



# MBQIP Quality Measures National Annual Report – 2019

Megan Lahr, MPH; Madeleine Pick, MPH; Tongtan Chantararat, MPH; Nathan Bean, MPP; Ira Moscovice, PhD

## KEY FINDINGS

- Patient Safety/Inpatient Measures – The percent of CAHs reporting in the Patient Safety/Inpatient domain increased from 92.9% in 2018 to 94.4% in 2019.
- Outpatient Measures – The percent of CAHs reporting in the Outpatient domain decreased from 87.4% in 2018 to 85.1% in 2019.
- Patient Engagement Measures – The percent of CAHs reporting in the Patient Engagement domain increased from 85.7% in 2018 to 91.7% in 2019.
- Care Transitions Measures – The percent of CAHs reporting in the Care Transition domain was 93.1% in 2019.
- Overall, 23 states had all of their CAHs reporting at least one Patient Safety/Inpatient measure, 12 states had all of their CAHs reporting at least one Outpatient measure, 13 states had all of their CAHs reporting at least one Patient Engagement survey, and 18 states had all of their CAHs reporting the Care Transitions measure.

## CONTENTS

Background .....	Page 2
Data & Methods .....	Page 2
<b>Patient Safety/Inpatient Domain</b>	
• Reporting .....	Page 3
• Performance .....	Page 4
<b>Outpatient Domain</b>	
• Reporting .....	Page 5
• Performance .....	Page 6
<b>Patient Engagement Domain</b>	
• Reporting .....	Page 7
• Performance .....	Page 9
<b>Care Transitions Domain</b>	
• Reporting .....	Page 10
• Performance .....	Page 11
Appendix .....	Page 12



## BACKGROUND

The Medicare Beneficiary Quality Improvement Program (MBQIP) focuses on quality improvement efforts in the 45 states that participate in the Medicare Rural Hospital Flexibility (Flex) Program. Through Flex, MBQIP supports more than 1,350 small hospitals certified as rural Critical Access Hospitals (CAHs) in voluntarily reporting quality measures that are aligned with those collected by the Centers for Medicare and Medicaid Services (CMS) and other Federal programs. The Flex Monitoring Team (FMT) has been producing national annual reports on quality measures for over a decade, and this and future annual reports from the FMT will focus specifically on MBQIP measures using data collected under the four MBQIP domains: Patient Safety/Inpatient, Outpatient, Patient Engagement, and Care Transitions. The FMT also produces state-level annual MBQIP reports, which can be found on the [FMT website](#).

## DATA & METHODS

The data used for this report are reported to CMS and extracted from QualityNet, or to the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) annual survey. Emergency Department Transfer Communication (EDTC) data used for this report are from the Federal Office of Rural Health Policy as reported by CAHs to State Flex Programs. The data values in this report only include CAHs with a signed MBQIP Memorandum of Understanding (MOU).

Quality measures included in this report are limited to MBQIP core and additional measures, including: nine Patient Safety/Inpatient measures (HCP/IMM-3; Antibiotic Stewardship; ED-2b; CLABSI; CAUTI; SSI:C; SSI:H; MRSA; CDIFF), four Outpatient measures (OP-2; OP-22; OP-3b; OP-18b), ten Patient

Engagement measures (from the Hospital Consumer Assessment of Healthcare Providers and Systems, or HCAHPS survey), and the Care Transitions (EDTC) measure. The six Healthcare-Associated Infections (HAI) measures (CLABSI; CAUTI; SSI:C; SSI:H; MRSA; CDIFF) are part of the MBQIP program, but not in the “core” measure set, and instead are a part of the “additional” measures set which is not required.

For each of the four domains, there are two sections of analyses: reporting and performance. Data are aggregated to the national level, and in all domains, data are not displayed for measures where the aggregated national data include fewer than 25 patients/cases/surveys.

