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 133 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)
Established Patient Criteria

• In 2016, the measure steward, MN Community Measurement, began using a new method to determine whether a patient should be included in the Optimal Diabetes Care, Optimal Vascular Care, Colorectal Cancer Screening, Optimal Asthma Control or Asthma Education and Self-Management measures.

• The new method uses Current Procedural Terminology (CPT) codes to determine whether a patient was established at a clinic (i.e. not a new patient). The old method was based on the number of clinic visits a patient had in the previous two years.

• The new method has led to more patients being included in these measures. For this reason, 2016 and 2015 rates for these measures are not directly comparable.
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• **Optimal Vascular Care**

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Selected Clinic Quality Measures

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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
Optimal Diabetes Care
Statewide Rate

4 ½ out of every 10 diabetic patients received optimal care

The 2016 statewide optimal care rate was 45%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
The percentage of diabetes patients that met all five goals was 45%. A greater share of patients met individual goals. Patients had a very high rate of daily aspirin use. The blood sugar control rate was notably lower than the 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 from 2016 service dates.

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, many patients did not meet one (or more) optimal diabetes care goals.

Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.

Summary of graph
Medicare patients had the highest optimal care rate in 2015 and 2016, followed by patients with commercial insurance. Note that established patient criteria changed in 2016 and the number of patients in the measure increased.
In 2016, compared to 2015, the share of clinics that delivered optimal diabetes care to more than 50% of their patients decreased by five percentage points. Note that established patient criteria changed in 2016 and the number of patients in the measure increased.

There were 595 reporting clinics in 2015 and 576 in 2016.

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

Summary of graph
Due to changes to established patient criteria, the number of patients included in the optimal diabetes care measure increased by more than 31,000 between 2015 and 2016. In 2015, the statewide optimal rate was 46% and in 2016 it was 45%.

There were 595 reporting clinics in 2015 and 576 in 2016.
Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
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

Measure steward: MN Community Measurement  
National Quality Forum #0076
The 2016 statewide optimal care rate was 62%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
The percentage of vascular patients who met all five goals is 62%. 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 from 2016 service dates.

Summary of graph
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 from 2016 service dates.

Summary of graph
Optimal care rates for patients with commercial insurance and Medicare were notably higher than rates for MHCP and self-pay/uninsured patients in both years. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program. Service year: January 1 through December 31.
Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
In 2016, compared to 2015, the share of clinics that delivered optimal vascular care to more than 50% of their patients decreased by four percentage points. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

There were 583 reporting clinics in 2015 and 582 in 2016.

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

Summary of graph
Due to changes to established patient criteria, the number of patients included in the optimal vascular care measure increased by nearly 75,000 between 2015 and 2016. In 2015, the statewide optimal rate was 66% and in 2016 it was 62%.

There were 583 reporting clinics in 2015 and 582 in 2016.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Optimal Asthma Control and Asthma Education and Self-Management

**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
Both asthma measures are reported separately for children (ages 5-17) and adults (ages 18-50).

Until 2014, Asthma Education & Self-Management and Optimal Asthma Control were part of the same measure, Optimal Asthma Care. In 2014, they were split into separate measures.
Adult Optimal Asthma Control
Statewide Rate

5 out of every 10 adult asthma patients had optimal control.

The 2016 statewide optimal control rate was 50%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
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 2016 statewide rate was 26%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
The percentage of adult asthma patients that met both goals was 50%, 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 from 2016 service dates.

Summary of graph
Optimal care rates for patients with commercial insurance were higher than rates for patients with other insurance types, but this difference decreased between 2015 and 2016. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.
In 2015, patients with commercial insurance had the highest rate of asthma education and self-management. But in 2016, the rate was similar across insurance types. Rates for all insurance types decreased between 2015 and 2016. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

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

Service year: July 1 through June 30.

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

Summary of graph
In 2016, compared to 2015, the share of clinics that delivered optimal asthma control to more than 50% of their patients decreased by more than seven percentage points. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

There were 613 reporting clinics in 2015 and 619 in 2016.

