15 Top Health Systems, 2020
Competitor Report

Prepared for:
Sample Health System

Date
Contents

– Background and approach
– Profiled hospital and competitors
– Executive summary
– 2018 performance and 5-year rate of improvement graphs
– Methodology overview
In this analysis, <Health System’s> performance and rate of improvement are compared to that of seven client-selected competitors, using the 15 Top Health Systems and 100 Top Hospitals® measures and methodologies.

Measures included in this analysis:

- OVERALL performance score
- Inpatient mortality
- Complications
- Healthcare-associated infections
- Influenza immunization
- Mean 30-day mortality
- 30-day hospital-wide readmission
- Average length of stay
- Emergency dept throughput
- Medicare spend per beneficiary
- HCAHPS top-box (overall rating quest)

Results are displayed as the rank percentile of each health system’s performance and rate of improvement compared to all U.S. health systems within each system’s 15 Top peer group.

Conversion to percentiles allows direct comparison of all selected health systems, without regard to peer group.
Profiled client health system and competitors

– Client health system
– Profiled Competitor 1
– Profiled Competitor 2
– Profiled Competitor 3
– Profiled Competitor 4
– Profiled Competitor 5
– Profiled Competitor 6
– Profiled Competitor 7
Executive Summary

Overall national performance

– Client health system falls into the ___ percentile nationally for 2018 performance and the ___ for 2014-2018 rate of improvement

– ___ competitors out-performed client system in 2018 with competitor __ leading this group with a percentile of ___, based on performance on all 15 Top health systems measures

Where client system is strong among peers and improving

– Curabitur pulvinar dui a erat placerat gravida. Nunc non felis eu ante vestibulum posuere ultricies at neque.


Where client system might have significant opportunity to improve nationally, and compared to these competitors

– Phasellus vitae egestas felis. Sed libero ante, dignissim id massa commodo, iaculis tincidunt neque.

– Pellentesque volutpat, sapien eget bibendum lobortis, sem leo feugiat odio, nec ornare neque sapien at leo.
Overall performance
15 Top Health Systems, 2020
Overall performance

Health System key
1 Client System
2 Competitor 1
3 Competitor 2
4 Competitor 3
5 Competitor 4
6 Competitor 5
7 Competitor 6
8 Competitor 7

Quintile key
- > 80 to 100
- > 60 to 80
- > 40 to 60
- > 20 to 40
- > 0 to 20
Performance measures
15 Top Health Systems, 2020
Inpatient mortality performance

Health System Key
1 Client System
2 Competitor 1
3 Competitor 2
4 Competitor 3
5 Competitor 4
6 Competitor 5
7 Competitor 6
8 Competitor 7

Quintile Key
> 80 to 100
> 60 to 80
> 40 to 60
> 20 to 40
> 0 to 20
15 Top Health Systems, 2020
Complications performance

Health System Key
1 Client System
2 Competitor 1
3 Competitor 2
4 Competitor 3
5 Competitor 4
6 Competitor 5
7 Competitor 6
8 Competitor 7

Quintile Key
> 80 to 100
> 60 to 80
> 40 to 60
> 20 to 40
> 0 to 20
# 15 Top Health Systems, 2020
Healthcare-associated infections performance

<table>
<thead>
<tr>
<th>Health System Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Client System</td>
</tr>
<tr>
<td>2 Competitor 1</td>
</tr>
<tr>
<td>3 Competitor 2</td>
</tr>
<tr>
<td>4 Competitor 3</td>
</tr>
<tr>
<td>5 Competitor 4</td>
</tr>
<tr>
<td>6 Competitor 5</td>
</tr>
<tr>
<td>7 Competitor 6</td>
</tr>
<tr>
<td>8 Competitor 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quintile Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 80 to 100</td>
</tr>
<tr>
<td>&gt; 60 to 80</td>
</tr>
<tr>
<td>&gt; 40 to 60</td>
</tr>
<tr>
<td>&gt; 20 to 40</td>
</tr>
<tr>
<td>&gt; 0 to 20</td>
</tr>
</tbody>
</table>
# 15 Top Health Systems, 2020

Influenza immunization performance

## Health System Key

1. **Client System**
2. Competitor 1
3. Competitor 2
4. Competitor 3
5. Competitor 4
6. Competitor 5
7. Competitor 6
8. Competitor 7

## Quintile Key

- **Green**: > 80 to 100
- **Light Green**: > 60 to 80
- **Yellow**: > 40 to 60
- **Orange**: > 20 to 40
- **Red**: > 0 to 20
# 15 Top Health Systems, 2020
Mean 30-day mortality performance

