Chartbook Section 9

Minnesota Statewide Quality Reporting and Measurement System
Background

• Minnesota’s Health Reform Law, enacted in 2008, requires the Commissioner of Health to establish a standardized set of quality measures for health care providers across the state. This set of measures is known as the Minnesota Statewide Quality Reporting and Measurement System (SQRMS).

• MDH updates the measure set every year, after seeking public comments and recommendations from the community.

• Physician clinics and hospitals are required to report quality measures annually. Statewide data collection began in 2010. At this point, more than 1,500 clinics and over 130 hospitals participate in SQRMS.

• This slide deck is part of Minnesota’s Health Care Markets Chartbook, an annual review of key metrics in health care access, coverage, market competition and health care costs (MN Statutes, Section 144.70)
Contents: Selected Hospital Quality Measures

• **Optimal Diabetes Care**
• **Optimal Vascular Care**
• Adult Asthma: **Optimal Asthma Control** and **Asthma Education and Self-Management**
• Child Asthma: **Optimal Asthma Control** and **Asthma Education and Self-Management**
• **Colorectal Cancer Screening**
• **Depression Remission at Six Months**
• **Adolescent Mental Health and/or Depression Screening**
• **Spinal Surgery: Lumbar Fusion**
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Contents: Selected Hospital Quality Measures

• Hospital Value-Based Purchasing Total Performance Score

• Hospital-Acquired Condition Reduction Program Score

• Hospital Readmissions Reduction Program Excess Readmission Score

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Contents: Additional Resources

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• Resources
Clinic Quality Measures
The percentage of diabetes patients, ages 18-75, who met **ALL** of the following **five goals:**

1) Blood sugar control
2) Blood pressure control
3) Statin use, if needed
4) Daily aspirin use, if needed
5) No tobacco use
4 ½ out of every 10 diabetic patients received optimal care.

The 2017 statewide optimal care rate was 45%.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
The percentage of diabetes patients that met all five goals was 45% in 2017. A greater share of patients met individual goals. For example, patients had a very high rate of daily aspirin use. The rate of blood sugar control was notably lower than the rates of other individual goals.

To be included in the statewide optimal rate, patients had to meet all five goals.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The statewide optimal diabetes care rate is lower than individual component rates because patients had to meet all five goals to have optimal diabetes care. As shown below, many patients did not meet one or more optimal diabetes care goals.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Approximately 10,000 more patients were included in the Optimal Diabetes Care measure in 2017 compared to 2016. The statewide rate of patients with optimal diabetes care remained constant at 45%.

There were 576 reporting clinics in 2016 and 581 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
In 2017, Medicare patients had the highest optimal care rate at 51%, followed by patients with commercial insurance at 45%.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
In 2017, compared to 2016, the share of clinics that delivered optimal diabetes care to more than 50% of their patients increased by two percentage points, from 25% to 27%.

There were 576 reporting clinics in 2016 and 581 in 2017.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
The percentage of ischemic vascular disease patients, ages 18-75, who met **ALL** of the following **four goals**: 

1) Blood pressure control 
2) Statin use, if needed 
3) Daily aspirin use, if needed 
4) No tobacco use
6 out of every 10 vascular patients received optimal care.

The 2017 statewide optimal care rate was 61%.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
The percentage of vascular patients who met all four goals is 61%. A greater share of patients met individual goals. Patients had very high rates of daily aspirin use and statin use.

To be included in the statewide optimal rate, patients had to meet all of the above goals.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
The statewide optimal vascular care rate is lower than individual component rates because patients had to meet all four goals to have optimal vascular care. As shown below, many patients did not meet one or more optimal vascular care goals.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
In 2017, the statewide optimal care rate declined slightly from 62% in 2016 to 61%. Over the same period, the total patient population included in the optimal vascular care measure declined from 164,801 to 154,987.

There were 582 reporting clinics in 2016 and 594 in 2017.
Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Optimal care rates for patients with commercial insurance and Medicare were notably higher than those of MHCP and self-pay/uninsured patients in both years.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The share of clinics that delivered optimal vascular care to more than 50% of their patients remained constant from 2016 to 2017 at 76%. The share of clinics that delivered optimal care to over 60% of their patients increased by 5 percentage points from 2016 to 2017.

