Provider Consolidation: Trends & Outcomes

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Two Topics

1. Horizontal consolidation of hospitals
2. Vertical integration of hospitals and physicians
Two Topics

1. *Horizontal consolidation of hospitals*
2. Vertical integration of hospitals and physicians

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**Horizontal Integration into Hospital Systems**

- Corporate Parent
  - Hospital A
  - Hospital B
  - Hospital C
Trends in Hospital Consolidation

A lot of hospital consolidation
• 1,200+ deals since 1994
• 357 deals since 2010
• Most urban areas are now dominated by 1-3 large hospital systems
  • Partners (Boston), Sutter (Bay Area), UPMC (Pittsburgh)

![Graph showing the number of deals and hospitals from 1998 to 2013]

Some enormous deals

<table>
<thead>
<tr>
<th>Hospital Deal</th>
<th># Hospitals</th>
<th># States/Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Health Systems &amp; Health Mgmnt Associates</td>
<td>206</td>
<td>29</td>
</tr>
<tr>
<td>Tenet Healthcare &amp; Vanguard Health Systems</td>
<td>77</td>
<td>30</td>
</tr>
<tr>
<td>Trinity Health &amp; Catholic Health East</td>
<td>82</td>
<td>21</td>
</tr>
<tr>
<td>Ascension Health &amp; Alexian Brothers</td>
<td>80</td>
<td>21</td>
</tr>
<tr>
<td>Trinity Health &amp; Loyala University H.S.</td>
<td>47</td>
<td>10</td>
</tr>
</tbody>
</table>
Number of Hospitals in Health Systems, 2002 – 2012

Theorized Benefits of Hospital Consolidation

- Scale economies: lower costs
- Ability to reduce unnecessary duplication
- Improved access to healthcare services / reduced distance
- Ability to handle risk contracts & alternative payment methods
- Investments in desired societal goals:
  - higher quality & lower cost of care
  - care coordination
  - population health / triple aim
  - patient safety

Source: Avalere Health analysis of American Hospital Association Annual Survey data, 2012, for community hospitals.

(1) Hospitals that are part of a corporate body that may own and/or manage health provider facilities or health-related subsidiaries, as well as non-health-related facilities including freestanding and/or subsidiary corporations.
Literature on Hospital Consolidation

Burns, McCullough, Wholey et al., (2015), *Medical Care Research and Review*

Capps, David, & Carlton (2010), Working paper

Gaynor and Town (2012), *RWJF Update*

Gaynor, Kleiner, & Vogt (2015), *Journal of Applied Econometrics*

Tsai & Jha (2014), *JAMA*

Vogt & Town (2006), *RWJF Synthesis*

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Evidence on Hospital Consolidation

- **Merging facilities …**
  - lowers costs
  - can increase volumes
  - does not necessarily improve quality

- **Consolidating facilities under one system roof …**
  - does not lower costs
  - may increase costs as systems get bigger
  - may increase costs as systems become more geographically dispersed
  - may lead to greater ability to invest in quality measurement & improvement, but
  - may lower quality of care
  - does not lead to clinical integration (at least initially)
  - does not lead to greater provision of charity care
Despite the lack of evidence for cost and quality gains, why the continuing trend toward hospital systems??

- Increase size to gain leverage over payers (or at least match up in size)
- Gain heft & scale to succeed/survive under PPACA
- Increase size to concentrate procedures in high-volume centers
- Everybody else is getting bigger ➔ want to stay competitive
- Diversify market risk via geographic spread
- Increase capital and access to cheaper capital to expand, renovate

- Viewed favorably by credit rating agencies:
  - “Too big to fail”
  - Respond to risk-based contracting (P4P, VBP)
- Increase size to perform population health & coordinated care
- Continued erosion in commercial insurance
- Rise of insurance exchanges & possible steerage that might exclude small systems
- Dwindling inpatient care market ➔ try to keep patients inside the network

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*Is the System Really the Solution? Operating Costs in Hospital Systems*

Lawton Robert Burns¹, Jeffrey S. McCullough¹, Douglas R. Wholey², Gregory Kruse¹, Peter Kralovec³, and Ralph Muller¹

**Abstract**

Hospital system formation has recently accelerated. Executives emphasize scale economies that lower operating costs, a claim unsupported in academic research. Do systems achieve lower costs than freestanding facilities, and, if so, which system types? We test hypotheses about the relationship of cost with membership in systems, larger systems, and centralized and local hub-and-spoke systems. We also test whether these relationships have changed over time. Examining 4,000 U.S. hospitals during 1990 to 2010, we find no evidence that system members exhibit lower costs. However, members of smaller systems are lower cost than larger systems, and hospitals in centralized systems are lower cost than everyone else. There is no evidence that the system’s spatial configuration is associated with cost, although national system hospitals exhibit higher costs. Finally, these results hold over time. We conclude that while systems in general may not be the solution to lower costs, some types of systems are.
Hospital Systems Can Engage in Strategies That …

