



15 Top Health Systems

— 2022

Report Methodology Notes

HEALTH SYSTEM SELECTION

In the 15 Top Health Systems study, we identify health systems as follows:

- Must have at least two acute care hospitals
- Must report a parent or related organization relationship on the hospital Medicare cost report

We also include Women's, Cardiac and Orthopedic hospitals, as well as Critical Access Hospitals in the system analysis.

If a health system has separately reported subsystems as members, we rank each subsystem's performance independent of its parent, as well as including it in its parent system. A hospital may be included in both a parent system and a subsystem analysis.

HEALTH SYSTEM COMPARISON GROUPS AND WINNERS

We divide health systems into three comparison groups to develop more actionable performance benchmarks.

Comparison Group	Criteria	Winners
Large Health System	$\geq \$2.5B$ tot oper exp OR $\geq 1.5B$ & ≥ 3 states OR $\geq 1.5B$ & ≥ 5 STGAC	5
Medium Health System	$\geq \$800M$ tot oper exp & ≥ 5 STGAC OR $\geq \$1B$ tot oper exp	5
Small Health System	Does not meet medium or large hs criteria	5
Overall		15

We select 15 **Benchmark health systems** (winners) based on overall performance across all included measures, in the most recent year of data available. Overall performance is determined by ranking each measure individually, by comparison group, summing the weighted ranks and re-ranking overall.

Peer health systems include all U.S. health systems in our study database, *excluding* benchmark systems.

HEALTH SYSTEM MEASURE CALCULATION

We produce health system measures by aggregating patient level and hospital data to the health system level. See study Abstract for details.

METHODOLOGY NOTES

Present on Admission (POA) coding was used in the risk models for mortality, complications and average length of stay (ALOS). Due to the increasing number of diagnoses with the invalid POA code '0', we made the following adjustments to the MEDPAR data:

- 1) Original, valid (Y,N,U,W or 1) POA codes assigned to diagnoses were retained
- 2) Where a POA code of '0' appeared, we took the next four steps:
 - a) We treated all principal diagnoses (dx) as 'present on admission'
 - b) We treated all secondary dx on the CMS exempt list as 'exempt'
 - c) We treated secondary dx for which the POA code 'Y' or 'W' appeared more than 50 percent of the time in the all-payer database as 'present on admission'
 - d) All others were treated as 'not present'

RANK WEIGHTS AND PUBLIC DATA SOURCES

Measures	Rank Wt	Source
Risk-Adjusted Inpatient Mortality	1	MEDPAR FFY ¹ 2016-2020
Risk-Adjusted Complications	1	MEDPAR FFY ¹ 2016-2020
Healthcare-Associated Infections	1	CMS Hospital Compare CY 2016-2019, Oct 2019-Mar 2021
30-Day Mortality (AMI, heart failure, pneumonia, COPD, stroke)	1	CMS Hospital Compare 3-yr data sets ending June 30 in 2016, 2017, 2018, 2019*
30-Day Hospital-Wide Readmissions	1	CMS Hospital Compare 1-yr data sets ending June 30 in 2016, 2017, 2018, 2019**
Severity-Adjusted Average Length of Stay	1	MEDPAR FFY ¹ 2016-2020
Medicare Spend Per Beneficiary	1	CMS Hospital Compare CY 2016-2019, July 2020-Dec 2020
HCAHPS	1	CMS Hospital Compare CY 2016-2019, July 2020-Mar 2021

¹Federal Fiscal year is Oct 1 through Sep 30.

*Two data points end in 2019 due to CMS removal of Q1 and Q2 2020 data from measure data sets in current year, 2 ½ years of data in 2020 data point.

**Two data points end in 2019 due to CMS removal of Q1 and Q2 2020 data from measure data sets in current year, 6 months of data in 2020 data point.

FOR MORE INFORMATION

For a Study Abstract, with full details on performance measures, methods used and winner list, visit www.100tophospitals.com.

15 Top Health Systems Performance Matrix

INTEGRATED SYSTEM PERFORMANCE COMPARISON

The 15 Top Health Systems Performance Matrix, in a single view, compares your system's current level of achievement and 5-year rate of improvement in percentiles. These percentiles are based on your rank, by measure and overall, versus all other health systems in your comparison group. This integrated performance comparison provides insight into the success of your performance improvement strategies relative to other similar health systems.

INTERPRETING SYSTEM PERFORMANCE

Overall health system performance is a composite score based on the sum of the ranks of individual measures. For 2020 Performance overall, all measures had a weight of 1 in both the current and trend profiles. This sum is used to rank your health system versus your comparison group. The matrix "Overall" dot integrates your national rank percentile for current overall performance with your national rank percentile for 5-year overall rate of improvement. Rank percentiles for each individual measure are also graphed. Measures may fall into any one of four quadrants: Declining (lower left), Improving (upper left), Leading (upper right), or At Risk (lower right).

PERFORMANCE MATRIX NOTES

Missing Matrix Graph or Matrix Data Point

Your matrix graph will be absent from the report if your health system is out-of-study due to missing data needed to calculate one or more measures. Also, there will be no matrix graph if your system has too few years of data to trend. A minimum of four years of data are required.

Your health system will have no matrix graph overall dot and one or more missing measure dots if one or more performance measures could not be trended due to outlier trimming. A minimum of three good data points is needed to calculate the trend statistic used for ranking rate of improvement.

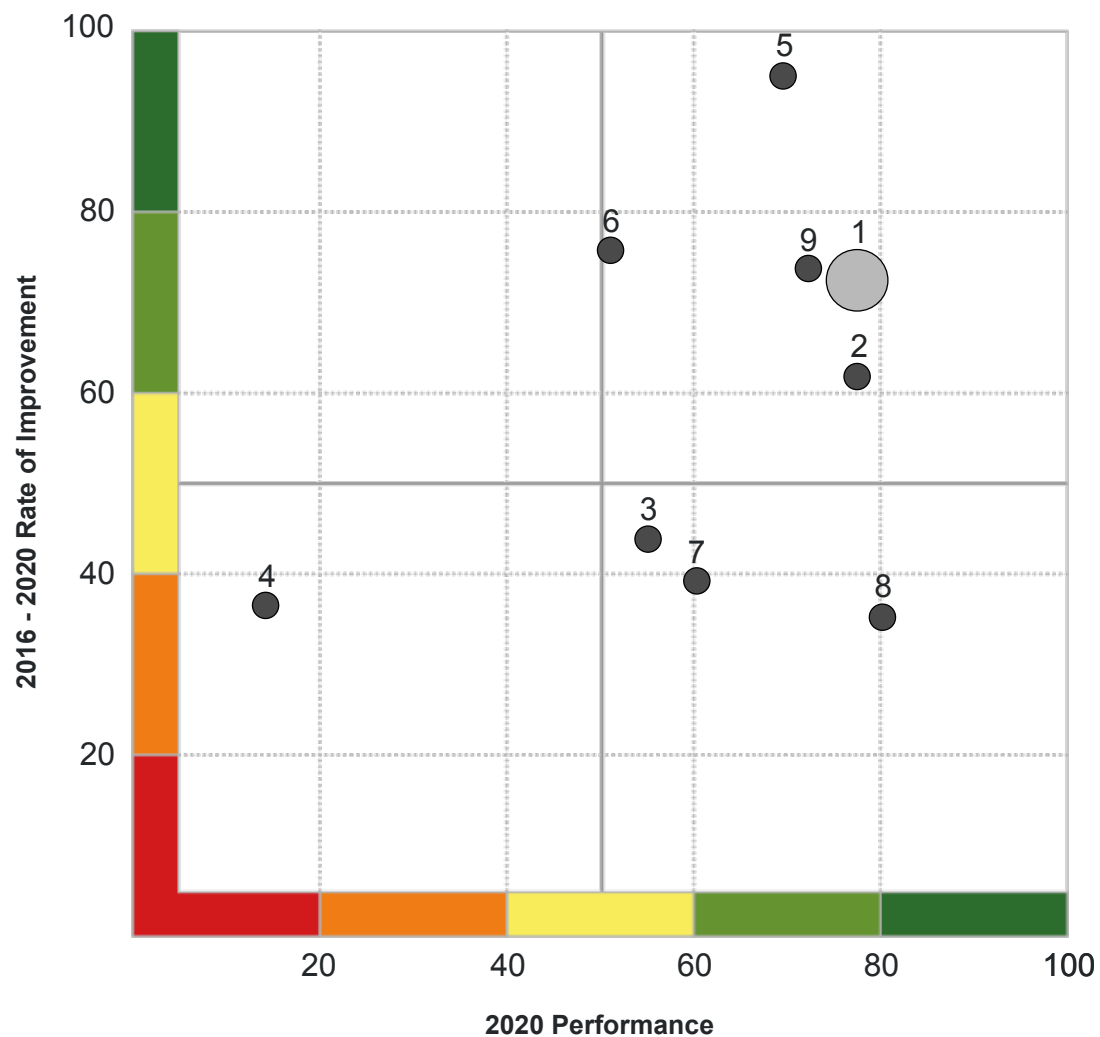
WINNER SELECTION

15 Top Health Systems award winners are selected based on highest overall **current** performance achievement only. Winners may have a wide range of performance on 5-year rate of improvement. Those with very low rates of improvement are "At Risk" for losing their benchmark status in future studies.

15 Top Health Systems Performance Comparison Group

Profiled health system compared to large health systems

2020 Performance and Five-Year Rate of Improvement Matrix



DATA POINT KEY

- 1 OVERALL**
- 2 Inpatient Mortality
- 3 Complications
- 4 HAI
- 5 30-Day Mortality
- 6 30-Day H-W Readmit
- 7 ALOS
- 8 MSPB
- 9 HCAHPS

- > 80 to 100
- > 60 to 80
- > 40 to 60
- > 20 to 40
- > 0 to 20

PROFILED HEALTH SYSTEM compared to:

2020 large health systems: n = 152

2016-2020 large health systems: n = 151

Performance and Improvement – Rank Percentiles Graphs

UNDERSTANDING THE GRAPHS

2020 Performance Rank Percentiles

The bar graph shows your system's performance on each measure, in the most current year of data we analyzed, reported as rank percentiles. Individual measure percentiles are calculated by dividing your measure rank within your comparison group by the number of systems in the group and multiplying by 100.

2016-2020 Rate of Improvement Rank Percentiles

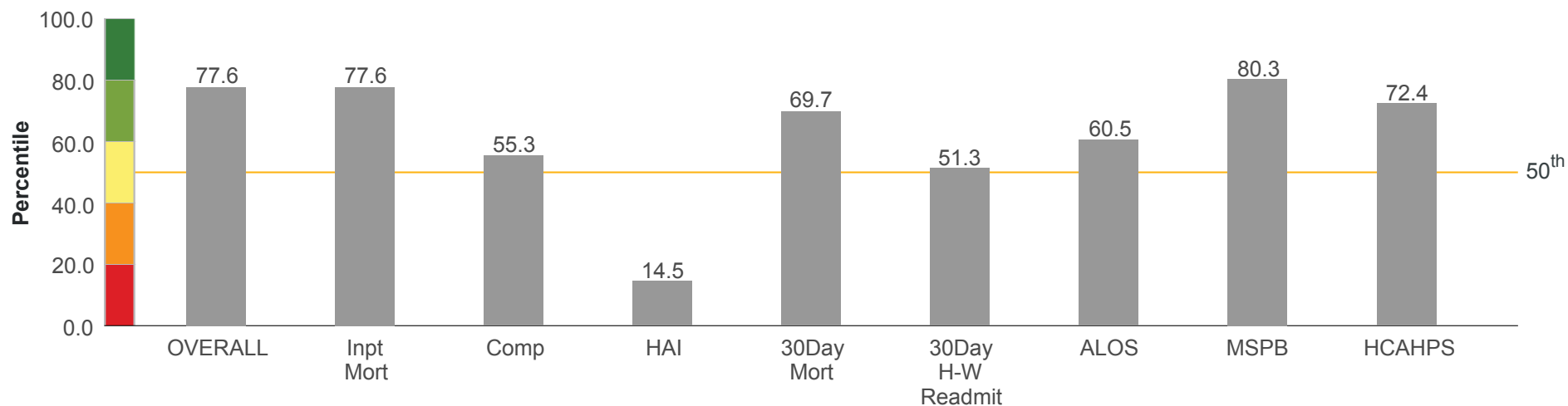
This bar graph shows your system's rate of improvement on each measure, and overall, reported as rank percentiles. Individual measure percentiles are calculated by dividing your measure rank within your comparison group by the number of systems in the group and multiplying by 100. The overall rank percentile is based on the sum of your individual measure ranks, re-ranked by comparison group. The overall rank sum is then converted into a percentile. The overall rank percentile is not the average of the individual measure percentiles.

Measures with rank percentiles above the median are likely to move ahead of peers on performance in the future, if those rates of improvement have continued.

Systems with overall and measure-specific rank percentiles below the median are likely to fall behind peers on performance in the future, if those low rates of improvement have continued. And winners with a low overall rate of improvement are at risk for dropping out of the winner circle entirely.

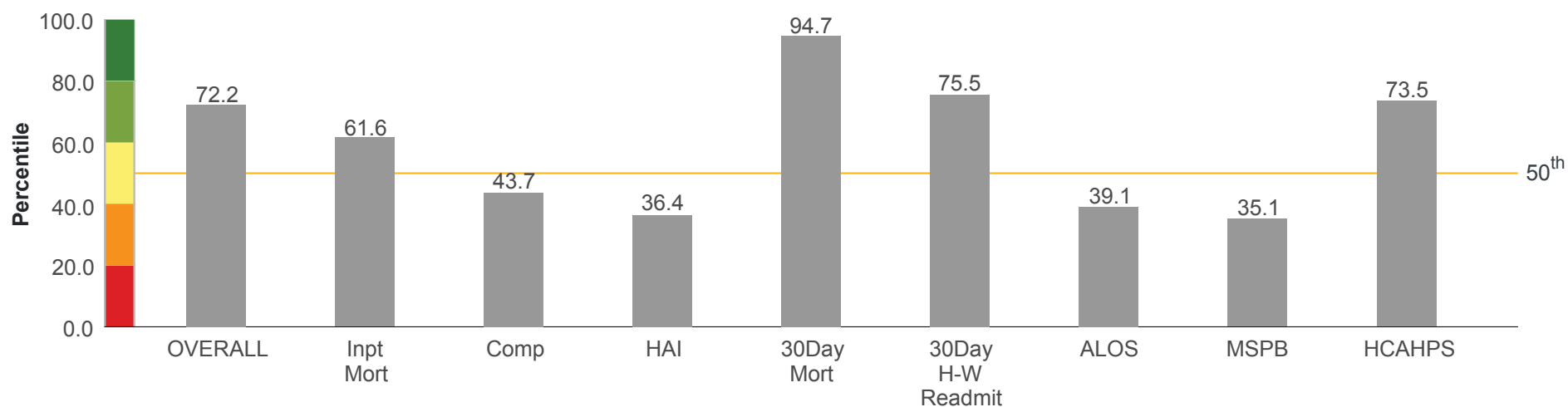
The 15 Top benchmark systems (winners) are selected based only on 2020 performance.

2020 Performance Rank Percentiles



Profiled system compared to large health systems: n = 152

2016 - 2020 Rate of Improvement Rank Percentiles



Profiled system compared to large health systems: n = 151

15 Top Health Systems Current Profile Notes

CURRENT PROFILE

The 15 Top Health Systems Current Profile analyzes your health system's performance in the most recent year available, using a national balanced scorecard of critical performance metrics:

- Risk-Adjusted Inpatient Mortality Index
- Risk-Adjusted Complications Index
- Mean Healthcare-Associated Infection Index
- Mean 30-Day Mortality Rate (AMI, heart failure, pneumonia, COPD, stroke)
- 30-Day Hospital-Wide Readmission Rate
- Severity-Adjusted Average Length of Stay
- Medicare Spend Per Beneficiary Index
- HCAHPS Top Box Percent (Overall Hospital Rating)

Using this Profile, you can identify your health system's level of performance achievement by individual measure and overall, and target higher performance. In addition, the Profile shows the level of achievement of national award-winning (benchmark) health systems and the median performance of non-winning (peer) systems.

MEASURE CALCULATION OVERVIEW

Mortality, complications and length of stay (LOS) indexes are calculated by summing hospital observed and expected values to the health system level. Expected values are normalized by system class. LOS indexes are converted to average length of stay in days for reporting, using the in-study health system grand mean LOS.

Healthcare-associated infections, 30-day mortality and 30-day hospital-wide readmissions are calculated by summing member hospital observed and eligible patient counts to the health system level to calculate the percent or rate.

Medicare spend per beneficiary index (MSPB) is calculated by weighting the member hospital MSPB indexes by the hospital MEDPAR discharges. The weighted indexes are summed and divided by the total member hospital discharges. This produces the weighted MSPB for each system.

The HCAHPS top box percent is calculated by summing the member hospital HCAHPS survey numbers and eligible patient counts to the health system level to calculate the percent.

UNDERSTANDING THE GRAPHS

Profiled System Compared with Benchmark and Peer

This section contains individual bar graphs for each of the performance measures included in the 15 Top Health Systems national balanced scorecard. Each bar graph shows performance achievement levels for three groups: your health system, the benchmark group median, and the peer group median.