There were 582 reporting clinics in 2016 and 594 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Optimal Asthma Control: The percentage of asthma patients, ages 18-50 or 5-17, who met the following two goals:

1) Asthma under control
2) Asthma at low risk of worsening

Asthma Education & Self Management: The percentage of asthma patients, ages 18-50 or 5-17, who have been educated about their condition and have a written asthma self-management plan

Optimal Asthma Control Measure steward: MN Community Measurement
Asthma is stratified by age, 5-17 for children and ages 18-50 for adults.

SQRMS has always measured three components of asthma care quality: control, risk, and education. Originally, these components were included in a composite measure called Optimal Asthma Care. Beginning with 2014 service dates, the measure steward, MN Community Measurement, removed the education component and changed the name of the composite measure to Optimal Asthma Control.

Beginning in 2017, the measurement period from the fiscal year (July – June) to the calendar year (January – December).
5 out of every 10 adult asthma patients had optimal control.

The 2017 statewide optimal control rate was 51%.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
Adult Asthma Education and Self-Management Statewide Rate

2 ½ out of every 10 adult asthma patients had asthma education and a self-management plan.

The 2017 statewide optimal care rate was 26%.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
The percentage of adult asthma patients that met both goals was 51%, and a greater share of patients met individual goals. Nearly two-thirds of all patients were at low risk of their asthma worsening.

To be included in the statewide optimal rate, patients had to meet both of the above goals.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
The statewide optimal rate was 50% in 2016 and it remained relatively constant at 51% in 2017. An additional 2,294 patients had optimal asthma control in 2017 as compared to 2016.

There were 619 reporting clinics in 2016 and 631 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
In 2016, the statewide optimal rate was 26%, and in 2017 it remained relatively constant at 27%. An additional 910 patients had asthma education and a self-management plan in 2017 as compared to 2016.

There were 619 reporting clinics in 2016 and 631 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Optimal care rates for patients with commercial insurance were higher than rates for patients with other insurance types.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
As in 2016, the rate of asthma education and self-management among adult patients was similar across insurance types in 2017. Rates increased by 1 percentage point from 2016 to 2017 for each insurance type except MHCP.
In 2017, compared to 2016, the share of clinics that delivered optimal asthma control to more than 50% of their patients remained relatively constant at 49%.

There were 619 reporting clinics in 2016 and 631 in 2017.
Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
In 2017, compared to 2016, the share of clinics that delivered optimal asthma education and self-management to more than 50% of their patients remained relatively constant at 23%.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Adult Asthma Components

- Over half of adult asthma patients had their asthma under control from 2013 to 2017.
- Two-thirds or more of patients were at low risk of their asthma worsening.
- The rate of patients with an asthma education plan declined each year between 2013 and 2016 to a low of 26%, where it remained in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Note that established patient criteria changed in 2016 and the number of patients in the measure increased. To provide context on the impact of removing the education/self-management component separation and changing the established patient criteria, we have included five years of data.

Summary of graph

- 2013
- 2014
- 2015
- 2016
- 2017

Asthma education plan removed from composite measure
6 out of every 10 child asthma patients had optimal control

The 2017 statewide optimal control rate was 58%.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
Child Asthma Education and Self-Management Statewide Rate

4 ½ out of every 10 child asthma patients had asthma education and a self-management plan.

The 2017 statewide optimal control rate was 47%.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
The percentage of child asthma patients that met both goals was 58%, and a greater share of patients met individual goals. In fact, 70% of patients were at low risk of their asthma worsening.

To be included in the statewide optimal rate, patients had to meet both of the above goals. 

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
In 2016, the statewide rate of optimal asthma control among child asthma patients was 57%, and it remained relatively constant at 58% in 2017. Over the same period, the number of children with asthma that received care increased by over 2,000 patients.

There were 580 reporting clinics in 2016 and 590 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The statewide rate of patients with asthma education and a self-management plan remained relatively constant at 47% in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The rate of optimal asthma control was 10 percentage points higher among patients with commercial insurance than among patients with either MHCP or self-pay/uninsured in 2017.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program. Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
In 2017, the asthma education and self-management rate increased slightly among patients of all insurance types except those that were self-pay/uninsured, whose rate declined by four percentage points to 37%.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The share of clinics that delivered optimal asthma control to more than 50% of their child asthma patients increased by nine percentage points from 48% to 57% between 2016 and 2017.