<table>
<thead>
<tr>
<th>Health System Key</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Client System</td>
</tr>
<tr>
<td><strong>2</strong> Competitor 1</td>
</tr>
<tr>
<td><strong>3</strong> Competitor 2</td>
</tr>
<tr>
<td><strong>4</strong> Competitor 3</td>
</tr>
<tr>
<td><strong>5</strong> Competitor 4</td>
</tr>
<tr>
<td><strong>6</strong> Competitor 5</td>
</tr>
<tr>
<td><strong>7</strong> Competitor 6</td>
</tr>
<tr>
<td><strong>8</strong> Competitor 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quintile Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 80 to 100</td>
</tr>
<tr>
<td>&gt; 60 to 80</td>
</tr>
<tr>
<td>&gt; 40 to 60</td>
</tr>
<tr>
<td>&gt; 20 to 40</td>
</tr>
<tr>
<td>&gt; 0 to 20</td>
</tr>
</tbody>
</table>
15 Top Health Systems, 2020
30-day hospital-wide readmissions performance

Health System Key
1  Client System
2  Competitor 1
3  Competitor 2
4  Competitor 3
5  Competitor 4
6  Competitor 5
7  Competitor 6
8  Competitor 7

Quintile Key
> 80 to 100
> 60 to 80
> 40 to 60
> 20 to 40
> 0 to 20
# 15 Top Health Systems, 2020
Average length of stay performance

## Health System Key
1. **Client System**
2. Competitor 1
3. Competitor 2
4. Competitor 3
5. Competitor 4
6. Competitor 5
7. Competitor 6
8. Competitor 7

## Quintile Key
- **Green** > 80 to 100
- **Gray** > 60 to 80
- **Yellow** > 40 to 60
- **Orange** > 20 to 40
- **Red** > 0 to 20
# 15 Top Health Systems, 2020

Emergency department throughput performance

## Health System Key

1. Client System
2. Competitor 1
3. Competitor 2
4. Competitor 3
5. Competitor 4
6. Competitor 5
7. Competitor 6
8. Competitor 7

## Quintile Key

- Green: > 80 to 100
- Light Green: > 60 to 80
- Yellow: > 40 to 60
- Orange: > 20 to 40
- Red: > 0 to 20
## 15 Top Health Systems, 2020
Medicare spend per beneficiary performance

### Health System Key

<table>
<thead>
<tr>
<th>Number</th>
<th>Health System</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Client System</td>
</tr>
<tr>
<td>2</td>
<td>Competitor 1</td>
</tr>
<tr>
<td>3</td>
<td>Competitor 2</td>
</tr>
<tr>
<td>4</td>
<td>Competitor 3</td>
</tr>
<tr>
<td>5</td>
<td>Competitor 4</td>
</tr>
<tr>
<td>6</td>
<td>Competitor 5</td>
</tr>
<tr>
<td>7</td>
<td>Competitor 6</td>
</tr>
<tr>
<td>8</td>
<td>Competitor 7</td>
</tr>
</tbody>
</table>

### Quintile Key

- **Green**: > 80 to 100
- **Light Green**: > 60 to 80
- **Yellow**: > 40 to 60
- **Orange**: > 20 to 40
- **Red**: > 0 to 20
### Health System Key

1. **Client System**
2. Competitor 1
3. Competitor 2
4. Competitor 3
5. Competitor 4
6. Competitor 5
7. Competitor 6
8. Competitor 7

### Quintile Key

- **> 80 to 100**
- **> 60 to 80**
- **> 40 to 60**
- **> 20 to 40**
- **> 0 to 20**
Methodology overview
15 Top Health Systems 2020, Overview

12 years of research

Definition of a system
– Minimum of two acute care general hospitals with separate provider IDs
– Cardiac, ortho/surg, women’s and CAH member hospitals also included
– Hospital cost reports must identify the parent system
– All identified member hospitals’ valid data are rolled-up to system level
– Uses public data to produce national norms and benchmarks (not a convenience sample)

Measures performance on a balanced scorecard (clinical and extended outcomes, operational efficiency, patient experience)
– Uses peer-reviewed Watson Health and CMS methodologies

Unique view of ‘systemness’ – measures the ability of a system to deliver consistent top performance in all member hospitals, in all communities served, over time; tracks competitive position
Ranking methodology

- We use the most current public data available for each measure (various data sets ending in 2018)
- Systems are ranked on each measure, independently, by comparison group
- Ranks are weighted, summed and the sum is re-ranked by comparison group to determine each system’s overall performance score
- Winners are the top overall performers in each comparison group