The graphs for the binomial measures — in-hospital mortality and complications — also have a statistical significance note that indicates whether your performance is better than expected, as expected, or worse than expected (99% confidence).

Healthcare-Associated Infections, 30-Day Mortality Rates, and HCAHPS Detail

This section contains bar graphs for the individual measures that make up the composite ranked measures for mean healthcare-associated infections and mean 30-day mortality. In addition, performance on each HCAHPS question is included for information. Only the Overall Hospital Rating question (an HCAHPS outcome metric) is ranked.

15 Top Health Systems Current Profile Notes

Member Hospital Exclusions

Member hospitals are excluded from the parent health system analysis if one or more of the following conditions exist:

- Identified as a specialty hospital (Children's, Cancer, LTAC, Psych or SNF)
- Identified as a federally owned hospital
- Identified as a non-U.S. hospital (Guam, Puerto Rico, Virgin Islands)
- Medicare average length of stay longer than 30 days
- No reported Medicare deaths

Any member hospital measures for which there are useable data will be included when aggregating member hospital data to the system level.

System Study Exclusions (No Report Available)

- Organization does not have at least two short term general acute care (STGAC) hospitals that report system membership on the hospital cost report
- 50% or more STGAC hospital members are missing valid data
- System has one or more missing measures
- POA not coded for 2019 or 2020 Medicare claims

System Winner Exclusions

A system is winner excluded if:

- Observed mortality or complications are statistically worse than expected (99% confidence)
- Medicare spend per beneficiary (MSPB) index is missing or incomplete
- Had a 15 Top Health System award rescinded within three years

Use of Median Values

When individual measures are missing or the reported value is insufficiently precise (patient count too low), we substitute class median values so your health system can be ranked. This was done for the following measures:

- 30-day mortality rates (AMI, HF, pneumonia, COPD, stroke)
- Medicare spend per beneficiary index

Measures for Information Only

We are including several measures in this report, to allow you to compare your performance relative to your peer and benchmark groups. These measures are **not** included in your overall performance rating and are not used to select the 15 Top award-winning health systems. You will find these measures in a separate section of the report following the detail graphs.

HCAHPS QUESTIONS

We ranked health systems on the Overall Rating question only. All other question results are reported for information only.

See Study Overview for more details. Visit www.100tophospitals.com.

15 Top Health Systems Trend Profile Notes

TREND PROFILE OVERVIEW

The 15 Top Health Systems Trend Profile analyzes your health system's rate of performance improvement over five years, using a balanced scorecard of critical performance metrics:

- Risk-Adjusted Inpatient Mortality Index
- Risk-Adjusted Complications Index
- Mean Healthcare-Associated Infection Index
- Mean 30-Day Mortality Rate (AMI, heart failure, pneumonia, COPD, stroke)
- 30-Day Hospital-Wide Readmission Rate
- Severity-Adjusted Average Length of Stay
- Medicare Spend Per Beneficiary Index
- HCAHPS Top Box Percent (Overall Hospital Rating)

Minimum Data Requirements for Ranking

We require a minimum of four (4) valid data points for each measure (including the most current year) to include a system in the Trend Profile ranking.

UNDERSTANDING THE GRAPHS

Improvement Trends Versus Comparison Group Quintiles (Color Quintile Graphs)

Trend performance for the system is displayed by the color quintile graphs for each individual performance measure showing your health system's actual data points for each year. These data points are displayed against a background of quintile ranges for the data points of all health systems in your comparison group. Each range is color-coded to indicate level of performance, from dark green (best quintile) to red (worst quintile). You can use these graphs to see whether your organization's trajectory over time is mostly flat, moving ahead of or falling behind other similar health systems.

A statistical significance note is displayed for each graph, indicating whether your performance is improving, not changing, or worsening over the five years we analyzed (99% confidence for mortality and complications; 95% for all other measures). We rank each measure using the t-statistic of the regression line through the data points (slope/S.E.)

Use of Median Values and Composite Measures

For each data year, when individual 30-day mortality measures are missing, the median value of your comparison group is substituted in order to calculate and display the composite mean 30-day value. However, if ALL individual 30-day mortality measures are missing for that data year, then median values are not used to calculate the composite mean and the data point will not be displayed on the color quintile graphs.

To determine whether your health system had a valid data point for the mean healthcare-associated infection index measure, we applied the same minimum eligibility requirements and individual HAI measure exclusions by comparison group as the current profile, to each historical year of data. *Note: The CDC's National Healthcare Safety Network updated its baseline HAI risk adjustment data to a standard based upon data from 2015, with new SIR values reported starting in January 2017.*

Missing Data Points

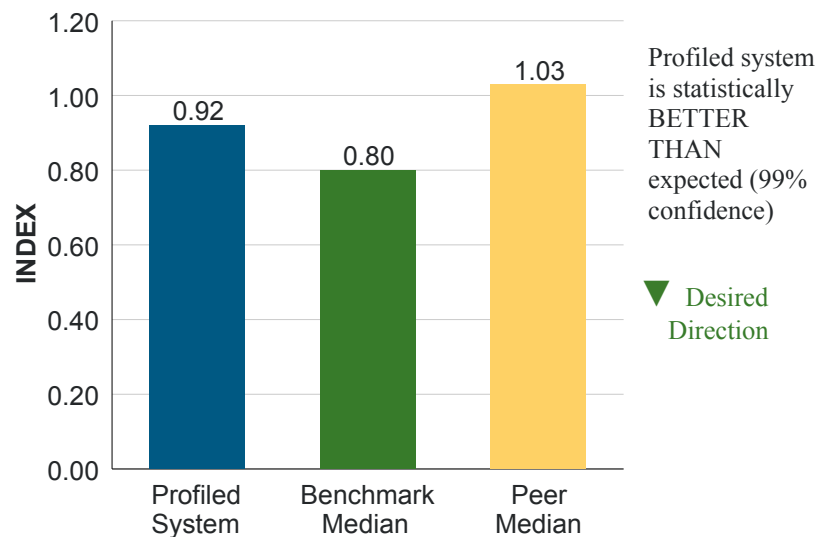
Individual data points are missing on the color quintile graphs when values are not reported, or your comparison group median value has been substituted in a specific year.

Data Point Time Periods

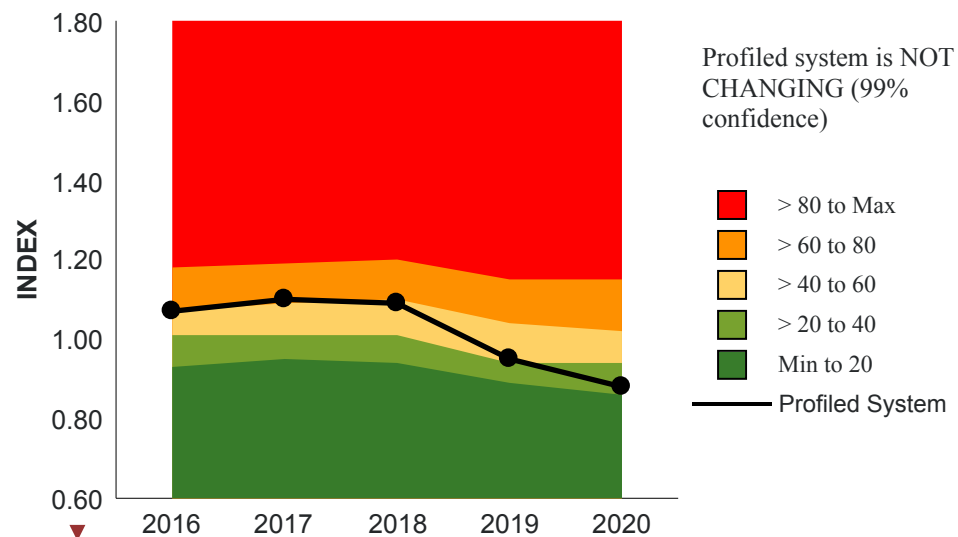
Data points on the graphs – labeled 2016, 2017, 2018, 2019, 2020 – represent various data periods. See Report Methodology Notes page, Rank Weights and Public Data Sources table for more details.

Risk-adjusted inpatient mortality index

2020 IP MORTALITY PERFORMANCE



2016-2020 IP MORTALITY RATE OF IMPROVEMENT



Benchmark systems are the winners in the comparison group: n = 5

System performance compared to peer system quintiles: n = 151

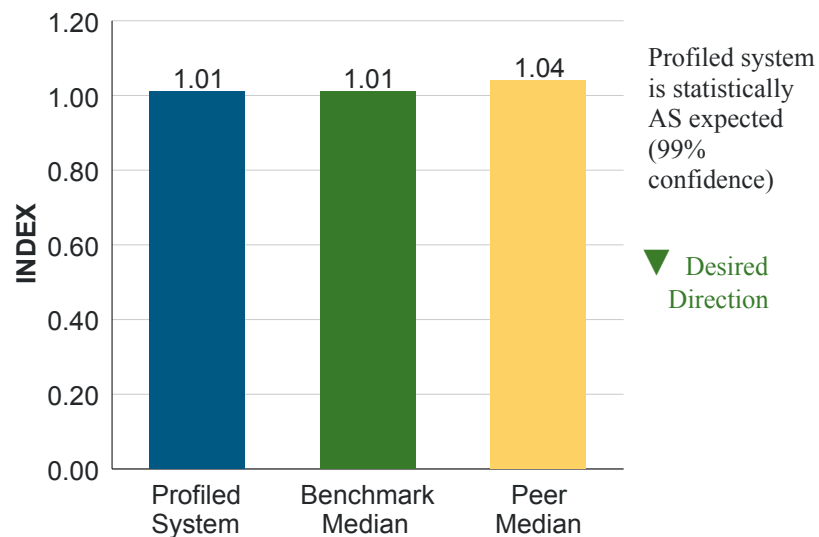
Peer systems are the non-winners in the comparison group: n = 147

Note: 2020 values on the current and trend graphs will not match due to different norm factors used to normalize the expected values.

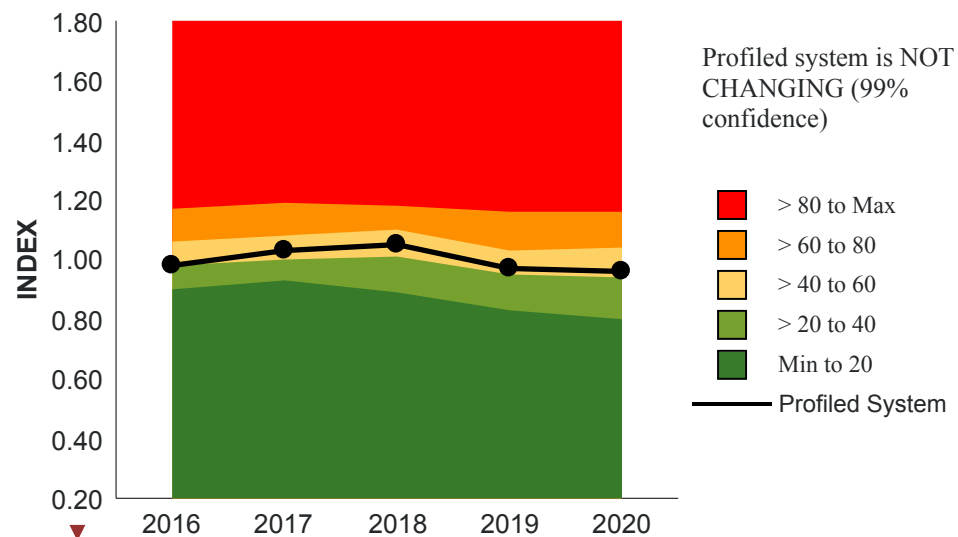
PERCENTILE POINTS ►		HEALTH SYSTEM COMPARISON GROUP				PROFILED SYSTEM		
		20th	40th	60th	80th	Value	Upper C.I.	Lower C.I.
YEARS	2016	0.93	1.01	1.07	1.18	1.07	1.13	1.02
	2017	0.95	1.01	1.09	1.19	1.10	1.16	1.05
	2018	0.94	1.01	1.10	1.20	1.09	1.14	1.04
	2019	0.89	0.94	1.04	1.15	0.95	1.00	0.90
	2020	0.86	0.94	1.02	1.15	0.88	0.92	0.83

Risk-adjusted complications index

2020 COMPLICATIONS PERFORMANCE



2016-2020 COMPLICATIONS RATE OF IMPROVEMENT



Benchmark systems are the winners in the comparison group: $n = 5$

Peer systems are the non-winners in the comparison group: $n = 147$

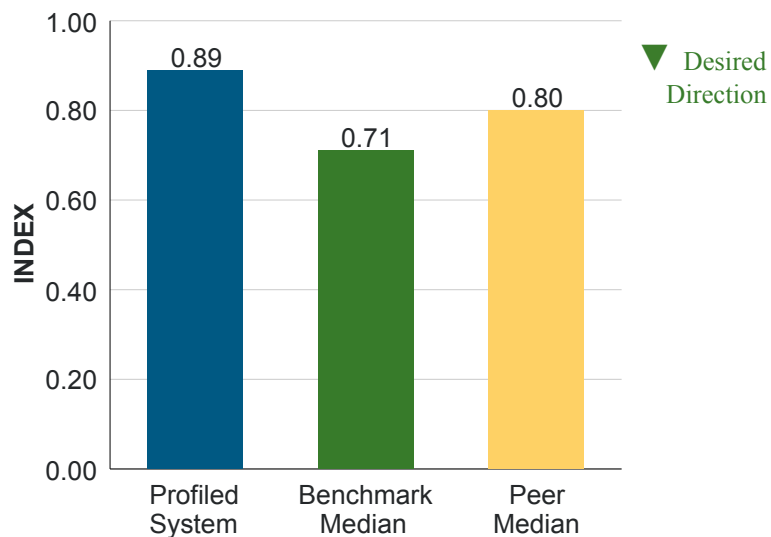
Note: 2020 values on the current and trend graphs will not match due to different norm factors used to normalize the expected values.

System performance compared to peer system quintiles: $n = 151$

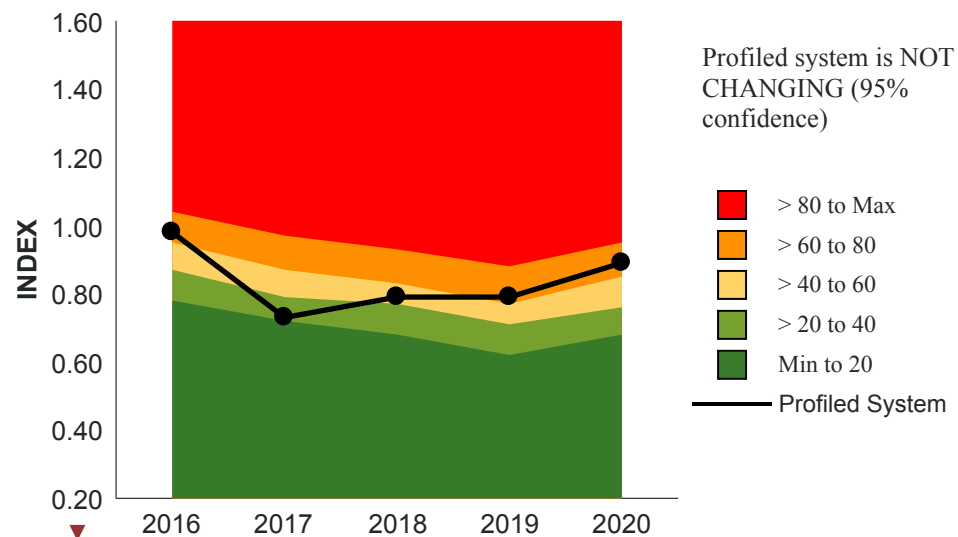
PERCENTILE POINTS ►		HEALTH SYSTEM COMPARISON GROUP				PROFILED SYSTEM		
		20th	40th	60th	80th	Value	Upper C.I.	Lower C.I.
YEARS	2016	0.90	0.98	1.06	1.17	0.98	1.03	0.94
	2017	0.93	1.00	1.08	1.19	1.03	1.08	0.98
	2018	0.89	1.01	1.10	1.18	1.05	1.10	1.00
	2019	0.83	0.95	1.03	1.16	0.97	1.02	0.93
	2020	0.80	0.94	1.04	1.16	0.96	1.01	0.91

Mean HAI standardized infection ratio

2020 HAI PERFORMANCE



2016-2020 HAI RATE OF IMPROVEMENT



Benchmark systems are the winners in the comparison group: $n = 5$

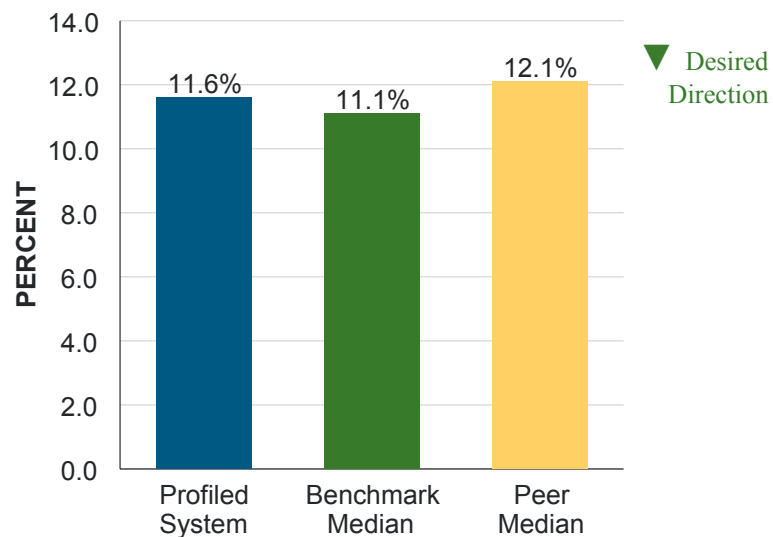
System performance compared to peer system quintiles: $n = 151$

