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Hospital Competition and Financial Performance: Effects of Specialty Hospitals and Ambulatory Surgery Centers
“The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labour.”

from
An Inquiry into the Nature and the Causes of The Wealth of Nations
Adam Smith, 1776
Book 1, Chapter 1, Page 1, Sentence 1
Specialization, Competition and Hospital Services

- **Specialization**: Economists have recognized the value of specialization going back to 1776 with Adam Smith’s famous presentation of a pin factory.

- **Competition**: Basic driving force behind the success of capitalism and market systems.

- **Single Specialty Hospitals (SSHs)**
  - A growing number of hospitals in the U.S. in the past 15 years have been doing just that. . . . cardiac, orthopedic, surgical specialty hospitals opened by a number of physicians who believe that if they can specialize, they will be able to:
    - Operate much more efficiently
    - Improve patient satisfaction and quality

- **Ambulatory Surgery Centers (ASCs)**
  - Limited service alternative for surgery patients
  - Can achieve lower costs than hospital outpatient departments by not requiring an overnight stay.
The position of most general hospitals is that competition from SSHs and ASCs is unfair:

- These providers select the most profitable services and patients
- And they reduce general hospitals’ ability to cross-subsidize unprofitable services and to pay for care for the uninsured
Legislative History of SSHs: I

- “Whole Hospital Exception”: a fertile environment for development of new SSHs
- Reasons for proliferation?
  - Distortions in the payment system
  - Technological advances
  - Dissatisfaction on the part of physicians with responses of hospital administrators
- Moratorium on new physician-owned cardiac, orthopedic, and surgical SSHs: 2003 to 2006
Legislative History of SSHs: II

- What are the issues?
  - Patient selection: cherry-picking
  - Financial impact on community hospitals
  - Conflict of interest: self-referral, induced demand
- Medicare inpatient reimbursement structure reform: FY2007
- *Patient Protection and Affordable Care Act Section 6001*
  - Whole hospital exception dismantled
  - Stricter limitations on grandfathered SSHs
What Does Research Find?

- Most studied issues:
  - Self-referral
  - Utilization
  - Selection

- Cost Efficiency
  - Evidence is mixed

- Competitive Effects
  - Multi-faceted question
Points of Interest

- **Peculiar economic trade-offs involved with SSHs:**
  - Focus on single specialties may mean that the patients with co-morbidities will be best treated in the full-service hospital where there is easy access to other specialists they may need.
  - Smallness of size can preclude attaining the volume of emergency services required to achieve economies of scale.

- **All SSHs are not alike:**
  - Cardiac SSHs are much larger averaging about 60 beds compared to about 15 beds for orthopedic and surgical SSHs.
  - Cardiac SSHs treat about 2/3 Medicare patients and orthopedic and surgical SSHs treat ~ 1/3 Medicare patients.
  - Cardiac SSHs are much more likely to have EDs.

Carey, Burgess and Young (October, 2007). Specialization and physician-ownership in the US hospital industry: beyond the moratorium. *Health Economics Policy and Law*
Question:

How do SSHs compare with community hospital competitors on the criterion of cost efficiency?

“Specialty and Full-Service Hospitals: A Comparative Cost Analysis”
Carey, Burgess and Young
*Health Services Research*, October 2008

Research supported by the Robert Wood Johnson Foundation
We identified 51 physician-owned SSHs:

- 39 in Texas
- 6 in Arizona
- 6 in California

- 13 Cardiac
- 38 Orthopedic/Surgical

Hospital Cost Function Approach

Operating Costs = f (discharges, outpatient visits, average length of stay, bed size, APR-DRG severity adjusted case-mix index, outpatient case-mix index, Herfindahl index of competition, system membership, for-profit indicator, quality controls)
Results of Stochastic Frontier Analysis

- The local market competitor general hospitals (n=1,052) averaged 27.9% higher costs than the most cost efficient hospitals in the sample
- SSHs (n=51) averaged 38.9% higher costs than the most cost efficient hospitals in the sample
  - Higher result only for orthopedic/surgical SSHs
  - Cardiac SSHs no difference observed
- Yet only one way of examining efficiency
3 Questions about SSH Entry and Hospital Competition

- If SSHs or the “focused factories” among hospitals are the new competitive benchmark in the industry . . . . . . . . we would expect to see responses on the part of general hospitals located in the same local markets to SSH entry.

- What responses might we look for? Competitors might:
  - Change their own service mix
  - Reduce their level of uncompensated care provision
  - Attempt to improve their own quality of care

Research supported by the Agency for Healthcare Research and Quality
Question:

Does SSH entry induce competitor hospitals to change their service mix?

