Plan-Do-Study-Act (PDSA)

PDSA is part of the IHI Model for Improvement, which is a framework to guide improvement work. This is a simple, yet powerful tool for accelerating improvement. This model is not meant to replace change models that organizations may already be using, but rather to accelerate improvement.

**Plan**
- Define objective, questions, goals; Plan Who? What? Where? When?; Plan data collection to answer those questions.

**Do**
- Carry out the plan to collect the data and answer the questions; Begin analysis of the data.

**Study**
- Complete the analysis of the data; Compare the data to predictions; Summarize what is learned.

**Act**
- Plan the next cycle (if needed); Decide whether the change can be implemented.

**Model for Improvement**

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

**DMAIC**

A Six Sigma Initiative Define, measure, analyze, improve, and control (DMAIC) is a data driven quality strategy used to improve processes. The letters in the acronym represent the five phases that make up the process. This is part of a Six Sigma initiative, but in general can be implemented as a standalone quality improvement procedure or as part of other process improvement initiatives such as lean.

**Define**
- Launch Team
- Establish Charter
- Plan Project
- Gather the Voice of the Customer
- Plan for Change

**Measure**
- Document the Process
- Collect Baseline data
- Narrow Project Focus

**Analyze**
- Generate Solutions
- Evaluate Solutions
- Optimize Solutions
- Pilot
- Plan and Implement

**Improve**
- Analyze Data
- Identify Root Cause
- Identify and Remove Wastes

**Control**
- Control the Process
- Validate Project Benefits
Rapid Cycle Improvement Projects
Rapid-cycle improvement is a “quality improvement method that identifies, implements and measures changes made to improve a process or a system.” Rapid-cycle improvement implies that changes are made and tested over periods of three or months or less.

HQIC Process Improvement
• Provide education and project management assistance following the IHI model for improvement.
• Learning cohorts typically last 3-5 months and follow a rapid cycle improvement methodology to make quick and meaningful changes.
• Process Improvement cycles (PDSA or DMAIC) are used to standardize improvement.
• Sustainability practices are reviewed and implemented as well as followed up on approximately 6 months after the completion of a learning cohort.

1. Improve behavioral health outcomes with a focus on reducing opioid misuse.
2. Increase patient safety by reducing all-cause harm by preventing ADEs and C. difficile.
3. Increase quality of care transitions with a focus on reducing hospital readmissions.

Hospital Quality Improvement Contractor
• CMS funded quality grant focused on decreasing harm
• NHA is partnering with Telligen QI Connect on the HQIC grant
• Goal: to improve the effectiveness, efficiency, economy, and quality of healthcare services delivered
  o Reduce opioid related adverse events including deaths by 7%
  o Reduce all-cause harm by 9%
  o Reduce readmissions by 5%
• 2019 baseline; 2021 – 2024 improvement period
• Data Collection (3 sources of data): Medicare Fee-for-Service (FFS), National Health Safety Network (NHSN), and Self-Reported.

NHA Quality Project Support
Project management is an art and a science – doing what you have never done before or changing a process that has been in place. Process implementation and process improvement are critical to the evolution of health care organizations.
However, project management can also be time-consuming and overwhelming. Whether you are attempting to rescue a project that is off course or developing new plans – let the NHA Quality team assist you in this journey.

*At no expense to HQIC participants, the NHA Quality Team will come on-site to assist you in the barriers you are encountering with your project. This could include but is not limited to:

CREATE PROJECT INFRASTRUCTURE
• AIM Statements
• Baselines and Goals
• Change Initiatives
• Testing
• Data Collection

EDUCATE THE TEAM
• Let an outside voice help sell the “why behind the what”

SUSTAINABILITY PLANS
• On-site Auditing
• Team Coaching

Hospital Quality Improvement Program
• Provides targeted, no-cost quality improvement assistance and support to rural, critical access, and hospitals serving vulnerable populations in several states across the country
• Supports the specific needs of hospitals during the COVID-19 pandemic and other public health emergencies
• Addresses the unique needs of hospital staff and patient populations in rural communities
• Utilizes quality improvement science to positively impact patient safety initiative INSIDE hospital walls

QIN-QIO
• Provides targeted, no-cost quality improvement assistance and support to nursing homes and community care partners
• Supports the specific needs of nursing homes during the COVID-19 pandemic and other public health emergencies
• Addresses the unique needs of staff and patients within nursing homes and outpatient settings in both rural and urban communities
• Utilizes quality improvement science to positively impact patient safety initiatives OUTSIDE hospital walls
**Medicare Beneficiary Quality Improvement Project**

- Quality improvement activity under the Medicare Rural Hospital Flexibility program of the Health Resources and Services Administration’s (HRSA) Federal Office of Rural Health Policy (FORHP).