Peer systems are the non-winners in the comparison group: $n = 147$

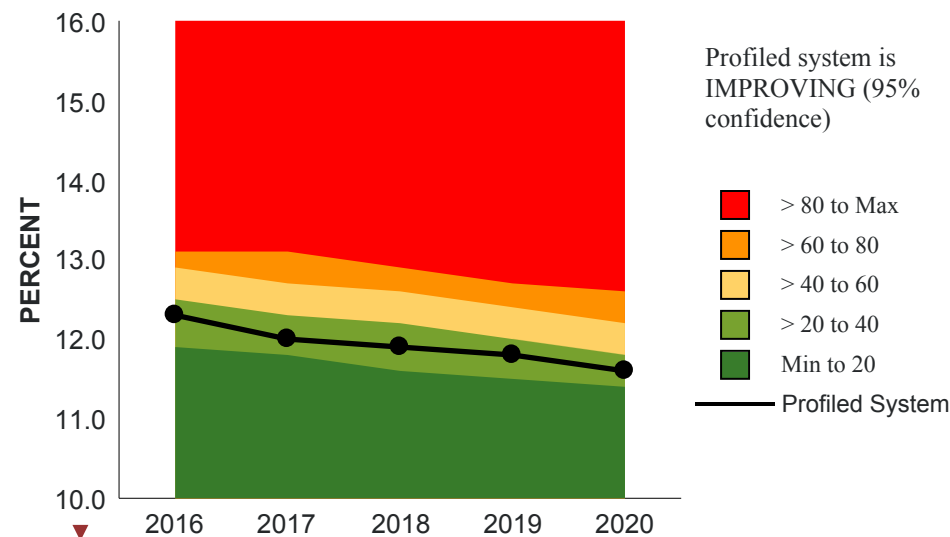
PERCENTILE POINTS ►		HEALTH SYSTEM COMPARISON GROUP				PROFILED SYSTEM
		20th	40th	60th	80th	Value
YEARS	2016	0.78	0.87	0.95	1.04	0.98
	2017	0.72	0.79	0.87	0.97	0.73
	2018	0.68	0.77	0.83	0.93	0.79
	2019	0.62	0.71	0.77	0.88	0.79
	2020	0.68	0.76	0.85	0.95	0.89

Mean 30-day mortality rate

2020 30D MORTALITY PERFORMANCE



2016-2020 30D MORTALITY RATE OF IMPROVEMENT



Benchmark systems are the winners in the comparison group: $n = 5$

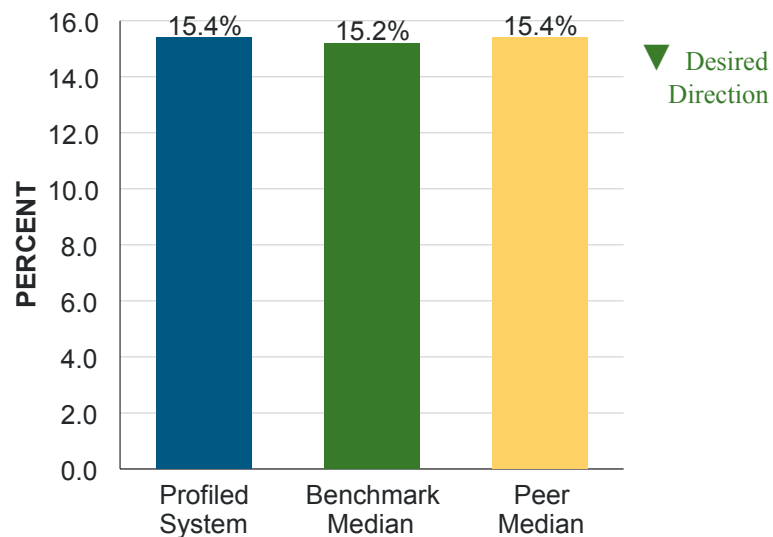
System performance compared to peer system quintiles: $n = 151$

Peer systems are the non-winners in the comparison group: $n = 147$

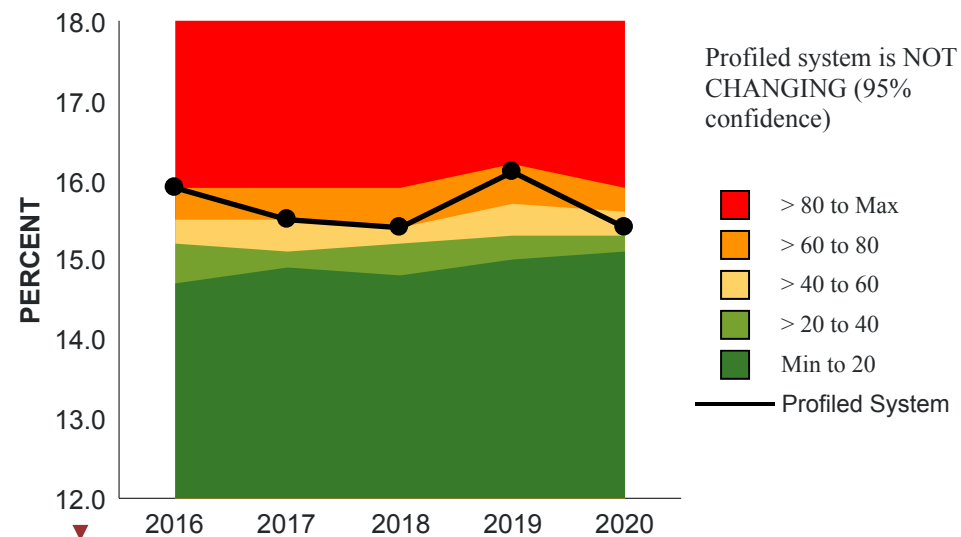
PERCENTILE POINTS ►		HEALTH SYSTEM COMPARISON GROUP				PROFILED SYSTEM
		20th	40th	60th	80th	Value
YEARS	2016	11.9	12.5	12.9	13.1	12.3
	2017	11.8	12.3	12.7	13.1	12.0
	2018	11.6	12.2	12.6	12.9	11.9
	2019	11.5	12.0	12.4	12.7	11.8
	2020	11.4	11.8	12.2	12.6	11.6

30-day hospital-wide readmission rate

2020 30D HOSP-WIDE READMIT PERFORMANCE



2016-2020 30D HOSP-WIDE READMIT RATE OF IMPROVEMENT



Benchmark systems are the winners in the comparison group: n = 5

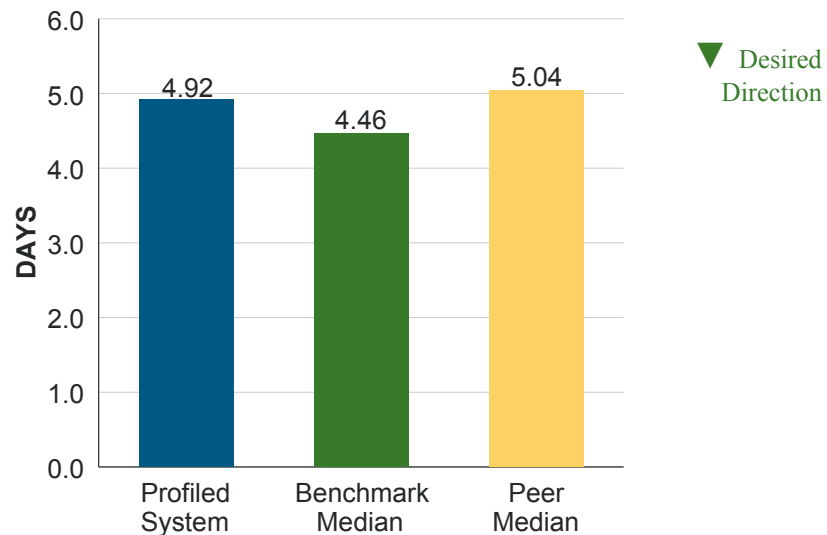
System performance compared to peer system quintiles: n = 151

Peer systems are the non-winners in the comparison group: n = 147

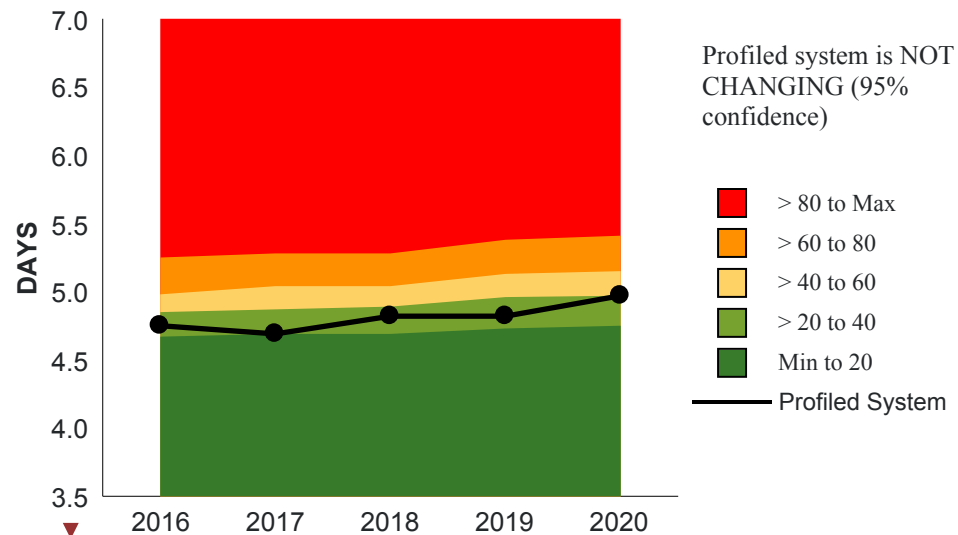
PERCENTILE POINTS ►		HEALTH SYSTEM COMPARISON GROUP				PROFILED SYSTEM
		20th	40th	60th	80th	Value
YEARS	2016	14.7	15.2	15.5	15.9	15.9
	2017	14.9	15.1	15.5	15.9	15.5
	2018	14.8	15.2	15.4	15.9	15.4
	2019	15.0	15.3	15.7	16.2	16.1
	2020	15.1	15.3	15.6	15.9	15.4

Severity-adjusted average length of stay

2020 ALOS PERFORMANCE



2016-2020 ALOS RATE OF IMPROVEMENT



Benchmark systems are the winners in the comparison group: $n = 5$

Peer systems are the non-winners in the comparison group: $n = 147$

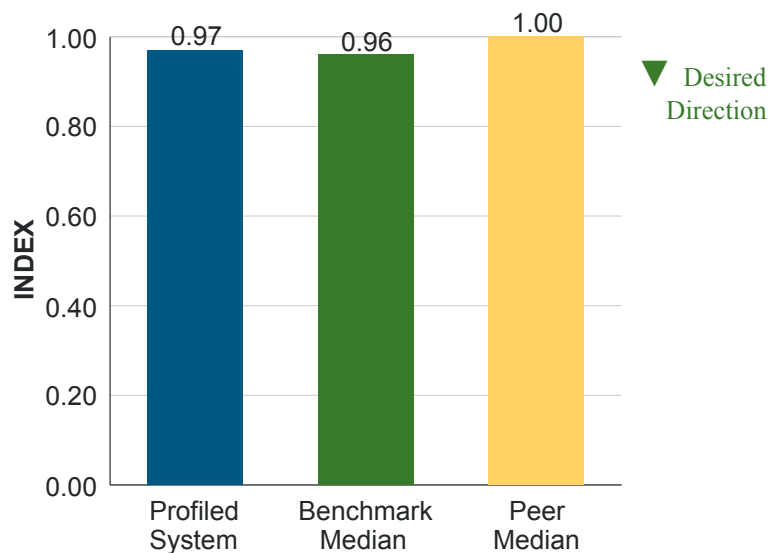
Note: 2020 values on the current and trend graphs will not match due to different norm factors used to normalize the expected values.

System performance compared to peer system quintiles: $n = 151$

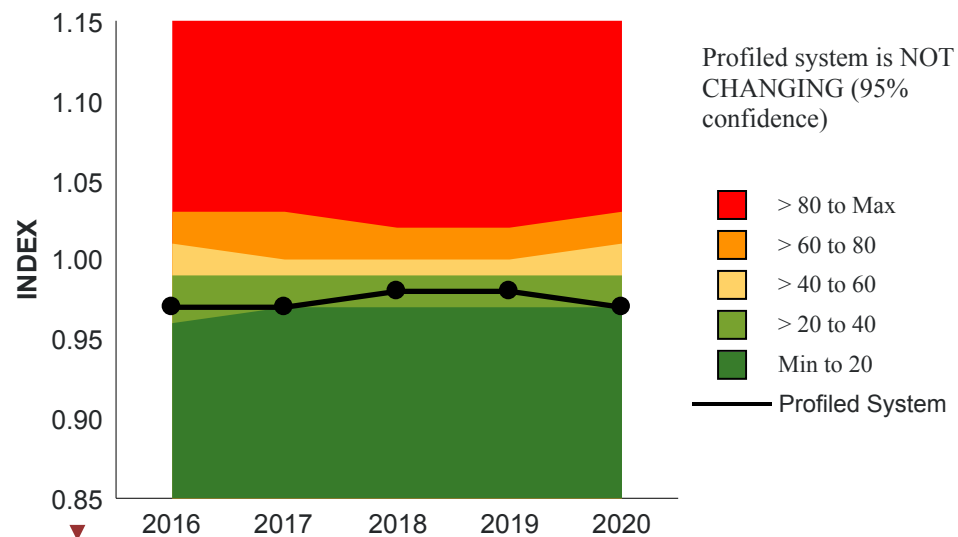
PERCENTILE POINTS ►		HEALTH SYSTEM COMPARISON GROUP				PROFILED SYSTEM
		20th	40th	60th	80th	Value
YEARS	2016	4.67	4.85	4.98	5.25	4.75
	2017	4.69	4.87	5.04	5.28	4.69
	2018	4.69	4.89	5.04	5.28	4.82
	2019	4.73	4.96	5.13	5.38	4.82
	2020	4.75	4.97	5.15	5.41	4.97

Medicare spend per beneficiary index

2020 MSPB PERFORMANCE



2016-2020 MSPB RATE OF IMPROVEMENT



Benchmark systems are the winners in the comparison group: $n = 5$

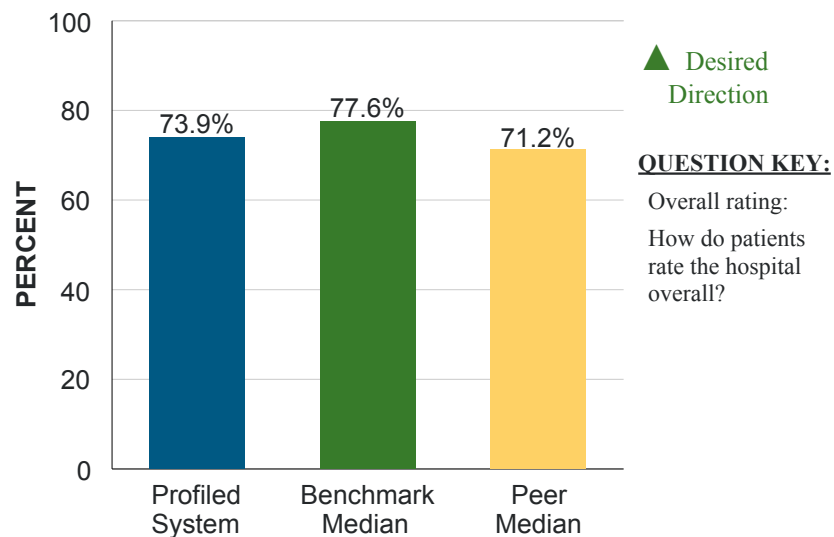
System performance compared to peer system quintiles: $n = 151$