Reporting identifies the number of CAHs reporting in each domain, and CAHs were considered reporting for any domain if they reported data in any quarter for any one measure with a denominator of one or more for that domain (indicating that they had at least one patient, case, or survey for the applicable measure.) Due to a lack of population and sampling data, these analyses did not include CAHs that may have reported a zero, since there is no way to determine if the zero was due to non-reporting or to a lack of an applicable population for a given measure. One exception to this is for the HAI measures, where we include data reported for these 6 measures where CAHs indicated they had a 0 denominator (0 patients in 2019 that would fall under any of these HAI categories). The reporting denominator of all CAHs in the U.S. for 2019 is 1,351 CAHs (the total number of CAHs designated on December 31, 2019), and the reporting numerator includes all CAHs with a signed MBQIP MOU reporting for the specific domain or measure. Please see the Appendix for additional information about the calculation of performance score values and statistical testing in each domain.

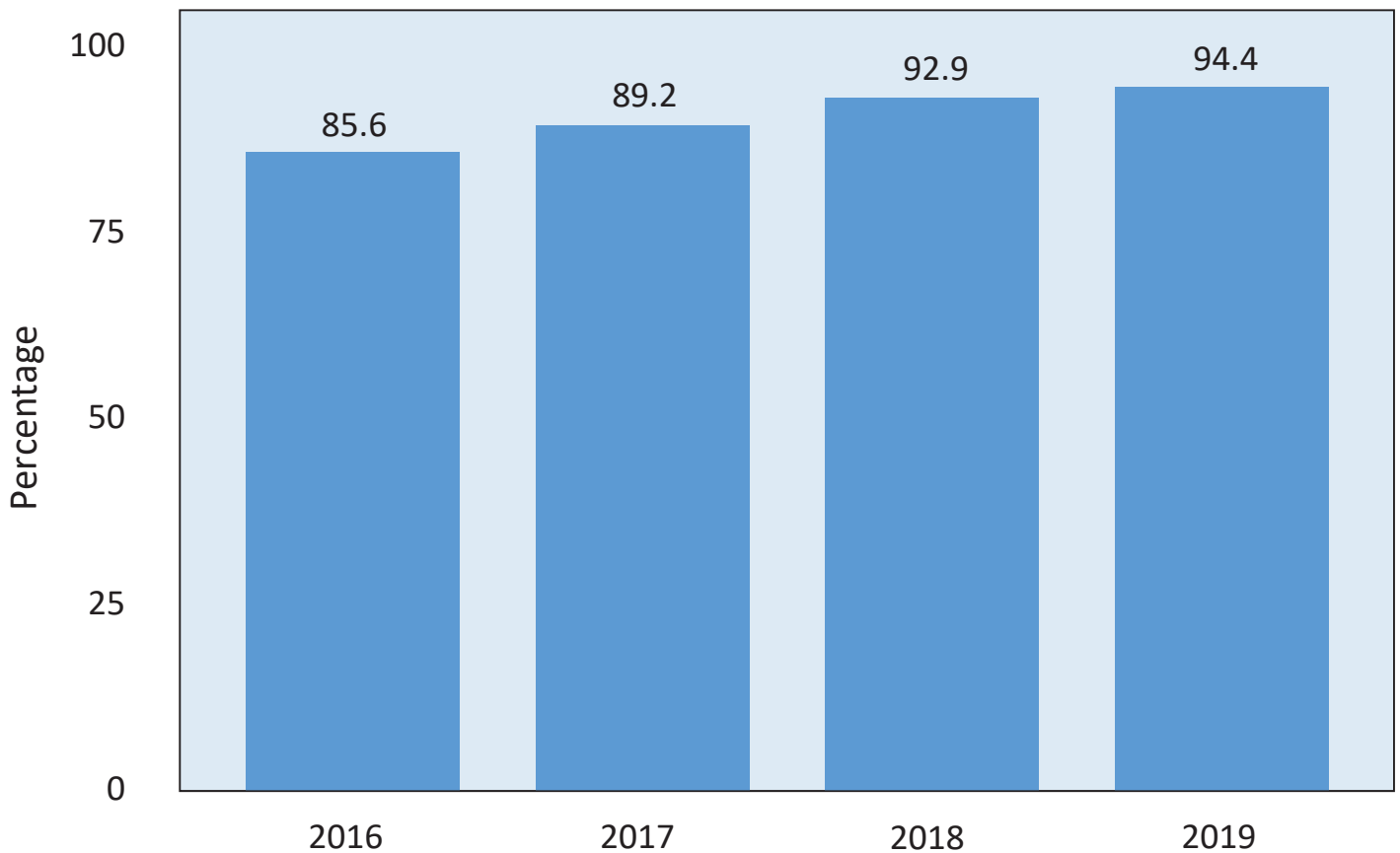


## PATIENT SAFETY/INPATIENT DOMAIN

### CAH Reporting

In 2019, 94.4% of CAHs reported quality data on at least one Patient Safety/Inpatient measure (Figure 1). The inpatient reporting percentage represents a slight increase from the previous reporting period. Table 1 shows state rankings for Patient Safety/Inpatient reporting rates.

