



# Hospital Compare Quality Measure Results for Minnesota CAHs: 2015

Michelle Casey, MS; Tami Swenson, PhD; Alex Evenson, MA  
University of Minnesota

## KEY FINDINGS:

- Compared to all other CAHs nationally, Minnesota’s CAHs reported at a rate that was higher for inpatient measures (97.5% of CAHs vs. 84.2% nationally) and higher for outpatient measures (94.9% of CAHs vs. 67.1% nationally).
- Minnesota’s CAHs rank #9 for inpatient measure reporting and #6 for outpatient measure reporting among the 45 states participating in the Flex Program.
- Compared to scores on process-of-care measures for all other CAHs nationally in 2015, Minnesota’s CAHs scored significantly higher on 5 measures, significantly lower on 1 measure, did not have significantly different performance on 25 measures, and had insufficient data to compare 8 measures.

## INTRODUCTION

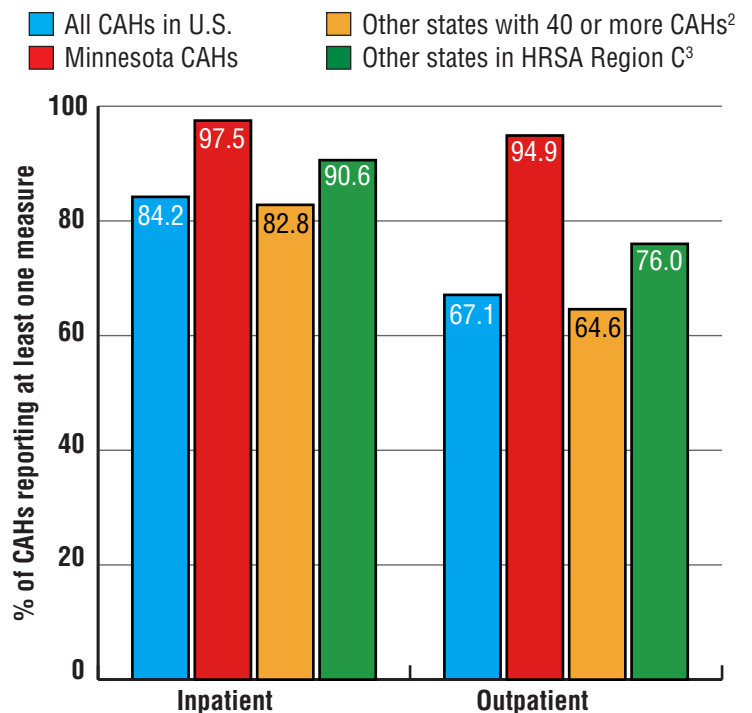
Since 2004, acute care hospitals paid under the Medicare Prospective Payment System (PPS) have had a financial incentive to publicly report quality measure data on the Centers for Medicare & Medicaid Services’ (CMS) Hospital Compare website. Although Critical Access Hospitals (CAHs) do not face the same financial incentives as PPS hospitals to participate, the Hospital Compare initiative provides an important opportunity for CAHs to publicly report, assess and improve their performance on national standards of care.

This report is part of a series of 45 annual state-level reports that examine CAH participation in Hospital Compare, quality measure results, and trends.<sup>1</sup> This set of state reports focus on data for inpatient and outpatient process of care and structural measures for 2015. State reports on Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) data for the same time period were previously released.<sup>2</sup>

The report used the following data sources:

- Publicly-available Hospital Compare data downloaded from the CMS Hospital Compare website

Figure 1. CAH Participation in Hospital Compare<sup>1</sup>, 2015



1. Percentage of CAHs in each state or group of states reporting data to Hospital Compare on at least one measure.
2. Group includes states with 40 or more CAHs: IL (51), IA (82), KS (84), MT (48), NE (64), TX (79), WI (58)
3. HRSA Region C includes IA (82), IL (51), IN (35), KS (84), MI (36), MO (36), NE (64), OH (33), WI (58)



on inpatient and outpatient process measures for 2015.

- Data for 2015 on process measures for which CAHs reported ten or fewer cases, which CMS suppresses from the Hospital Compare website, but makes available to the Federal Office of Rural Health Policy for aggregate CAH analyses.

Since the last set of CAH state reports, two outpatient process measures have been added and one inpatient measure was deleted due to insufficient data reported in Hospital Compare. This report includes 39 process of care measures and 6 structural measures that are potentially relevant to CAHs and for which some CAHs nationally have reported data; some states do not have any CAHs reporting some of these measures. Definitions of the measures used in the report are provided on pages 8-11.