- Goal of MBQIP: improve the quality of care provided in critical access hospitals, by increasing quality data reporting by CAHs and then driving quality improvement activities based on the data.

Historically, CAHs have been exempt from national quality improvement reporting programs due to challenges related to measuring improvement in low volume settings and limited resources.

Some CAHs are not only participating in national quality improvement reporting programs but are excelling across multiple rural relevant topic areas.

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**Medicare FFS Claims**

- Opioid Prescribing Practices
- Opioid Related Adverse Drug Events
- Glycemic Related Adverse Drug Events
- Anticoagulation Related Adverse Drug Events
- Postoperative Sepsis Rate
- Sepsis Mortality
- Pressure Ulcer Rate
- All-Cause Readmission Rate
- Unplanned All-Cause 30-Day Readmission Rate
- Falls
- PE/DVT Rate

**NHSN or Self-Reported**

- Catheter Utilization Ratio
- Catheter Associated Urinary Tract Infection Rate (CAUTI)
- Central Line Utilization Ratio
- Central Line Associated Blood Stream Infection Rate (CLABSI)
- Methicillin-Resistant Staphylococcus Aureus Rate (MRSA)
- Clostridium Difficile Rate (C. Diff)
- Surgical Site Infection Rate (SSI)

**Self-Reported**

- Glycemic Management Adverse Drug Events
- Opioid Related Adverse Drug Events
- Falls
- Readmissions

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**Quality Data Reporting Channels for MBQIP Required Measures**

- CMS Inpatient Measures (Submitted on CART) or selected tool: ED-2
- CMS Outpatient Measures (Submitted through QualityNet or selected tool): OP-2, OP-3, OP-18
- HCASP Survey (Vendor or self-administered)
- NHSN
- ABX Annual Facility Survey
- State Flex Coordinator
- EDTC**

**Notes:**

- CMS Alternate and Reporting Tool (Hospital Consumer Assessment of Healthcare Providers and Systems
- National Healthcare Safety Network, Aphthous Stomatitis (Dysgeusia) Department Tobacco Consumption
- **EDTC:** 2 and after 04/2014 data submission.
## Patient Safety/Inpatient

**Core Measures**

**HCP/IMM-3**

Influenza Vaccination Coverage Among Healthcare Personnel (HCP)

**Antibiotic Stewardship:**

Measured via CDC NHSN Annual Facility Survey

### Additional Measures

Healthcare-Associated Infections
- CLABSI, CAUTI, MRSA, CDI, SSIs

Perinatal Care
- PC-01: Elective Delivery
- PC-05: Exclusive Breast Milk Feeding (eCQM)

Falls
- Falls with Injury
- Patient Fall Rate
- Screening for Future Fall Risk

Adverse Drug Events
- Opioids
- Glycemic Control
- Anticoagulant Therapy

Patient Safety Culture Survey

Inpatient Influenza Vaccination
eCQMs
- VTE-1: Venous Thromboembolism Prophylaxis
- Safe Use of Opioids: Concurrent Prescribing
- ED-2: Median Admit Decision Time to ED Departure Time for Admitted Patient

Find more tools and resources at:
nebraskahospitals.org

## Patient Engagement

**Core Measures**

**HCAHPS**

The HCAHPS survey contains 21 patient perspectives on care and patient rating items that encompass 8 key topics

### Additional Measures

Emergency Department Patient Experience

## Outpatient

**Core Measures**

**HCAHPS**

AMI
- OP-2: Fibrinolytic Therapy Received within 30 minutes
- OP-3: Median Time to Transfer to another Facility for Acute Coronary Intervention

**ED Throughput**

- OP-18: Median Time from ED Arrival to ED Departure for Discharged ED Patients
- OP-22: Patient Left Without Being Seen

### Additional Measures

Chest Pain/AMI
- Aspirin at Arrival
- Median Time to ECG

**ED Throughput**
- Door to Diagnostic Evaluation by a Qualified Medical Professional

## Care Transitions

**Core Measures**

Emergency Department Transfer Communication (EDTC)