**FIGURE 1.** Percentage of CAHs Reporting at Least One Patient Safety/Inpatient Measure, 2016-19





**TABLE 1.** State Ranking of CAH Reporting Rates for Patient Safety/Inpatient Quality Measures, 2019

Rank	State	# participating CAHs	% of CAHs	Rank	State	# participating CAHs	% of CAHs
1	Kansas	82	100.0	24	Michigan	36	97.3
1	Minnesota	78	100.0	25	Ohio	32	97.0
1	Nebraska	64	100.0	26	Colorado	31	96.9
1	Wisconsin	58	100.0	27	Kentucky	27	96.4
1	Illinois	51	100.0	28	Idaho	26	96.3
1	Washington	39	100.0		<b>National</b>	<b>1,275</b>	<b>94.9</b>
1	South Dakota	38	100.0	29	Missouri	33	94.3
1	North Dakota	36	100.0	30	California	32	94.1
1	Indiana	35	100.0	31	Iowa	77	93.9
1	Georgia	30	100.0	32	Tennessee	14	93.3
1	Arkansas	28	100.0	33	Utah	12	92.3
1	Oregon	25	100.0	34	North Carolina	18	90.0
1	West Virginia	21	100.0	34	New Mexico	9	90.0
1	Maine	16	100.0	36	Montana	44	89.8
1	Wyoming	16	100.0	37	Oklahoma	35	89.7
1	Pennsylvania	15	100.0	38	New York	15	83.3
1	Alaska	13	100.0	39	Arizona	12	80.0
1	New Hampshire	13	100.0	39	Alabama	4	80.0
1	Nevada	13	100.0	41	Louisiana	21	77.8
1	Vermont	8	100.0	42	Mississippi	24	77.4
1	Virginia	7	100.0	43	Florida	9	75.0
1	South Carolina	4	100.0	44	Texas	65	74.7
1	Massachusetts	3	100.0	45	Hawaii	6	66.7

**CAH Performance**

Tables 2-4 display the number of CAHs reporting and national performance for each of the Patient Safety/Inpatient measures in 2019.

**TABLE 2.** Patient Safety/Inpatient Quality Measure Results for All CAHs Nationally, 2019

Measure	Description	CAHs Reporting	CAH Performance
HCP/IMM-3	Healthcare workers given influenza vaccination	985	90.4
Antibiotic Stewardship	Fulfill antibiotic stewardship core elements	1,077	79.9

Note: HCP/IMM-3 is expressed as the percentage of health care workers immunized, and Antibiotic Stewardship is the percentage of CAHs fulfilling all antibiotic stewardship elements.



**TABLE 3.** Patient Safety/Inpatient Median Time Quality Measure Results for All CAHs Nationally, 2019

Measure	Description	CAHs Reporting	Median Minutes
ED-2b	Admit time to ED departure time for admitted patients	1,063	43.0

Note: ED-2b is expressed in median minutes to receiving care. Lower values are better for this measure.

**TABLE 4.** Healthcare-Associated Infection Measures Reported by All CAHs Nationally, 2019

Measure	Description	CAHs Reporting	SIR
HAI-1	Central-line-associated bloodstream infections (CLABSI)	621	0.5
HAI-2	Catheter-associated urinary tract infections (CAUTI)	745	0.6
HAI-3	Surgical site infections from colon surgery (SSI:C)	282	1.0
HAI-4	Surgical site infections from abdominal hysterectomy (SSI:H)	233	1.2
HAI-5	Methicillin-resistant Staphylococcus Aureus (MRSA) infections	690	0.5
HAI-6	Clostridium difficile (C.diff) intestinal infections	789	0.8

