Hospital Compare Quality Measure Results for Pennsylvania CAHs: 2016

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KEY FINDINGS:

- Compared to all other CAHs nationally, Pennsylvania's CAHs reported at a rate that was higher for inpatient measures (100% of CAHs vs. 85.6% nationally) and higher for outpatient measures (93.3% of CAHs vs. 60.2% nationally).

- Pennsylvania's CAHs rank #1 for inpatient measure reporting and #4 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 2016, Pennsylvania's CAHs scored significantly better on 3 measures, significantly worse on 2 measures, did not have significantly different performance on 13 measures, and had insufficient data to compare 2 measures.
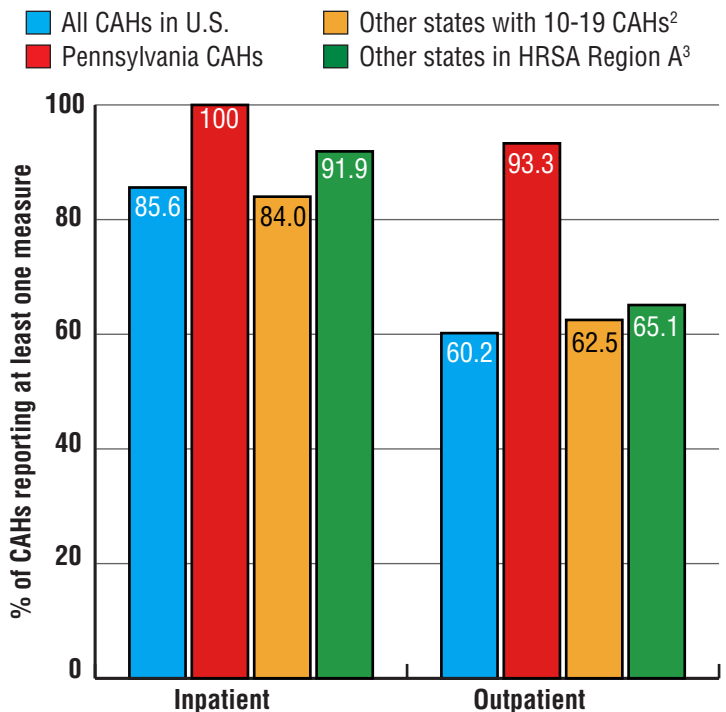
INTRODUCTION

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.[1] This set of state reports focus on data for inpatient and outpatient process of care and structural measures for 2016. State reports on Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) data for the same time period were previously released.[2]

The report used the following data sources:

- Publicly-available Hospital Compare data down-

Figure 1. CAH Participation in Hospital Compare[1], 2016

Legend:
- All CAHs in U.S.
- Pennsylvania CAHs
- Other states with 10-19 CAHs[2]
- Other states in HRSA Region A[3]

y-axis: % of CAHs reporting at least one measure

Inpatient: All CAHs in U.S. 85.6, Pennsylvania CAHs 100, Other states with 10-19 CAHs 84.0, Other states in HRSA Region A 91.9

Outpatient: All CAHs in U.S. 60.2, Pennsylvania CAHs 93.3, Other states with 10-19 CAHs 62.5, Other states in HRSA Region A 65.1

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 10-19 CAHs: AK(14), AZ(14), FL(13), ME(16), NH(13), NV(13), NY(18), TN(15), UT(12), WY(16)
3. HRSA Region A includes MA(3), ME(16), NH(13), NY(18), VA(8), VT(8), WV(20)

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loaded from the CMS Hospital Compare website on inpatient and outpatient process measures for 2016.

- Data for 2016 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, no measures have been added, though 19 inpatient measures were removed from Hospital Compare. This report includes 20 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. This year, measures ED-1b and ED-2b were included as inpatient measures (where previously they were included as outpatient measures), to align with their CMS designation as inpatient measures. Definitions of the measures used in the report are provided on pages 8-9.

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.

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. 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. On the tables in this report, we have indicated measures that are core / additional improvement measures for MBQIP in FY 2018-21, although these data are from CY 2016.

APPROACH

For this report, summary measures were calculated to compare performance on the inpatient and outpatient process of care measures for all CAHs within Pennsylvania 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 Pennsylvania 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 Pennsylvania 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 PENNSYLVANIA 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 Pennsylvania, 100% of the 15 CAHs reported data to Hospital Compare on at least one inpatient process of care measure for discharges in 2016. 93.3% of the 15 CAHs in Pennsylvania reported data to Hospital Compare on at least one outpatient process of care measure for discharges in 2016.

Figure 2 (next page) compares the respective inpatient and outpatient reporting rates over time (2013 through 2016) among CAHs in four groups: those in Pennsylvania, all CAHs nationally, other states with a similar number of CAHs as Pennsylvania, and other states located in the same HRSA geographic region as Pennsylvania.