### Additional Measures

Discharge Planning
Medication Reconciliation

**Claims-Based Measures**

- Readmissions
- Complications
- Hospital Return Days
<table>
<thead>
<tr>
<th>Measure(s)</th>
<th>Nebraska Average</th>
<th>Nebraska Goal</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Reported</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Nebraska Glycemic Management Adverse Drug Event | 2.38 | 2.01 | # of discharges in the denominator, with one or more glycemic ADEs, including deaths
# of acute care discharged patients |
| Nebraska Opioid Related Adverse Drug Event | 0.30 | 0.28 | # of discharges in the denominator, with one or more opioid ADEs, including deaths
# of acute care discharged patients |
| Nebraska Fall Rate | 3.97 | 3.76 | Total # of assisted and unassisted falls with or without injury among bedded patients
# of patient days |
| Nebraska All-Cause Readmission Rate | 4.71 | 4.53 | Inpatients returning as an acute care inpatient within 30 days of an inpatient discharge, to any facility with the same state
All patients discharged from the hospital (excluding discharged due to death) |
| **NHSN or Self-Reported** | | | |
| Urinary Catheter Utilization Ratio | 14.50 | 11.86 | Total number of indwelling urinary catheter days for bedded inpatient care locations under surveillance
Total number of patient days for bedded inpatient care locations |
| Catheter-Associated Urinary Tract Infection Rate | 0.17 | 0.53 | Total number of observed healthcare associated CAUTI among patients in bedded inpatient care locations
Total number of indwelling catheter days for each location under surveillance for CAUTI during the data period |
| Clostridioides difficile Rate | 0.02 | 1.08 | Total number of observed hospital-onset C. difficile lab identified events among all inpatients facility-wide
Patient days (facility-wide) |
| Central Line-Associated Blood Stream Infection (CLABSI) Rate | 0.07 | 0.64 | Total number of observed healthcare associated CLABSI among patient in bedded inpatient care locations
Total number of central line days for each location under surveillance for CLABSI during the data period |
| Central Line Utilization Ratio | 12.30 | 10.41 | Total number of central line days for bedded inpatient care locations under surveillance
Total number of patient days for bedded inpatient care locations under surveillance |
| Methicillin-resistant Staphylococcus aureus (MRSA) Rate | 0.08 | 0.06 | Total # of observed hospital-onset unique blood source MRSA lab identified events among all inpatients in the facility
Total patient days |
| Surgical Site Infection Rate Total Hip Replacement | 1.07 | 0.12 | Total # of observed surgical site infections based on CDC NHSN definition
# of specific operative procedures included in the selected NHSN operative procedure category |
| Surgical Site Infection Rate Total Knee Replacement | 1.21 | 1.35 | Total # of observed surgical site infections based on CDC NHSN definition
# of specific operative procedures included in the selected NHSN operative procedure category |
| Surgical Site Infection Rate Colon Surgeries | 5.12 | 3.61 | Total # of observed surgical site infections based on CDC NHSN definition
# of specific operative procedures included in the selected NHSN operative procedure category |
| **HHS Protect** | | | |
| Healthcare Personnel COVID-19 Vaccination Rate | 80.94 | | Current healthcare personnel who have received a completed series of a COVID-19 vaccination or a single-dose vaccination
Total # of current healthcare personnel |
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<tr>
<td>Adverse Drug Event Rate</td>
<td>0.39</td>
<td>0.43</td>
<td># of discharges in the denominator, with one or more Adverse Drug Events # of acute care discharged patients</td>
</tr>
<tr>
<td>Anticoagulation Related Adverse Drug Event</td>
<td>0.09</td>
<td>0.09</td>
<td># of discharges in the denominator, with one or more anticoagulation ADEs, including deaths # of acute care discharged patients</td>
</tr>
<tr>
<td>Glycemic Management Adverse Drug Event</td>
<td>0.01</td>
<td>0.02</td>
<td># of discharges in the denominator, with one or more glycemic ADEs, including deaths # of acute care discharged patients</td>
</tr>
<tr>
<td>Opioid Related Adverse Drug Event</td>
<td>0.30</td>
<td>0.34</td>
<td># of discharges in the denominator, with one or more opioid ADEs, including deaths # of acute care discharged patients</td>
</tr>
<tr>
<td>Opioid Prescribing Practices</td>
<td>0.09</td>
<td>0.09</td>
