Hospital Acquisition of Physician Practices: Higher Value or Higher Costs?

Center on Health Care Effectiveness Policy Forum
Mathematica Policy Research
Washington, DC

November 12, 2015
The Center on Health Care Effectiveness (CHCE) conducts and disseminates research and policy analyses that support better decisions at the point of care. Our focus is on the delivery systems and policy environments that help clinicians and patients make more informed decisions, using information on outcomes and effectiveness.

For more information about CHCE, visit http://chce.mathematica-mpr.com/
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Today's Speakers

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Stuart Guterman  
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Craig Schneider  
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Eugene Rich  
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Reasons for Hospital Employment

**Hospital Perspective**

- Increase market share and referrals for:
  - Inpatient admissions
  - Lucrative tests
  - Procedures by their specialists

- Greater leverage with health plans on prices

- Eye toward the future
  - Accountable care organizations (ACOs)
  - Bundled payment
  - Penalties for readmissions

**Physician Perspective**

- Fear of being “squeezed out of the market” in highly consolidated hospital markets

- Rising overhead but flat reimbursement

- Implementation of health information technology and meaningful use

- Malpractice premiums

- Work-life balance

- Help navigating complex changes in delivery system, reporting and alternative payment models: ACOs, reporting on quality metrics etc. (and in the future MACRA, MIPS, etc.)

Opportunities & Risks of Hospital Employment of Physicians

Opportunities

• Economies of scale
• Influence over physicians’ actions
• Theoretically, it can establish structure for better care integration
• One-stop shopping for patients

Risks

• FFS still hinders coordination of care
• Access can shift markedly for patients if hospital drops a plan network (for example, Medicaid)
• Potential for higher costs
  – Increases leverage over plans on payment rates
  – Exacerbates pressure to increase volume under FFS model
  – Facility fees for office visits
• Demise of independent small practices — which still serve a lot of people and rep about 50-60% of practicing physicians
Policy Implications

• Greater hospital employment of physicians does not mean that clinical integration will naturally follow

• Risks raising costs without improving quality, unless broader payment reform incentivizes coordination of patient care
Physician–Hospital Integration: Higher Prices and More to Come?

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November 12, 2015
Why study physician–hospital (vertical) integration?

- Increasing
- Understudied: effects so far on prices, utilization, and quality unclear
- May accelerate under new payment models
- Concern that price effects will offset gains from new payment models (APMs)
Should we expect more vertical integration under payment reform?

Yes

- Potential efficiencies from ownership
  - Care coordination
  - Greater influence over physician behavior
  - Lower transaction costs
  - Other economies of scale or scope

- Strategy/survival
  - Acquisition of primary care practices to preserve market share
Should we expect more vertical integration under payment reform?

No

- Efficiencies questionable
  - Reduced incentives to achieve efficiencies
  - Diseconomies of scale or scope (internal politics)

- Reasons for integration under FFS
  - Increase admissions, referrals for HOPD services
  - Bargaining power
  - Economies of scale or scope
  - Higher payments
New empirical evidence

1. Effects of recent vertical integration on inpatient and outpatient prices and utilization

2. Performance differences between vertically integrated organizations and independent physician groups in Medicare ACO programs

3. Relationship between ACO contracting and vertical integration
Association of Financial Integration Between Physicians and Hospitals with Commercial Health Care Prices

Neprash HT, Chernew ME, Hicks AL, Gibson T, McWilliams JM
Study Data and Population

- Study period: 2008–2012
- Data:
  - Truven Health MarketScan Commercial Database
    - To measure spending and utilization at patient level
    - Does not contain provider IDs
  - Medicare claims
    - To measure physician–hospital integration at MSA level
- Population: 7.4M PPO/POS enrollees
  - 240 MSAs where Medicare billing substantial and MarketScan covered >15% of PPO population
  - Enrollees in MarketScan in 2008 and 2012
Study Variables

- Physician–hospital integration
  - % of MSA’s NPIs billing in hospital–owned facilities
  - Based on place of service codes
  - Captures HOPD employment and off campus acquisitions
  - Misses some acquisitions and looser contracting arrangements

- Concentration measures (HHIs)
  - Physician: Medicare, TIN share of outpatient care
  - Hospital: AHA, system–adjusted admissions share
  - Insurer: HealthLeaders InterStudy, enrollment share
Study Variables

- Spending and utilization
  - Inpatient and outpatient spending
  - Utilization = service counts \times \text{mean prices}
  - Implied price effect (Spending = P \times Q)