There were 580 reporting clinics in 2016 and 590 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The share of clinics that delivered optimal asthma education and self-management to more than 50% of their patients increased from 28% to 32% between 2016 and 2017. The share of clinics with optimal care rates that were at or below 10% declined by 4 percentage points.

There were 580 reporting clinics in 2016 and 590 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Child Asthma Components

- In 2016, the patient population included in the measure increased and all components dropped by over 10% compared to 2015.
- The rate of patients meeting individual component goals remained relatively constant between 2016 and 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Note that established patient criteria changed in 2016 and the number of patients in the measure increased. To provide context on the impact of removing the education/self-management component separation and changing the established patient criteria, we have included five years of data.

Summary of graph
Colorectal Cancer Screening

The percentage of patients ages 50-75 who are up to date with appropriate colorectal cancer screening exams, which include ANY of the following methods:

1) Colonoscopy within the measurement period or prior 9 years
2) Sigmoidoscopy or CT colonography within the measurement period or prior 4 years
3) FIT DNA test during the measurement period or prior two years
4) Stool blood test within the measurement period

Beginning in 2017, the measurement period changed from the fiscal year (July – June) to the calendar year (January – December).

Definitions:
(1) Colonoscopy: An exam used to detect changes or abnormalities in the large intestine (colon) and rectum.
(2) Sigmoidoscopy: An exam used to evaluate the lower part of the large intestine (colon).
(3) CT colonography: An exam used to obtain a virtual interior view of the colon
(4) FIT-DNA test: A lab test used to check stool samples for hidden blood and/or altered DNA, which may be indicate colon cancer or polyps.
(5) Stool blood test: A lab test used to check stool samples for hidden blood.

The USPSTF recommends regular colorectal cancer screening for adults ages 50-75 using the tests described above.

Measure steward: MN Community Measurement
Summary of graph
Colorectal Cancer Screening
Statewide Rate

7 out of every 10 adult patients were screened for colorectal cancer

The 2017 statewide screening rate was 71%.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
Summary of graph
Between 2016 and 2017, the statewide screening rate declined slightly from 73% to 71%. Approximately 120,000 fewer patients were included in the measure in 2017.

There were 638 reporting clinics in 2016 and 637 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Colorectal cancer screening rates for patients with commercial insurance and Medicare were notably higher than rates for MHCP and self-pay/uninsured patients in both 2016 and 2017.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The share of clinics that screened more than 50% of their patients for colorectal cancer remained relatively constant between 2016 and 2017. In 2017, 86% of reporting clinics screened over half of their patients.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
The percentage of patients with Major Depression or Dysthymia who reached remission six months (+/- 30 days) after an initial visit.

To achieve remission, patients must score below 5 on the Patient Health Questionnaire-9 (PHQ-9) tool.

Patients are not counted as having reached remission if they do not complete a PHQ-9 six months (+/- 30 days) after their initial visit.

Measure steward: MN Community Measurement
National Quality Forum# 0711
1 out of every 10 depression patients achieved remission in six months.

The 2017 statewide rate was 8%.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
In 2017, compared to 2016, the number of patients included in the measure increased by more than 17,500. The remission rate remained constant at 8%.

There were 575 reporting clinics in 2016 and 621 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Patients with moderate depression had the highest remission rate six months after the initial visit, although patients in all severity categories have low remission rates. The remission rates for patients at each severity category remained constant from 2016 to 2017.

Severity is determined by initial PHQ-9 scores.
Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Between 2016 and 2017, the share of clinics where more than 10% of depression patients achieved remission at six months increased from 22% to 27%.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The percentage of patients 12 – 17 years of age who were screened for mental health and/or depression.

Patients may be screened using any of the following tools: Patient Health Questionnaire – 9 item version (PHQ-9); PHQ-9M Modified for Teens and Adolescents; Kutcher Depression Scale (KADS); Beck Depression Inventory II (BDI-II); Beck Depression Inventory Fast Screen (BDI-FS); Child Depression Inventory (CDI); Child Depression Inventory II (CDI-2); Patient Health Questionnaire – 2 item version (PHQ-2); Pediatric Symptom Checklist – 17 item version (PSC-17) - parent version; Pediatric Symptom Checklist – 35 item (PSC-35) - parent version; Pediatric Symptom Checklist – 35 item Youth Self-Report (PSC Y-SR); Global Appraisal of Individual Needs screens for mental health and substance abuse (GAIN-SS).