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 decreased by more than 15 percentage points from 2015 to 2016. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

There were 613 reporting clinics in 2015 and 619 in 2016.

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

Summary of graph
Adult Optimal Asthma Control Patients

Due to changes to established patient criteria, the number of patients included in the optimal asthma control measure more than doubled between 2015 and 2016. In 2015, the statewide optimal rate was 56% and in 2016 it dropped to 49%.

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

Summary of graph
Due to changes to established patient criteria, the number of patients in the adult asthma education measure more than doubled between 2015 and 2016. In 2015, the statewide optimal rate was 41% and in 2016 it decreased to 26%.

There were 613 reporting clinics in 2015 and 619 in 2016.

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

Summary of graph
Between 2012 and 2015, over half of adult asthma patients had their asthma under control and over two-thirds were at low risk of their asthma worsening. In 2016 both of these rates decreased as the number of patients in the measure increased. The asthma education and self-management rate peaked in 2013, and declined substantially in 2014 when it became a standalone measure. It has continued to decline every year since, reaching a low of 26% in 2016.

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 substantially.
The 2015 statewide optimal control rate was 57%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
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 2016 statewide rate was 46%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
The percentage of child asthma patients that met both goals was 57%, and a greater share of patients met individual goals. Nearly 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 from 2016 service dates.

Summary of graph
Patients with commercial insurance had the highest optimal control rate in 2015 and 2016. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program. Service year: July 1 through June 30.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
Summary of graph
In 2016 the asthma education and self-management rate decreased for each insurance type. Patients with commercial and MHCP insurance had slightly higher rates than the other insurance types. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program. Service year: July 1 through June 30.

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 patients decreased by nine percentage points in 2016. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

There were 561 reporting clinics in 2015 and 580 in 2016.

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 declined from 46% to 28% between 2015 and 2016. Note that established patient criteria changed in 2016 and the number of patients in the measure increased substantially.

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

Summary of graph

There were 561 reporting clinics in 2015 and 580 in 2016.
Due to changes to established patient criteria, the number of patients in the child asthma control measure increased by more than 24,000 between 2015 and 2016. In 2015, the statewide optimal rate was 67% and in 2016 it decreased to 57%.

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

Summary of graph
Due to changes to established patient criteria, the number of patients in the child asthma education measure increased by more than 24,000 between 2015 and 2016. In 2015, the statewide rate was 66% and in 2016 it was 46%.

There were 561 reporting clinics in 2015 and 581 in 2016. Source: MDH Health Economics Program analysis of Quality Reporting System data.
Child Asthma Components

The rates of child asthma patients whose asthma was under control and at low risk of worsening were relatively stable from 2013 to 2015, but both of these rates dropped by over 10% in 2016 as the number of patients in the measure increased. The rate of child asthma patients with asthma education and a self-management plan peaked at 79% in 2013, declined in 2014 when it became a standalone measure, and has now dropped to 46%.

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.

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

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) Stool blood test: A lab test used to check stool samples for hidden blood, which may be an indicator of colon cancer or polyps in the colon or rectum.

The USPSTF recommends regular colorectal cancer screening for adults ages 50-75 using the tests described above.
Measure steward: MN Community Measurement
Colorectal Cancer Screening
Statewide Rate

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

The 2016 statewide screening rate was 73%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
Screening rates for patients with commercial insurance and Medicare were notably higher than rates for MHCP and self-pay/uninsured patients.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program. Service year: July 1 through June 30.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
The share of clinics that screened more than 50% of their patients for colorectal cancer remained constant at 87% between 2015 and 2016.

There were 627 reporting clinics in 2015 and 638 in 2016.

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

Summary of graph
Approximately 84,000 more patients were screened in 2016 as compared to 2015. In 2015, the statewide screening rate was 72% and in 2016 it was 73%.

There were 638 reporting clinics in 2016 and 627 in 2015.