Peer systems are the non-winners in the comparison group: $n = 147$

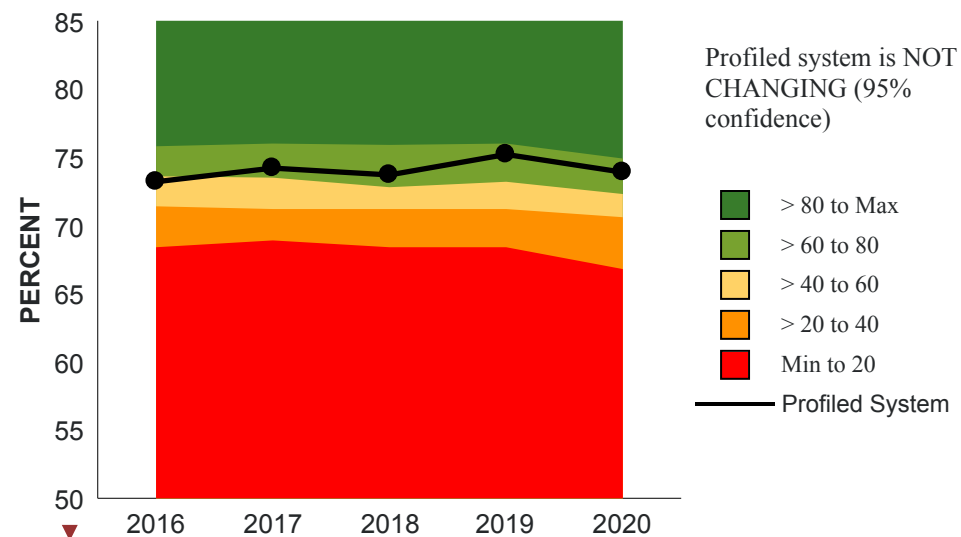
PERCENTILE POINTS ►		HEALTH SYSTEM COMPARISON GROUP				PROFILED SYSTEM
		20th	40th	60th	80th	Value
YEARS	2016	0.96	0.99	1.01	1.03	0.97
	2017	0.97	0.99	1.00	1.03	0.97
	2018	0.97	0.99	1.00	1.02	0.98
	2019	0.97	0.99	1.00	1.02	0.98
	2020	0.97	0.99	1.01	1.03	0.97

HCAHPS: overall rating question

2020 HCAHPS TOP BOX PERFORMANCE



2016-2020 HCAHPS TOP BOX RATE OF IMPROVEMENT



Benchmark systems are the winners in the comparison group: n = 5

System performance compared to peer system quintiles: n = 151

Peer systems are the non-winners in the comparison group: n = 147

PERCENTILE POINTS ►		HEALTH SYSTEM COMPARISON GROUP				PROFILED SYSTEM
		20th	40th	60th	80th	Value
YEARS	2016	68.4	71.4	73.6	75.8	73.2
	2017	68.9	71.2	73.5	76.0	74.2
	2018	68.4	71.2	72.8	75.9	73.7
	2019	68.4	71.2	73.2	76.0	75.2
	2020	66.8	70.6	72.3	74.9	73.9

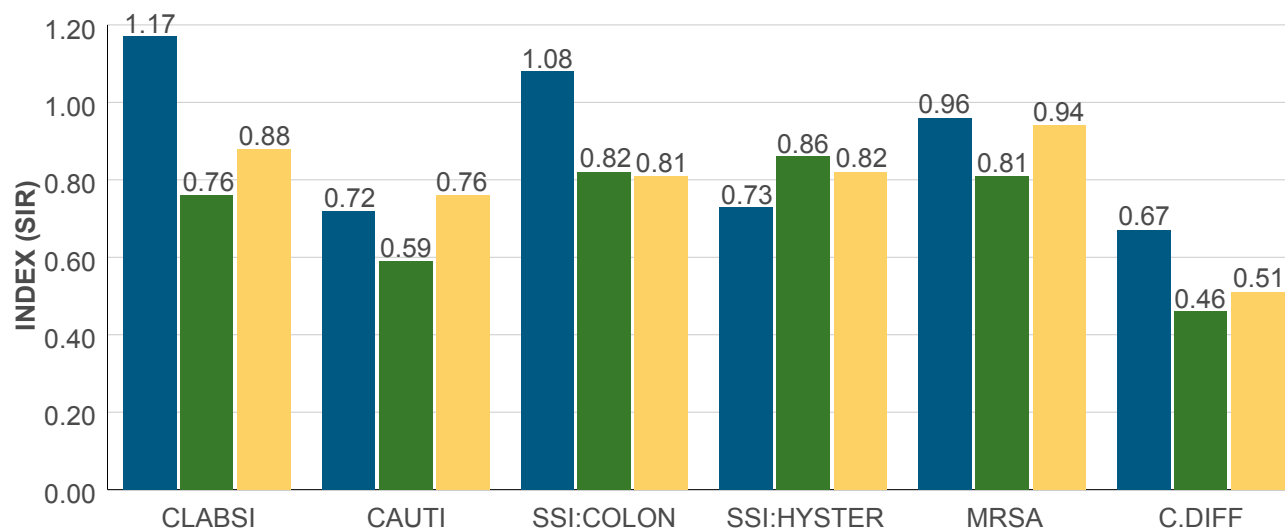
2020 Health system performance – detail graphs

This section of your report contains the detail graphs of those measures that are ranked based on a composite of individual measures. These include:

- Healthcare-associated infections (HAIs)
- 30-day mortality (AMI, HF, pneumonia, COPD and stroke)
- HCAHPS – Note: The individual measures are displayed for information only. The ranked measure is for the overall rating question.

Healthcare-associated infections SIR measure detail

2020 HAI PERFORMANCE



HEALTHCARE-ASSOCIATED INFECTIONS ABBREVIATION KEY

- CLABSI Central line-associated blood stream infections
- CAUTI Catheter-associated urinary tract infections
- SSI:COLON Surgical site infection from colon surgery
- SSI:HYSTER Surgical site infection from abdominal hysterectomy
- MRSA Methicillin-resistant staphylococcus aureus blood laboratory-identified events
- C.DIFF Clostridium difficile laboratory-identified events

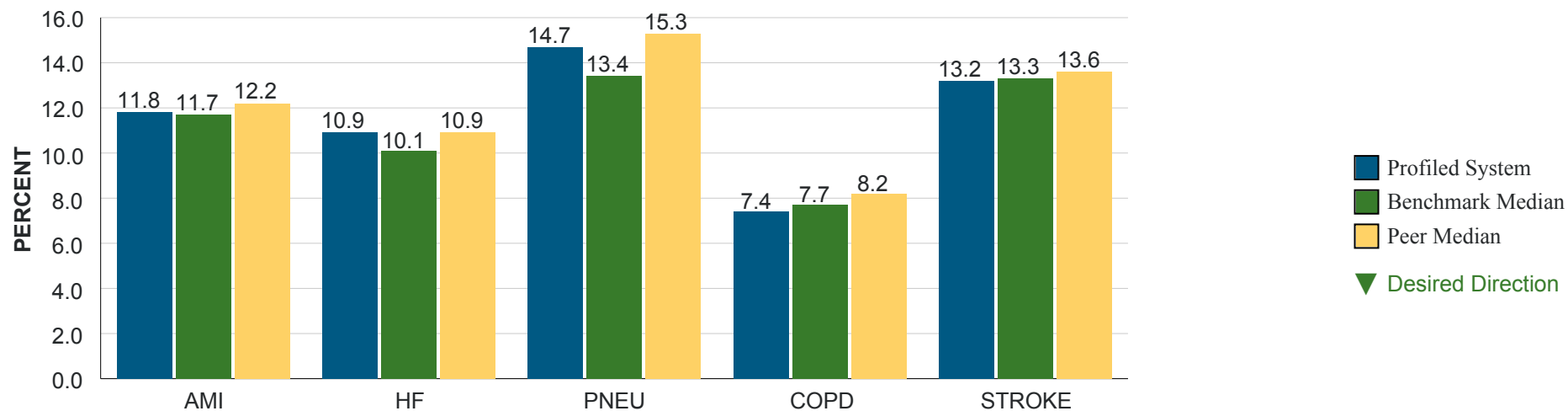
- Profiled System
- Benchmark Median
- Peer Median
- ▼ Desired Direction

Benchmark systems are the winners in the comparison group: n = 5

Peer systems are the non-winners in the comparison group: n = 147

30-day mortality rates by patient condition

2020 PERFORMANCE FOR 30D MORTALITY

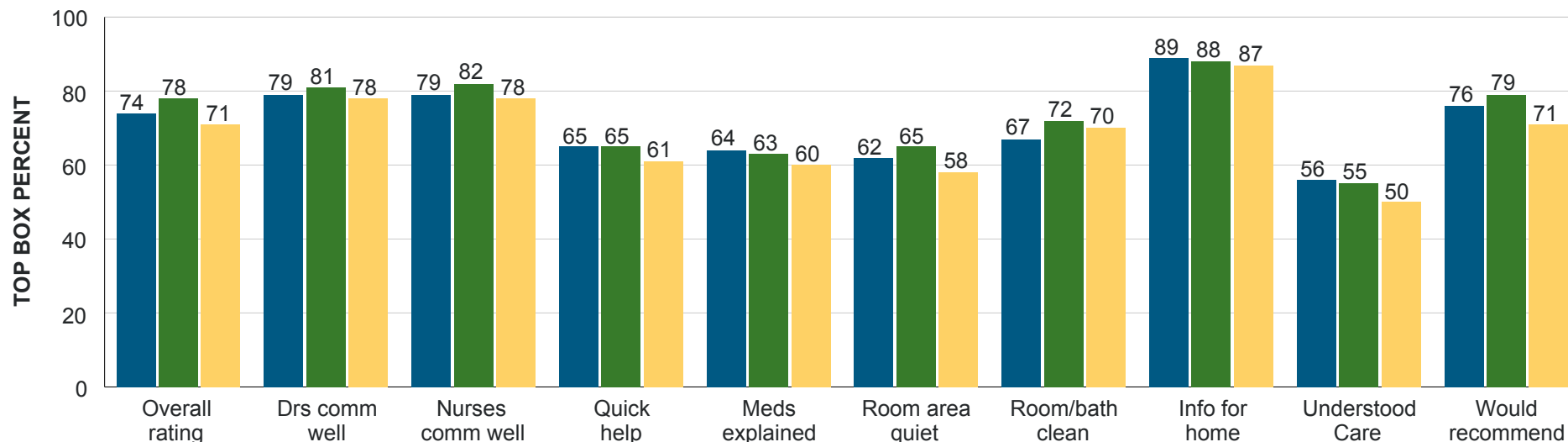


Benchmark systems are the winners in the comparison group: n = 5

Peer systems are the non-winners in the comparison group: n = 147

HCAHPS questions – only overall rating used in ranking

2020 HCAHPS PERFORMANCE



QUESTION KEY

- Overall rating How do patients rate the hospital overall?
- Drs comm well How often did doctors communicate well with patients?
- Nurses comm well How often did nurses communicate well with patients?
- Quick help How often did patients receive help quickly from hospital staff?
- Meds explained How often did staff explain about medicines before giving them to patients?
- Room area quiet How often was the area around patients rooms kept quiet at night?
- Room/bath clean How often were the patients rooms and bathrooms kept clean?
- Info for home Were patients given information about what to do during their recovery at home?
- Understood care How often did patients understand their care at discharge?
- Would recommend Would patients recommend the hospital to friends and family?

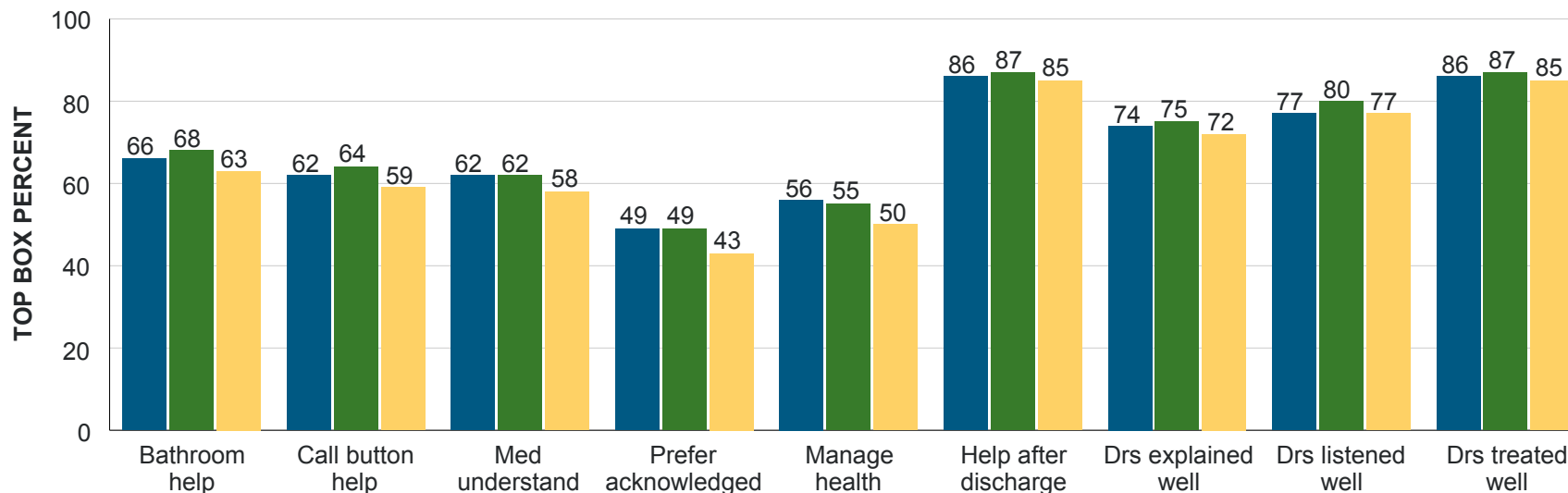
- Profiled System
- Benchmark Median
- Peer Median
- ▲ Desired Direction

Benchmark systems are the winners in the comparison group: n = 5

Peer systems are the non-winners in the comparison group: n = 147

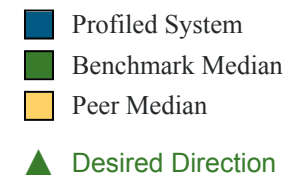
HCAHPS questions, con't

2020 HCAHPS PERFORMANCE



QUESTION KEY

- Bathroom help How often did patients receive bathroom help as soon as they wanted?
- Call button help How often did patients receive help after using the call button as soon as they wanted?
- Med understanding How often did patients understand the purpose of their medications when leaving the hospital?
- Prefer acknowledged How often did the staff take patients' preferences into account when determining health care needs?
- Manage health How often did patients understand their responsibilities in managing their health?
- Help after discharge How often did patients discuss whether they would need help after discharge?
- Drs explained well How often did doctors explain things in a way patients could understand?
- Drs listened well How often did doctors listen carefully to patients?
- Drs treated well How often did doctors treat patients with courtesy and respect?

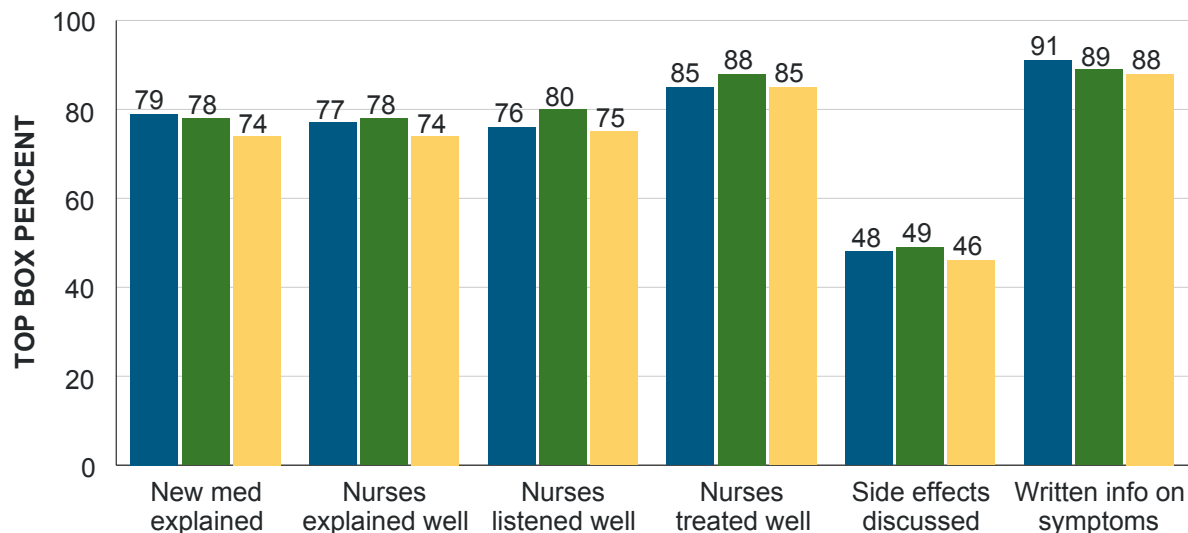


Benchmark systems are the winners in the comparison group: n = 5

Peer systems are the non-winners in the comparison group: n = 147

HCAHPS questions, con't

2020 HCAHPS PERFORMANCE



QUESTION KEY

- New med explained How often did staff communicate what the new medication was for?
- Nurses explained well How often did nurses explain things in a way patients could understand?
- Nurses listened well How often did nurses listen carefully to patients?
- Nurses treated well How often did nurses treat patients with courtesy and respect?
- Side effects discussed How often did staff discuss possible side effects when receiving a new medication?
- Written info on symptoms Did patients receive written information about possible symptoms to look out for after discharge?