Measure steward: MN Community Measurement
Adolescent Mental Health Screening
Statewide Rate

8 ½ out of every 10 adolescent patients were screened for mental health issues or depression.

The 2017 statewide screening rate was 83%.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
An additional 7,000 adolescent patients were screened for mental health/depression in 2017 compared to 2016. Over the same period, the statewide screening rate increased from 80% to 83%.

There were 573 reporting clinics in 2016 and 580 in 2017.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Screening rates increased between 2016 and 2017 for patients with all insurance types except self-pay/uninsured. Commercial patients had the highest screening rate in 2017.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
As of 2017, over half of all reporting clinics (56%) screen more than 80% of their adolescent patients for mental health or depression. Between 2016 and 2017, the share of clinics that screened more than half of their patients increased by six percentage points, to 78%.

There were 573 reporting clinics in 2016 and 580 in 2017.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
Summary of graph
Spinal Surgery: Lumbar Fusion
Functional Status, Pain, and Mental Health Status

The average change (preoperative to 1 year post-operative) in functional status, pain, or mental health status, for adult patients who had lumbar spine fusion surgery.

• **Functional status** is measured using the Oswestry Disability Index (ODI), which asks patients about 10 topics, including ability to lift, walk, sit and stand.

• **Pain** is measured using the Visual Analog Scale (VAS) for leg and back pain. VAS asks patients to rate their pain on a 1 – 10 scale.

• **Mental health status** is measured with the PROMIS 10, which asks patients about their quality of life, mood, social satisfaction, and emotional problems.

Patients complete tests 3 months before surgery and at 1 year (+/- 3 months) after surgery to measure change. A positive average change indicates that patients had improved functional status, mental health status, or less pain after surgery.
The share of lumbar fusion patients that received pre- and post-surgery ODI tests increased from 41% to 45% between 2015 and 2016. Over the same period, the total number of reported lumbar fusion surgery patients increased by 165.

<table>
<thead>
<tr>
<th>Year</th>
<th>Patients Who Received Pre- and Post-Surgery ODI</th>
<th>Patients Who Did Not Receive Pre- and Post-Surgery ODI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>776</td>
<td>1,136</td>
</tr>
<tr>
<td>2016</td>
<td>935</td>
<td>1,142</td>
</tr>
</tbody>
</table>

At least three eligible medical groups—Midwest Spine & Brain Institute, Twin Cities Orthopedics, and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full lumbar fusion patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Average change in functional status was less varied across medical groups in 2016 than in 2015 (not shown). The largest average functional status improvement was 25.6 and the smallest average improvement was 14.5, from a possible range of -100 to 100. The statewide average improvement was 19.4.

In report year 2018, 13 medical groups that provided lumbar fusion surgeries in 2016 reported some data to MDH; of these, 9 medical groups provided patients with pre-and post-surgery ODI tests.

At least three eligible medical groups—Midwest Spine & Brain Institute, Twin Cities Orthopedics, and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full lumbar fusion patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Commercially insured patients continued to have the highest average functional status improvement in 2016, followed by patients with Medicare. However, MHCP patients saw the greatest increase in average functional status from 2015 to 2016.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program. Self-pay/uninsured rates are not displayed due to small patient counts.

At least three eligible medical groups—Midwest Spine & Brain Institute, Twin Cities Orthopedics, and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full lumbar fusion patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Spinal Surgery: Lumbar Fusion
Average Decrease in Back and Leg Pain
Stratified by Insurance Type

Commercial and Medicare patients had larger decreases in back and leg pain after surgery than MHCP patients. Average decreases represent the difference in patient leg and back pain ratings (0-10) before and after surgery.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program. Self-pay/uninsured rates are not displayed due to small patient counts.