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

Summary of graph
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.
Depression Remission at Six Months
Statewide Rate

1 out of every 10 depression patients achieved remission in six months

The 2016 statewide rate was 8%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
Patients with moderate depression had the highest remission rate for all three years, although patients in all severity categories have low remission rates.

Severity is determined by initial PHQ-9 scores.
Dates of service: February 1 through January 31.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
In 2016, the share of clinics where more than 10% of depression patients achieved remission at six months remained relatively stable at 22%.
Depression Remission at Six Months Patients

In 2016, compared to 2015, the number of patients included in the measure increased by more than 9,000. The remission rate remained constant at 8%.

There were 575 reporting clinics in 2016, and 591 in 2015. In 2015 and 2016, to be included in this measure, patients had to have a PHQ-9 greater than 9 and a diagnosis of major depression or dysthymia. Previously, this diagnosis was only required at the first-ever index contact between patient and provider. Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Adolescent Mental Health and/or Depression Screening

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 and/or Depression Screening
Statewide Rate

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

The 2016 statewide screening rate was 80%.
Source: MDH Health Economics Program analysis of Quality Reporting System data from 2016 service dates.
Patients with commercial insurance had the highest screening rates. Rates for all insurance types increased between 2015 and 2016.
In 2016, compared to 2015, the share of clinics that screened more than 50% of their patients for mental health or depression increased by eight percentage points. The percentage of clinics that screened 91-100% of their patients nearly doubled, increasing from 15.8% in 2015 to 30.4% in 2016.

There were 570 reporting clinics in 2015 and 573 in 2016.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
More than 15,000 additional patients were screened in 2016 as compared to 2015. In 2015, the statewide screening rate was 70% and in 2016 it increased to 80%.

There were 570 reporting clinics in 2015 and 573 in 2016.
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.

Measure steward: MN Community Measurement
National Quality Forum #2643
Average change in functional status after lumbar fusion surgery varied across medical groups. The largest average improvement in functional status, as measured with pre- and post surgery tests, was 27.7 and the smallest average improvement was 6.7, from a possible range of -100 to 100. The statewide average improvement was 17.7. This indicates that on average, patients had improved functional status after surgery.

In report year 2016, 15 medical groups that provided lumbar fusion surgeries in 2015 reported some data to MDH; of these, 10 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 from 2015 dates of procedure.

Summary of graph
MHCP patients had the lowest average improvement in functional status after procedures in both 2014 and 2015.

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

Dates of procedure: January 1 through December 31, 2014 and 2015.

Self-pay/Uninsured patient average change is not reported because there were fewer than 10 Self-Pay/Uninsured patients with pre- and post-tests.

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

Summary of graph
Spinal Surgery: Lumbar Fusion
Functional Status Patients

Forty-one percent of patients who had lumbar fusion surgery in 2015 received pre- and post-surgery ODI tests. This rate has remained stable since 2014. The majority of patients are not receiving functional status tests at the appropriate times before and after surgery.

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

Summary of graph
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 than MHCP patients. Average decreases represent the reduction 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.
Dates of procedure: January 1 through December 31, 2015.
Self-pay/Uninsured patient average change is not reported because there were fewer than 10 Self-Pay/Uninsured patients with pre- and post-tests.
Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Patients with commercial insurance had the most improvement in mental health status after surgery in 2016, followed by Medicare patients. MHCP patients had a slight decrease in mental health status after lumbar fusion surgery (scale: -5 to 5).

Statewide average change in mental health status is 1.6

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Self-pay/uninsured rates are not displayed due to small patient counts.

Summary of graph
Spinal Surgery: Lumbar Discectomy Laminotomy
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 a lumbar discectomy laminotomy procedure.

- **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 using 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.

Measure steward: MN Community Measurement
Average change in functional status after lumbar discectomy laminotomy surgery varied across medical groups. The largest average improvement in functional status, as measured with pre- and post surgery tests, was 31.3, and the smallest average improvement was 15.0, from a possible range of -100 to 100. The statewide average improvement in functional status was 27.1.