- Profiled System
- Benchmark Median
- Peer Median
- ▲ Desired Direction

Benchmark systems are the winners in the comparison group: n = 5

Peer systems are the non-winners in the comparison group: n = 147

Supplemental information-only measures

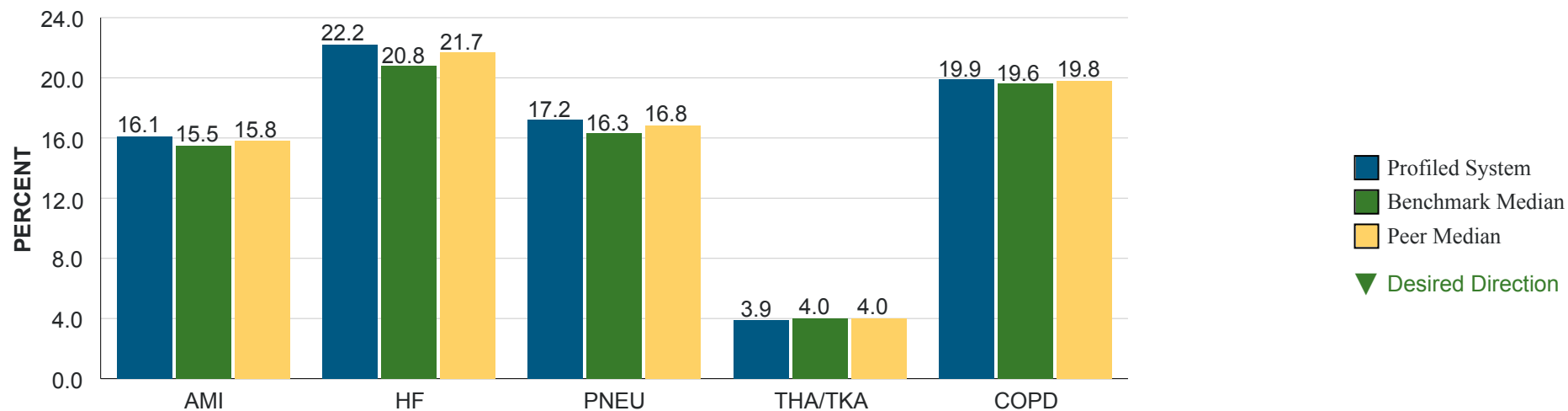
This section of your report contains measures that we are profiling only for informational purposes; they were not included in the ranking or determination of winners. We welcome your comments and feedback on the usefulness and relevance of these measures in assessing leadership's ability to drive high-level, balanced performance.

- 30-day readmission rate by patient condition
 - AMI, HF, pneumonia, THA/TKA, COPD
- Medicare episode of payment measures
 - 30-day payment for AMI / HF / pneumonia patients
 - 90-day payment for THA/TKA patients
- Excess days in acute care (EDAC) measures
 - 30-day excess days in acute care for AMI / HF / pneumonia patients
- Complication measure
 - 90-day complication rate for THA/TKA patients
- Patient safety indicator (PSI) measures

<ul style="list-style-type: none"> - PSI-3 Pressure sores - PSI-6 Collapsed lung due to medical treatment - PSI-8 Broken hip from a fall after surgery - PSI-9 Perioperative Hemorrhage or Hematoma Rate - PSI-10 Postoperative Acute Kidney Injury Requiring Dialysis Rate 	<ul style="list-style-type: none"> - PSI-11 Postoperative Respiratory Failure Rate - PSI-12 Serious blood clots after surgery - PSI-13 Blood stream infection after surgery - PSI-14 A wound that splits open after surgery on the abdomen or pelvis - PSI-15 Accidental cuts and tears from medical treatment - PSI-90 Serious complications
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- Unplanned hospital visits after hospital outpatient surgery (OP-36) measure

30-day readmission rates by patient condition

2020 PERFORMANCE FOR 30D READMISSIONS

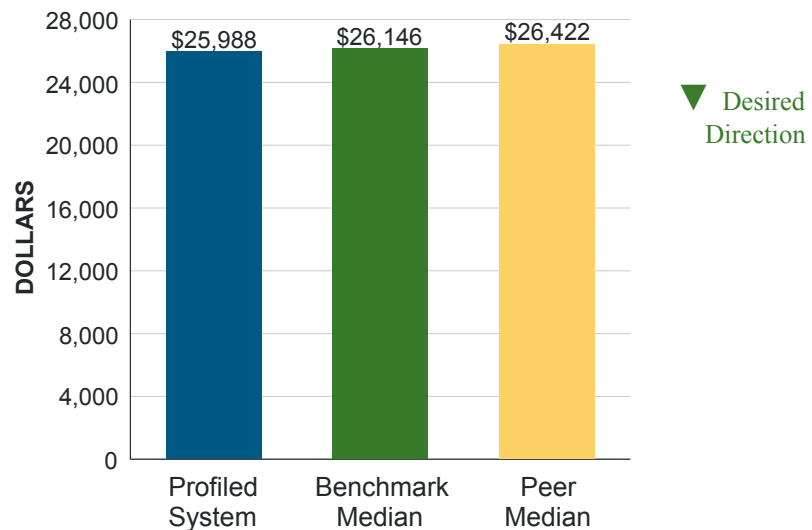


Benchmark systems are the winners in the comparison group: n = 5

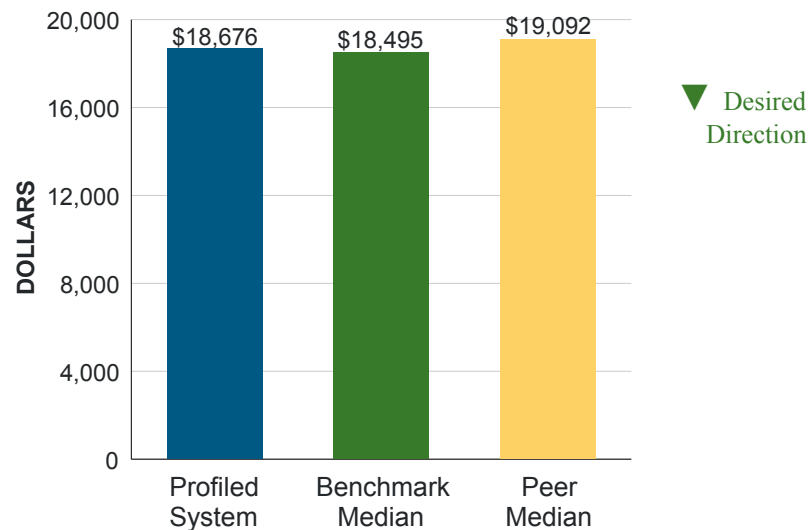
Peer systems are the non-winners in the comparison group: n = 147

30-day episode of payment measures by patient condition

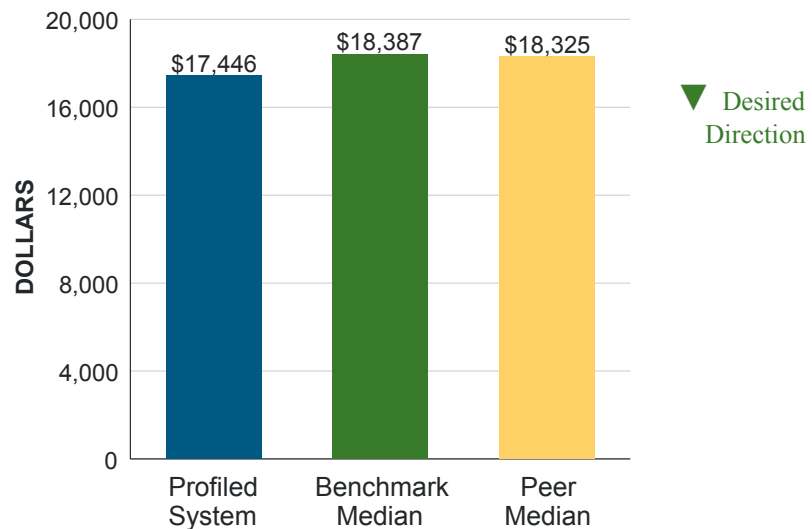
2020 30D PAYMENT PERFORMANCE FOR AMI



2020 30D PAYMENT PERFORMANCE FOR PNEUMONIA



2020 30D PAYMENT PERFORMANCE FOR HF

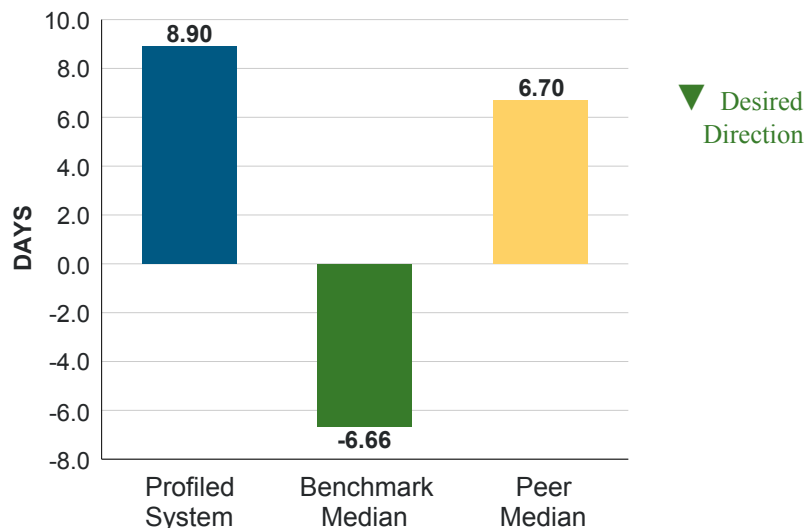


Benchmark systems are the winners in the comparison group: n = 5

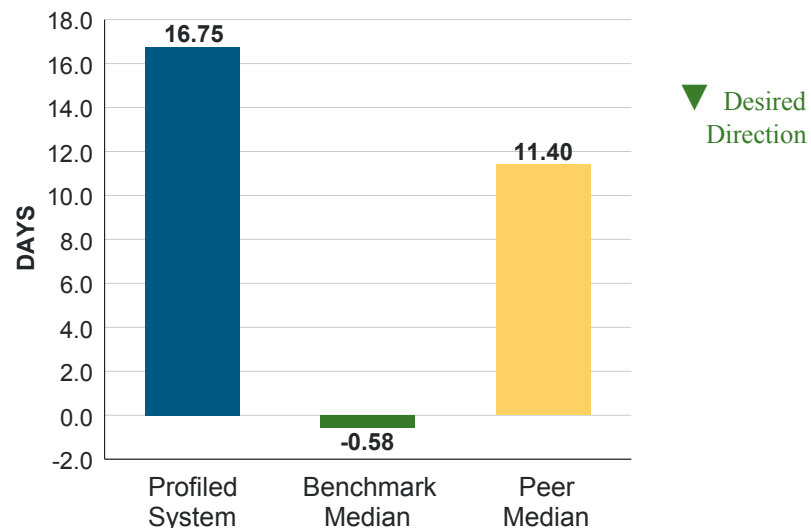
Peer systems are the non-winners in the comparison group: n = 147

30-day excess days in acute care measures by patient condition

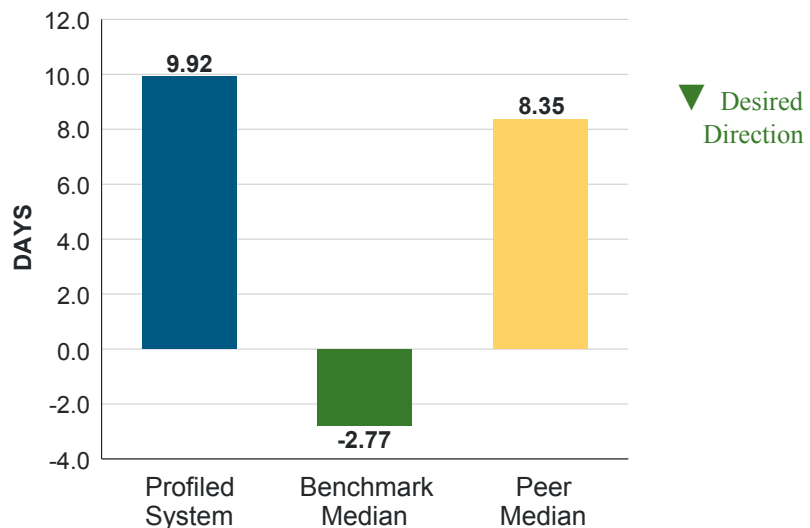
2020 30D EDAC PERFORMANCE FOR AMI



2020 30D EDAC PERFORMANCE FOR PNEUMONIA



2020 30D EDAC PERFORMANCE FOR HF

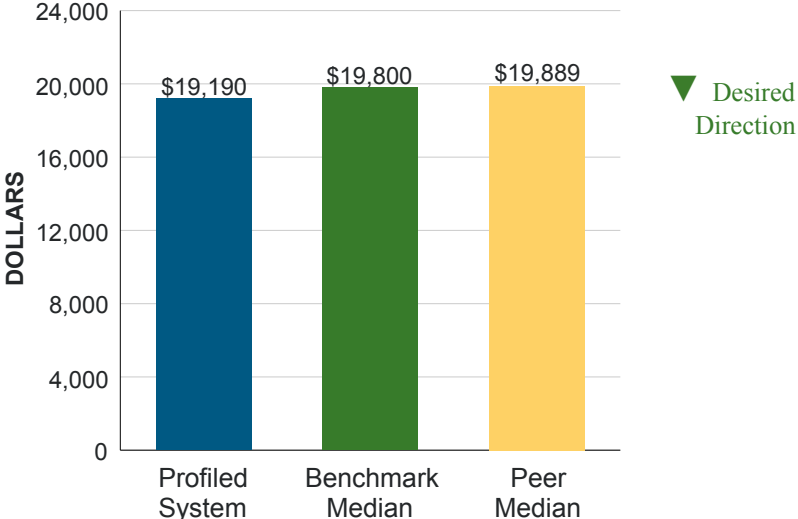


Benchmark systems are the winners in the comparison group: n = 5

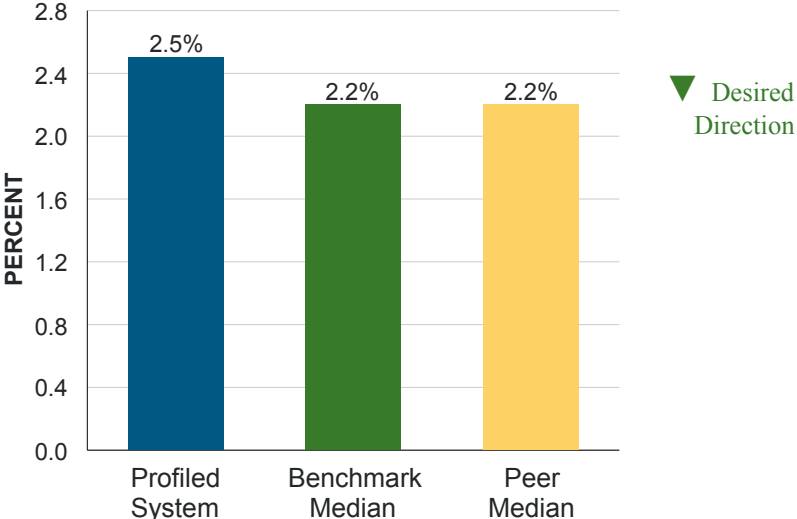
Peer systems are the non-winners in the comparison group: n = 147

90-day episode payment and complication rate for THA/TKA

2020 90D PAYMENT PERFORMANCE FOR THA/TKA



2020 90D COMPLICATION PERFORMANCE FOR THA/TKA

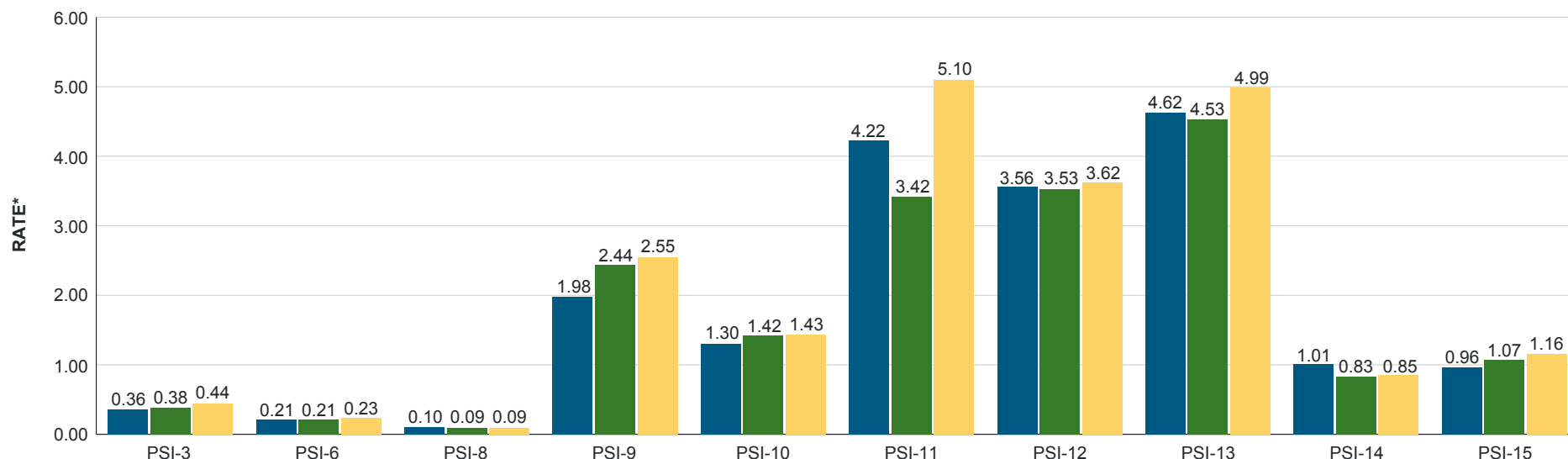


Benchmark systems are the winners in the comparison group: n = 5

Peer systems are the non-winners in the comparison group: n = 147

Patient safety indicator measures

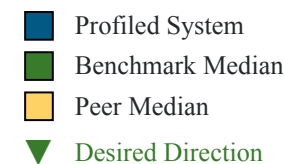
2020 PSI PERFORMANCE



*Rate per 1000 discharges

PSI KEY

- PSI-3 Pressure sores
- PSI-6 Collapsed lung due to medical treatment
- PSI-8 Broken hip from a fall after surgery
- PSI-9 Perioperative Hemorrhage or Hematoma Rate
- PSI-10 Postoperative Acute Kidney Injury Requiring Dialysis Rate
- PSI-11 Postoperative Respiratory Failure Rate
- PSI-12 Serious blood clots after surgery
- PSI-13 Blood stream infection after surgery
- PSI-14 A wound that splits open after surgery on the abdomen or pelvis
- PSI-15 Accidental cuts and tears from medical treatment