The Hospital Compare data in this report include several measures that are also measures for the Medicare Beneficiary Quality Improvement Project (MBQIP). Although the majority of CAHs report data on these measures to both Hospital Compare and MBQIP, the data in this report may differ from MBQIP reports because some CAHs only report data to one of these programs.

For FY 2015-17, State Flex Grantees are required to work with all CAHs on all MBQIP core improvement activities in each of four quality domains: patient safety, patient engagement, care transitions, and outpatient care. States may also choose to work on additional improvement activities with CAHs based on need and relevance. This report includes Hospital Compare data reported by CAHs on several measures that are new MBQIP measures for FY 2015-17, including new outpatient measures. The tables in the report indicate if a measure is an MBQIP core or additional improvement measure in addition to being a Hospital Compare measure.

## APPROACH

For this report, summary measures were calculated to compare performance on the inpatient and outpatient

process of care measures for all CAHs within Minnesota to the performance of CAHs in all other states. The inpatient and outpatient measure scores were classified as: 1) insufficient data (less than 25 patients total); 2) not significantly different than CAHs in all other states; 3) significantly better than all other CAHs; or 4) significantly worse than all other CAHs. The percent of CAH patients receiving recommended care was not reported when the total number of CAH patients in a state (or nationally) with data on a measure was less than 25.

The percentages of patients that received recommended care for the inpatient and outpatient process of care quality measures were calculated by dividing the total number of patients in all CAHs in the state and all other CAHs nationally who received the recommended care by the total number of eligible patients in all CAHs in the state and all other CAHs nationally for each measure. For each inpatient and outpatient rate measure, the percent of CAH patients receiving recommended care in each state was then compared to the percent of CAH patients that received recommended care in all other states combined. Chi-square tests were used to calculate whether these differences were statistically significant ( $p < .05$ , which means that at least 95% of the time, the differences between CAHs in Minnesota and all other CAHs nationally are equal to or more extreme than the observed differences in the data).

Median scores for the median time process measures were calculated by arranging the median times by quarter for all CAHs in the state and all other CAHs nationally from the lowest time to the highest time by hospital, and selecting the middle value based on number of patients. Wilcoxon-Mann-Whitney tests were used to compare the median times for CAHs in each state and all other CAHs.

For each structural measure, the percentages of CAHs in Minnesota and all other states that reported no data, and those that reported yes or no on each measure, were calculated.



## REPORTING FOR PROCESS OF CARE MEASURES IN MINNESOTA AND ALL OTHER STATES

As in previous years, the percent of CAHs reporting inpatient and outpatient process of care data to Hospital Compare varied considerably across states. In Minnesota, 97.5% of the 79 CAHs reported data to Hospital Compare on at least one inpatient process of care measure for discharges in 2015. 94.9% of the 79 CAHs in Minnesota reported data to Hospital Compare on at least one outpatient process of care measure for discharges in 2015.

Figure 2 (next page) compares the respective inpatient and outpatient reporting rates over time (2012 through 2015) among CAHs in four groups: those in Minnesota, all CAHs nationally, other states with a similar number of CAHs as Minnesota, and other states located in the same geographic region as Minnesota.

Figure 3 (page 5) compares the respective inpatient and outpatient reporting rates of CAHs in Minnesota to those located in the other 44 states participating in the Flex Program as well as the rate for all CAHs nationally. The Minnesota CAH inpatient reporting rate of 97.5% ranks #9 nationally; the Minnesota CAH outpatient reporting rate of 94.9% ranks #6 nationally.

The number of CAHs reporting individual inpatient and outpatient process of care measures may differ by measure for several reasons. Some measures only apply to a portion of patients; others exclude patients with contraindications, or only apply to conditions not treated or procedures not performed in some CAHs.

## RESULTS

### *Process of Care Measures*

Tables 1-2 (pages 6 and 7, respectively) display the results for inpatient and outpatient process-of-care results for 2015 discharges for CAHs in Minnesota and all other CAHs. Table 3 (page 7) displays results for median time measures (lower scores, indicating shorter median times, are better).

### *Structural Measures*

Nationally, more than three-fourths of CAHs did not

report structural quality measure data. Table 4 (page 8) provides results for CAHs in Minnesota and all other CAHs nationally that reported data for 2015.