In report year 2016, 16 medical groups that provided lumbar discectomy laminotomy surgeries in 2015 reported data to MDH; of these, 11 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 discectomy/laminotomy patient population. Source: MDH Health Economics Program analysis of Quality Reporting System data from 2015 dates of procedure.
Spinal Surgery: Lumbar Discectomy Laminotomy
Average Functional Status Improvement
Stratified by Insurance Type

Patients with commercial insurance had the most improvement in functional status after procedures in both 2014 and 2015.

MHCP is Minnesota Health Care Programs, which includes Medical Assistance, MinnesotaCare, and the Minnesota Family Planning Program.
Dates of procedure: January 1 through December 31, 2014 and 2015.
Self-pay/Uninsured patient average change is not reported because there were fewer than 10 Self-Pay/Uninsured patients with pre- and post-tests.
Source: MDH Health Economics Program analysis of Quality Reporting System data.

Summary of graph
Spinal Surgery: Lumbar Discectomy Laminotomy Functional Status Patients

Thirty-six percent of patients who had lumbar discectomy laminotomy surgery in 2015 received pre- and post-surgery ODI tests. The 2014 rate was 37%. The majority of patients are not receiving functional status tests at the appropriate times before and after surgery.

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

Summary of graph
On average, lumbar discectomy laminotomy patients had decreased leg pain and back pain after surgery regardless of insurance type. Average decreases represent the reduction 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.

Dates of procedure: January 1 through December 31, 2015.

Self-pay/Uninsured patient average change is not reported because there were fewer than 10 Self-Pay/Uninsured patients with pre- and post-tests.

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

Summary of graph
Patients with commercial insurance had the most improvement in mental health status after surgery in 2016, followed by MHCP patients (scale: -5 to 5).

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Self-pay/uninsured rates are not displayed due to small patient counts.

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.
Average change in functional status after total knee replacement varied across medical groups. The largest average improvement in functional status, as measured with pre- and post surgery tests, was 28.0, and the smallest average improvement was 13.7, from a possible range of -48 to 48. The statewide average improvement in functional status was 16.6. This indicates that on average, patients had improved functional status after surgery.

In report year 2016, 37 medical groups that provided primary total knee replacement surgeries in 2015 reported data to MDH; and of these, 28 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 from 2015 dates of procedure.
Patients with commercial insurance had the most improvement in functional status after surgery in 2015, followed closely by Medicare and MHCP patients.

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

Dates of procedure: January 1 through December 31, 2014 and 2015.

Self-pay/Uninsured patient average change is not reported because there were fewer than 10 Self-Pay/Uninsured patients with pre- and post-tests.

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

Summary of graph
Thirty percent of patients who had primary total knee replacement surgery in 2015 received pre- and post-surgery OKS tests. The 2014 rate was 29%. The majority of patients are not receiving functional status tests at the appropriate times before and after surgery.

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

Summary of graph
Patients had similar modest improvements in mental health status after surgery in 2015 regardless of insurance type (scale: -5 to 5).

Statewide average change in mental health status is 1.8

<table>
<thead>
<tr>
<th>Insurance Type</th>
<th>Average Change</th>
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<tbody>
<tr>
<td>Commercial</td>
<td>1.8</td>
</tr>
<tr>
<td>Medicare</td>
<td>1.7</td>
</tr>
<tr>
<td>MHCP</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Source: MDH Health Economics Program analysis of Quality Reporting System data.
Self-pay/uninsured rates are not displayed due to small patient counts.
Clinic Patient Experience of Care

Clinics administer the Clinician & Group Consumer Assessment of Healthcare Providers and Systems (CG-CAHPS) every two years to measure patients’ perceptions of their clinic experience.

