Executive Briefings: Implementing Health Reform

Variation in Health Care: More than Geography

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### RUSH IN BRIEF

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>Date founded</td>
<td>1837</td>
</tr>
<tr>
<td>Medical staff</td>
<td>890</td>
</tr>
<tr>
<td>Professional nursing staff</td>
<td>1,153</td>
</tr>
<tr>
<td>Residents and fellows</td>
<td>650</td>
</tr>
<tr>
<td>Employees</td>
<td>8,426</td>
</tr>
</tbody>
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### STAFFED BEDS

<table>
<thead>
<tr>
<th>Facility</th>
<th>Beds</th>
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<tbody>
<tr>
<td>Rush University Medical Center</td>
<td>600</td>
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<tr>
<td>Johnston R. Bowman Health Center</td>
<td>58</td>
</tr>
<tr>
<td>Rush Oak Park Hospital</td>
<td>128</td>
</tr>
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</table>

### BIRTHS

<table>
<thead>
<tr>
<th>Facility</th>
<th>Births</th>
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<tbody>
<tr>
<td>Rush University Medical Center</td>
<td>2,054</td>
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<tr>
<td>Rush Oak Park Hospital</td>
<td>N/A</td>
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### ADMISSIONS

<table>
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<tr>
<th>Facility</th>
<th>Admissions</th>
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<tbody>
<tr>
<td>Rush University Medical Center</td>
<td>30,699</td>
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<tr>
<td>Rush Oak Park Hospital</td>
<td>4,324</td>
</tr>
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</table>

### AVERAGE LENGTH OF STAY (DAYS)

<table>
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<tr>
<th>Facility</th>
<th>Days</th>
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<tbody>
<tr>
<td>Rush University Medical Center</td>
<td>5.74</td>
</tr>
<tr>
<td>Rush Oak Park Hospital</td>
<td>6.45</td>
</tr>
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</table>

### PATIENT DAYS

<table>
<thead>
<tr>
<th>Facility</th>
<th>Days</th>
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<tbody>
<tr>
<td>Rush University Medical Center</td>
<td>176,200</td>
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<tr>
<td>Rush Oak Park Hospital</td>
<td>27,877</td>
</tr>
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</table>

### OPERATIONS PERFORMED (inpatient and outpatient)

<table>
<thead>
<tr>
<th>Facility</th>
<th>Operations</th>
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<tbody>
<tr>
<td>Rush University Medical Center</td>
<td>20,405</td>
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<tr>
<td>Rush Surgicenter</td>
<td>5,231</td>
</tr>
<tr>
<td>Rush Oak Park Hospital</td>
<td>4,899</td>
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</table>

### EMERGENCY ROOM VISITS

<table>
<thead>
<tr>
<th>Facility</th>
<th>Visits</th>
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</thead>
<tbody>
<tr>
<td>Rush University Medical Center</td>
<td>47,767</td>
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<tr>
<td>Rush Oak Park Hospital</td>
<td>21,807</td>
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**About Rush University Medical Center**

An academic medical center based in Chicago

Health sciences university

Recognized for quality, ambition to be a leader
What did we set out to do?

• Slow down growth in expenses
  – “bend the cost curve”
• Find opportunities for growth in revenue
• Intrigued by the notion of variations
  – Do local variations in care affect cost and quality?
  – Can we reduce variations not driven by patient needs?
Context for our work

• External
  – Payment reform, healthcare reform
  – Dynamic market, many local players

• Internal
  – Strategic focus on quality, safety and efficiency
  – Campus transformation – new Tower
  – Investment in electronic health record
Guiding principles

• Maintain or improve quality and safety
• Prepare for payment reform and emerging reimbursement models
• This is not a short-term initiative, we want to hardwire new ways of thinking about care delivery
Approach

• Minimize variations unless driven by patient needs
• No “top down” mandate to “cut costs by x%”
• Initiatives led by physician leaders of clinical programs
• Multi-disciplinary teams, plus
  – Medical leadership, Quality and Finance
Taming the ‘cost dragon’