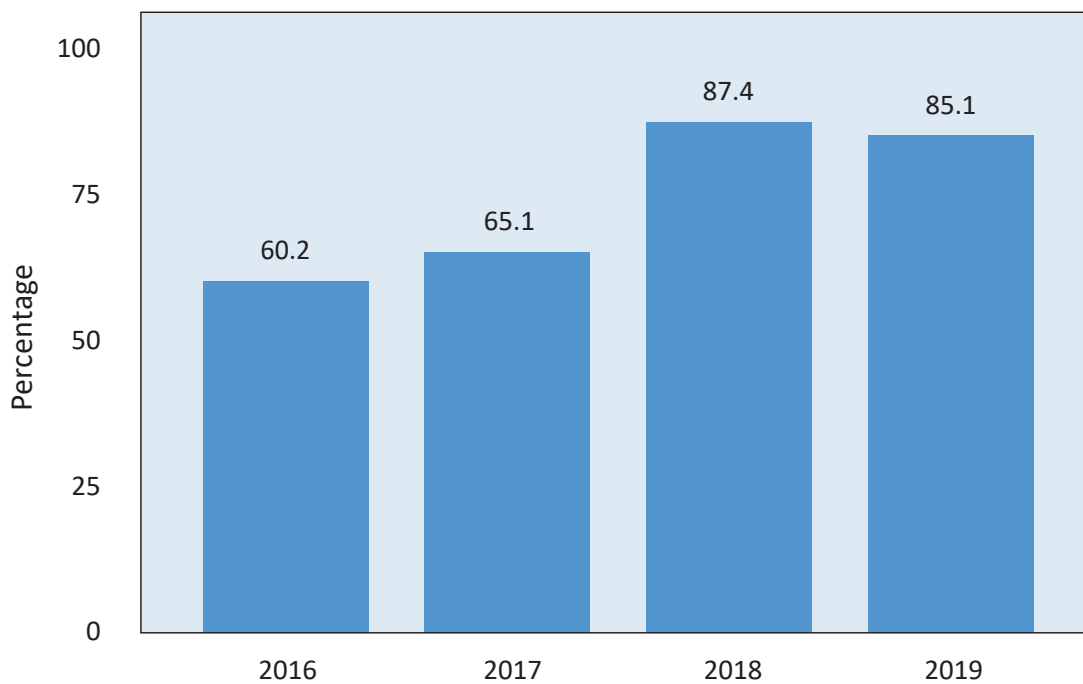
Note: SIRs are a ratio of the total number of infections observed in 2019 divided by the predicted number of annual infections.

## OUTPATIENT DOMAIN

### CAH Reporting

In 2019, 85.1% of CAHs reported quality data on at least one Outpatient measure (Figure 2). The outpatient reporting percentage represents a slight decrease from the previous reporting period. Table 5 shows state rankings for Outpatient reporting rates.

**FIGURE 2.** Percentage of CAHs Reporting at Least One Outpatient Measure, 2016-19





**TABLE 5.** State Ranking of CAH Reporting Rates for Outpatient Quality Measures, 2019

Rank	State	CAHs Reporting	% of CAHs	Rank	State	CAHs Reporting	% of CAHs
1	Minnesota	78	100.0	24	Oklahoma	34	87.2
1	Nebraska	64	100.0	24	Washington	34	87.2
1	Michigan	37	100.0	26	Tennessee	13	86.7
1	Georgia	30	100.0	27	Indiana	30	85.7
1	Arkansas	28	100.0		<b>National</b>	<b>1,150</b>	<b>85.1</b>
1	Idaho	27	100.0	28	Colorado	27	84.4
1	Pennsylvania	15	100.0	29	Montana	41	83.7
1	New Hampshire	13	100.0	30	South Dakota	31	81.6
1	Hawaii	9	100.0	31	Wyoming	13	81.2
1	Virginia	7	100.0	32	Alaska	10	76.9
1	South Carolina	4	100.0	33	Oregon	19	76.0
1	Massachusetts	3	100.0	34	Iowa	61	74.4
13	Wisconsin	57	98.3	35	Arizona	11	73.3
14	Kansas	80	97.6	36	Kentucky	20	71.4
15	West Virginia	20	95.2	37	California	24	70.6
16	New York	17	94.4	38	Illinois	34	66.7
17	Maine	15	93.8	38	Ohio	22	66.7
18	Nevada	12	92.3	38	Florida	8	66.7
18	Utah	12	92.3	41	Texas	56	64.4
20	North Dakota	33	91.7	42	Vermont	5	62.5
21	Missouri	32	91.4	43	Alabama	3	60.0
22	North Carolina	18	90.0	44	Louisiana	16	59.3
22	New Mexico	9	90.0	45	Mississippi	18	58.1