Tables 1 and 2 (page 5) compare the respective inpatient and outpatient reporting rates of CAHs in Pennsylvania to those located in the other 44 states participating in the Flex Program. The Pennsylvania CAH inpatient reporting rate of 100% ranks #1 nationally; the Pennsylvania CAH outpatient reporting rate of 93.3% ranks #4 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

Table 3 (page 6) displays the results for inpatient and outpatient process of care results for 2016 discharges for CAHs in Pennsylvania and all other CAHs. Table 4 (page 7) displays results for median time measures (lower scores, indicating shorter median times, are better).

Structural Measures

Nationally, nearly three-fourths of CAHs did not report structural quality measure data. Table 5 (page 7) provides results for CAHs in Pennsylvania and all other CAHs nationally that reported data for 2016.

TOOLS AND RESOURCES

The Flex Monitoring Team (FMT) provides free access to all publications and presentations on our website, 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

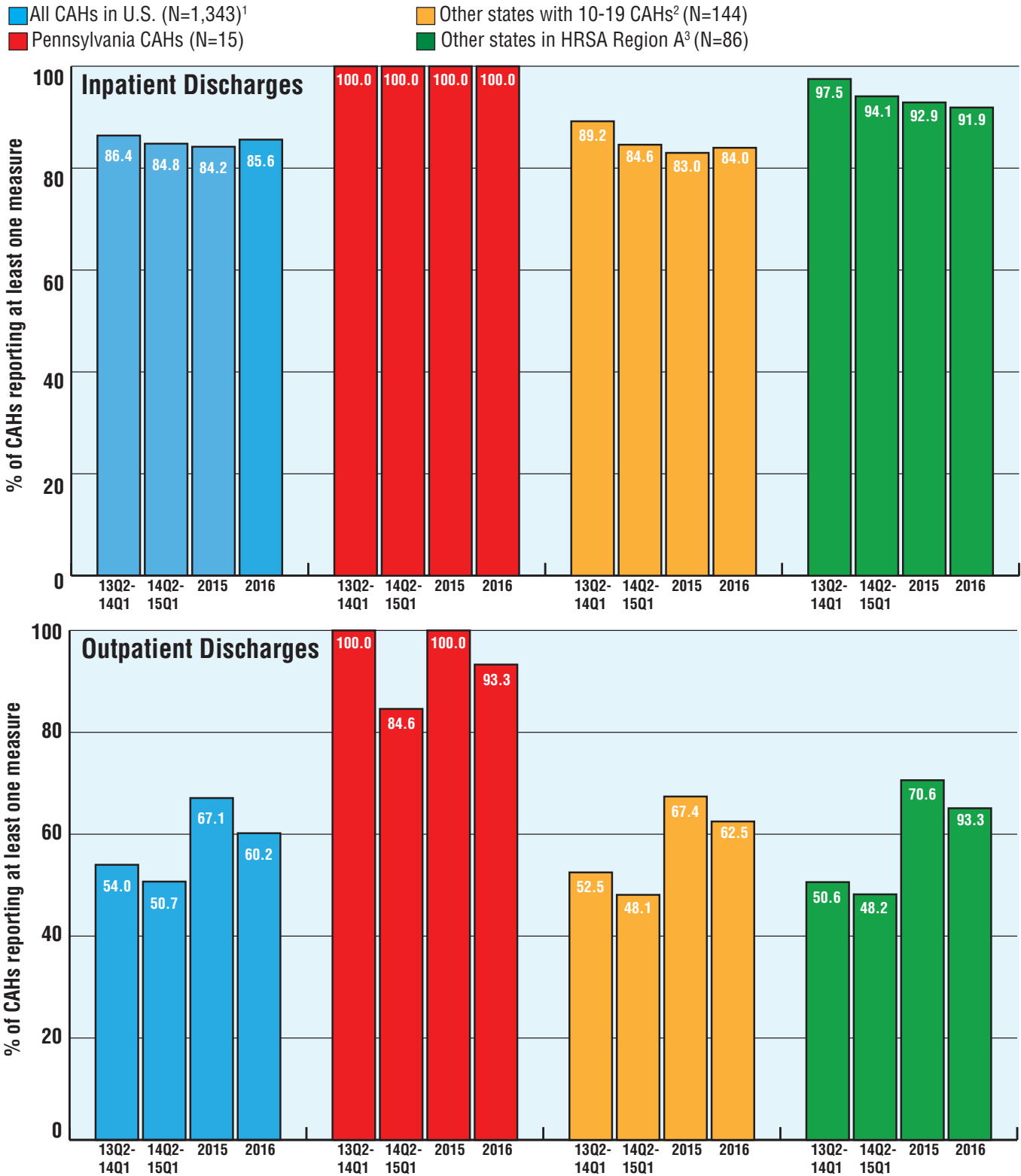1. The Flex Monitoring Team has published national Hospital Compare reports since 2006. All are available for download at http://www.flexmonitoring.org/publications/annualhospital-compare-results/.