• Promote efficiency: coordination, rationalization, standardization

• Ignore efficiency: prices, technology upgrades, hires, differentiation, feeders

• Retard efficiency: bureaucracy, complexity, governance, culture, dispersion

Two Topics

1. Horizontal consolidation of hospitals

2. *Vertical integration of hospitals and physicians*
**Vertical Integration**
Physician and Hospital Linkages

**Input Markets**
- Physician Offices
- Ambulatory Care
- Outpatient Care

**Output Markets**
- Hospitals
- Skilled Nursing Facility
- Post-Acute Care

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**Horizontal & Vertical Integration: Possible Story Line**

- Hospital Acquisitions
- Commercial Patients & Rates
- Technology Acquisition
- Physician Acquisitions
- Patient Volume Provider Revenue
- Access to Site 22 $$
- 340b $$
Extent of physician-hospital consolidation

• *Alliance models* (PHO, MSO, IPA)

  - dismal failures in 1990s
  - garnered few capitated lives from insurers
  - no impact on cost or quality
  - no impact on physician alignment
  - no infrastructure to manage risk

  on the wane ever since
  may make a comeback with PPACA
  can serve as the chassis for an ACO

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**Extent of Consolidation**

**Physician-Hospital Alliances 1993 - 2013**

- Independent Practice Association
- Open Physician Hospital Organization
- Management Service Organization
- Equity Model
- Group Practice Without Walls
- Closed Physician Hospital Organization
- Integrated Salary Model
- Foundation

Source: AHA Database
Extent of physician-hospital consolidation

• *Hierarchy models* (employment)

    more hospitals now employ physicians
    not entirely sure how many physicians are employed by hospitals
    lots of WAGs
    lots of group think
    get out your BS detector

Extent of consolidation: Estimates

• Percent of Physicians Employed by Hospitals:
  
  - Credit Suisse (2013) 2/3 of physicians
  - WSJ (2014) 2/3 of physicians
  - Truven Health Analytics 2/5 - 1/2 of physicians – teaching hospitals
  - SK&A (2012) 1/4 of physicians
  - ACS (2012) 1/4 of cardiologists
  - AMA (2015) 1/4 of physicians
  - Neprash et al. (2015) 1/5 of physicians
  - AHA (2013) 1/7 of physicians
  - Truven Health Analytics 1/10 of physicians – community hospitals

• Percentages vary a lot by specialty
HORIZONTAL AND VERTICAL INTEGRATION OF PHYSICIANS: A TALE OF TWO TAILS

Lawton Robert Burns, Jeff C. Goldsmith and Aditi Sen

ABSTRACT

Purpose: Researchers recommend a reorganization of the medical profession into larger groups with a multispecialty mix. We analyze whether there is evidence for the superiority of these models and if this organizational transformation is underway.

Design/methodology approach: We summarize the evidence on scale and scope economies in physician group practice, and then review the trends in physician group size and specialty mix to conduct survivorship tests of the most efficient models.

Findings: The distribution of physician groups exhibits two interesting tails. In the lower tail, a large percentage of physicians continue to practice in small, physician-owned practices. In the upper tail, there is a small but rapidly growing percentage of large groups that have been organized primarily by non-physician owners.

Drivers of consolidation

**Hospital Goals**
- Increase MD incomes
- Improve care processes & quality
- Share cost of clinical IT with physicians
- Prepare for ACOs and Triple Aim
- Increase leverage over payers
- Increase physician loyalty/alignment
- Minimize volume splitting
- Increase hospital revenues
- Capture outpatient market
- Mitigate competition with physicians
- Develop regional service lines
- Create entry barriers for key clinical services
- Recruit physicians in specialties with shortages
- Address medical staff pathologies

**Physician Goals**
- Stabilize / increase MD incomes
- Forestall / offset reimbursement cuts
- Integration = Income insurance policy
- Increase quality of service to patients
- Access to hospital’s accumulated capital
- Access to new technology
- Uncertainty over health reform
- Low leverage over payers
- Escape administrative hassles of private practice
- Escape pressures of managed care
- Exit strategy for group’s founding physicians
- Increase predictability of case load & income
- Increase physician control
- Increase career satisfaction & lifestyle
Provider-based Status: Advantages

• Relationship that allows a hospital to treat another facility as part of the hospital for payment purposes

• Location can bill as part of the hospital to which it is based:
  - SOS 22 (hospital outpatient = professional & facility fee)
  - SOS 11 (physician office = professional fee)