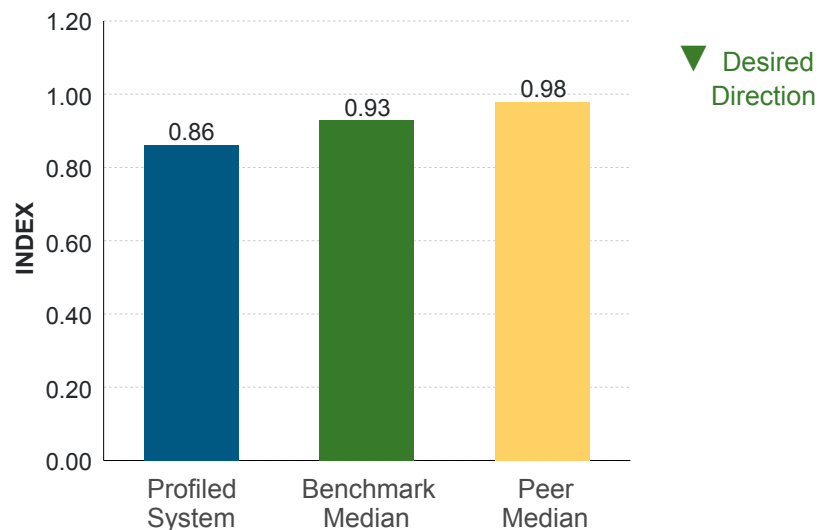


Benchmark systems are the winners in the comparison group: n = 5

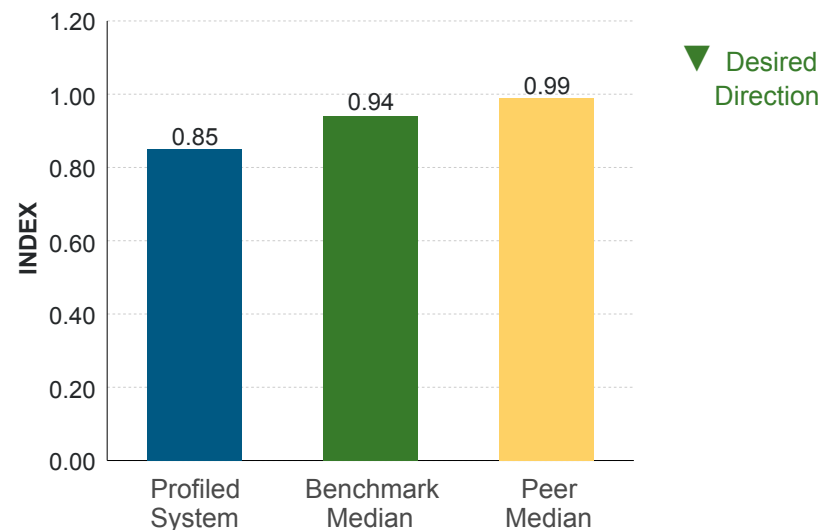
Peer systems are the non-winners in the comparison group: n = 147

Patient safety indicator 90: Serious complications OP-36: Unplanned hospital visits after hospital outpatient surgery

2020 PSI 90 PERFORMANCE



2020 UNPLANNED VISITS PERFORMANCE



Benchmark systems are the winners in the comparison group: n = 5

Peer systems are the non-winners in the comparison group: n = 147

Health system member hospital alignment

Overview

This section shows the performance and improvement alignment of health system member acute care hospitals. There are two components to the alignment view. First, we are providing a summary graph showing **performance-weighted alignment** for the health system compared to the best systems in both performance and improvement. This is a new feature of the report. Second, we provide member hospital performance overall and for each individual measure on comparison matrix graphs.

Graphed Member Hospitals

Short-term, general, acute care hospitals are included in the alignment analysis. **Only member hospitals that are ranked in the 100 Top Hospitals, 2022 study are graphed.** Some acute care hospitals that are included in the 15 Top Health Systems study cannot be graphed because they were missing data for one or more measures used only in the 100 Top Hospitals study and were, therefore, not ranked in that study.

Critical Access Hospitals (CAH) with valid data are included in the alignment profile. Their performance overall is calculated based on six measures: inpatient mortality, complications, 30-day hospital-wide readmission, ALOS, operating profit margin and HCAHPS. Dots for these hospitals will appear only on the graphs for these measures. Note: any available data for other measures will be included in the system roll-up, even though CAHs are not ranked on those measures.

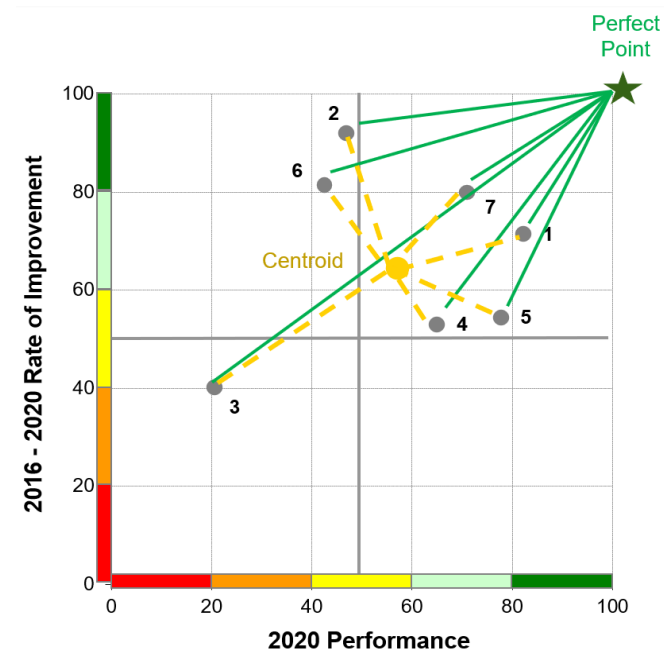
Women's, Cardiac and Orthopedic hospitals that are **included** in the 15 Top Health Systems study are not graphed in this section because we do not include these hospitals when comparing short term general acute care hospital performance in the 100 Top Hospitals study.

Performance-Weighted Alignment Score Findings

The performance-weighted alignment scores (PWAS) measure how consistently the system delivers on high level performance and improvement across their member hospitals, overall and for each measure. Better-performing health systems have better Overall alignment, and the difference is statistically significant.

Methodology

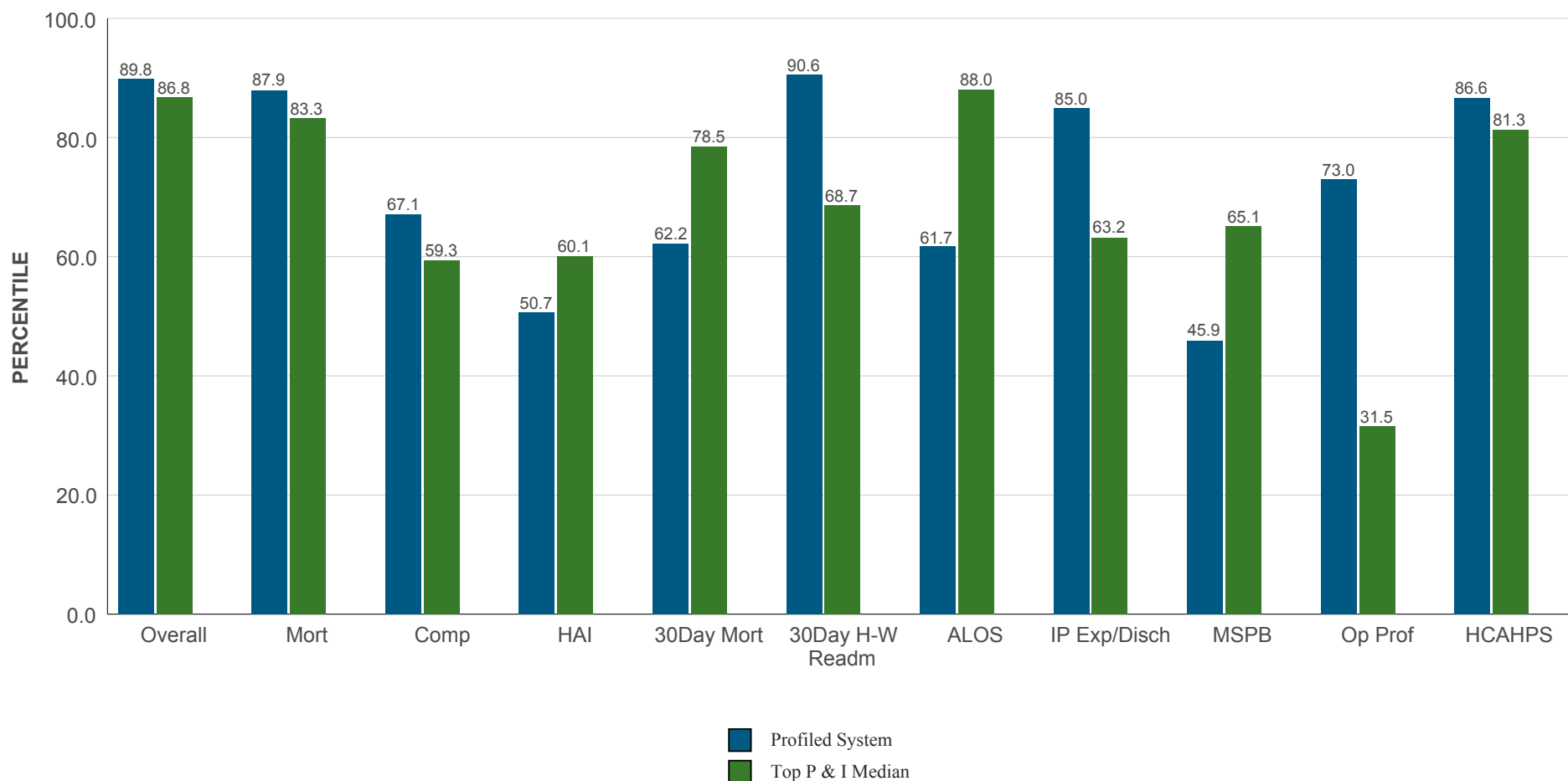
Each system performance-weighted alignment score is the average of the distance of each member hospital from their central point (Centroid) and the distance of each of those hospitals from the 100th – 100th percentile point (Perfect Point), weighted by the distance from the perfect point. A score is calculated overall and for each measure. **Higher percentiles mean better performance.** See Study Overview for details.



The system performance-weighted alignment scores are ranked by comparison group and reported as rank percentiles. Higher percentiles mean better performance. The profiled system performance is compared to the median alignment scores for the hospitals that were in the top quintile on both Performance and Improvement (Top P & I Group). This group was selected using the study ranked metrics, **not** member hospital alignment. We find that high alignment has not yet been achieved uniformly across all measures, even in this high performing group.

Performance-weighted alignment score percentiles

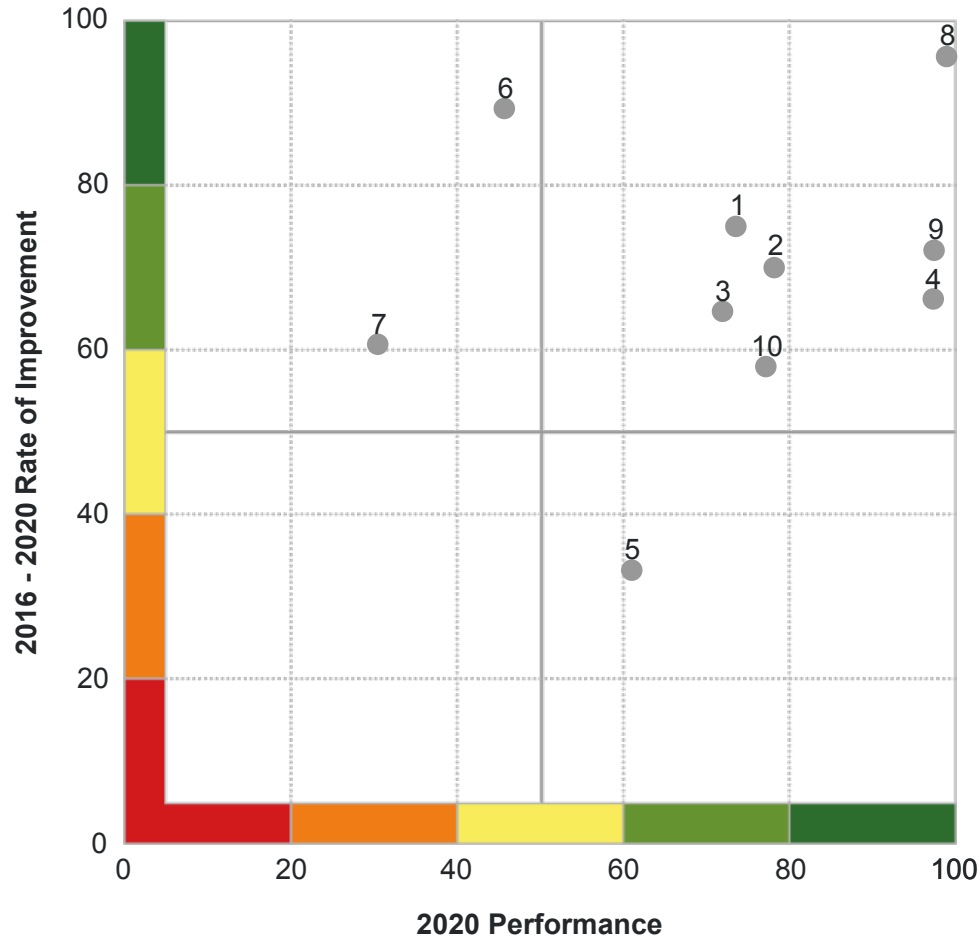
2020 Profiled System Compared to Top Performance and Improvement Health Systems*



* Top Performance & Improvement health systems: n = 14

Member hospitals – overall performance

2020 Performance versus Rate of Improvement



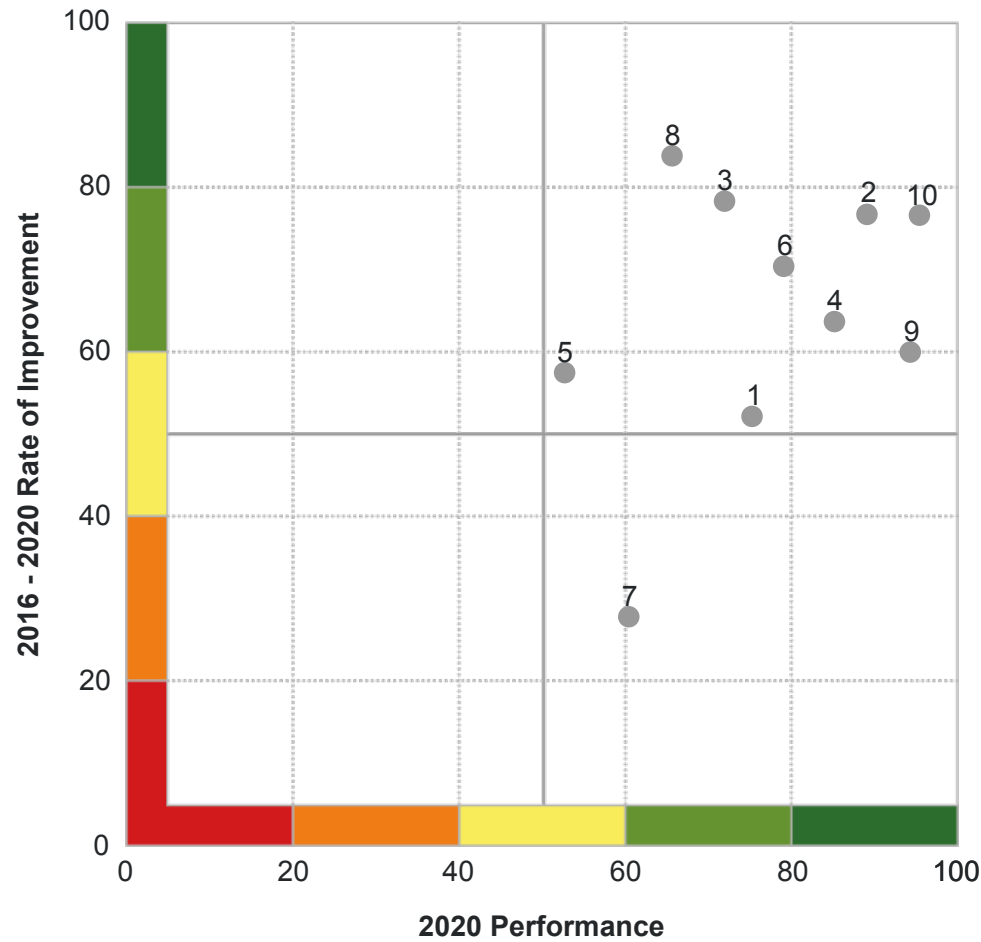
Hospital Key

- 1 Comfort Hospital
- 2 Holy Hospital
- 3 Grand Hospital
- 4 Blessings Hospital
- 5 Country Hospital
- 6 Medical Hospital
- 7 City Hospital
- 8 County Hospital
- 9 Region Hospital
- 10 State Hospital