## TOOLS AND RESOURCES

The Flex Monitoring Team (FMT) provides free access to all publications and presentations on our website, [www.flexmonitoring.org](http://www.flexmonitoring.org), including a series of policy briefs on evidence-based QI programs and strategies that could be implemented by CAHs.

The Technical Assistance and Services Center (TASC) provides resources for State Flex Programs and CAHs on their website.

For profiles of State Flex Programs, State Contacts, and examples of Flex activities to support quality improvement, visit <http://www.ruralcenter.org/tasc/flex-profile>.

For resources focused on the Medicare Beneficiary Quality Improvement Program (MBQIP), visit <https://www.ruralcenter.org/tasc/mbqip>.

## REFERENCES

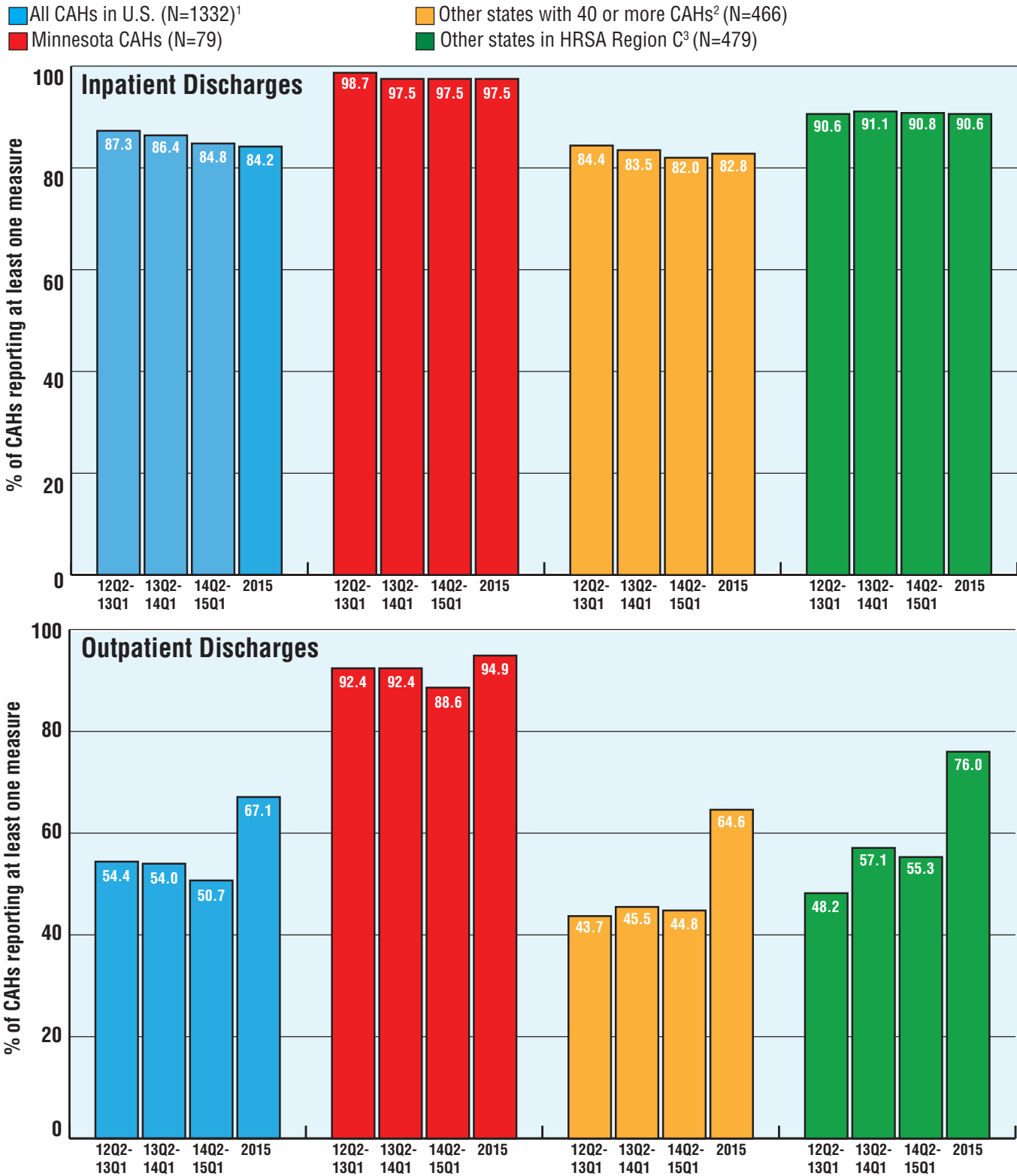
1. The Flex Monitoring Team has published national Hospital Compare reports since 2006. All are available for download at <http://www.flexmonitoring.org/publications/annualhospital-compare-results/>.
2. Previous state-level reports are available on the Flex Monitoring Team website at <http://www.flexmonitoring.org/data/state-level-data>.