- Covariates
  - MSA–level
    - Rates of unemployment, poverty, age >65
    - Physicians and beds per capita
  - Patient–level
    - Age, sex
    - Verisk Health DxCG risk score
  - Plan–level cost–sharing
Analysis

- Modeled spending/utilization as function of:
  - Year (2008 vs. 2012) and MSA fixed effects
  - Physician–hospital integration
  - Physician, hospital, insurer market concentration
  - Covariates

- Focus on physician–hospital integration and physician market concentration

- Estimated expected effects for MSA exhibiting a change at the 75th percentile of changes

- Analysis of hospital–owned vs office price differentials: was market power a mediator?
Changes in Characteristics in MSAs with More vs. Less Physician–Hospital Integration From 2008 to 2012

<table>
<thead>
<tr>
<th>MSA–level Characteristic</th>
<th>Study Year, Mean</th>
<th>Change from 2008–2012, Mean</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2012</td>
<td>Below Median P–H Integration</td>
</tr>
<tr>
<td>Physician–hospital integration, %</td>
<td>18.0</td>
<td>21.3</td>
<td>-0.1</td>
</tr>
<tr>
<td>Physician HHI</td>
<td>675</td>
<td>726</td>
<td>54</td>
</tr>
<tr>
<td>Hospital HHI</td>
<td>3962</td>
<td>4143</td>
<td>127</td>
</tr>
<tr>
<td>Insurance HHI</td>
<td>2441</td>
<td>2386</td>
<td>-52</td>
</tr>
<tr>
<td>% unemployed</td>
<td>5.7</td>
<td>7.8</td>
<td>2.3</td>
</tr>
<tr>
<td>% in poverty</td>
<td>13.1</td>
<td>15.7</td>
<td>2.6</td>
</tr>
<tr>
<td>% age ≥65y</td>
<td>12.9</td>
<td>14.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Physicians/1000 persons</td>
<td>2.79</td>
<td>2.87</td>
<td>0.08</td>
</tr>
<tr>
<td>Hospital beds per 1000 persons</td>
<td>2.88</td>
<td>2.75</td>
<td>-0.12</td>
</tr>
<tr>
<td>Mean DxCG Risk Score</td>
<td>0.69</td>
<td>1.18</td>
<td>0.46</td>
</tr>
<tr>
<td>Mean outpatient OOP payment, $</td>
<td>29.23</td>
<td>34.44</td>
<td>4.99</td>
</tr>
<tr>
<td>Mean inpatient OOP payment, $</td>
<td>605.55</td>
<td>796.92</td>
<td>203.24</td>
</tr>
</tbody>
</table>

Neprash, Chernew, Hicks, Gibson, & McWilliams. JAMA Intern Med 2015
Effect of vertical integration 2008–2012 (expected for 5.2pp increase)

Neprash, Chernew, Hicks, Gibson, & McWilliams. JAMA Intern Med 2015
MSA–level Variation in Office Visit Price Differential between Independent and Hospital–owned Practices: Medicare vs MarketScan

Neprash, Chernew, Hicks, Gibson, & McWilliams. JAMA Intern Med 2015
Effect of Physician Market HHI 2008–12 (expected for 75\textsuperscript{th} pctile of changes)

![Bar chart showing annual spending or utilization (in dollars) for outpatient and inpatient care.]

- Outpatient: $19
- Inpatient: $11

Neprash, Chernew, Hicks, Gibson, & McWilliams. JAMA Intern Med 2015
Savings by ACO Characteristics (Pioneer)

Financial integration between hospitals and physician groups
Yes (16)
No (16)

Baseline spending in ACO service area
Higher (16)
Lower (16)

Baseline spending in ACO
Above local average (16)
Below local average (16)

Dropped out
Yes (13)
No (19)

P value for test of difference between ACO subgroups
0.83
0.04
0.048
0.75

Differential change in quarterly spending per beneficiary ($)

McWilliams, Chernew, Landon, & Schwartz. NEJM 2015
Has Medicare ACO contracting been associated with more integration?