- Cost of complications, readmits, outliers
- Cost of care for a ‘typical patient’
- Quality
  - Patient Safety
  - Care Coordination
- Effective capacity
- Contribution margin
- Variations
- Lean

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Cross-cutting initiatives focus on high cost

- **Medications**
  - Examples:
    - Factor VIIa
    - Low molecular weight heparin
    - *Fibrin sealants*

- **Imaging & Diagnostics**

- **Capacity (Room/Labor)**

- **Laboratory**

- **Blood products**
  - Examples:
    - *Red blood cells*
    - *Platelets*

- **Medical/Surgical Supplies**
  - Examples:
    - Surgical staplers

**High-impact resource focus**
Programmatic focus – quality, cost and growth

The unit of analysis is the program – easier to engage physicians; allows use of a systems approach and a chance to identify growth opportunities

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Selecting programs

- Definable clinical population
- High-volume, and/or relatively high cost per case
- Variations in resource use
- Start with engaged physicians and staff

*Message is clear: Being selected is not a bad thing*
Management structure

Organizational oversight

Leadership
CMO Quality
Finance

Clinical teams

Physician leaders
Multi-disciplinary staff

IT team

Epic
Business Intelligence

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Framework for action
Evidence-based, Lean Care Maps

Goals

- Quality outcomes
- Direct cost targets
- Growth

Care coordination

Start

Engage

- Order sets
- Point-of-care decision support
- Measurement and feedback

EBM

- Guidelines / protocols / best practices

IT

- Reduce variations
- Improve flow
- Cost effective choices

Lean

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Engaging physicians

Most physicians do not know how much treatments and tests cost

Start with “screening data” – crude, high-level
  • Total direct cost for patient population
  • Costs broken down by major components
    • pharmacy, nursing, laboratory, radiology, etc.
  • Data on clinical outcomes

Ask for input, design analysis together
Invite peers who have gone through this to the kickoff

*Tone cannot be “You are spending too much!”*
Relative contributors to cost in Hepatology

35.6%
17.2%
12.3%
7.9%
7.8%
6.3%
4.3%
2.3%

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Use of data to understand variations and key drivers
Physician-to-physician variations in cost

Same procedure performed by two surgeons – two very different distributions of direct cost

Some of the difference is driven by patient severity, the rest by resource use preferences and potential complications

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Finding target areas with greater variation and opportunity

Direct Cost

Tall and narrow distribution, less opportunity

Target: Short and fat tailed distribution, more variation

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Impact of *potential* complications: Distribution of post-op ileus cases

Cases with ileus “hug” the right hand side of the LOS curve

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Action Plan Outline

Review quality, costs and current process

Identify evidence-based care standards

Reduce variations in practice and resource use not driven by patient needs

Improve efficiency, remove inefficiencies that do not add value to patient care

Hardwire and measure care standards, provide feedback

Lower expenses, quality impact positive or neutral
Examining impact
Are we making a difference? Laparoscopic colectomy (pre/post)

Distribution curve shifts to the left (lower LOS for typical patients) and peaked (less variation, fewer outliers).
Bowel Surgery: Impact on Length of Stay

Laparoscopic colectomy:
Reduced average LOS; reduced variability after implementation of new protocols

Open colectomy:
Reduced average LOS; reduced variability after implementation of new protocols

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Thoracic Surgery: Impact on direct cost per case (preliminary)

Reduction in direct cost per case of $1100-$1300 in each procedure group

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Overall impact to date

• Financial impact in Year 1 and 2 over $5 million

• Examples of program-specific improvements
  – Reduced readmissions and central line infections in BMT
  – Reduced drug utilization in stroke, BMT
  – Lower LOS in bowel surgery, thoracic surgery
  – Program growth in stroke

• Gradual shift in culture
Key Lessons

• Reducing variations is only half of the game – new choices must be lean and hardwired
• Physician engagement is essential
• Instead of telling physicians what to do, ask what can be done differently – and provide support
• Medical leadership and collaboration with Finance are essential for success
• Internal benchmarks are good enough
• Don’t wait for perfect IT systems or perfect data, use what you have and get started

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