*(Figures 2-3, Tables 1-4, and measure definitions begin on next page)*



**Minnesota CAH Hospital Compare Quality Measure Results, 2015**

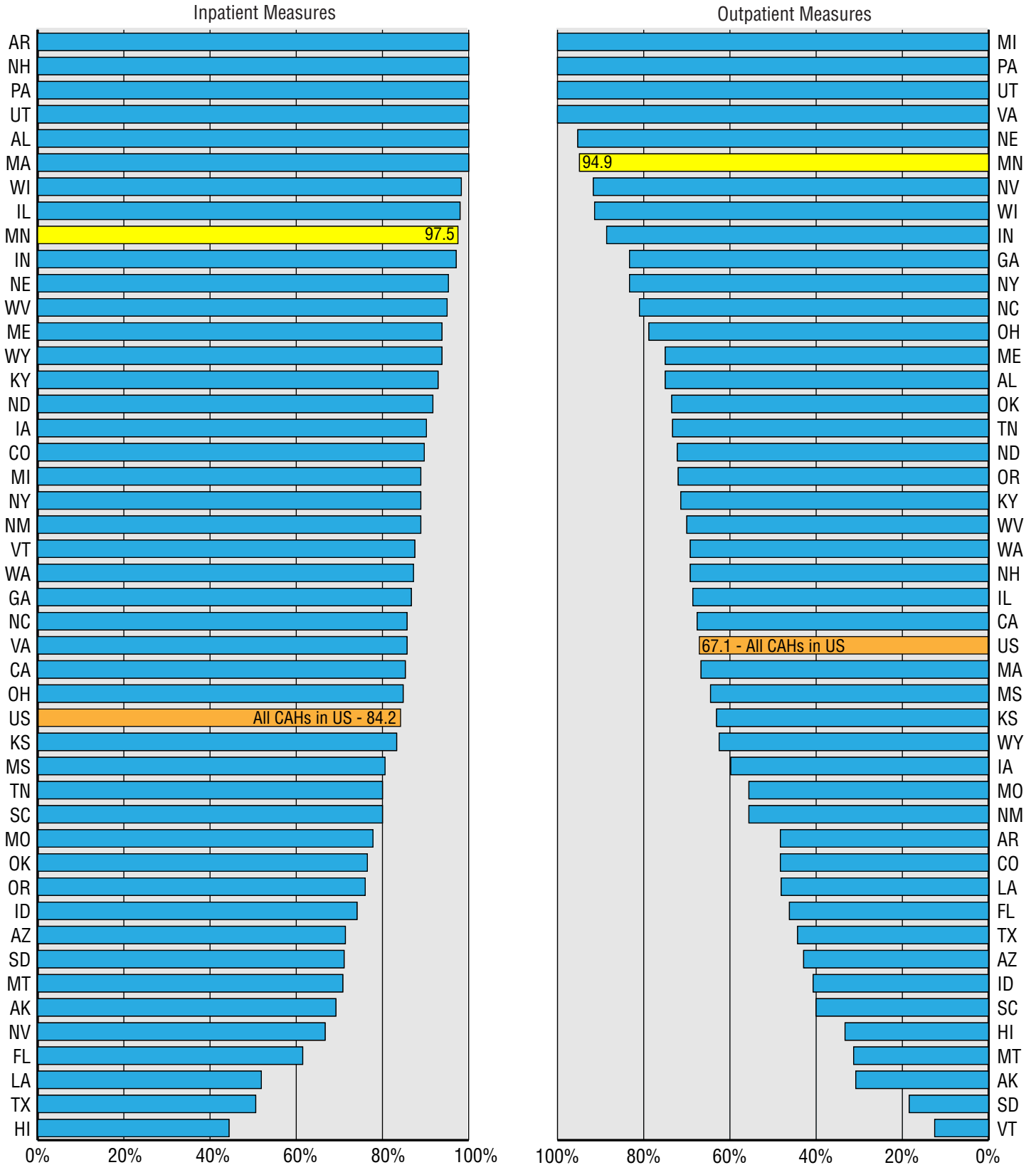
**Figure 2. CAH Participation in Hospital Compare for Inpatient and Outpatient Discharges, 2015**



