapy have a scheduled appointment for an INR prior to discharge
- Ensure that patients discharged on warfarin therapy have a scheduled medication management consultation within 7 days of discharge

KEY LEARNING

- Engage multidisciplinary teams in the process by creating awareness, training, and education around current evidence-based practice
- Engage and educate patients and families
- Implement VTE risk-assessment tool to identify those patients at high or low risk for developing VTE
- Incorporate VTE risk-assessments and order sets into electronic health records (EHRs) for ease of use
- Educate providers
- Collaborate across service lines; including Pharmacy, Laboratory Services, etc.
- Measure performance by setting baselines, collecting performance data, reviewing data with staff and adapting systems to improve performance and outcomes

MEASURES

Process:
- VTE appropriate prophylaxis
- Venous thromboembolism warfarin therapy discharge instructions

Outcome:
- Post-operative pulmonary embolism or deep venous thrombosis

Source:

Last Updated: September 2017
VENOUS THROMBOEMBOLISM
POST-OPERATIVE PE OR DVT

CASE FOR CHANGE
Pulmonary embolism and deep vein thrombosis, collectively known as venous thromboembolism, represent a major public health problem that affects 350,000 to 600,000 Americans annually. VTE is primarily a problem of sick or injured patients who are hospitalized or were recently hospitalized, and it is frequently estimated to be among the most common preventable causes of hospital death.1

350,000 to 600,000

FREQUENTLY ASKED QUESTIONS
Q: Where does this data come from?
- The data comes from IPOP/claims data.

Q: Why do the numbers I have differ from the numbers on the HIIN report?
- There are specific inclusions and exclusions that apply. If you would like to access these, please refer to the AHRQ Quality Indicators, PSI #12.

MEASURE
Numerator: 
- Number of Acute Care surgical inpatients with non-POA secondary ICD-9/10 code(s) for DVT or PE

Denominator:
- Number of Acute Care surgical inpatient discharges excluding cases where DVT/PE are present on admission

QUESTIONS TO CONSIDER
- Do you know what your current data reflects for your hospital’s Post-Operative PE and DVT rate?
- How is your facility assessing for VTE risk?
- If a patient is high risk for VTE and is not started on prophylaxis due to the provider’s discretion – is this documented in the EHR?
- Is early mobilization of patients being done as soon as possible?
- Are compression stockings being utilized for appropriate patients?
- If ordered, are they on the patient while in bed and in the chair?
- Do you have protocols and/or standards for VTE prophylaxis prescribing for surgical patients?

Source:
Last Updated: October 2018
Preventing harm caused by unsafe healthcare is a global, national, and local priority. Despite widespread recognition of patient safety as a public health issue since at least 1999, preventable patient harm still occurs in alarming numbers. For years it has been recognized that medical error in United States (U.S.) hospitals was leading to patient deaths.

In 2002, the World Health Organization (WHO) recognized patient safety as a global imperative. That year the Fifty-Fifth World Health Assembly called upon all member nations to take action. In response, WHO launched the World Alliance for Patient Safety in 2004, acknowledging that to tackle patient safety effectively, a campaign involving cultural change and systems-based safety science was necessary. These actions set forward a plan to facilitate learning about why preventable harm events occur and to find solutions that will prevent them in the future.

Collaborative efforts and partnerships have strengthened among healthcare organizations, clinicians, thought leaders, policymaking bodies, and payors that are positioned to incentivize achievement of expected outcomes. Their efforts have been matched by the pioneering spirit of dedicated innovators and researchers, educators, nonprofit/non-governmental advocacy groups, product makers, and activated healthcare consumers. The sum of their efforts has generated substantial evidence that when forces align the collective impact can truly make a difference.

Despite the significant progress, there are still hurdles that have proven to be difficult to jump on the journey to achieving the bold aim of zero harm. Perhaps one of the tallest hurdles is a culturally embedded “deny and defend” paradigm that manifests as a pervasive “wall of silence” following unexpected patient harm. Achieving PfP aims and sustaining the improvement CMS is driving in the U.S. hinges largely on a successful shift to a culture of safety in healthcare dedicated to continuous learning and its spread through collaboration across local, national, and international communities. The CANDOR toolkit is an evidence-based state of the art toolkit for driving and sustaining individual behavior and organizational culture change that optimizes continuous improvement in reducing preventable harm. Developed by innovators with support from CMS federal partner, the Agency for Healthcare Research and Quality (AHRQ), the CANDOR toolkit is designed as a tool that can be used to embed a comprehensive, principled, and systematic approach to responding when unexpected outcomes occur.

In 2015, the State of Iowa enacted innovative legislation designed to advance the uptake of Candor by Iowa hospitals. The law encourages open and honest conversation between patients and providers by limiting the use of statements shared by anyone in subsequent litigation, provided patients and families give consent. Successful implementation of Candor programs in Iowa depends on buy-in and behavior change by physicians and other healthcare leaders, as well as training that challenges and overcomes the normalized paradigm of defensiveness. The advance of CANDOR also depends on upskilling the healthcare workforce in several areas, notably communication during and after unexpected events, as well as event analysis using human factors and cognitive interviewing approaches. Implementation of CANDOR in Iowa and lessons learned along the way will serve as an important resource for all HIINs, as well as policymakers, educators, and patient safety advocates in other U.S. States as well as other countries.