At least three eligible medical groups—Midwest Spine & Brain Institute, Twin Cities Orthopedics, and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full lumbar fusion patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Spinal Surgery: Lumbar Fusion
Average Change in Mental Health Status
Stratified by Insurance Type

Patients with commercial insurance experienced the greatest improvement in mental health status after surgery in 2016, followed by Medicare patients. Average mental health improvement increased between 2015 and 2016 for all insurance types (scale: -5 to 5).

Self-pay/uninsured rates are not displayed due to small patient counts.
At least three eligible medical groups—Midwest Spine & Brain Institute, Twin Cities Orthopedics, and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full lumbar fusion patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The average change (preoperative to 1 year post-operative) in functional status or mental health status for adult patients who had primary total knee replacement surgery.

- **Functional status** is measured using the Oxford Knee Score (OKS), which asks patients about 12 topics, including ability to kneel, walk, sit, and complete everyday tasks.
- **Mental health status** is measured with the PROMIS 10, which asks patients about their quality of life, mood, social satisfaction, and emotional problems.

Patients complete tests 3 months before surgery and at 1 year (+/- 3 months) after surgery to measure change. A positive average change indicates that patients had improved functional status, mental health status, or less pain after surgery.
The share of patients that received pre- and post-surgery OKS tests after primary total knee replacement surgery remained relatively constant at 31% in 2016. The majority of patients are not receiving functional status tests at the appropriate times before and after surgery.

At least two eligible medical groups—Twin Cities Orthopedics and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full primary total knee replacement patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Average change in functional status after total knee replacement varied across medical groups. Out of a possible range of -48 to 48, the largest average improvement in functional status was 25, and the smallest average improvement in functional status was 1.5. The statewide average improvement in functional status was 16.4. This indicates that on average, patients had improved functional status after surgery.

In report year 2018, 38 medical groups that provided primary total knee replacement surgeries in 2015 reported data to MDH; and of these, 31 medical groups provided patients with pre- and post-surgery OKS tests.

At least two eligible medical groups—Twin Cities Orthopedics and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full primary total knee replacement patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Commercial, Medicare, and MHCP patients had similar improvements in functional status after surgery in 2016.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program. Results for self-pay/uninsured patients are not displayed due to small patient counts. At least two eligible medical groups—Twin Cities Orthopedics and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full primary total knee replacement patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Patients experienced modest improvements in mental health status after surgery regardless of insurance type. The average statewide change remained relatively constant at 1.7 in 2016 (scale: -5 to 5).

Results for self-pay/uninsured patients are not displayed due to small patient counts.

At least two eligible medical groups—Twin Cities Orthopedics and St. Cloud Orthopedics—did not report procedures or results to MDH; therefore, measure results may not be representative of the full primary total knee replacement patient population.

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Hospital Quality Measures
The Hospital Value-Based Purchasing (VBP) Program is a Centers for Medicare & Medicaid Services incentive program designed to tie payment to the quality of care provided by a hospital.

The VBP Total Performance Score is calculated based on each prospective payment system hospital’s performance and improvement on a number of measures in the following areas:

- Safety
- Clinical Care
- Efficiency and Cost Reduction
- Patient- and Caregiver-Centered Experience of Care
In 2017, 47 Minnesota hospitals had total performance scores that ranged from 29.67 (lowest) to 76.75 (highest) out of 100, the best possible score. Sixty-four percent of hospitals scored between 40 and 60. The median score was 50.25, slightly lower than in 2016 (51.08) but higher than 2015 (46.25).

Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
The Hospital-Acquired Condition Reduction Program is a Centers for Medicare & Medicaid Services incentive program designed to tie hospital payment to the frequency of hospital-acquired conditions: conditions that patients acquire while receiving treatment.

The Hospital-Acquired Condition Reduction Program Score is calculated based on how often hospital-acquired infections and other conditions, including ulcers and falls, occur at each prospective payment system hospital.
More hospitals were penalized financially for high Hospital-Acquired Condition (HAC) scores in 2017 (12 hospitals) than in 2016 (7 hospitals).

In 2017, HAC scores ranged from -1.68 (the best score) to 1.42 (the worst score) among 49 Minnesota hospitals. Higher scores indicate higher rates of hospital-acquired infections.