1. Listed N values refer to most recent data (2015) only.  
 2. Group includes AK (13), AZ (15), FL (13), ME (16), NV (11), NY (18), PA (13), TN (16), UT (11), WY (16)  
 3. HRSA Region A includes MA (3), ME (16), NY (18), PA (13), VA (7), VT (8), WV (20)



Figure 3. State Rankings of CAH Reporting Rates for Inpatient and Outpatient Quality Measures, 2015





**Minnesota CAH Hospital Compare Quality Measure Results, 2015**

**Table 1. Inpatient Process of Care Results for Patients Discharged from Reporting CAHs in Minnesota and All Other States, 2015**

■ Significantly better than rate for all other CAHs nationally (p<.05)    ■ Significantly worse than rate for all other CAHs nationally (p<.05)

Measure code	Measure description	MN (n=79)		All other CAHs (n=1253)	
		CAHs reporting	% of patients <sup>1</sup>	CAHs reporting	% of patients
HF-2	Evaluation of LVS function	28	87.9	585	85.2
IMM-2 <sup>†</sup>	Immunization for influenza	72	84.2	463	91.9
OP-27/IMM-3 <sup>†</sup>	Healthcare workers given influenza vaccination	63	85.8	766	85.6
PC-01 <sup>‡</sup>	Early elective delivery (lower is better)	35	3.1	115	3.9
PN-6	Initial antibiotic selection for pneumonia patient	27	88.7	598	87.3
SCIP-Card-2	Surgery patients who received perioperative beta blocker	8	99.0	158	94.1
SCIP-Inf-1	Preventative antibiotic(s) 1 hour before incision	10	92.9	203	95.4
SCIP-Inf-2	Received appropriate preventative antibiotic(s)	10	95.3	200	97.0
SCIP-Inf-3	Preventative antibiotic(s) stopped within 24 hours after surgery	10	96.2	199	97.2
SCIP-Inf-9	Urinary catheter removed first / second day after surgery	9	97.0	176	97.5
SCIP-VTE-2	Surgery patients who received appropriate VTE antibiotics	10	99.5	201	99.0
STK-1 <sup>‡</sup>	VTE prophylaxis	8	94.9	295	90.5
STK-2	Discharged on antithrombotic therapy	7	*	210	95.4
STK-3	Anticoagulation therapy for atrial fibrillation/flutter	1	*	126	90.8
STK-4	Thrombolytic therapy	3	*	102	13.7
STK-5	Antithrombotic therapy by end of second hospital-day	7	*	205	93.4
STK-6	Discharged on statin medication	8	*	276	84.0
STK-8 <sup>‡</sup>	Stroke education	5	*	233	82.6
STK-10	Assessed for rehabilitation	7	100.0	221	95.5
VTE-1 <sup>‡</sup>	Venous thromboembolism prophylaxis	13	94.6	382	90.3
VTE-2 <sup>‡</sup>	ICU venous thromboembolism prophylaxis	3	94.1	162	94.9
VTE-3 <sup>‡</sup>	Anticoagulation overlap therapy	11	91.5	310	89.7
VTE-4	Unfractionated heparin with dosages/platelet count monitoring	4	*	83	94.4
VTE-5	Warfarin therapy discharge instructions	10	76.5	275	88.3
VTE-6	Incidence of potentially-preventable VTE (lower is better)	5	*	83	2.7

1. Rates without highlights were not significantly different from comparable rates in all CAHs nationally.

\* Insufficient data to calculate rate (<25 patients).

† MBQIP core measure (this table shows Hospital Compare data)

‡ MBQIP additional improvement measure (this table shows Hospital Compare data)



## Minnesota CAH Hospital Compare Quality Measure Results, 2015

**Table 2. Outpatient Process of Care Results for Patients Discharged from Reporting CAHs in Minnesota and All Other States, 2015**

■ Significantly better than rate for all other CAHs nationally (p<.05)
 ■ Significantly worse than rate for all other CAHs nationally (p<.05)

Measure code	Measure description	MN (n=79)		All other CAHs (n=1253)	
		CAHs reporting	% of patients <sup>1</sup>	CAHs reporting	% of patients
OP-2 <sup>†</sup>	Fibrinolytic therapy received within 30 minutes	26	50.0	286	49.4
OP-4 <sup>†</sup>	Aspirin at arrival	69	94.2	644	95.8
OP-22 <sup>†</sup>	Patient left without being seen (lower is better)	20	0.4	233	1.1
OP-23 <sup>‡</sup>	Received head CT scan interpretation within 45 minutes	30	48.8	345	54.7
OP-29	Appropriate follow-up interval, colonoscopy, average-risk patients	3	88.6	100	74.6
OP-30	Appropriate follow-up interval, colonoscopy, patients with polyps	3	96.3	81	85.0

1. Rates without highlights were not significantly different from comparable rates in all CAHs nationally.

\* Insufficient data to calculate rate (<25 patients).