**CAH Performance**

Tables 6-7 display the number of CAHs reporting and national performance for each of the Outpatient measures in 2019.

**TABLE 6.** Outpatient Quality Measure Results for All CAHs Nationally, 2019

Measure	Description	CAHs Reporting	% of Patients
OP-2	Fibrinolytic therapy received within 30 minutes	479	52.4
OP-22	Patients left without being seen (lower is better)	669	0.9

Note: "CAHs Reporting" indicates CAHs that had a denominator of one or more.



**TABLE 7.** Outpatient Median Time Quality Measure Results in Minnesota and All CAHs Nationally, 2019

Measure	Description	CAHs Reporting	Median Minutes
OP-3b	Median time to transfer to another facility - acute coronary intervention	596	64.5
OP-18b	Median time from ED arrival to ED departure for discharged patients	1,117	107.0

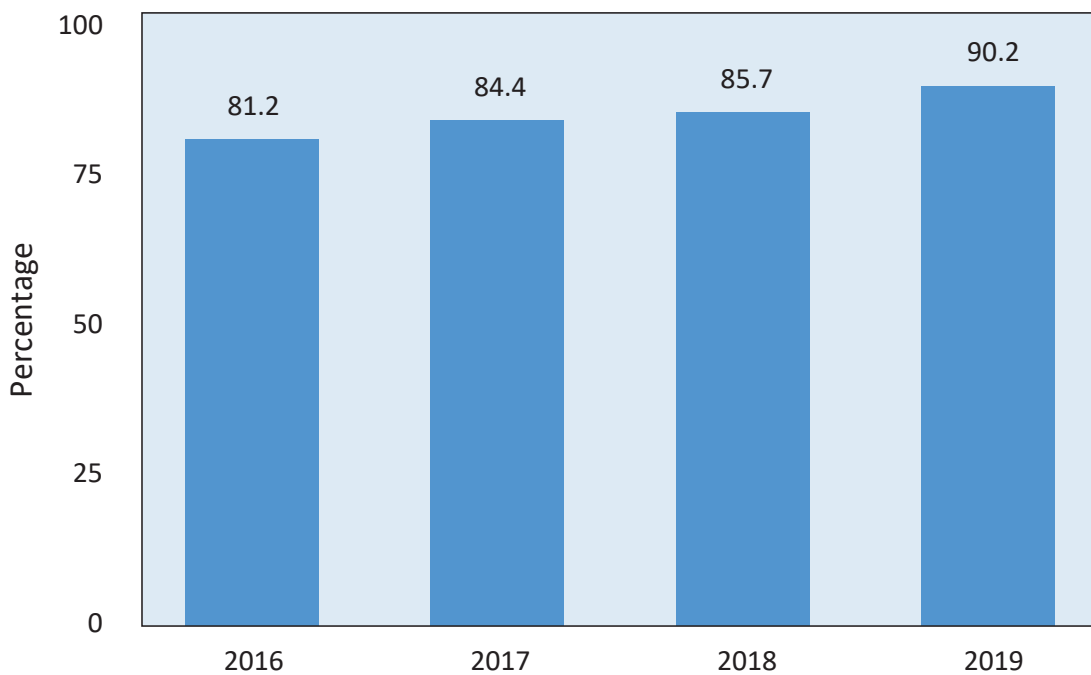
Note: OP-3b and OP-18b are expressed in median minutes to receiving care. Lower values are better for both measures. "CAHs Reporting" indicates CAHs that had a denominator of one or more.

