Benchmarking and Performance Management in Health Care

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The Current Scenario for Benchmarking in Health Care

- Current economic conditions challenge health care providers globally.
- Healthcare organizations need to deliver optimal financial, operational, and clinical performance to sustain quality of service delivery.
- Benchmarking is one of the most potent and under-utilized management tools available.
Benchmarking Defined

- The **continuous measurement and improvement of an organization's performance against the best** in the industry to obtain information about new working methods or practices in other organizations.
  

- The **three principles of benchmarking** are maintaining quality, customer satisfaction and continuous improvement.


The Benchmarking Theory

- Benchmarking is an important concept in TQM.
  

- Is built upon **performance comparison, gap identification** and changes in the management **process**.

Why Benchmark in Health Care?

- To understand strengths and weaknesses
- To realize what level(s) of performance and improvement is feasible
- To satisfy patients'/customers' needs for quality, cost, product and service
- To promote changes and to deliver improvements in quality, productivity and efficiency; which in turn bring innovation and competitive advantage
- Is a cost effective and time efficient way of establishing a pool of innovative ideas from which the most applicable practical examples can be utilized

Benchmarking and Performance Data in Health Care Organizations

Health care organizations measure various dimensions of performance: Clinical, operational and financial

- How do health care organizations use performance data?
- Is decision-making influenced by performance?
- Is health care organizational vision driven by performance?
- How does benchmarking improve performance?
The Limitations of Performance Data

- A thermometer reading would have little value as a measure of your health…
  
  *if you didn't know that 98.6 is the “normal” temperature!*

- A no-show rate of 25% at out-patients is meaningless as a performance measure of your hospital…*if you don’t know how others are performing*

- We are **overwhelmed with data without meaning**
- **Data** without a context are **only numbers!**

Models of Benchmarking

- **Descriptive/Normative:** No formal comparisons with norms; static snapshot e.g. government reports.

- **Comparative:** Formal comparison against a descriptive benchmark; typically reported as percentile rankings or in graph form.

- **Process:** Draws upon benchmarking data to identify potential best practices; achieved by comparing the practices of top performers with others.
Most Commonly-Used Benchmarks in Hospitals

- **Clinical**
  - Clinical Outcomes
  - Patient Satisfaction
  - Re-Admission Rate

- **Operational**
  - Physicians and Nurses to Patient Ratios
  - Utilization (e.g. length of stay, turnaround time)
  - Waiting Time (Days from Request to First Appointment)
  - Waiting Lists (Patients Waiting for Operation)
  - No-Show Rate

- **Organizational Climate**
  - Staff Turnover
  - Job Satisfaction/Engagement

- **Financial**
  - Cost per Unit of Service
  - Administrative Costs
Quality Indicator Attributes and Descriptions


Benchmarking Initiatives that Mater Dei Hospital, Malta has been involved in:

1. PATH WHO
2. Benchmarking Clinicians
PATH is a performance assessment system designed by the World Health Organization to support hospitals in defining quality improvement strategies, questioning their own results and translating them into actions for improvement.
The PATH system goes beyond the traditional professional divisions such as financial performance vs. clinical effectiveness, taking a more comprehensive approach to hospital performance within a framework comprising six dimensions. For each dimension, indicators were selected based on their importance and usefulness, potential impact and burden of data collection.

**RATIONAL FOR PERFORMANCE MEASUREMENT WHO PATH PROJECT**

- PATH is a tool to measure and manage hospital performance, and to foster and support a culture of measurement and continuous improvement.
- It means an agreement of hospital leaders to the principles of performance measurement presented in the Tallinn Charter and in the Vienna Statement on Hospital Performance Assessment.

- The Tallinn Charter was unanimously adopted by the WHO European Ministerial Conference that was held in Tallinn on June 25-27, 2008: to strengthen health systems in Europe, while acknowledging social, cultural and economic diversity in the region.

- Vienna Statement has been adopted by the 2nd International WHO Conference on PATH held in Vienna on July 4th, 2008.
A performance assessment framework for hospitals: the WHO regional office for Europe PATH project

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WHO PATH Performance Indicators

- C-Section Rate
- Patient Based stroke 30 day in-hospital
- Patient based AMI 30 day in-hospital
- Use of blood components
- Day surgery rate
- Exclusive Breast Feeding

C-SECTION RATE
C-Section Rate

Number of C-Section Against Total Deliveries

C-Section Rate: % LSCS EU C-Section per 1000 births

Source:
WHO/Europe, European HFA Database, January 2012 EU
PATIENT BASED AMI & STROKE 30 DAY IN-HOSPITAL MORTALITY RATE

Results

<table>
<thead>
<tr>
<th>AMI 2011</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>881</td>
</tr>
<tr>
<td>Numerator LOS 0-30</td>
<td>83 Patients deceased</td>
</tr>
<tr>
<td>Mortality rate</td>
<td>9.40%</td>
</tr>
</tbody>
</table>
Methodology AMI & Stroke

- Step 1: All cases matching the denominator definition were extracted from the HAA database (ICD 10 Codes as specified in indicator).
- Step 2: The data was analyzed to extract the patients marked as deceased as opposed to the total count. Patients with a length of stay from 0 - 30 were included.
- Limitation: The value of the indicator depends greatly on the quality of the principal diagnosis recorded on the HAA and on the underlying cause of death recorded on the death certificate.