“Single Specialty Hospitals and Service Competition”
Carey, Burgess and Young
*Inquiry*, Summer 2009
Services Dimensions of Interest

- Head to Head Competition
- High Tech Imaging:
  - Contributor to New Medical Arms Race?
- Safety Net Services
# Findings

<table>
<thead>
<tr>
<th>More likely to be offered in SSH markets</th>
<th>No significant* difference * p &lt; 0.05</th>
<th>Less likely to be offered in SSH Markets</th>
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<tbody>
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<td>Head to Head</td>
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<td>Outpatient Center</td>
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<td>Crisis Prevention</td>
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<td>Urgent Care Center</td>
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<td>ED</td>
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<td>Burn Unit</td>
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Question:

If SSHs carve out relatively profitable services and draw away profitable patients, general hospitals may not have the financial resources necessary for them to support the social safety net.

“Specialty Hospitals and Uncompensated Care in General Hospitals”
Carey, Burgess and Young
Journal of Health Care Finance, Fall 2009
What We Found for California Cardiac SSHs

- Uncompensated and charity care grew over the period in markets both with and without specialty hospital presence.
- For the average general hospital located in a market with a cardiac hospital, changes in uncompensated and charity care were 25.9% and 40.5% lower compared to hospitals in markets with no specialty hospitals.
- Orthopedic or surgical hospital presence did not appear to affect either uncompensated or charity care.
SSH Entry and Nurse Staffing

Question:

Does SSH entry affect nurse staffing patterns among general hospital competitors?

“Single Specialty Hospitals and Nurse Staffing Patterns”
Carey, Burgess and Young
*Medical Care Research and Review*, June 2009
CMS study found that RN staffing ratios were much higher in SSHs
- Some SSHs had RNs but no LPNs
- Competitors might engage in non-price competition

MedPAC interviews found that some competitor hospitals cut staff in response to financial pressure from cardiac SSHs

Literature has linked nurse staffing ratios to quality of hospital care
What We Found

- General hospitals appeared to increase RN staffing ratios in response to orthopedic/surgical SSH entry
  - 10 state model 1997 to 2004
  - Magnitude of effect ~ 5% of RN FTE in typical general hospital
- No effect for cardiac SSH entry
- No observed labor substitution of RNs for LPNs
- Whether or not these changes are associated with improved patient outcomes is unknown

Limitations
- Did not control for labor market effects
- If SSHs are entering markets where nurse supply is greater . . . .
Ambulatory Surgery Centers
And Competitive Effects on Financial Performance of General Hospitals
What About ASCs?

- ASCs are loosely regulated compared to the hospital outpatient surgery departments with whom they compete
  - Not subject to the Stark Laws for composite services
  - Exempt from the moratorium
- Despite intense policy interest in physician-owned single specialty hospitals, according to a recent GAO survey, hospital executives are more concerned about competition from ASCs (GAO, 2006)
- Over 5,000 nationwide
  - originated in 1970 when a group of anesthesiologists opened a surgical center in Phoenix
  - Over half of these have opened since the early ’90s
  - Significant amount of physician-ownership
  - Ophthalmology, Gastroenterology and Orthopedic Surgery most common specialties but many General Surgery ASCs
If ASC competition works as a positive force in promoting efficiency, we would expect to find that
- Hospitals located in markets where ASC competition has grown would be more successful at controlling cost growth over time
- And would be able to maintain profits

But a finding that profits decline in those HRRs and/or cost growth is no different in those HRRs would fail to support the argument that ASCs promote healthy competition in the hospital industry.
Question: What happens to profits of general hospitals when ASCs enter local markets?

“Hospital Competition and Financial Performance: The Role of Ambulatory Surgery Centers”
Carey, Burgess and Young
Health Economics, May 2011
Profits = Revenue – Costs

- How might revenues be affected?
  - Fall if patients move over to ASCs
  - Steady if ASCs mainly picking up new demand
  - Rise if hospitals strategically shift payer mix to more private/self pay or change service mix
- Hospital may attempt cost containment effort in response to loss of revenue, e.g.
  - Cutting staff
  - Reducing charity care and/or bad debt
  - Otherwise reducing expenses
What About Selection?

- Since ASCs do not offer inpatient services, they may draw patients with low risk . . .
- Leaves the higher severity patients in the hospital outpatient departments . . . .
- Causes higher average costs of patients treated there and . . .
- Puts downward pressure on profits in general hospitals
## Combined Effects

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<th>Competitive Response Effect</th>
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<td>Positive</td>
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<td>No Effect</td>
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<td>Weak Negative</td>
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<td>High</td>
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**What We Found**
Jan ‘08: CMS implemented new payment system for ASCs designed to align with hospital outpatient rates for the same procedures

Did so without any reliable information about costs

Empirical evidence on the cost of performing surgeries in ASCs is virtually nonexistent

Important to better understand the costs within ASCs in addition to cost effects outside
Questions and/or Comments?

Thank you for your interest