### PATIENT ENGAGEMENT DOMAIN

#### CAH Reporting

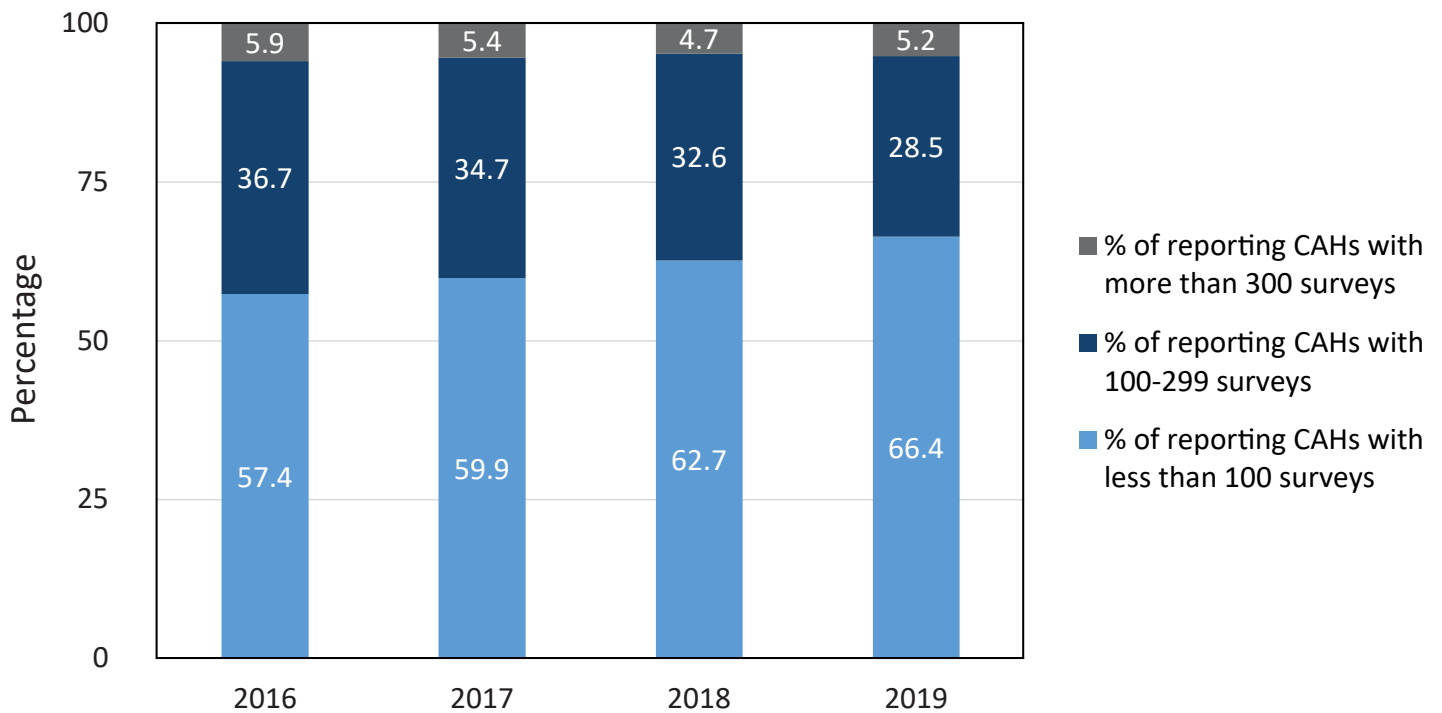
In 2019, 90.2% of CAHs reported quality data on at least one Patient Engagement (HCAHPS) measure (Figure 3). The Patient Engagement reporting percentage represents an increase from the previous reporting period. However, the number of completed surveys per reporting CAH has also changed over time as the proportion of CAHs reporting less than 100 surveys continues to increase from 57.4% in 2016 to 66.4% in 2019 and the percentage reporting more than 300 surveys decreased from 5.9% in 2016 to 5.2% in 2019 (Figure 4). Table 8 shows the wide variation in the number of completed HCAHPS surveys per CAH when compared to the annual volume of inpatient admissions. Twelve hospitals with over 800 admissions had less than 50 completed surveys – three of the hospitals had less than 25 surveys. No CAHs with 0-250 admissions had more than 99 surveys. Variation in the number of completed surveys may be due in part to the number of discharged patients who are eligible for HCAHPS and in part to differences in response rates among surveyed patients. Table 9 displays the number of completed HCAHPS surveys and response rates nationally for CAHs. Table 10 shows state rankings for Patient Engagement reporting rates.