![Graph showing the percentage of physicians practicing in hospital-owned facilities from 2008 to 2012 for different MSA-level ACO penetration groups (Lowest, Q2, Q3, Highest).](image)
Vertical integration associated with higher prices with no evidence of efficiencies under FFS or APMs (at least not yet)

Not clear that integration is accelerating under payment reform (at least not yet), but clear that it is increasing

Not a reason to abandon payment reforms

Need parallel policies to keep markets competitive and limit mark ups

More competitive hospital markets may be key
Implications of Hospital Vertical Integration for Development of Alternative Payment Models

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McWilliams et al. in Context

• Key results are consistent with most prior literature on topic
  – Identifying outpatient prices as main driver a key contribution
  – Relatively little research on implications for quality
    • What little exists does not suggest vertical integration has improved quality
    • One study finds vertical integrated systems associated with patients going to lower-quality hospitals

• Beware of the mean—lots of local variation:
  – In hospital employment of physicians
  – In the way hospitals use physicians they employ
    • Many are going down the path of developing integrated delivery systems and attempting to find ways of delivering cost-efficient care

• Landscape changing rapidly—more than twice as many ACOs now as in 2012, the end of the study period
Avenues to Higher Costs

• The study’s findings suggest that vertically integrated hospitals increase revenue primarily by:
  – Using enhanced market power to negotiate higher rates with commercial insurers
  – Shifting services from community settings to hospital outpatient departments (HOPDs)
  – Billing community-based services by employed physicians as if they were provided in the HOPD

• Price differentials between HOPD services and those billed at community rate can be substantial
  – Affects public and commercial payers
  – Medicare pays 70% more for a medium-length office visit in HOPD than it does for office visit in doctor’s office
HOPD vs. Community Prices: Knee MRIs

Figure 1
Prices for Knee MRIs in Hospital Outpatient Departments (HOPD) and Community-Based Settings for Privately Insured Patients
HOPD vs. Community Prices: Screening Colonoscopies

Figure 2
Prices for Colonoscopy Procedures in Hospital Outpatient Departments (HOPD) and Community-Based Settings for Privately Insured Patients

Key
- 90th Percentile
- 10th Percentile
- Mean
- 50th to 75th Percentile
- 25th to 50th Percentile
HOPD vs. Community Prices: Common Lab Tests

Figure 3
Prices for Common Laboratory Tests in Hospital Outpatient Departments (HOPD) and Community-Based Settings for Privately Insured Patients

![Graph comparing HOPD vs. Community Prices for common lab tests](image-url)
Transitioning to ACOs (& other APMs) Is Difficult

• ACO transition is difficult, costly, and requires considerable time and managerial resources
  – Build new information systems
  – Develop care management and quality measurement systems
  – Figure out how to manage population health
  – Devise ways to align provider incentives

• Leadership, culture, and governance important determinants of success

• Vertically integrated hospitals have distinct advantages
  – Greater ability to compel change by physicians
  – Greater resources to fund system change
Is the Transition More Difficult for Hospital-Led Systems?

• Reports suggest physician-led ACOs are more successful at lowering costs compared with hospital-led ACOs

• ACO transition requires fundamental change in mindset
  – e.g., hospital inpatient and outpatient services as cost centers, not profit centers

• Short-run avenues to achieve savings may be less available to hospital-led ACOs
  – Most lucrative way to achieve ACO shared savings is to cut services by providers outside of your ACO without cutting your own FFS income
    • Physician-led ACOs cutting ED and inpatient use, some specialist services
    • Better managing patients’ utilization of post-acute care
  – Physician-run ACOs may have greater opportunities to do this when compared to hospitals-run ACOs

• On the other hand, higher hospital system outpatient prices could lead to higher ACO benchmarks and easier road to shared savings
The Road Ahead (1)

- Continued pressure from CMS/private payers for doctors and hospitals to work together to manage patient health and lower costs
  - MACRA will change the calculus, making FFS less attractive and APMs more so

- CMS shows willingness to compel APM participation
  - For example, Comprehensive Care for Joint Replacement bundling initiative

- CMS is moving away from shared saving/risk benchmarks based on provider entity’s historical costs
The Road Ahead (2)

• Recent budget deal marks initial move to limit HOPD pricing for “off campus” services by employed physicians
  – Applies only to physicians employed by hospitals after 1/1/2015
  – Other calls for site-neutral payments persist

• Hospitals fail to pursue integrated delivery systems at their own peril
Making Markets Work in Health Care: What Does That Really Mean?

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Senior Scholar in Residence
AcademyHealth

Mathematica Center on Health Care Effectiveness
Washington, DC
November 12, 2015
There are two types of markets in health care:
• The market for health care services
• The market for health care coverage

The two markets are interdependent
Both of those markets are broken:

- Lack of useable information
- Adverse incentives
- Disconnect between purchaser and user
Both markets are becoming more consolidated:
• Providers
• Insurers

This trend is both good news and bad news
What are the implications for policy?