Twelve Minnesota hospitals scored 0.40 or higher and are subject to a 1% payment reduction penalty from the Centers for Medicare & Medicaid Services.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Summary of graph
The Readmission Reduction Program Excess Readmission Ratio is a composite measure of 30-day readmission rates at prospective payment system hospitals for the following conditions:

- Acute myocardial infarction (AMI)
- Heart failure
- Pneumonia
- Chronic obstructive pulmonary disease (COPD)
- Total hip arthroplasty
- Total knee arthroplasty
- Coronary artery bypass graft

Ratios below 1.0 are best. Hospitals with ratios below 1 had fewer readmissions than expected; hospitals with rates above 1 had more readmissions than expected.
In 2017, 12 Minnesota hospitals had more readmissions than expected. This was a decrease from 2016, when 22 hospitals had more readmissions than expected.

Twenty-seven hospitals (69%) had excess readmission ratios below 1, indicating that they had fewer readmissions than expected. The best readmission ratio was 0.88, and the worst was 1.08.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
As many as 20 percent of Americans get influenza each flu season, and when combined with pneumonia, influenza is the eighth leading cause of death in the U.S. Among those that die from influenza, as many as two-thirds had been hospitalized that flu season. As a result, vaccination among healthcare personnel represents an opportunity to reduce the disease burden associated with influenza among patients.

The Centers for Medicare & Medicaid Services calculates the Influenza Vaccination Coverage among Healthcare Personnel measure as the percentage of healthcare personnel at critical access hospitals who receive the influenza vaccination during the months of October through March of the following year.
Over the 2016–2017 flu season, fifty percent of hospitals immunized 91% or more of the health care professionals working in their facility. Eight percent of hospitals had relatively low workforce vaccination rates between 50% and 70%.
Appendix: Quality Reporting System Measures
# 2018 Reporting Year Clinic Quality Measures

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<th>Measure</th>
<th>Steward</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Optimal Diabetes Care</td>
<td>MNCM</td>
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<tr>
<td>Optimal Vascular Care</td>
<td>MNCM</td>
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<tr>
<td>Depression Care: Remission at Six Months</td>
<td>MNCM</td>
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<tr>
<td>Optimal Asthma Control – Adult and Child</td>
<td>MNCM</td>
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<tr>
<td>Asthma Education and Self-Management – Adult and Child</td>
<td>MNCM</td>
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<tr>
<td>Colorectal Cancer Screening</td>
<td>MNCM</td>
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<tr>
<td>Total Knee Replacement Outcome Measures (Functional Status, Health-Related Quality of Life)</td>
<td>MNCM</td>
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<tr>
<td><strong>Spinal Surgery: Lumbar Spinal Fusion Outcome Measures (Functional Status, Health-Related Quality of Life, Back Pain, Leg Pain)</strong></td>
<td>MNCM</td>
</tr>
<tr>
<td><strong>Spinal Surgery: Discectomy Laminotomy Outcome Measures (Functional Status, Health-Related Quality of Life, Back Pain, Leg Pain)</strong></td>
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<tr>
<td><strong>Pediatric Preventive Care: Adolescent Mental Health and/or Depression Screening</strong></td>
<td>MNCM</td>
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<tr>
<td><strong>Data Source: Clinic Survey</strong></td>
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<tr>
<td>Health Information Technology Survey</td>
<td>MNCM/MDH</td>
</tr>
</tbody>
</table>

Medical record data is obtained from electronic health records or paper records.

A Measure Steward is an organization that owns and is responsible for maintaining the measure. Measure stewards are often the same as measure developers, but not always.