2. Previous state-level reports are available on the Flex Monitoring Team website at http://www.flexmonitoring.org/data/state-level-data.

Figure 2. CAH Participation in Hospital Compare for Inpatient and Outpatient Discharges, 2016

- All CAHs in U.S. (N=1,343)[1]
- Pennsylvania CAHs (N=15)
- Other states with 10-19 CAHs[2] (N=144)
- Other states in HRSA Region A[3] (N=86)

Inpatient Discharges

% of CAHs reporting at least one measure

	13Q2-14Q1	14Q2-15Q1	2015	2016
All CAHs in U.S.	86.4	84.8	84.2	85.6
Pennsylvania CAHs	100.0	100.0	100.0	100.0
Other states 10-19 CAHs	89.2	84.6	83.0	84.0
Other states HRSA Region A	97.5	94.1	92.9	91.9

Outpatient Discharges

% of CAHs reporting at least one measure

	13Q2-14Q1	14Q2-15Q1	2015	2016
All CAHs in U.S.	54.0	50.7	67.1	60.2
Pennsylvania CAHs	100.0	84.6	100.0	93.3
Other states 10-19 CAHs	52.5	48.1	67.4	62.5
Other states HRSA Region A	50.6	48.2	70.6	93.3

1. Listed N values refer to most recent data (2016) only.
2. Group includes AK(14), AZ(14), FL(13), ME(16), NH(13), NV(13), NY(18), TN(15), UT(12), WY(16)
3. HRSA Region A includes MA(3), ME(16), NH(13), NY(18), VA(8), VT(8), WV(20)

Table 1. State Rankings of CAH Reporting Rates for Inpatient Quality Measures, 2016

Rank	State	CAHs reporting	% of CAHs
1	Michigan	36	100.0
	Indiana	35	
	Georgia	30	
	Arkansas	29	
	Maine	16	
	Pennsylvania	15	
	Utah	12	
	Virginia	8	
	South Carolina	5	
	Alabama	4	
	Massachusetts	3	
12	Minnesota	77	98.7
13	Wisconsin	57	98.3
14	Washington	38	97.4
15	Illinois	49	96.1
16	Nebraska	61	95.3
17	West Virginia	19	95.0
18	North Dakota	34	94.4
19	Wyoming	15	93.8
20	New Hampshire	12	92.3
21	Oregon	23	92.0
22	Kansas	75	89.3
23	Idaho	24	88.9
24	California	30	88.2
25	Vermont	7	87.5
26	Tennessee	13	86.7
27	North Carolina	18	85.7
	All CAHs	1,150	85.6
28	Kentucky	23	85.2
29	Colorado	25	83.3
30	Iowa	68	82.9
31	Ohio	27	81.8
32	New York	14	77.8
	New Mexico	7	
34	Nevada	10	76.9
	Florida		
36	Montana	36	75.0
	Missouri	27	
38	Alaska	10	71.4
39	Oklahoma	26	70.3
40	Mississippi	20	64.5
41	Arizona	9	64.3
42	South Dakota	24	63.2
43	Louisiana	16	59.3
44	Texas	48	58.5
45	Hawaii	5	55.6

Table 2. State Rankings of CAH Reporting Rates for Outpatient Quality Measures, 2016

Rank	State	CAHs reporting	% of CAHs
1	Alabama	4	100.0
2	Nebraska	63	98.4
3	Michigan	35	97.2
4	Pennsylvania	14	93.3
5	Minnesota	70	89.7
6	Indiana	31	88.6
7	Maine	13	81.3
	Wyoming		
9	Wisconsin	45	77.6
10	Virginia	6	75.0
11	Washington	29	74.4
12	Tennessee	11	73.3
13	New York	13	72.2
14	Oregon	18	72.0
15	Georgia	21	70.0
16	North Dakota	25	69.4
17	Nevada	9	69.2
18	Oklahoma	25	67.6
19	Ohio	22	66.7
	North Carolina	14	
	Utah	8	
	Massachusetts	2	
23	Iowa	54	65.9
24	New Hampshire	8	61.5
25	Illinois	31	60.8
	All CAHs	808	60.2
26	West Virginia	12	60.0
27	Kentucky	16	59.3
28	Mississippi	18	58.1
29	Arizona	7	50.0
30	Arkansas	13	44.8
31	New Mexico	4	44.4
	Hawaii		
33	Kansas	33	39.3
34	Florida	5	38.5
35	Colorado	11	36.7
36	Missouri	13	36.1
37	California	12	35.3
38	Texas	28	34.1
39	Montana	16	33.3
	Idaho	9	
41	Louisiana	8	29.6
42	Vermont	2	25.0
43	South Dakota	9	23.7
44	Alaska	3	21.4
45	South Carolina	1	20.0