The CG-CAHPS 12-month Survey covers the following domains:

- **Access to care**
- **Provider communication**
- **Care Coordination**
- **Office staff**
- **Provider rating**

Measure steward: Agency for Healthcare Research and Quality (AHRQ).
National Quality Forum #0005
## Clinic Patient Experience of Care

<table>
<thead>
<tr>
<th>Domain</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Access to care</strong></td>
<td>The survey asked patients how often they received appointments for care as soon as needed and timely answers to questions when they called the office</td>
</tr>
<tr>
<td><strong>Provider communication</strong></td>
<td>The survey asked patients if their doctors explained things clearly, listened carefully, showed them respect, provided easy to understand instructions, knew their medical history, and spent enough time with the patient</td>
</tr>
<tr>
<td><strong>Care Coordination</strong></td>
<td>The survey asked patients whether providers and staff shared important information with patients and used information to coordinate care</td>
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<tr>
<td><strong>Office staff</strong></td>
<td>The survey asked patients if office staff were helpful and treated them with courtesy and respect</td>
</tr>
<tr>
<td><strong>Provider rating</strong></td>
<td>The survey asked patients to rate their doctors on a scale of 0 to 10, with 0 being the worst and 10 being the best</td>
</tr>
</tbody>
</table>
The Access to Care domain had the most variation between the lowest- and highest-performing clinics, and this domain also had the lowest statewide average at 66%. The range of clinic rates was smaller for the Provider Communication domain, and the statewide average was 86%. Rates represent the proportion of respondents who chose the most positive response to the survey questions.

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

Summary of graph
The new Care Coordination domain had a statewide average of 73%. The Office Staff domain had a statewide average of 83%. The highest-performing clinic in this domain scored above 100% because all rates are adjusted by respondent age, education, and self-reported physical and mental health status. Rates represent the proportion of respondents who chose the most positive response to the survey questions.

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

Summary of graph
The Provider Rating domain had a statewide average of 81%, meaning that 81% of patients rated their provider as either a 9 or a 10 on a scale of 1-10. The highest-performing clinic in this domain scored above 100% because all rates are adjusted by respondent age, education, and self-reported physical and mental health status.

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

- Safety
- Clinical Care
- Efficiency and Cost Reduction
- Patient and Caregiver-Centered Experience of Care/Care Coordination
In 2016, 48 Minnesota hospitals had total performance scores that ranged from 20.5 (the worst score) to 68.7 (the best score) out of 100, the best possible score. Most hospitals scored between 50 and 60; the median score was 51.1. This is an increase from the 2015 median score of 46.3.

Service year varies by component: October 1, 2014 – June 30, 2016 and January 1 through December 31, 2016.
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 payment to 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.
Hospital Acquired Condition (HAC) scores ranged from -1.73 (the best score) to 1.20 (the worst score) for 49 Minnesota hospitals. Higher scores indicate higher rates of hospital-acquired infections. Seven Minnesota hospitals scored higher than 0.3687 and are subject to a 1% payment reduction from the Centers for Medicare & Medicaid Services.

Service year varies by domain: July 1, 2014 through September 30, 2015 and January 1, 2015 through December 31, 2016. The scoring methodology for HAC scores changed in 2018, so these results are not comparable to previous years.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
The Readmission Reduction Program Excess Readmission Ratio is based on each prospective payment system hospital’s 30-day readmission rate 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

Scores below 1.0 are best. Hospitals with Excess Readmission Ratios rates below 1 had fewer readmissions than expected; hospitals with rates above 1 had more readmissions than expected.
Out of 50 Minnesota hospitals, 54% (27) had excess readmission ratios of 1.0 or lower, indicating that they had the expected number of readmissions or fewer than expected. The worst excess readmission ratio was 1.09, and the best was 0.89.

Service years: July 1, 2013 through June 30, 2016.
Source: MDH Health Economics Program analysis of Quality Reporting System data.
Summary of graph
The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is a survey that measures patients’ perceptions of their hospital experience.

The HCAHPS survey asks discharged patients 27 questions about important aspects of their recent hospital stay, including:

- Communication with nurses and doctors
- Understanding of care
- Receiving help when needed
Minnesota’s rate was slightly higher than the national average for both provider communication questions. This trend has been consistent over time.

Source: MDH Health Economics Program analysis of Quality Reporting System data.
In both 2014 and 2016, slightly higher rates of Minnesota patients reported that they understood their care and always received help when they wanted it compared to the national average.