# 2018 Reporting Year Hospital Quality Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Steward</th>
<th>Hospital Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Source: Medical Record</strong></td>
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<tr>
<td>Influenza Immunization: Influenza Immunization (IMM-2)</td>
<td>CMS</td>
<td>CAH</td>
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<tr>
<td><strong>Emergency Department Measures</strong></td>
<td>CMS</td>
<td>CAH</td>
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<tr>
<td>Median Time from ED Arrival to ED Departure for Admitted ED Patients – Overall Rate (ED-1a)</td>
<td>CMS</td>
<td>CAH</td>
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<td>Admit Decision Time to ED Departure Time for Admitted Patients – Overall Rate (ED-2a)</td>
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<tr>
<td>Median Time from ED Arrival to ED Departure for Discharged ED Patients (OP-18)</td>
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<td>ED Patient Left without Being Seen (OP-22)</td>
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<td><strong>Elective Delivery (PC-01)</strong></td>
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<td><strong>Outpatient Acute Myocardial Infarction and Chest Pain</strong></td>
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<td>Median Time to Fibrinolysis (OP-1)</td>
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<td>Fibrinolytic Therapy Received within 30 Minutes (OP-2)</td>
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<tr>
<td>Median Time to Transfer to Another Facility for Acute Coronary Intervention – Overall Rate (OP-3a)</td>
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<td>Aspirin at Arrival (OP-4)</td>
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</tr>
<tr>
<td>Median Time to ECG (OP-5)</td>
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<td>CAH</td>
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</tbody>
</table>

CMS stands for Centers for Medicare & Medicaid Services; CAH stands for Critical Access Hospitals.
Medical record data is obtained from electronic health records or paper records.
A Measure Steward is an organization that owns and is responsible for maintaining the measure. Measure stewards are often the same as measure developers, but not always.
## Hospital Quality Measures (Page 2)

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<th>Measure</th>
<th>Steward</th>
<th>Hospital Type</th>
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<tbody>
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<td><strong>Data Source: Medical Record</strong></td>
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<tr>
<td>Emergency Department Stroke Registry Indicators: Door-to-Imaging Initiated Time</td>
<td>Minnesota Stroke Registry Program</td>
<td>PPS and CAH</td>
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<tr>
<td>Emergency Department Stroke Registry Indicators: Time to Intravenous Thrombolytic Therapy</td>
<td>American Heart Association /American Stroke Association</td>
<td>PPS and CAH</td>
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<tr>
<td>Emergency Department Transfer Communication Composite</td>
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<tr>
<td>Hospital Value-Based Purchasing Total Performance Score</td>
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<tr>
<td>Hospital Readmissions Reduction Program Excess Readmission Score</td>
<td>CMS</td>
<td>PPS</td>
</tr>
<tr>
<td>Hospital-Acquired Condition Reduction Program Score</td>
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<td>PPS</td>
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</table>

CDC stands for Centers for Disease Control and Prevention.  
PPS stands for Prospective Payment System hospitals, CAH stands for Critical Access Hospitals.  
## Hospital Quality Measures (Page 3)

<table>
<thead>
<tr>
<th>Measure</th>
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<tr>
<td><strong>Data Source: Hospital Survey</strong></td>
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<tr>
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<td><strong>Data Source: Provider Survey</strong></td>
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<tr>
<td>Safe Surgery Checklist Use (OP-25)</td>
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<tr>
<td><strong>Data Source: Inpatient Administrative Data</strong></td>
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<tr>
<td>Mortality for Selected Conditions (IQI-91)</td>
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<tr>
<td>Death Rate Among Surgical Inpatients with Serious Treatable Complications (PSI-4)</td>
<td>AHRQ</td>
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</tr>
<tr>
<td>Patient Safety and Adverse Events Composite (PSI-90)</td>
<td>AHRQ</td>
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</tr>
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<td><strong>Data Source: Management &amp; Personnel Data</strong></td>
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<tr>
<td>Influenza Vaccination Coverage among Healthcare Personnel (OP-27)</td>
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<td>CAH</td>
</tr>
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</table>

AHRQ stands for Agency for Healthcare Research and Quality.
Resources
Additional Information from the Health Economics Program

Health Economics Program
https://www.health.state.mn.us/healtheconomics

Health Care Markets Chartbook
https://www.health.state.mn.us/data/economics/chartbook

Statewide Quality Reporting and Measurement System
https://www.health.state.mn.us/data/hcquality
Quality Measurement Resources

**MN Community Measurement**
mncm.org

**HealthScores**
www.mnhealthscores.org

**Stratis Health**
www.stratishealth.org

**Minnesota Hospital Association**
www.mnhospitals.org

**Minnesota Hospital Quality Report**
www.mnhospitalquality.org/#/consumer

**Hospital Compare**
www.medicare.gov/hospitalcompare

**National Quality Forum**
www.qualityforum.org

**Agency for Healthcare Research and Quality**
www.ahrq.gov