Table 3. Inpatient and Outpatient Process of Care Results for Patients Discharged from Reporting CAHs in Pennsylvania and All Other States, 2016

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

	Code	Description	PA (n=15)		All other CAHs (n=1,328)	
			CAHs reporting	% of patients[1]	CAHs reporting	% of patients[1]
Inpatient	IMM-2[†]	Immunization for influenza	14	94.5	935	87.1
	OP-27/IMM-3[†]	Healthcare workers given influenza vaccination	12	90.4	941	87.7
	PC-01[‡]	Early elective delivery (lower is better)	3	0.0	196	2.1
	STK-4	Thrombolytic therapy	3	*	116	*
	VTE-5	Warfarin therapy discharge instructions	6	97.3	287	89.9
	VTE-6	Incidence of potentially-preventable VTE (lower is better)	3	*	91	*
	Code	Description	CAHs reporting	% of patients[1]	CAHs reporting	% of patients[1]
Outpatient	OP-2[†]	Fibrinolytic therapy received within 30 minutes	6	60.0	336	50.3
	OP-4[†]	Aspirin at arrival	14	95.7	744	95.3
	OP-22[†]	Patient left without being seen (lower is better)	11	0.8	550	1.1
	OP-23[‡]	Received head CT scan interpretation within 45 minutes	8	64.9	471	62.2
	OP-29	Appropriate follow-up interval, colonoscopy, average-risk patients	5	62.4	147	76.5
	OP-30	Appropriate follow-up interval, colonoscopy, patients with polyps	5	87.1	137	92.3

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 FY 2018-21 (this table shows Hospital Compare data)
‡ MBQIP additional improvement measure FY 2018-21 (this table shows Hospital Compare data)

Table 4. Median Time to Patients Receiving Recommended Care at CAHs in Pennsylvania and All Other States, 2016

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

Note: lower is better for all measures in this table.

Code	Description	PA (n=15)		All other CAHs (n=1,328)	
		CAHs reporting	Minutes[1]	CAHs reporting	Minutes[1]
ED-1b†	Median time from ED admission to ED departure for admitted patients	11	201.5	640	202.0
ED-2b†	Admit decision time to ED departure time for admitted patients	11	47.5	640	47.0
OP-1†	Median time to fibrinolysis	6	30.0	336	32.0
OP-3b†	Median time to transfer to another facility - acute coronary intervention	10	77.0	404	66.5
OP-5†	Median time to ECG	14	8.0	743	7.5
OP-18b†	Median time from ED arrival to ED departure for discharged patients	14	104.8	710	104.5
OP-20†	Median time from door to diagnostic evaluation	14	16.0	711	17.0
OP-21†	Median time to pain management for long bone fracture	13	53.0	684	45

1. Median minutes to receiving care. Lower is better for all measures. Rates without highlights were not significantly different from comparable rates in all CAHs nationally.
* Insufficient data to calculate rate (<25 patients).
† MBQIP core measure FY 2018-21 (this table shows Hospital Compare data)
‡ MBQIP additional improvement measure FY 2018-21 (this table shows Hospital Compare data)

Table 5. Structural Quality Measures Reported by CAHs in Pennsylvania and All Other States, 2016

Code	Description	PA CAHs (n=15)			All other CAHs (n=1,328)		
		No data	No	Yes	No data	No	Yes
OP-12	Ability to receive lab data directly to certified EHR	26.7	0.0	73.3	74.6	2.1	23.3
OP-17	Ability to track clinical results between visits	26.7	0.0	73.3	74.9	2.7	22.4
OP-25‡	Use of safe surgery checklist: outpatient	26.7	6.7	66.7	71.8	1.8	26.4
SM-PART-NURSE	Nursing care registry	40.0	53.3	6.7	75.7	17.2	7.1
SM-PART-GEN-SURG	General surgery registry	33.3	60.0	6.7	75.9	22.1	2.0
SM-SS-CHECK	Use of safe surgery checklist: inpatient	33.3	6.7	60.0	73.2	2.0	24.8

‡ MBQIP additional improvement measure FY 2018-21 (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.)

- **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 / IMM-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 repor

- **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).

- **SM-PART-GEN-SURG (SM-4):** General Surgery Registry – participation in a systematic clinical database for general surgery.

- **SM-PART-NURSE (SM-3)**: Nursing Care Registry – participation in a systematic clinical database for nursing-sensitive care.

- **SM-SS-CHECK (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-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.

- **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 January 2017
- Specifications Manual for National Hospital Outpatient Quality Measures http://bit.ly/OutpManual, accessed January 2017
- Prenatal measure specifications http://bit.ly/Prenatal-Specs, accessed January 2017

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