5-Year Rate of Improvement (2014-2018)
- 5 data points are trended for each measure
- Systems are ranked on the regression line t-statistic for each included measure, by comparison group
- Ranks are weighted, summed and the sum is re-ranked by comparison group to determine each system’s overall rate of improvement score
- Trended results are presented to guide leadership decision-making. They are not used in the selection of winners
# National Comparison Groups

<table>
<thead>
<tr>
<th>System Comparison Groups</th>
<th>Categorization by Member Hospital Criteria</th>
<th>2020 Winners</th>
<th>2020 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Health System</td>
<td>• ≥ 2.5B total operating expense <strong>OR</strong>&lt;br&gt;• ≥ 1.5B tot oper exp and member hospitals in ≥ 3 states <strong>OR</strong>&lt;br&gt;• ≥ 1.5B tot oper exp and member hospitals ≥ 5 short-term acute care</td>
<td>5</td>
<td>126</td>
</tr>
<tr>
<td>Medium Health System</td>
<td>• ≥ 1.0B total operating expense <strong>OR</strong>&lt;br&gt;• ≥ 800M tot oper exp and member hospitals ≥ 5 short-term acute care</td>
<td>5</td>
<td>93</td>
</tr>
<tr>
<td>Small Health System</td>
<td>Does not meet large or medium health system criteria</td>
<td>5</td>
<td>113</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td><strong>15</strong></td>
<td><strong>332</strong></td>
</tr>
</tbody>
</table>
# Scorecard domains, measures and rank weights

<table>
<thead>
<tr>
<th>Domain</th>
<th>Performance Measure</th>
<th>2018 Weight</th>
<th>Trend Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical outcomes</td>
<td>Risk-adjusted inpatient mortality index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Risk-adjusted complications index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Mean healthcare-associated infections index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Process of care</td>
<td>Influenza immunization rate</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Extended outcomes</td>
<td>Mean 30-day mortality rate (AMI, HF, PN, COPD, STK)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>30-day hospital-wide readmission rate</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Severity-adjusted average length of stay</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Mean emergency department throughput (time to admit, time to discharge)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Medicare spending per beneficiary index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Patient experience</td>
<td>HCAHPS top box rate (overall rating question)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Performance Measure</td>
<td>2017 Performance (15 Top Health Systems Award)</td>
<td>5-Year Trend</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Inpatient mortality and complications</td>
<td>MEDPAR Federal Fiscal Year (FFY) 2017 and 2018*</td>
<td>MEDPAR FFY 2013-2018*</td>
<td></td>
</tr>
<tr>
<td>Healthcare-associated infections (HAI)</td>
<td>CMS Hospital Compare (CMSHC) CY 2018</td>
<td>CMSHC CY 2014, 2015, 2016, 2017, 2018</td>
<td></td>
</tr>
<tr>
<td>30-day readmission rates</td>
<td>CMSHC July 1, 2017 - June 30, 2018</td>
<td>CMSHC 1-yr data sets ending June 30, 2014, 2015, 2016, 2017, 2018</td>
<td></td>
</tr>
<tr>
<td>Average length of stay</td>
<td>MEDPAR FFY 2018</td>
<td>MEDPAR FFY 2014-2018</td>
<td></td>
</tr>
<tr>
<td>Emergency department wait times</td>
<td>CMSHC CY 2018</td>
<td>CMSHC CY 2014, 2015, 2016, 2017, 2018</td>
<td></td>
</tr>
<tr>
<td>HCAHPS top box</td>
<td>CMSHC CY 2018</td>
<td>CMSHC CY 2014, 2015, 2016, 2017, 2018</td>
<td></td>
</tr>
</tbody>
</table>

*Two years of MEDPAR data are combined to calculate each study year data point.*
Legal Disclaimer

The information contained in this publication is provided for informational purposes only. While efforts were made to verify the completeness and accuracy of the information contained in this publication, it is provided AS IS without warranty of any kind, express or implied. In addition, this information is based on IBM’s current product plans and strategy, which are subject to change by IBM without notice. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, this publication or any other materials. Nothing contained in this publication is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software.

References in this presentation to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in this presentation may change at any time at IBM’s sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. Nothing contained in these materials is intended to, nor shall have the effect of, stating or implying that any activities undertaken by you will result in any specific sales, revenue growth or other results.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user’s job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.

All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics may vary by customer.

IBM, the IBM logo, ibm.com, and Watson Health are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at “Copyright and trademark information” at ibm.com/legal/copytrade.