† MBQIP core measure (this table shows Hospital Compare data)

‡ MBQIP additional improvement measure (this table shows Hospital Compare data)

**Table 3. Median Time to Patients Receiving Recommended Care at CAHs in Minnesota and All Other States, 2015**

■ Significantly better than rate for all other CAHs nationally (p<.05)
 ■ Significantly worse than rate for all other CAHs nationally (p<.05)

Note: lower scores are better for all median time measures		Median minutes to receiving care (lower is better)			
		MN (n=79)		All other CAHs (n=1253)	
		CAHs reporting	Minutes <sup>1</sup>	CAHs reporting	Minutes
ED-1b <sup>‡</sup>	Median time from ED admission to ED departure for admitted patients	58	172	485	221
ED-2b <sup>‡</sup>	Admit decision time to ED departure time for admitted patients	55	31	483	57
OP-1 <sup>†</sup>	Median time to fibrinolysis	26	36	284	31.5
OP-3b <sup>†</sup>	Median time to transfer to another facility - acute coronary intervention	41	63	349	64.5
OP-5 <sup>†</sup>	Median time to ECG	69	8	645	7
OP-18b <sup>†</sup>	Median time from ED arrival to ED departure for discharged patients	48	100	506	102
OP-20 <sup>†</sup>	Median time from door to diagnostic evaluation	49	18	514	18
OP-21 <sup>†</sup>	Median time to pain management for long bone fracture	46	39	511	45

1. Rates without highlights were not significantly different from comparable rates in all CAHs nationally.

\* Insufficient data to calculate rate (<25 patients).

† MBQIP core measure (this table shows Hospital Compare data)

‡ MBQIP additional improvement measure (this table shows Hospital Compare data)



**Table 4. Structural Quality Measures Reported by CAHs in Minnesota and All Other States, 2015**

		MN CAHs (n=79)			All other CAHs (n=1253)		
		No data	No	Yes	No data	No	Yes
OP-12	Ability to receive lab data directly to certified EHR	69.7	2.5	27.8	79.1	2.0	18.9
OP-17	Ability to track clinical results between visits	69.6	3.8	26.6	79.6	3.5	16.9
OP-25 <sup>‡</sup>	Use of safe surgery checklist: outpatient	44.3	1.3	54.4	79.0	1.9	19.1
SM-3	Nursing care registry	62.0	36.7	1.3	80.0	14.5	5.5
SM-4	General surgery registry	62.0	36.7	1.3	80.1	18.1	1.8
SM-5	Use of safe surgery checklist: inpatient	54.5	2.5	43.0	79.1	1.5	19.4

‡ MBQIP additional improvement measure (this table shows Hospital Compare data)

## DEFINITIONS OF MEASURES

Note: higher numbers reflect better performance, except where indicated below.

- **ED-1b:** Admit Decision Time to Emergency Department (ED) Departure Time for Admitted Patients - median time from admit decision time to time of departure from the ED for patients admitted to inpatient status. (A lower number is better.)
- **ED-2b:** Median Time from Emergency Department (ED) Arrival to ED Departure for Admitted Patients - median time from ED arrival to time of departure from the ED for patients admitted to the facility from the ED (A lower number is better.)
- **HF-2:** Evaluation of Left Ventricular Systolic (LVS) Function – heart failure patients with documentation in the hospital record that an evaluation of the LVS function was performed before arrival, during hospitalization, or is planned for after discharge.
- **IMM-2:** Influenza Vaccination – This prevention measure addresses acute care hospitalized inpatients age 6 months and older who were screened for seasonal influenza immunization status and were vaccinated prior to discharge if indicated. The numerator captures two activities: screening and the intervention of vaccine administration when indicated. As a result, patients who had documented contraindications to the vaccine, patients who were offered and declined the vaccine, and

patients who received the vaccine during the current year’s influenza season but prior to the current hospitalization are captured as numerator events.