**FIGURE 3.** Percentage of CAHs Reporting at Least One Patient Engagement Measure (HCAHPS), 2016-19





**FIGURE 4.** Completed HCAHPS Surveys among CAHs Reporting Data, 2016-19



**TABLE 8.** CAHs by Number of Completed HCAHPS Surveys and Hospital Admissions, 2019

# Completed Surveys	0-250 Admissions	251-500 Admissions	501-800 Admissions	>800 Admissions	Total
Less than 25	194	42	9	3	248
25-49	118	95	30	9	252
50-99	31	158	93	25	307
100-299	0	38	123	186	347
300 and higher	0	0	0	63	63
<b>Total</b>	343	333	255	286	1,217

**TABLE 9.** CAHs by Number of Completed HCAHPS Surveys and Hospital Admissions, 2019

	Total CAHs Reporting	Number of completed surveys					HCAHPS survey response rates		
		<25	25-49	50-99	100-299	≥300	<25%	25-50%	>50%
<b>National</b>	1,239	249	253	307	347	63	403	784	32





**TABLE 10.** State Ranking of CAH Reporting Rates for HCAHPS Quality Measures, 2019

Rank	State	CAHs Reporting	% of CAHs	Rank	State	CAHs Reporting	% of CAHs
1	Nebraska	64	100.0	24	Georgia	28	93.3
1	Wisconsin	58	100.0	25	South Dakota	35	92.1
1	Oregon	25	100.0	26	Michigan	34	91.9
1	New York	18	100.0	27	California	31	91.2
1	Maine	16	100.0		<b>National</b>	<b>1,219</b>	<b>90.2</b>
1	Wyoming	16	100.0	28	North Carolina	18	90.0
1	Pennsylvania	15	100.0	29	Montana	44	89.8
1	New Hampshire	13	100.0	30	Kansas	73	89.0
1	Nevada	13	100.0	31	Vermont	7	87.5
1	Utah	13	100.0	32	Washington	33	84.6
1	Virginia	7	100.0	33	Oklahoma	32	82.1
1	South Carolina	4	100.0	34	Missouri	28	80.0
1	Massachusetts	3	100.0	34	Tennessee	12	80.0
14	North Dakota	35	97.2	34	New Mexico	8	80.0
15	Ohio	32	97.0	34	Alabama	4	80.0
16	Colorado	31	96.9	38	Texas	69	79.3
17	Mississippi	30	96.8	39	Louisiana	21	77.8
18	Arkansas	27	96.4	40	Indiana	27	77.1
19	Idaho	26	96.3	41	Kentucky	21	75.0
20	Illinois	49	96.1	42	Arizona	11	73.3
21	West Virginia	20	95.2	43	Alaska	9	69.2
22	Iowa	78	95.1	44	Florida	5	41.7
23	Minnesota	73	93.6	45	Hawaii	3	33.3

**CAH Performance**

Table 11 shows the performance for each of the Patient Engagement (HCAHPS) measures in 2019. The lowest national performance rates for individual HCAHPS measures were related to understanding post-discharge instructions (“strongly agree care understood when left hospital”), patient rating of the hospital environment (“area around patient’s room was always quiet at night”), and explanations for medications (“staff always explained medications before giving them”).

**TABLE 11.** HCAHPS Results for All CAHs Nationally, 2019

HCAHPS Measure	Percentage
CAHs reporting (n= 1,219)	
Nurses always communicated well	84.6
Doctors always communicated well	85.2
Patient always received help as soon as wanted	77.2
Staff always explained medications before giving them	69.8
Yes, staff gave patient info. about recovery at home	89.1
Strongly agree care understood when left hospital	57.3
Patient's room and bathroom were always clean	81.7
Area around patient's room was always quiet at night	66.4
Overall hospital rating of 9 or 10 (high)	78.1
Would definitely recommend hospital to others	76.2



## CARE TRANSITIONS DOMAIN

### CAH Reporting

In 2019, 93.1% of CAHs reported quality data on the Care Transitions (EDTC) measure. Only 2019 data are included in this report due to the lack of historical data on EDTC in previous FMT reports. In addition, collection and reporting procedures for the EDTC measure changed beginning in 2020. Future reports will include only data for the new measure. Table 12 shows state rankings for Care Transitions reporting rates.