Results

CVA 2011

<table>
<thead>
<tr>
<th>Denominator</th>
<th>557</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
<td>138</td>
</tr>
<tr>
<td>LOS 0-30</td>
<td>Patients deceased</td>
</tr>
<tr>
<td>Mortality rate</td>
<td>24.70%</td>
</tr>
</tbody>
</table>
Results

AMI 2011

Denominator 881
Numerator LOS 0-30 83
Patients deceased
Mortality rate 9.40%

CVA 2011

Denominator 557
Numerator LOS 0-30 138
Patients deceased
Mortality rate 24.70%

USE OF BLOOD COMPONENTS
### Period of Data Collection

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Nov 11</th>
<th>Dec 11</th>
<th>Jan 12</th>
<th>Feb 12</th>
<th>Mar 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>CABG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transurethral prostatectomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Knee Replacement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hip Replacement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Results - Use of Blood Components

<table>
<thead>
<tr>
<th>Procedure</th>
<th>No of Pts Type &amp; Screened</th>
<th>No of Pts with Blood Allocated</th>
<th>No of Pts Transfused</th>
<th>No of Blood Units Transfused</th>
<th>No of Blood Units Allocated</th>
<th>Total No of Patients in Dataset</th>
</tr>
</thead>
<tbody>
<tr>
<td>CABG</td>
<td>49</td>
<td>49</td>
<td>29</td>
<td>64</td>
<td>191</td>
<td>49</td>
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<tr>
<td>Transurethral prostatectomy</td>
<td>54</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>56</td>
</tr>
<tr>
<td>Total Knee Replacement</td>
<td>111</td>
<td>11</td>
<td>6</td>
<td>13</td>
<td>27</td>
<td>111</td>
</tr>
<tr>
<td>Total Hip Replacement</td>
<td>51</td>
<td>11</td>
<td>7</td>
<td>12</td>
<td>22</td>
<td>51</td>
</tr>
</tbody>
</table>
### Results - Use of Blood Components

<table>
<thead>
<tr>
<th>Procedure</th>
<th>C/T Ratio</th>
<th>Transfusion Probability</th>
<th>Transfusion Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>CABG</td>
<td>3.0</td>
<td>59</td>
<td>0.3</td>
</tr>
<tr>
<td>Transurethral prostatectomy</td>
<td>5.0</td>
<td>25</td>
<td>0.2</td>
</tr>
<tr>
<td>Total Knee Replacement</td>
<td>2.0</td>
<td>55</td>
<td>1.2</td>
</tr>
<tr>
<td>Total Hip Replacement</td>
<td>1.8</td>
<td>63</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**DAY SURGERY RATE**
Results

International comparison of the % inguinal hernia repair performed on a day surgery (anonymous countries) (minimum, quartile 1, quartile 3, maximum)
Results – Exclusive Breast Feeding Percentage

Percentage Exclusive Breast Feeding From Birth to Discharge

Year 2005 2006 2007 2008 2009 2010

% EBF
Benchmarking Clinicians

In benchmarking, a clinician’s performance is compared to an expected value.

How should we compare clinicians?

- Clinician to average peer
- Clinician to average peer taking care of same kinds of patients
- Clinician to expectations on admission
- Clinician and peers on patients matched on certain features
**Problems with Benchmarking Clinicians**

- Measurement may not achieve all objectives of quality of care
- Defensive Medicine
- Variability in patient variables
- Measurement takes time off real improvement

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**Benchmarking Orthopaedic Surgeons**

- Surgical orthopaedic procedures according to BUPA category
- New cases out-patient appointments per consultant and according to clinic code
- Total patients on waiting list
- Waiting list for arthroscopies
- Waiting list for arthroplasties
- Ward attenders
- Outpatient activity
- Length of Stay
- Registered discharges from MDH according to discharging consultant
Average Length of Stay and Median length of stay for Discharges in the Orthopaedic Department for 2011

Registered Discharges from MDH according to Discharging Consultant for 2011

Registered Discharges from MDH according to Discharging Consultant for 2011
Conclusions

- Benchmarking is an analytic tool to understand organizational performance
- Is needed for financial survival and organizational excellence