- **OP-1:** Median Time to Fibrinolysis - median time from arrival to fibrinolysis for patients that received fibrinolysis. (A lower number is better.)
- **OP-2:** Fibrinolytic therapy received within 30 minutes of arrival – Acute Myocardial Infarction (AMI) patients receiving fibrinolytic therapy during the hospital stay and having a time from hospital arrival to fibrinolysis of 30 minutes or less.
- **OP-3b:** Median Time to Transfer to Another Facility for Acute Coronary Intervention – Median number of minutes before outpatients with heart attack who needed specialized care were transferred to another hospital. (A lower number is better.)
- **OP-4:** Aspirin at arrival – Acute Myocardial Infarction (AMI) patients without aspirin contraindications who received aspirin within 24 hours before or after hospital arrival.
- **OP-5:** Median Time to echocardiogram (ECG) – median number of minutes before outpatients with heart attack (or with chest pain that suggests a possible heart attack) got an ECG. (A lower number is better.)
- **OP-12:** Ability to Receive Lab Data Directly to Electronic Health Record (EHR) – the ability for providers with Health Information Technology (HIT) to receive





laboratory data directly into their ONC-certified EHR system as discrete searchable data.

- **OP-17:** Ability to Track Clinical Results between Visits – the ability for a facility to track pending laboratory tests, diagnostic studies, or patient referrals through the ONC-certified Electronic Health Record (EHR) system.
- **OP-18b:** Median Time from Emergency Department (ED) Arrival to ED Departure for Discharged Patients - median time from ED arrival to time of departure from the ED for patients discharged from the ED (a lower number is better).
- **OP-20:** Door to Diagnostic Evaluation by Qualified Medical Personnel - median time from Emergency Department (ED) arrival to provider contact for ED patients (a lower number is better).
- **OP-21:** Median Time to Pain Management for Long Bone Fracture - median time from Emergency Department (ED) arrival to time of initial oral or parenteral pain medication administration for ED patients with a principal diagnosis of long bone fracture (a lower number is better).
- **OP-22:** Left Without Being Seen - percent of patients who leave the Emergency Department (ED) without being evaluated by a physician, advanced practice nurse (APN), or physician's assistant (PA). (A lower number is better.)
- **OP-23:** 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 Emergency Department (ED) Arrival - percentage of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within 2 hours of the onset of symptoms who have a head CT or MRI scan performed during the stay and have interpretation of the CT or MRI scan within 45 minutes of arrival.
- **OP-25:** Use of Safe Surgery Checklist (Outpatient) – whether or not a facility used a checklist for outpatient surgical procedures during each of the three critical perioperative periods (prior to administration of anesthesia, prior to skin incision, and closure of incision / prior to patient leaving the operating room).
- **OP-27/HMM-3:** Health Care Workers Given Influenza Vaccination – Facilities must report vaccination data for three categories of Healthcare Personnel (HCP): employees on payroll; licensed independent practitioners (who are physicians, advanced practice nurses, and physician assistants affiliated with the hospital and not on payroll); and students, trainees, and volunteers aged 18 or older. Only HCP physically working in the facility for at least one day or more between October 1 and March 31 should be counted. Data on vaccinations received at the facility, vaccinations received outside of the facility, medical contraindications, and declinations are reported for the three categories of HCP.
- **OP-29:** Appropriate Follow-up Interval for Normal Colonoscopy in Average Risk Patients - Percentage of patients aged 50 to 75 years of age receiving a screening colonoscopy without biopsy or polypectomy who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report.
- **OP-30:** Colonoscopy Interval for Patients with a History of Adenomatous Polyps - Percentage of patients aged 18 years and older receiving a surveillance colonoscopy, with a history of a prior colonic polyp(s) in previous colonoscopy findings, who had a follow-up interval of 3 or more years since their last colonoscopy.
- **PC-01:** Elective Delivery - patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 and less than 39 weeks of gestation completed (a lower number is better).
- **PN-6:** Most Appropriate Initial Antibiotics – immunocompetent patients with pneumonia who receive an initial antibiotic regimen that is consistent with current guidelines.
- **SCIP-Inf-1:** Prophylactic Antibiotic Received within One Hour Prior to Surgical Incision – surgical patients who received prophylactic antibiotics within 1 hour prior to surgical incision.
- **SCIP-Inf-2:** Prophylactic Antibiotic Selection for Surgical Patients – surgical patients who received the recommended antibiotics for their particular type of surgery.