**TABLE 12.** State Ranking of CAH Reporting Rates for EDTC Quality Measure, 2019

Rank	State	CAHs Reporting	% of CAHs	Rank	State	CAHs Reporting	% of CAHs
1	Minnesota	78	100.0	24	Illinois	49	96.1
1	Wisconsin	58	100.0	25	North Carolina	19	95.0
1	Oklahoma	39	100.0	26	New York	17	94.4
1	South Dakota	38	100.0	27	Wyoming	15	93.8
1	North Dakota	36	100.0	28	Arizona	14	93.3
1	Georgia	30	100.0	28	Tennessee	14	93.3
1	Arkansas	28	100.0		<b>National</b>	<b>1,258</b>	<b>93.1</b>
1	Idaho	27	100.0	30	Kentucky	26	92.9
1	West Virginia	21	100.0	31	Louisiana	25	92.6
1	Pennsylvania	15	100.0	32	Washington	36	92.3
1	New Hampshire	13	100.0	32	Alaska	12	92.3
1	Nevada	13	100.0	34	Florida	11	91.7
1	Utah	13	100.0	35	Indiana	32	91.4
1	New Mexico	10	100.0	36	Iowa	74	90.2
1	Hawaii	9	100.0	37	Montana	44	89.8
1	Virginia	7	100.0	38	Missouri	31	88.6
1	South Carolina	4	100.0	39	Maine	14	87.5
1	Massachusetts	3	100.0	40	Oregon	21	84.0
19	Nebraska	63	98.4	41	Alabama	4	80.0
20	Kansas	80	97.6	42	Texas	66	75.9
21	Michigan	36	97.3	43	Ohio	24	72.7
22	California	33	97.1	44	Colorado	22	68.8
23	Mississippi	30	96.8	45	Vermont	4	50.0



*CAH Performance*

Table 13 displays the number of CAHs reporting and national performance for each component of the Care Transitions (EDTC) measure in 2019.

**TABLE 13.** EDTC Results for All CAHs Nationally, 2019

<b>EDTC Measure</b>	<b>Percentage</b>
CAHs reporting (n= 1,258)	
EDTC-All: Composite	84.7
Administrative Communication	96.6
Patient Information	96.2
Vital Signs	95.9
Medication Information	94.9
Physician or Practitioner Generated Information	95.4
Nurse Generated Information	91.8
Procedures and Tests	97.0



## APPENDIX

This appendix includes additional detailed information regarding the methods and data used in this report. Performance for each measure is shown in a variety of ways depending on the measure.

**Percentages** are calculated using the number of patients (or healthcare workers for the measure HCP/IMM-3) who meet the measure criteria, divided by the number of patients or workers in the measure population, which are specifically defined for each measure. Antibiotic stewardship performance was measured as the percentage of CAHs that fulfilled all seven core elements of an antibiotic stewardship program. The questions in the NHSN address different activities CAHs can participate in to fulfill the core elements. Values are rounded to the nearest decimal place.

**Median time** includes the median number of minutes until the specified event occurs among patients who meet certain criteria, which are specifically defined for each measure. For median time measures, lower scores, indicating shorter median times, are better.

**Performance for each HAI measure** was calculated using Standardized Infection Ratios (SIRs). SIRs are a ratio of the total number of infections observed in 2019 divided by the predicted number of annual infections. Predicted number of infections data are calculated and made available by the CDC. SIRs can only be calculated when there are one or more predicted infections for the time period. A lower SIR indicates better performance.

For each **HCAHPS measure**, the percentages of patients reporting the highest response (e.g., “always”) on each measure were summed and averaged across all reporting CAHs nationally.

**Performance for the EDTC measure** was calculated as the percentage of patients nationally that met each of the data elements. Changes to the EDTC measure in 2020 included adjustments to help streamline and modernize the measure, including a reduction in the total number of data elements from 27 to 8 and clarifications to specific definitions of individual data elements.

For more information on this study, please contact Megan Lahr at [lahrx074@umn.edu](mailto:lahrx074@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.