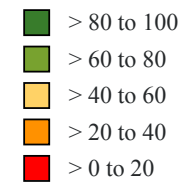
Member hospitals – inpatient mortality

2020 Performance versus Rate of Improvement



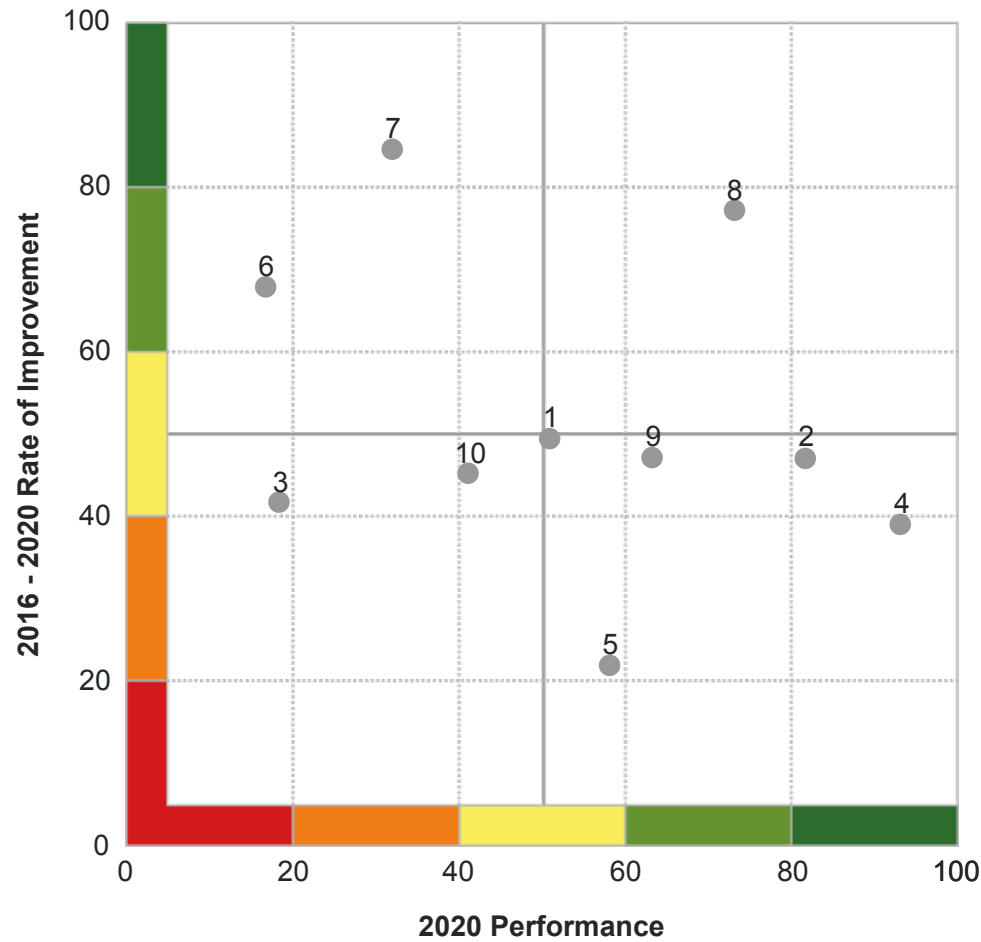
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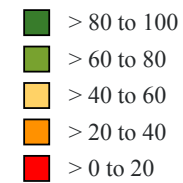
Member hospitals – complications

2020 Performance versus Rate of Improvement



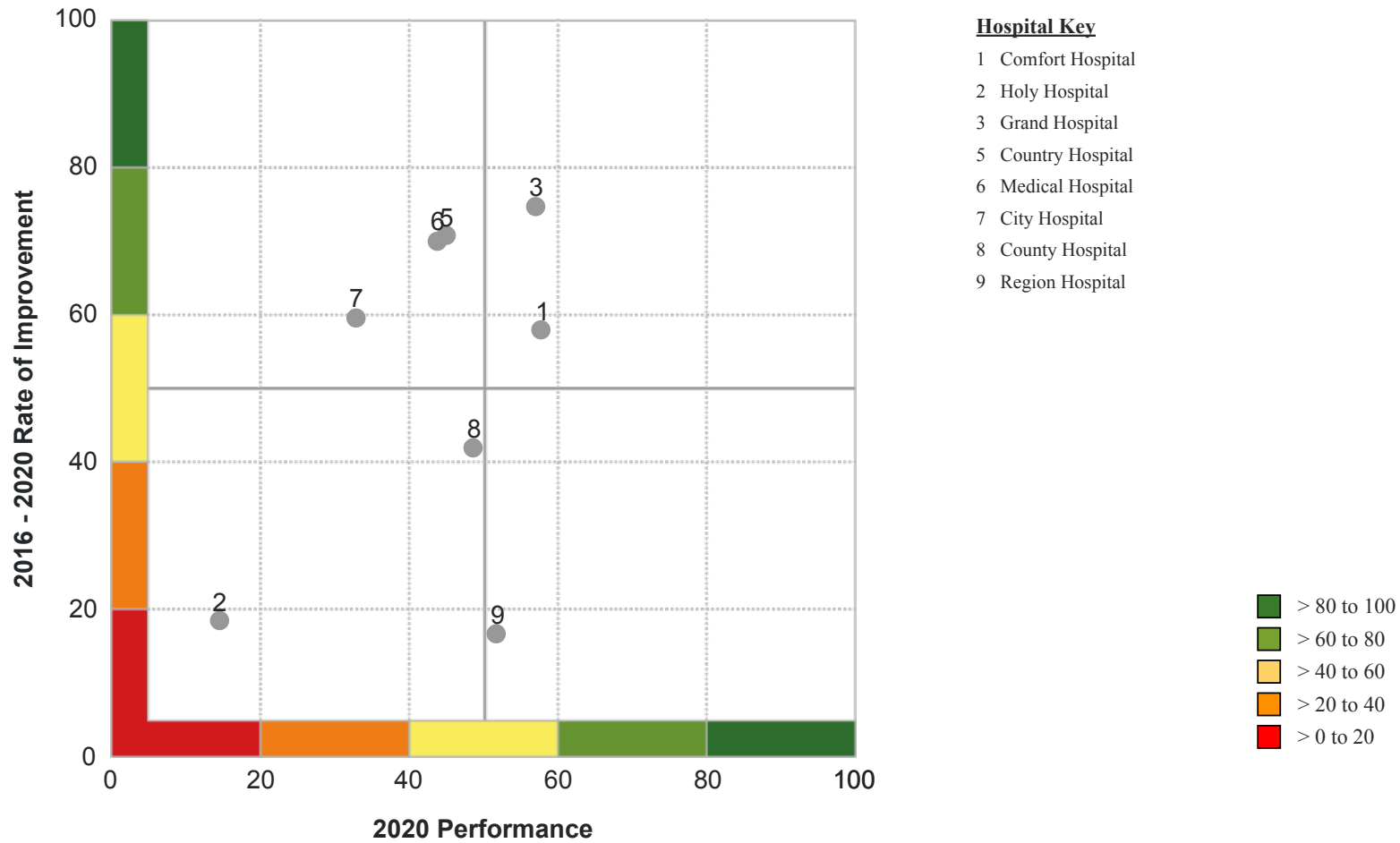
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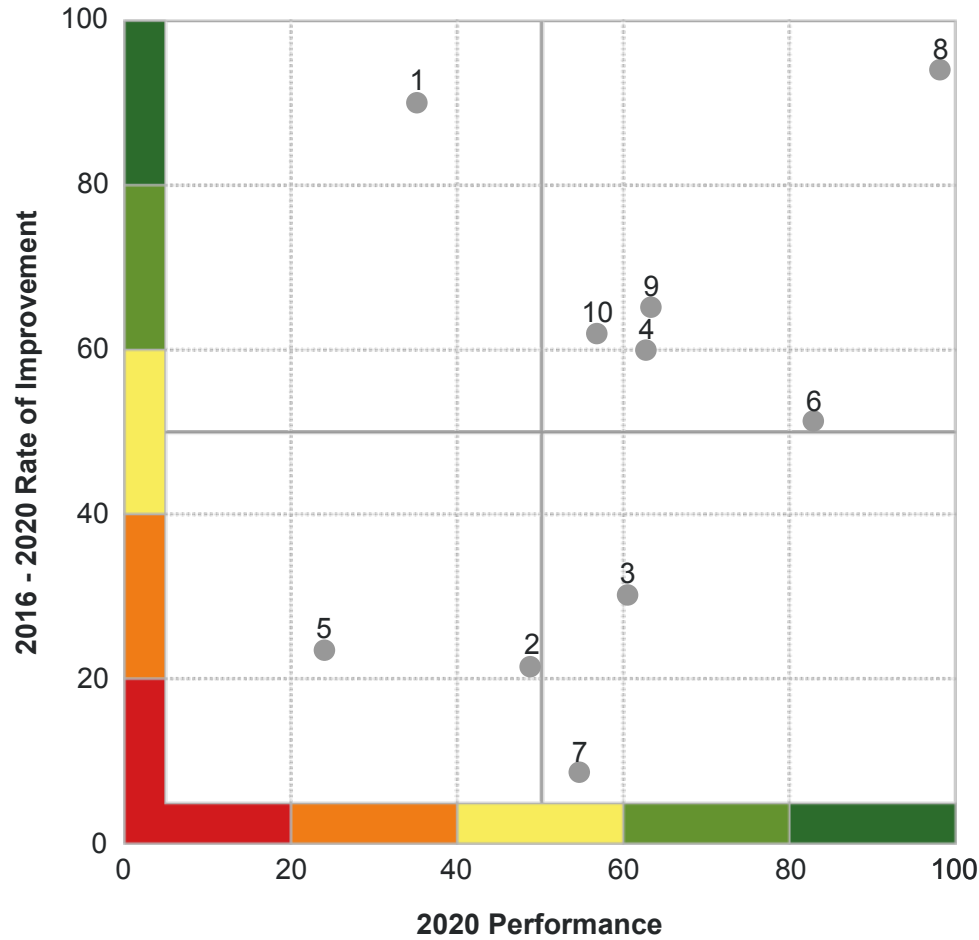
Member hospitals – healthcare-associated infections

2020 Performance versus Rate of Improvement



Member hospitals – 30-day mortality

2020 Performance versus Rate of Improvement



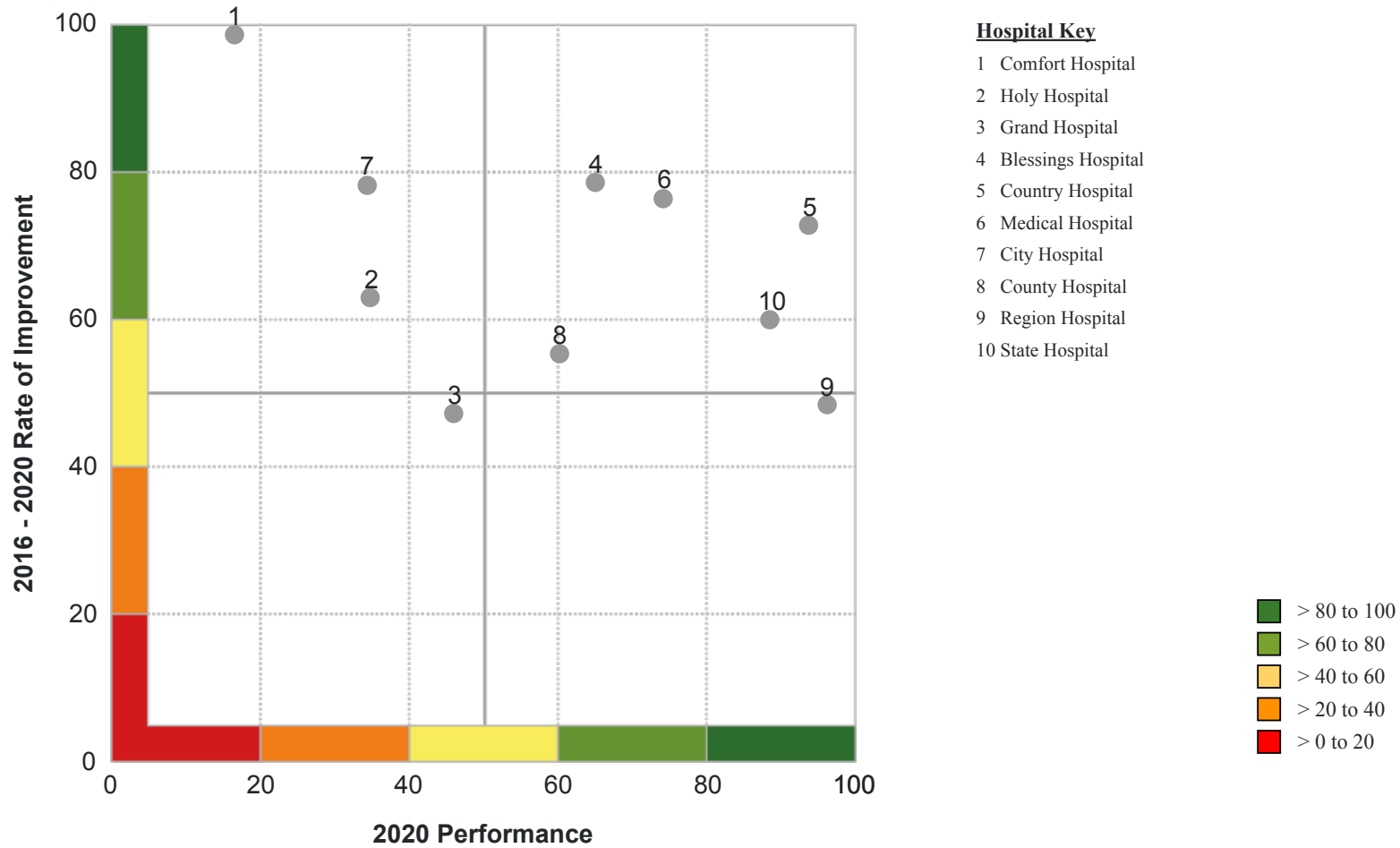
Hospital Key

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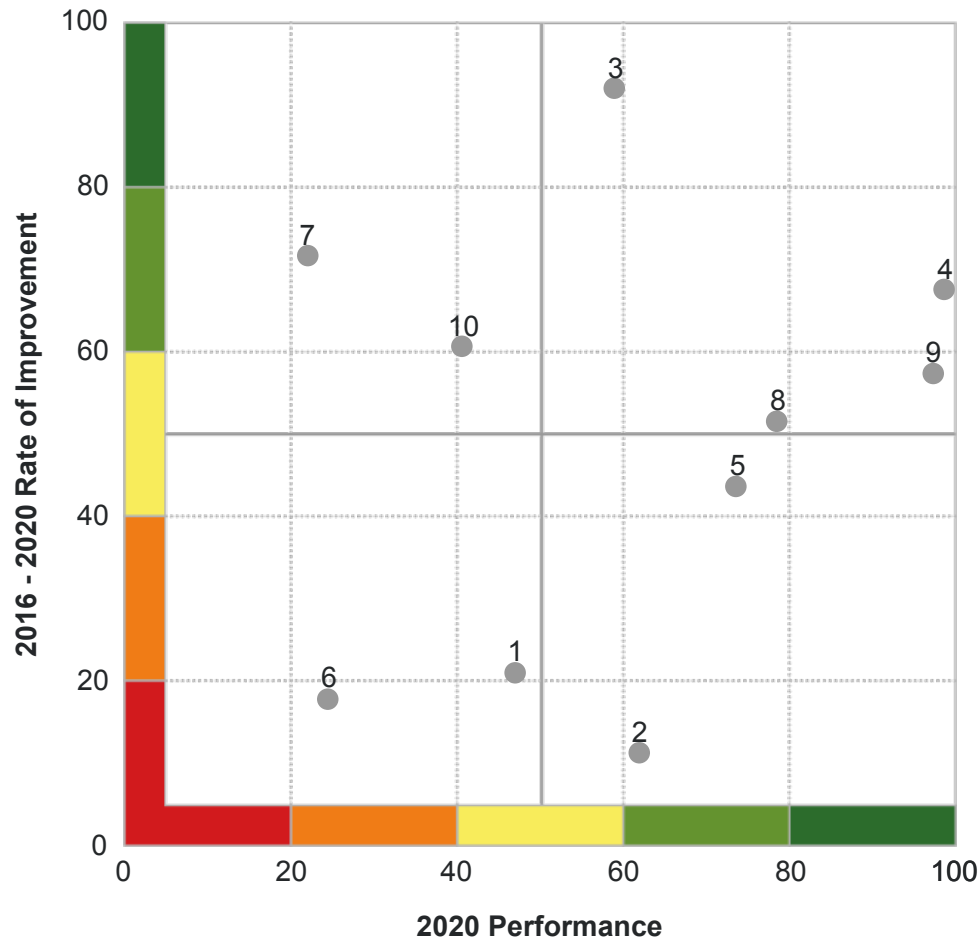
Member hospitals – 30-day hospital-wide readmissions