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

Summary of graph
Appendix: Quality Reporting System Measures
# 2017 Reporting Year Clinic Quality Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Steward</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Source: Medical Record</strong></td>
<td></td>
</tr>
<tr>
<td>Optimal Diabetes Care</td>
<td>MNCM</td>
</tr>
<tr>
<td>Optimal Vascular Care</td>
<td>MNCM</td>
</tr>
<tr>
<td>Depression Remission at Six Months</td>
<td>MNCM</td>
</tr>
<tr>
<td>Optimal Asthma Control – Adult and Child</td>
<td>MNCM</td>
</tr>
<tr>
<td>Asthma Education and Self-Management - Adult and Child</td>
<td>MNCM</td>
</tr>
<tr>
<td>Colorectal Cancer Screening</td>
<td>MNCM</td>
</tr>
<tr>
<td>Cesarean Section Rate</td>
<td>MNCM</td>
</tr>
<tr>
<td>Total Knee Replacement Outcome Measures</td>
<td>MNCM</td>
</tr>
<tr>
<td>Spinal Surgery: Lumbar Spinal Fusion Outcome Measures</td>
<td>MNCM</td>
</tr>
<tr>
<td>Spinal Surgery: Discectomy Laminotomy Outcome Measures</td>
<td>MNCM</td>
</tr>
<tr>
<td>Pediatric Preventive Care: Pediatric Overweight Counseling</td>
<td>MNCM</td>
</tr>
<tr>
<td>Pediatric Preventive Care: Adolescent Mental Health and/or Depression Screening</td>
<td>MNCM</td>
</tr>
<tr>
<td><strong>Data Source: Clinic Survey</strong></td>
<td></td>
</tr>
<tr>
<td>Health Information Technology Survey</td>
<td>MNCM/MDH</td>
</tr>
<tr>
<td><strong>Data Source: Patient Survey</strong></td>
<td></td>
</tr>
<tr>
<td>Patient Experience of Care Survey: Consumer Assessment of Healthcare Providers and Systems Clinician &amp; Group 3.0 Survey – Adult</td>
<td>AHRQ</td>
</tr>
</tbody>
</table>

AHRQ is the Agency of Healthcare Research and Quality.

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.

# 2017 Reporting Year Hospital Quality Measures

<table>
<thead>
<tr>
<th>Measure</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Source: Medical Record</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influenza Immunization: Influenza Immunization (IMM-2)</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<td><strong>Emergency Department Measures</strong></td>
<td></td>
<td></td>
</tr>
<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>
</tr>
<tr>
<td>Admit Decision Time to ED Departure Time for Admitted Patients - Overall Rate (ED-2a)</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<td>Median Time from ED Arrival to ED Departure for Discharged ED Patients (OP-18)</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<td>Median Time to Pain Management for Long Bone Fracture (OP-21)</td>
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<tr>
<td>ED Patient Left without Being Seen (OP-22)</td>
<td></td>
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<tr>
<td><strong>Elective Delivery (PC-01)</strong></td>
<td>The Joint Commission</td>
<td>CAH</td>
</tr>
<tr>
<td><strong>Outpatient Acute Myocardial Infarction and Chest Pain</strong></td>
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<tr>
<td>Median Time to Fibrinolysis (OP-1)</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<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>
<td>CMS</td>
<td>CAH</td>
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<tr>
<td>Aspirin at Arrival (OP-4)</td>
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<tr>
<td>Median Time to ECG (OP-5)</td>
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</tr>
</tbody>
</table>

CMS is Centers for Medicare and Medicaid Services; CAH is Critical Access Hospitals.