* In the Iowa statute, the term “Candor” is used instead of the all caps acronym “CANDOR” used in the AHRQ toolkit. In this report, we use the acronym CANDOR for consistency except when referring explicitly to the implementation of Candor in Iowa or state of Iowa legislation.

Key Components of the CANDOR approach include:

- Rapid reporting and response to unexpected patient harm
- Early and ongoing, open and honest communication with patients and their loved ones
- Emotional support for provider staff as well as patients and family members
• Event review using human factors theory to maximize understanding and identification of contributory causes and strong solutions to improve processes
• Fair and timely financial and non-financial resolution with apology when the harm is caused by inappropriate care
• Continuous learning and improvement that serves to prevent future harm.

Recommended Team Members
• Hospital Team Lead
• Hospital Quality
• Hospital Executive Leadership
• Physicians
• Chief Medical Officer
• Patient Experience officer
• Risk Manager
• Hospital Insurer
• Hospital Legal Team

Resources
• Candor Workshop Series Video Library
  A comprehensive video library capturing the interactive four-day workshop IHC hosted in 2018.
• Candor Workshop Series Resource Library
  A comprehensive online resource library that accompanies each workshop. Click on the individual workshop links for a full list of resources.
• AHRQ CANDOR Toolkit Introduction
• Iowa Medical Society Candor Resource Guide
  IMS Candor resource guide: developed as a series of educational materials to assist Iowa physicians in putting this new liability protection to work in their clinics.
Diagnostic Error Introduction
Over the past decade, healthcare organizations have worked tirelessly on improving patient safety and quality of care. These efforts have addressed issues such as medication errors, healthcare-associated infections and post-surgical complications. Yet diagnostic error related to quality and safety improvement efforts is less prevalent in the performance improvement community, despite research estimating diagnostic error accounts for 17 percent of preventable errors in hospitalized patients. A systematic review of autopsy studies covering four decades found approximately nine percent of patients experienced a major diagnostic error that went undetected while the patient was alive (Brennan & Newhouse et al 1991). More recent research compiled by Dr. Mark Graber in a 2013 narrative review cited studies, although using different approaches, consistently found diagnostic error incidence to be between 10-15 percent (Graber 2013). In addition to mounting research evidence illuminating the significant opportunity for improvement in reducing diagnostic errors, patients also cite the reduction of diagnostic errors as a high priority. A 2018 report reviewing more than 2 million safety events, root cause analyses and research requests revealed diagnostic errors as the number one patient healthcare concern that should be established as a priority (ECRI Institute, 2018). It is critical that the healthcare community raises its awareness of the magnitude of this problem and the impact it has on the quality and safety of our patients.

There appears to be even some variance in how diagnostic error is defined and a need for “common language” as the healthcare community commits to improvement. Perhaps the easiest way to understand diagnostic error is to consider diagnoses that are delayed, wrong/inaccurate or missed. The most widely accepted definition as defined by The National Academy of Medicine (formerly the Institute of Medicine) is as follows:

Diagnostic error is the failure to:

(a) establish an accurate and timely explanation of the patient’s health problem (s) or
(b) communicate that explanation to the patient

The Diagnostic Process
The diagnostic process is complex and is comprised of a significant number of steps where errors can occur. The process begins from the first symptom or health problem experienced by a patient, continuing through the patient’s engagement with the health system including information gathering, examination, testing, diagnosis and treatment, as well as communication with the patient and care team through outcomes. These errors can arise from cognitive or human failures including unconscious bias, system or process failures, culture lacking emphasis on patient safety issues or any combination of the three. Although the diagnostic process involves many areas of medicine and the health system the key to quality improvement may be in targeting a specific disease, care setting or modality. Inaccurate or delayed diagnosis is one of the most important safety concerns in healthcare.
Resources

- **Clinical Reasoning Toolkit**
  Diagnostic reasoning is fundamental for any clinician. The Clinical Reasoning Toolkit highlights a host of resources to help clinicians and educators better understand, improve, study and teach this essential skill.

- **Patient’s Toolkit for Diagnosis**
  This is a resource to help patients prepare for their doctor’s visit. The toolkit covers preparing for your appointment, symptoms, medications and next steps after your appointment.

- **Improving Diagnosis in Medicine Change Package**
  Developed through clinical practice sharing, organization input and contributions from subject matter experts, patients, and families, it is designed to help users identify the circumstances under which diagnostic errors can occur and engage all team members, especially patients and families. In the package you will find a menu of strategies, change concepts, and specific actionable items that any hospital can implement and case studies that will guide users in adapting tested interventions and building the infrastructure and support necessary to develop a learning organization capable of responding to adverse events related to diagnosis, thus reducing the risk for harm to patients.

- **Reducing Diagnostic Error Related to the Laboratory Testing Process Change package**
  Developed by IHC in 2018, this change package is proposed for hospitals in an effort to reduce diagnostic error related to the laboratory testing process through laboratory-driven systems change. It outlines best practices and scalable concepts for implementation that can improve the diagnostic process and reduce errors, thereby reducing harm to patients. A table of strategies and change concepts with specific actionable items that hospitals of all sizes can choose to adapt and implement is included.