- Aligning payment incentives with system goals: paying for what we want
- Making markets work
  - What does this mean?
    - Market forces can be powerful tools for achieving societal goals
    - But that means the markets in which they operate must be appropriately configured
  - Is it possible?
  - The role of antitrust policy

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Balancing competition and regulation

- Narrow networks
- Tiered networks
- Reference pricing
- Benefit design
- Price regulation
- Fixing the infrastructure of the market—markets and market forces
The Role of Medicare ACOs in Market Transformation

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Craig Schneider
Senior Health Researcher
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Medicare ACO Models

- Pioneer
- Shared Savings Program (SSP)
  - Advance Payment (AP)
  - ACO Investment Model (AIM)
- End-Stage Renal Disease Seamless Care Organization (ESCO)
- Coming in January: Next Generation
## Overview of Medicare ACOs

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pioneer</th>
<th>SSP</th>
<th>ESCO</th>
<th>Next Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date</td>
<td>January 2012 (one-time)</td>
<td>January 2012 (annual enroll)</td>
<td>October 2015 (no expansion)</td>
<td>Jan. 2016 and Jan. 2017</td>
</tr>
<tr>
<td>Quality Measures</td>
<td>33 GPRO</td>
<td>33 GPRO</td>
<td>26 (various sources)</td>
<td>32 GPRO (no EHR measure)</td>
</tr>
<tr>
<td>Payment</td>
<td>5 options, 2-sided risk, 60-75% SS/SL, MSR/MSL 2%</td>
<td>Track 1: SS only, up to 50%. Track 2: 2-sided risk, up to 60%. Track 3: 2-sided, up to 75%.</td>
<td>LDOs: MSR 1%, SS/SL 70% PY1. SDOs: SS only (up to 50%).</td>
<td>2 options: SS/SL 80% or 100%, 1st $ risk/reward, 4 pm. mechanisms</td>
</tr>
<tr>
<td>Beneficiary attribution</td>
<td>Prospective historic claims (voluntary PY4)</td>
<td>Prelim. prospective, final retro</td>
<td>Based on 1st visit to dialysis facility</td>
<td>Prospective historic claims (voluntary PY2)</td>
</tr>
<tr>
<td>Number</td>
<td>19</td>
<td>405</td>
<td>13 (?)</td>
<td>TBD (20 per cohort?)</td>
</tr>
<tr>
<td>Minimum enrollment</td>
<td>15,000 (rural 5000)</td>
<td>5000</td>
<td>350</td>
<td>10,000 (rural 7500)</td>
</tr>
</tbody>
</table>
Challenges for ACOs to Meet

- Patient and beneficiary engagement
- Patient attribution – who are my patients, churn
- Aligning incentives (much of care still FFS)
- Limited funding for transformation, eyeing return on investment
- Behavioral health
- Coordinating patient care within the ACO
- Lack of timely and complete data
- Collaboration in a competitive marketplace
- Participating in evolving models/programs (Pioneer, SSP, Next Gen)
- Leveraging private contracts, Medicaid
- Optimizing use of care managers/navigators-guides in care team

Challenges related to hospital acquisition of practices:

- Build provider network in rural areas
- Organizational transformation
- Integrating multiple EHRs, interoperability
- Data sharing
- Integrating newly acquired organizations
Observations:

• Some clinical organizations merged for purpose of becoming Medicare ACOs

• Theory that some providers view Medicare ACO as stepping stone to Medicare Advantage

• Accountable care and hospital acquisition – most of savings from reducing ED, hospitalizations, and readmissions – depends on where you sit:
  – If you’re a practice, may want to avoid hospital ownership
  – If you’re a hospital, may need practices to recoup the savings
Observations, continued:

• Coordinating care across continuum – most have formed partnerships (referral arrangements), rather than acquisitions

• Medicare policy is pushing providers up the ladder of managing risk – practices need hospitals’ expertise/infrastructure, hospitals need practices to buy into coding, referral, evidence-based medicine

• Patient engagement – with freedom of choice, hospitals need practices (who are closer to patients) to build brand loyalty and avoid “leakage”

• MACRA APM requirements are likely to encourage more providers to join/become Medicare ACOs
Observations, continued:

• McWilliams et al paper: Focus on Pioneers – mostly IDNs, small N – SSP is probably more indicative of where market is heading

• Agree with point that “ACO transition difficult, costly, and requires considerable time and managerial resources” – heard from ACO this week that it’s only in the 4th year that org is really turning around

  – Merger/growth is distraction from necessary culture change

• Quote from an ACO COO at same meeting: “Health care is a noble purpose. It can’t be about you, it got to be about the patients. If you just want to make money, go sell shampoo.”
Questions?