- **SCIP-Inf-3:** Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time – surgical patients whose prophylactic antibiotics were discontinued within 24 hours after surgery end time.
- **SCIP-Card-2:** Surgery Patients on a Beta Blocker Prior to Arrival Who Received a Beta Blocker During the Perioperative Period – surgery patients who were taking heart drugs called beta blockers before coming to the hospital, who were kept on the beta blockers during the period just before and after their surgery.
- **SCIP-VTE-2:** Surgery Patients Who Received Appropriate Venous Thromboembolism (VTE) Prophylaxis within 24 Hours Prior to Surgery to 24 Hours After Surgery – surgery patients who received appropriate VTE prophylaxis within 24 hours prior to surgical incision time to 24 hours after surgery end time.
- **SM-3:** Nursing Care Registry – participation in a systematic clinical database for nursing-sensitive care
- **SM-4:** General Surgery Registry – participation in a systematic clinical database for general surgery
- **SM-5:** Use of Safe Surgery Checklist (inpatient) – whether or not a facility used a checklist for inpatient surgical procedures during each of the three critical perioperative periods (prior to administration of anesthesia, prior to skin incision, and closure of incision / prior to patient leaving the operating room).
- **STK-1:** Venous Thromboembolism (VTE) Prophylaxis - ischemic and hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission.
- **STK-2:** Discharged on Antithrombotic Therapy - ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.
- **STK-3:** Anticoagulation Therapy for Atrial Fibrillation/Flutter - ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.
- **STK-4:** Thrombolytic Therapy - acute ischemic stroke patients who arrive at this hospital within two hours of time last known well and for whom intravenous tissue plasminogen activator (IV tPA) was initiated at this hospital within three hours of time last known well.
- **STK-5:** Antithrombotic Therapy By End of Hospital Day 2 - ischemic stroke patients administered antithrombotic therapy by the end of hospital day two.
- **STK-6:** Discharged on Statin Medication - ischemic stroke patients with low-density lipoprotein (LDL) cholesterol levels greater than or equal to 100 mg/dL, or LDL not measured, or who were on a lipid-lowering medication prior to hospital arrival are prescribed statin medication at hospital discharge.
- **STK-8:** Stroke Education - ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow-up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke.
- **STK-10:** Assessed for Rehabilitation - ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services.
- **VTE-1:** Venous Thromboembolism (VTE) Prophylaxis - the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission.
- **VTE-2:** Intensive Care Unit (ICU) Venous Thromboembolism (VTE) Prophylaxis - number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the ICU or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer).
- **VTE-3:** Venous Thromboembolism (VTE) Patients with Anticoagulation Overlap Therapy - the number of patients diagnosed with confirmed VTE who received

an overlap of parenteral (intravenous or subcutaneous) anticoagulation and warfarin therapy. Patients who received less than five days of overlap therapy should be discharged on both medications or have a reason for discontinuation of parenteral therapy. Overlap therapy should be administered for at least five days with an international normalized ratio (INR) greater than or equal to two prior to discontinuation of the parenteral anticoagulation therapy, discharged on both medications, or have a reason for discontinuation of parenteral therapy.

- **VTE-4:** Venous Thromboembolism (VTE) Patients Receiving Unfractionated Heparin (UFH) with Dosages/Platelet Count Monitoring by Protocol or Nomogram - the number of patients diagnosed with confirmed VTE who received intravenous (IV) UFH therapy dosages and had their platelet counts monitored using defined parameters such as a nomogram or protocol.
- **VTE-5:** Venous Thromboembolism (VTE) Warfarin Therapy Discharge Instructions - the number of patients diagnosed with confirmed VTE that are discharged to home, home care, court/law enforcement or home on hospice care on warfarin with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions.

- **VTE-6:** Hospital Acquired Potentially-Preventable Venous Thromboembolism (VTE) - the number of patients diagnosed with confirmed VTE during hospitalization (not present at admission) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date (a lower number is better).

For detailed measure specifications:

- Specifications Manual for National Hospital Inpatient Quality Measures <http://bit.ly/InpManual>, accessed February 2017
- Specifications Manual for National Hospital Outpatient Quality Measures <http://bit.ly/OutpManual>, accessed February 2017
- Prenatal measure specifications <http://bit.ly/Prenatal-Specs>, accessed February 2017

For more information on this study,  
please contact Michelle Casey at  
[mcasey@umn.edu](mailto:mcasey@umn.edu)



This study was conducted by the Flex Monitoring Team with funding from the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS), under PHS Grant No. U27RH01080. The information, conclusions, and opinions expressed in this document are those of the authors and no endorsement by FORHP, HRSA, or HHS is intended or should be inferred.