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

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<td><strong>Data Source: Medical Record</strong></td>
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</tr>
<tr>
<td>Door to Diagnostic Evaluation by a Qualified Medical Professional (OP-20)</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<td>Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 Minutes of Arrival (OP-23)</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<td>Catheter Associated Urinary Tract Infection (CAUTI)</td>
<td>CDC</td>
<td>CAH</td>
</tr>
<tr>
<td>Emergency Department Stroke Registry Indicators: Door-to-Imaging Initiated Time</td>
<td>Minnesota Stroke Registry Program</td>
<td>PPS and CAH</td>
</tr>
<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>
</tr>
<tr>
<td>Emergency Department Transfer Communication Composite</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<td>Hospital Value-Based Purchasing Total Performance Score</td>
<td>CMS</td>
<td>PPS</td>
</tr>
<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>
<td>CMS</td>
<td>PPS</td>
</tr>
</tbody>
</table>

PPS stands for Prospective Payment System hospitals, CAH stands for Critical Access Hospital.
### Hospital Quality Measures (Continued)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Steward</th>
<th>Hospital Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Source: Administrative Clinical Data</strong></td>
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<tr>
<td>Heart Failure 30-Day Readmission Rate (READM-30-HF)</td>
<td>CMS</td>
<td>CAH</td>
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<tr>
<td>Pneumonia 30-Day Readmission Rate (READM-30-PN)</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease 30-Day Readmission Rate (READM-30-COPD)</td>
<td>CMS</td>
<td>CAH</td>
</tr>
<tr>
<td><strong>Data Source: Hospital Survey</strong></td>
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<tr>
<td>Health Information Technology Survey</td>
<td>American Hospital Association/MDH</td>
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<td><strong>Data Source: Patient Survey</strong></td>
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</tr>
<tr>
<td>Patient Experience of Care: Hospital Consumer Assessment of Healthcare Providers and Systems</td>
<td>CMS</td>
<td>PPS and CAH</td>
</tr>
<tr>
<td><strong>Data Source: Provider Survey</strong></td>
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</tr>
<tr>
<td>Safe Surgery Checklist Use (OP-25)</td>
<td>CMS</td>
<td>CAH</td>
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<tr>
<td><strong>Data Source: Inpatient Administrative Data</strong></td>
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</tr>
<tr>
<td>Mortality for Selected Conditions (IQI 91)</td>
<td>AHRQ</td>
<td>PPS and CAH</td>
</tr>
<tr>
<td>Death Among Surgical Inpatients with Serious Treatable Complications (PSI 4)</td>
<td>AHRQ</td>
<td>PPS and CAH</td>
</tr>
<tr>
<td>Patient Safety and Adverse Events Composite (PSI 90)</td>
<td>AHRQ</td>
<td>PPS and CAH</td>
</tr>
<tr>
<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>
<td>CDC</td>
<td>CAH</td>
</tr>
</tbody>
</table>

Resources
Additional Information from the Health Economics Program

Health Economics Program and Publications
www.health.state.mn.us/divs/hpsc/hep

Health Care Markets Chartbook
http://www.health.state.mn.us/divs/hpsc/hep/chartbook

Statewide Quality Reporting and Measurement System
http://www.health.state.mn.us/healthreform/measurement

A summary of the charts and graphs contained within is provided at Chartbook Summaries - Section 9. Direct links are listed on each page. Please contact the Health Economics Program at 651-201-3550 or health.hep@state.mn.us if additional assistance is needed for accessing this information.
Quality Measurement Resources

**MN Community Measurement**
- [mncm.org](http://mncm.org)

**HealthScores**
- [www.mnhealthscores.org](http://www.mnhealthscores.org)

**Stratis Health**
- [www.stratishealth.org](http://www.stratishealth.org)

**Minnesota Hospital Association**
- [www.mnhospitals.org](http://www.mnhospitals.org)

**Minnesota Hospital Quality Report**
- [www.mnhospitalquality.org/#/consumer](http://www.mnhospitalquality.org/#/consumer)

**Hospital Compare**
- [www.medicare.gov/hospitalcompare](http://www.medicare.gov/hospitalcompare)

**National Quality Forum**
- [www.qualityforum.org](http://www.qualityforum.org)

**Agency for Healthcare Research and Quality**
- [www.ahrq.gov](http://www.ahrq.gov)