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Measuring Changes in the Economics of Medical Practice

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Collecting Data on Physicians and Their Practices (CDPP)

• AHRQ project on methods to answer how physicians and practices are responding to public and private policy initiatives, as well as technological change

• Special issue on the findings from CDPP
  – *Journal of General Internal Medicine*, August 2015
  – Includes
    • “Factors Contributing to Variations in Physicians’ Use of Evidence at The Point of Care.” James Reschovsky, Eugene Rich, and Timothy Lake.
• CDPP reviewed studies of the production and cost functions of physician practices


  – “Evidence of scale economies, scope economies, and quality performance advantages has been strikingly thin, in some cases for decades”

  – “Scale economies appear to be quickly reached by groups of 10 or so physicians”
# Practice Configurations of Common Specialties

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Percentage of unique MDs in groups with 100 or more EPs</th>
<th>Percentage of unique MDs in groups with 15 or fewer EPs</th>
<th>Percentage of unique MDs in groups with 1 EP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td>41%</td>
<td>18%</td>
<td>5%</td>
</tr>
<tr>
<td>Diagnostic radiology</td>
<td>31%</td>
<td>27%</td>
<td>2%</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>27%</td>
<td>48%</td>
<td>27%</td>
</tr>
<tr>
<td>Cardiology</td>
<td>40%</td>
<td>34%</td>
<td>11%</td>
</tr>
<tr>
<td>Orthopedic surgery</td>
<td>29%</td>
<td>42%</td>
<td>14%</td>
</tr>
<tr>
<td>General surgery</td>
<td>39%</td>
<td>41%</td>
<td>18%</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>18%</td>
<td>70%</td>
<td>23%</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>36%</td>
<td>34%</td>
<td>5%</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>35%</td>
<td>43%</td>
<td>15%</td>
</tr>
<tr>
<td>Heme-oncology</td>
<td>56%</td>
<td>22%</td>
<td>5%</td>
</tr>
<tr>
<td>Dermatology</td>
<td>22%</td>
<td>69%</td>
<td>28%</td>
</tr>
</tbody>
</table>

EP = Eligible Professional

Source: [http://www.medicare.gov/physiciancompare/staticpages/aboutphysiciancompare/about.html](http://www.medicare.gov/physiciancompare/staticpages/aboutphysiciancompare/about.html)
CDPP Framework for Physician Practice

- Timely evaluation
- Correctly interpreted diagnostic tests
- Patient-centered recommendations
- Well-executed therapeutic interventions
Organizational Influences on Physicians’ Decisions

- Direct compensation incentives
- Performance measures
- Quality improvement initiatives
- Work culture
- Peer relationships
- Practice resources
  - Time with patients
  - Support staff
  - Clinical decision support tools
## Some Challenges to Research on Economics of Physician Practice

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Inputs</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conceptual issues</strong></td>
<td>Changing professional responsibilities (e.g., care planning, care coordination)</td>
<td>Limited applicability of aggregate measures of output (e.g., episodes of care) to diverse physician roles</td>
</tr>
<tr>
<td><strong>Data sources</strong></td>
<td>Physician practice site vs Physician organization vs Hospital or other affiliates (e.g., ACO)</td>
<td>Physicians provide services in multiple locations, may bill from multiple organizations</td>
</tr>
<tr>
<td><strong>Measurement considerations</strong></td>
<td>Diverse models for allocating input costs across organizations and practice locations</td>
<td>Important physician outputs not measured through RVUs (e.g., emails, telephone advice, care coordination)</td>
</tr>
</tbody>
</table>
Conclusions

- Understanding the economics of medical practice remains important
  - Continued diversity of practice arrangements
  - Implications for payment reform
- The evolving environment for physician practice imposes important research challenges
  - Eg. Diverse affiliations for physician practice sites mean data on key practice inputs to physician work may be held in any of several organizations
- All-payer claims databases and data-sharing consortia of payers and delivery organizations create a research opportunity
  - Potential data sources and measurement techniques to investigate the changing economics of medical practice
Discussion

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Audience Q&A
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