2020 Performance versus Rate of Improvement



Member hospitals – average length of stay

2020 Performance versus Rate of Improvement



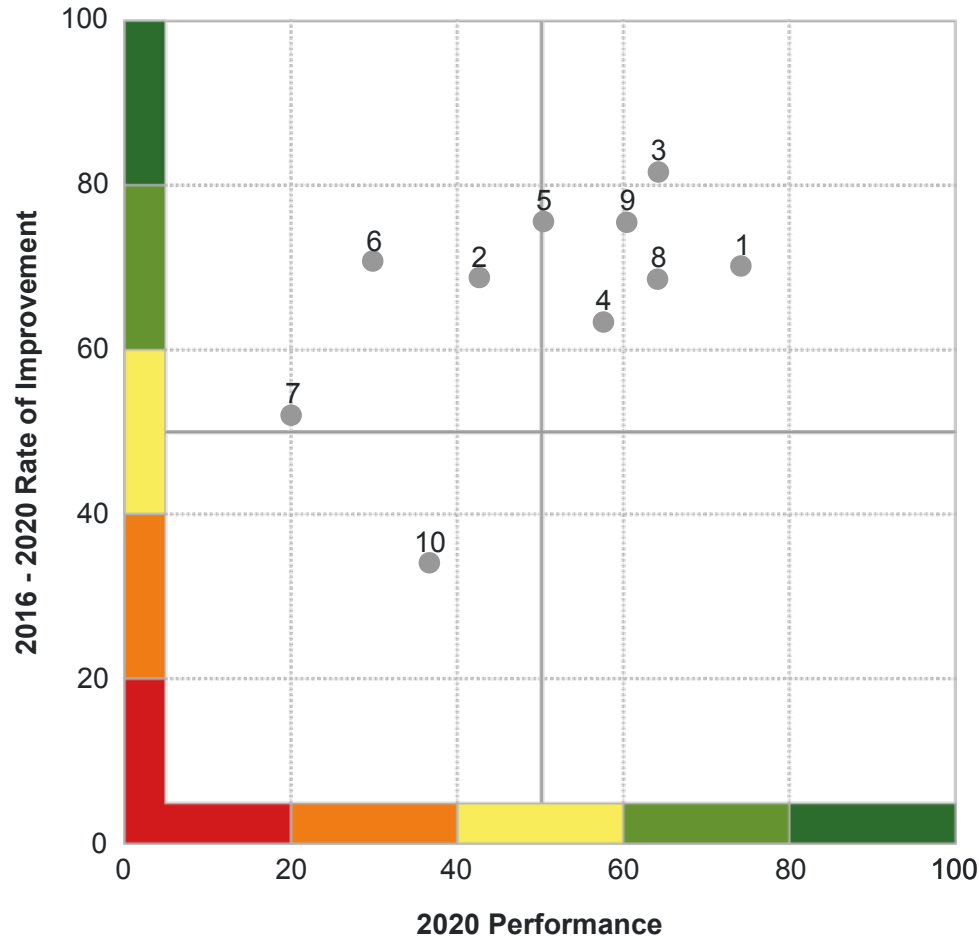
Hospital Key

- 1 Comfort Hospital
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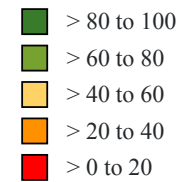
Member hospitals – adjusted inpatient expense per discharge

2020 Performance versus Rate of Improvement



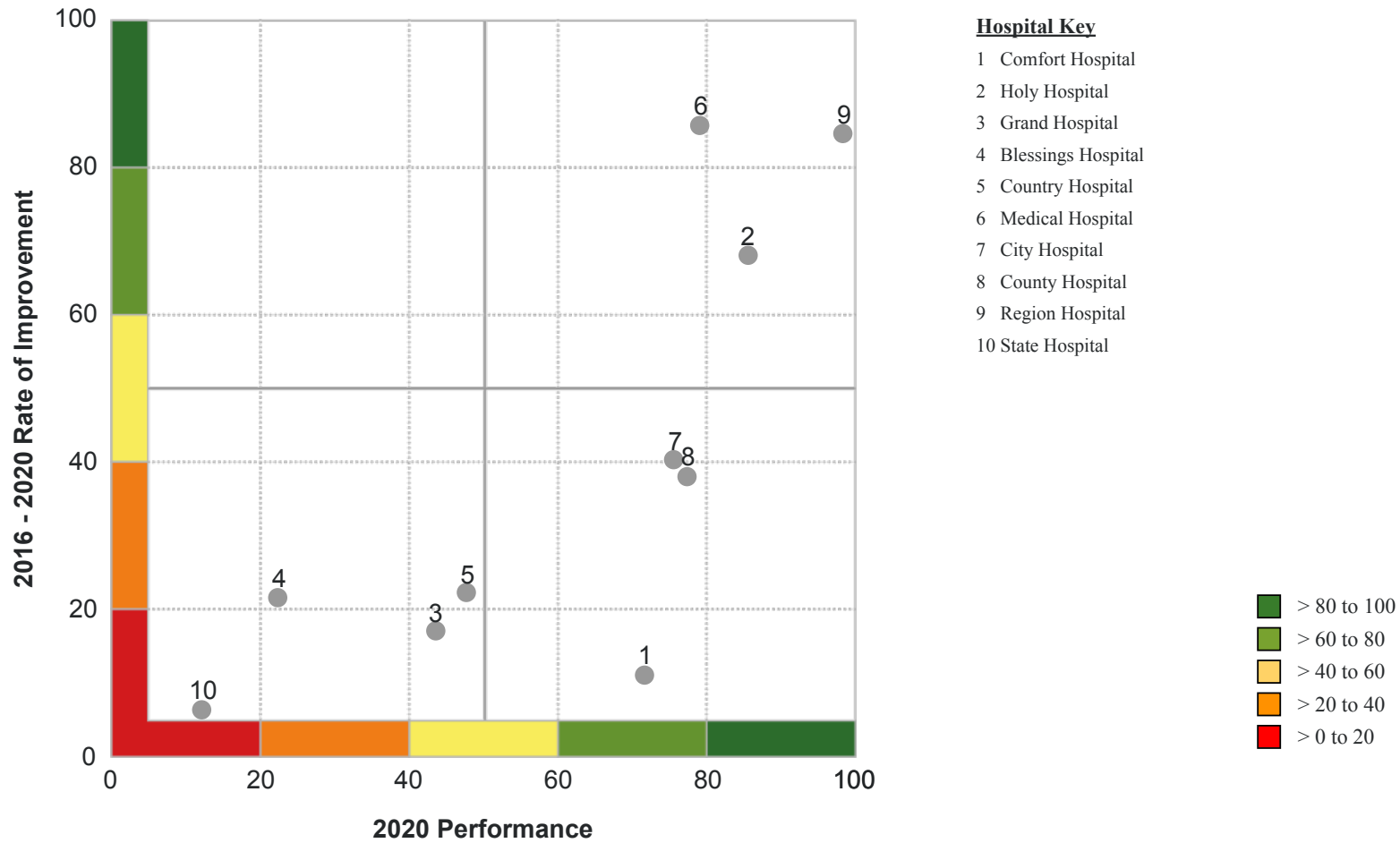
Hospital Key

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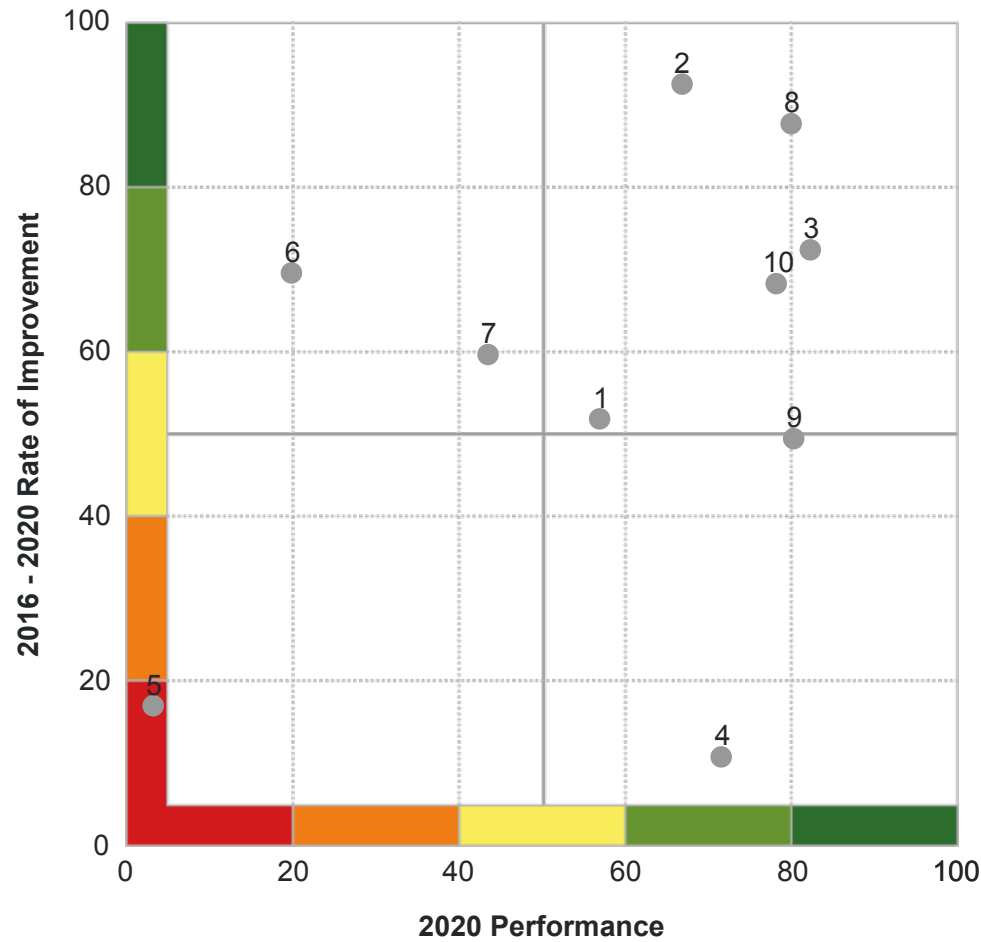
Member hospitals – Medicare spend per beneficiary

2020 Performance versus Rate of Improvement



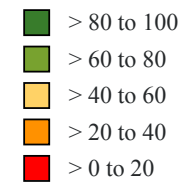
Member hospitals – adjusted operating profit margin

2020 Performance versus Rate of Improvement



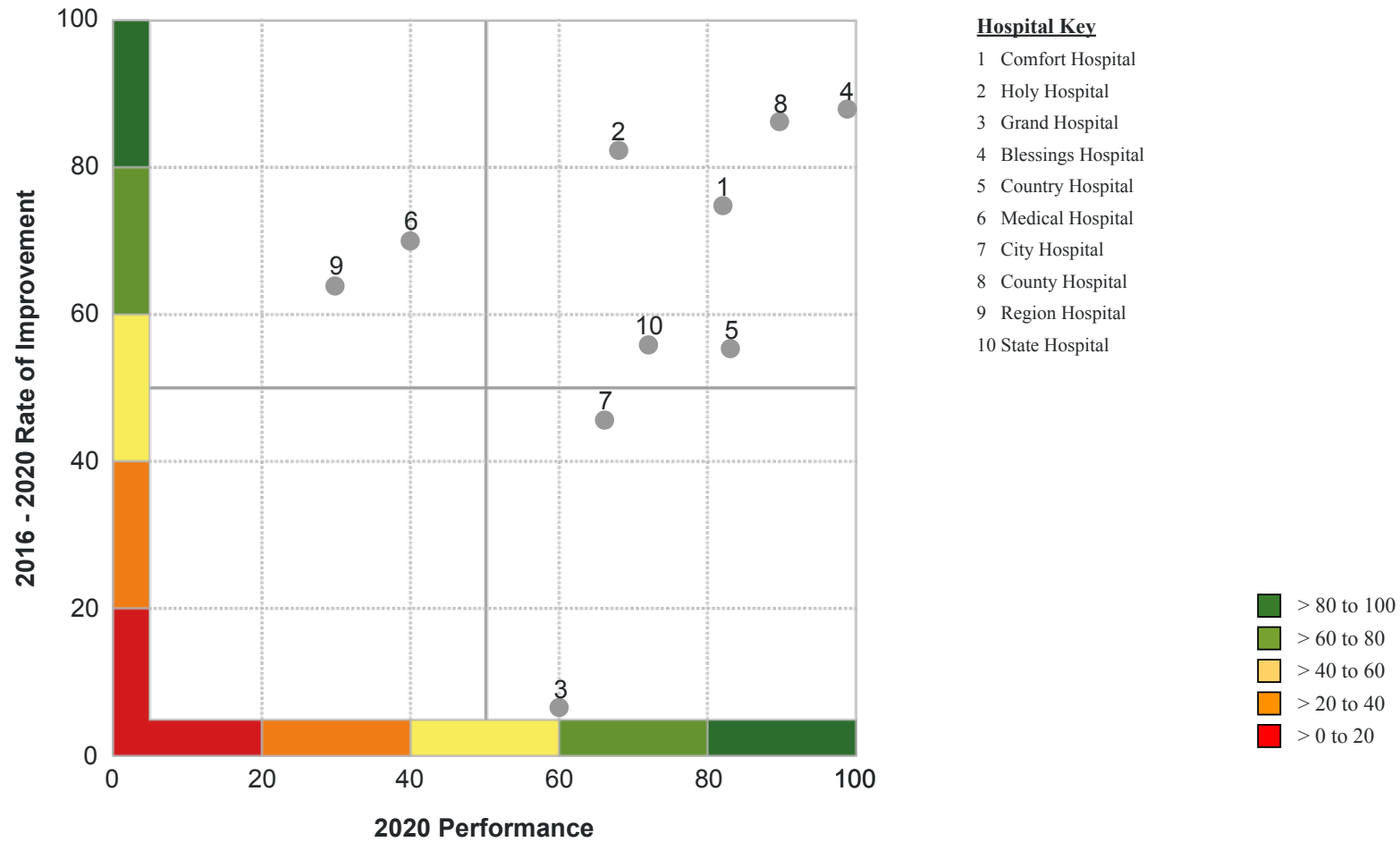
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Member hospitals – HCAHPS top-box: overall rating question

2020 Performance versus Rate of Improvement



Appendix

Included Member Hospitals

This section contains the list of health system member hospitals included in the 15 Top Health Systems 2022 study, identified using 2020 cost reports.

Acute care general, cardiac, orthopedic, women's, and critical access hospitals are included when aggregating data to the system level.

Only acute care hospitals that were ranked in the 100 Top Hospitals 2022 study are graphed on the preceding pages. These hospitals will have an overall 2020 percentile and 2016-2020 trend percentile from that study displayed in the table.

Included again this year, critical access hospitals (CAH) are ranked on six metrics. CAH's with valid data for all six measures are graphed on the preceding pages as well. These hospitals will have an overall 2020 percentile and 2016-2020 trend percentiles displayed in the table.

Health System Included Member Hospitals

GRAPH KEY	MCARE ID	HOSPITAL NAME	CITY	STATE	2020 OVERALL PERCENTILE	2016-20 OVERALL PERCENTILE
1	999999	Comfort Hospital	Any City	US	73.7	74.8
2	999999	Holy Hospital	Any City	US	78.3	69.8
3	999999	Grand Hospital	Any City	US	72.1	64.5
4	999999	Blessings Hospital	Any City	US	97.4	66.0
5	999999	Country Hospital	Any City	US	61.2	33.1
6	999999	Medical Hospital	Any City	US	45.9	89.1
7	999999	City Hospital	Any City	US	30.7	60.5
8	999999	County Hospital	Any City	US	99.0	95.4
9	999999	Region Hospital	Any City	US	97.5	71.9
10	999999	State Hospital	Any City	US	77.3	57.8
	999999	Lake Hospital	Any City	US	NA	NA
	999999	Wonderful Hospital	Any City	US	NA	NA
	999999	River Hospital	Any City	US	NA	NA