<td>Patients discharged (inpatient, ED, and OBS) who filled a prescription on the date of discharge or within 7 days after hospital discharge, for an opioid &gt;90 MME/Day, prescribed by the attending or operating NPI. Total discharged patients per month (inpatients, ED, OBS)</td>
</tr>
<tr>
<td>Falls</td>
<td>0.01</td>
<td>0.07</td>
<td>Total # of assisted and unassisted falls with or without injury among bedded patients # of patient days</td>
</tr>
<tr>
<td>Pressure Ulcer Rate Stage 3+</td>
<td>0.02</td>
<td>0.02</td>
<td>Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary diagnosis codes for pressure ulcer and any secondary diagnosis codes for pressure ulcer stage III or IV (or unstageable) Surgical or medical discharges</td>
</tr>
<tr>
<td>All Cause Readmission Rate</td>
<td>11.94</td>
<td>11.18</td>
<td>Inpatients returning as an acute care inpatient within 30 days of date of an inpatient discharge, to any facility with the same state All Medicare patients discharged from the hospital (excluding discharged due to death)</td>
</tr>
<tr>
<td>All Cause Unplanned Readmissions</td>
<td>11.19</td>
<td>10.56</td>
<td>Inpatients returning as an acute care inpatient within 30 days of date of an inpatient discharge, to any facility, with the exception of certain planned admissions Patients, age 65+, discharged alive from the hospital with continuous Medicare FFS Coverage</td>
</tr>
<tr>
<td>Post-Operative Sepsis Rate</td>
<td>1.00</td>
<td>0.40</td>
<td>Discharges among cases meeting the inclusion and exclusion rules for the denominator, with any AHRQ designated secondary ICD-10 diagnosis codes for sepsis Elective surgical discharges for patients ages 18 years and older, with any listed ICD-10-PCS procedure codes for an operating room procedure</td>
</tr>
<tr>
<td>Sepsis Mortality Rate</td>
<td>22.75</td>
<td>18.76</td>
<td>Patient discharges in the denominator where the patient died within 30 days of discharge Medicare FFS hospital inpatient discharges for patients ≥18 yrs of age, with a diagnosis of sepsis in any position</td>
</tr>
<tr>
<td>Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate</td>
<td>0.51</td>
<td>0.37</td>
<td># of patients meeting inclusion and exclusion rules for the denominator, with a secondary ICD-10 CM diagnosis codes for proximal deep vein thrombosis or a secondary ICD-10 CM diagnosis code for pulmonary embolism All surgical discharges age 18 and older defined by specific DRGs or MS-DRGs and a procedure code for an operating room procedure</td>
</tr>
<tr>
<td>Measure ID</td>
<td>Description</td>
<td>MBQIP Domain</td>
<td>Reported To</td>
</tr>
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<tr>
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<td>April 1 – June 30</td>
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<td>July 1 – Sep 30</td>
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<td>Oct 1 – Dec 31</td>
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<tr>
<td></td>
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<td>Jan 1 – Mar 31</td>
</tr>
<tr>
<td>Population &amp; Sampling</td>
<td>Population &amp; Sampling Submission</td>
<td>Inpatient and Outpatient</td>
<td>QualityNet via Secure Log in</td>
</tr>
<tr>
<td>HCP/ IMM-9</td>
<td>Influenza vaccination coverage among health care personnel</td>
<td>Patient Safety/ Inpatient</td>
<td>NHSN</td>
</tr>
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<td>Antibiotic Stewardship</td>
<td>CDC NHSN Annual Facility Survey</td>
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<td>NHSN</td>
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<td>HCAHPS</td>
<td>Hospital Consumer Assessment of Healthcare Providers and Systems</td>
<td>Patient Engagement</td>
<td>QualityNet via Vendor</td>
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<td>EDTC</td>
<td>Emergency Department Transfer Communication</td>
<td>Care Transitions</td>
<td>As directed by state Flex program</td>
</tr>
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<td>OP-2</td>
<td>Fibrinolytic therapy received within 30 minutes</td>
<td>Outpatient</td>
<td>QualityNet via Secure Log in</td>
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<tr>
<td>OP-3</td>
<td>Median time to transfer to another facility for acute coronary intervention</td>
<td>Outpatient</td>
<td>QualityNet via Secure Log in</td>
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<td>OP-18</td>
<td>Median time from ED arrival to ED departure for discharged ED patients</td>
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<td>QualityNet via Secure Log in</td>
</tr>
<tr>
<td>OP-22</td>
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