• HOPD professional & technical claim amounts >> MD office claim amount

• Medicare payment differentials carry over to commercial payments

• Can partake in 340b savings

• Inclusion in hospital’s third-party payer contracts

Economist Hypotheses Regarding Vertical Integration

<table>
<thead>
<tr>
<th>Positive benefits</th>
<th>Negative consequences</th>
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<tbody>
<tr>
<td>Efficient production of hospital services</td>
<td>Improved bargaining power w/ commercial payers</td>
</tr>
<tr>
<td>Improved MD-hospital communication across sites</td>
<td>Higher prices</td>
</tr>
<tr>
<td>Care coordination</td>
<td>Higher costs</td>
</tr>
<tr>
<td>Possibly higher quality of care</td>
<td>Shift in site of care from SOS 11 ➔ SOS 22</td>
</tr>
<tr>
<td>Prepare for risk contracting &amp; APMs</td>
<td>Higher volume</td>
</tr>
<tr>
<td>Increase referrals</td>
<td>Higher overall spending</td>
</tr>
<tr>
<td>Meet challenges of accountable care</td>
<td>Potential to pay physicians covertly for referrals</td>
</tr>
<tr>
<td>Reduce wasteful duplication of tests</td>
<td></td>
</tr>
<tr>
<td>Continuum of care / in-network care</td>
<td></td>
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<tr>
<td>Substitute low-cost for high-cost sites</td>
<td></td>
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<tr>
<td>Share best practices, IT</td>
<td></td>
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<tr>
<td>Population health investments</td>
<td></td>
</tr>
</tbody>
</table>
Evidence Base on Physician-Hospital Economic Integration

Recent Papers on Hospital-Physician Integration

**Vertical Integration: Hospitals & MDs**
- Andes & Gans (2015), *MGMA*
- Baker, Bundorf, & Kessler (2014), *Health Affairs*
- Baker, Bundorf, & Kessler (2015), *NBER*
- Gans & Wolper (2013), *MGMA*
- Neprash, Chernew, Hicks et al. (2015), *JAMA Internal Medicine*
- Robinson and Miller (2014), *JAMA*
- McWilliams, Chernew, et al. (2013), *JAMA Internal Medicine*
- Huang & McCarthy (2015), *Emory Univ.*

**Horizontal Integration: Specialty Concentration**
- Austin & Baker (2015), *Health Affairs*
- Baker, Bundorf, Royalty, & Levin (2014)
- Dunn & Shapiro (2012), *Bureau of Economic Analysis*
- Schneider, Li, Klepser et al. (2008), *Int J Health Care Fin Econ*
- Scheffler (2015), Presentation to FTC

**Site of Service: From MD Office to HOPD**
- Health Policy Brief (2014), *Health Affairs*
- Song, Wallace, Neprash et al. (2015), *JAMA Internal Med*
- Wynn, Hussey, Ruder (2011), *RAND Report*

**Fully Integrated Models: Hospitals, MDs, Health Plan**
- Burns, Gimm, & Nicholson (2005), *Journal Healthcare Mgmt*
- Burns, Goldsmith, & Sen (2013), *Advances in Health Care Mgmt*
- Frakt, Pizer, & Feldman (2013), *Health Services Research*
- Goldsmith., Burns, Sen et al. (2015), *NASI*
Recent Papers on Hospital-Physician Integration (2012-15)

- Shift care from MD office to HOPD
- Higher prices paid for physician services in HOPD
- Higher HOPD prices tied to concentrated MD markets, salaried models, hospital market share
- More impact on outpatient prices than on outpatient volume
- Little impact on inpatient prices or volume
- Higher total cost of care
- Lower quality: lower HEDIS scores, higher re-admissions
- Lower physician productivity (RVUs, $ revenues per MD)
- Lower levels of office staffing by non-physician clinicians

Some Overall Issues

- Any reduction in volume or utilization?
- Any evidence of care coordination efficiencies?
- Are patients more likely to go to lower-cost, higher-quality hospitals (or just the opposite)?
- Are price increases a function of (1) site of payment or (2) bargaining power over payers?
- Effects on patient cost-sharing?
- Lots of confounds and contingent effects:
- Are studies conducted in FFS environment or alternative payment methods environment?
15. Hospital employment of physicians is a positive trend likely to enhance quality of care and decrease costs.

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly agree</td>
<td>9.3%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>27.8%</td>
<td>19.9%</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>28.8%</td>
<td>32.8%</td>
</tr>
<tr>
<td>Mostly disagree</td>
<td>34.1%</td>
<td>42.7%</td>
</tr>
</tbody>
</table>

Multiple Treatment Interference

- Physician Offices
- Ambulatory Care
- Outpatient Care
- HMO, PPO
- Skilled Nursing Facility
- Post-Acute Care
NASI Report Findings

- No relationship of IDN “revenue at risk” with
  
  (a) IDN profitability
  (b) IDN cost of care (adjusted for CMI)

- Comparing the *IDN flagship hospital* with its main in-market competitor:
  
  (a) higher average cost per case in 10/14 sites
  (b) more “revenue at risk” associated with higher Medicare spending in last 2 years of life
  (c) no meaningful differences in clinical quality scores:
    
    - readmissions
    - infection rates
    - complication rates
  (d) no meaningful differences in patient satisfaction scores or Leapfrog safety ratings

- NOT CLEAR that IDNs can coordinate care, lower costs, or deliver value
Thank you for listening