The Value of Benchmarking

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“If you don't know where you are going, you'll end up someplace else.”
REQUIREMENTS FOR A SUCCESSFUL BENCHMARK

- Identify measures within the organization whose performance you want to compare with others
- Get buy-in from key stakeholders
- Identify a credible source for comparison data
- Comparisons must be relevant
  - Similar patient populations
  - Risk adjusted
- Some comparisons may be internal
WHAT EXTERNAL BENCHMARKS DO WE UTILIZE AT CHOC

• We’re a pediatric organization, so we rely on pediatric benchmarks
• Specialty-specific external sources to which we submit our data
  – Society for Thoracic Surgeons, Vermont Oxford Network, etc.
• Children’s hospital specific – Children’s Hospital Association (CHA)
  – Solutions for Patient Safety (SPS)
    • Started in Ohio to improve patient safety and reduce costs
    • Now a national network of over 100 children’s hospitals
  – Pediatric Health Information System (PHIS)
    • A comparative pediatric database, includes clinical and resource utilization data for
      inpatient, ambulatory surgery, emergency department and observation unit patient
      encounters for more than 45 children's hospitals.
• US News and World Report
REDUCING SERIOUS HARM FROM HOSPITAL ACQUIRED CONDITIONS (HACS)

- An example of internal benchmarking
- Our goal is simple – zero hospital acquired conditions that lead to serious harm

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HOW DID WE GET THESE REMARKABLE IMPROVEMENTS?

- Reduced medication errors through **CPOE**, dose range checking and other alerts
- **Positive Patient ID** (barcoding) initially for meds, and now for blood and breast milk administration and laboratory specimen collection
- Display **fall risk** on the chart and unit whiteboard
- Documentation of **skin assessment** drives care
- Patient summary presents pertinent **patient data** on one page
  - **Isolation status** prominently displayed
- Track **compliance with treatment protocols**
- Provide **instant access to evidence-based protocols**
We committed to dramatically improving codes outside of the ICU in 2007 via an EMR and process improvement project.

Our baseline performance was our benchmark for improvement.

Since establishing rapid response teams and PEWS, we have avoided 369 resuscitations for cardiac arrest outside the ICU saving over $18 million and countless lives.

[Note: The dashed line represents the pre-intervention mean rate of 0.8/1000]
EXAMPLE OF PHIS BENCHMARKS - MORTALITY

- Data is from the Children’s Hospitals’ Association Pediatric Health Information Systems (CHA PHIS) database and is severity-adjusted using APR-DRG methodology.
- By definition, the expected O/E mortality rate is 1.0; anything lower is favorable.

CHOC Observed to Expected (O/E) Mortality Ratio, 2011 to 2016 (data in black, with trend in blue)
EXAMPLE OF PHIS BENCHMARK – ASTHMA READMISSIONS

Asthma Readmissions Within 30 days (%)

Asthma readmissions within 30 days, 2010 -2015 (%). [PHIS CH=Children’s Hospital Association Pediatric Health Information System]
US NEWS AND WORLD REPORT HOSPITAL RANKINGS

• 183 organizations across the U.S. invited to participate
  – 106 submitted enough information to be considered
• 78 hospitals were ranked in at least one specialty
• 11 hospitals named to the Honor Roll
• Some 1500 data points across the same 10 specialties plus general hospital information
  – They rank the top 50 specialties
  – Allows for meaningful longitudinal tracking
SO HOW DID WE DO?

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Rank</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>45</td>
<td>60.2</td>
</tr>
<tr>
<td>Diabetes/Endocrinology</td>
<td>40</td>
<td>68.9</td>
</tr>
<tr>
<td>Gastroenterology/GI Surgery</td>
<td>49</td>
<td>51.9</td>
</tr>
<tr>
<td>Heart</td>
<td>NR</td>
<td>42.9</td>
</tr>
<tr>
<td>Neonatology</td>
<td>32</td>
<td>70.7</td>
</tr>
<tr>
<td>Nephrology</td>
<td>NR</td>
<td>51.0</td>
</tr>
<tr>
<td>Neurology/Neurosurgery</td>
<td>40</td>
<td>68.6</td>
</tr>
<tr>
<td>Orthopaedics</td>
<td>29</td>
<td>71.4</td>
</tr>
<tr>
<td>Pulmonology</td>
<td>26</td>
<td>58.7</td>
</tr>
<tr>
<td>Urology</td>
<td>22</td>
<td>69.1</td>
</tr>
</tbody>
</table>

• We ranked in 8 specialties with 3 in the top 30. Is that good?
• If you take a longitudinal view, we ranked in 6 in 2015, so we improved.
• These rankings are more about what you do, not necessarily about how well you do it.
• Heavily influenced by reputation and fellowship programs, both areas we fall quite short.
CHOC Cumulative Performance vs. Top 12 Mean Performance (%)
Thank you!

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