The economics of integration: What do we know?

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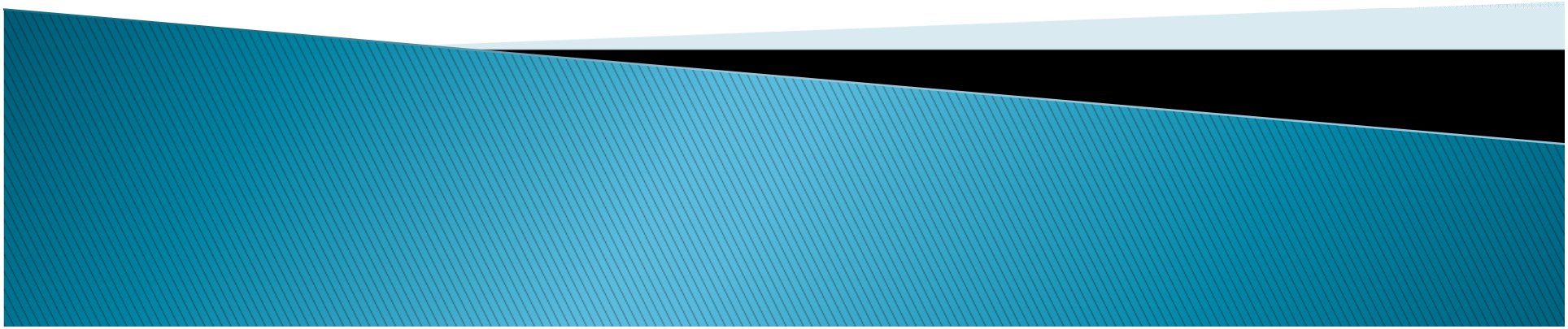
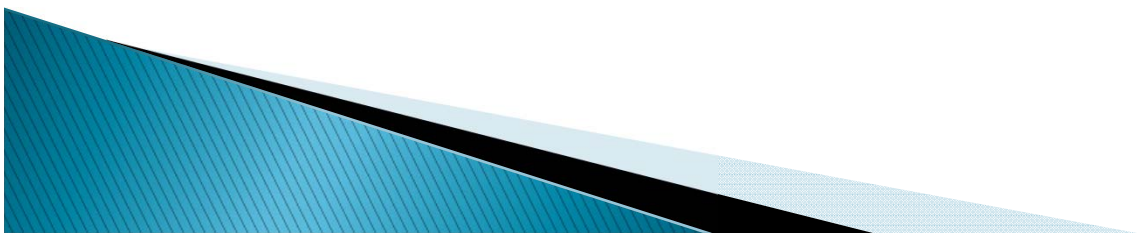


- 85 years old, living in Florida, USA
- In fairly good health but:
  - Diabetic
  - Lots of meds
  - Frequent falls
- Regular docs:
  - Primary care
  - Endocrinologist
  - Orthopedist
  - Opthamologist
- Insured (Medicare)

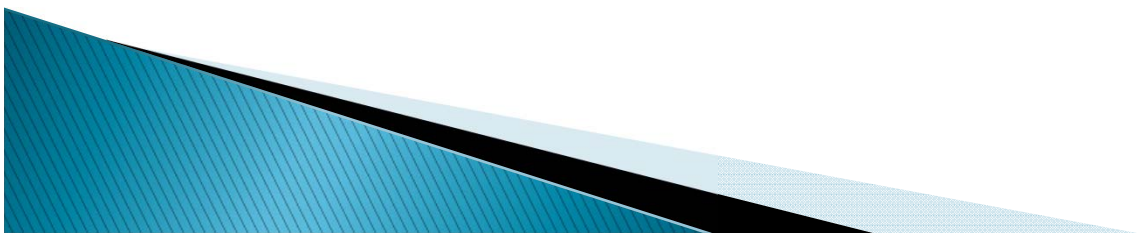
Typical trajectory

- Hospitalized after a fall w/ major injury
  - No information about meds, history, diagnoses
  - Regular docs may not be notified
  - Hospital wants to discharge asap
- Rehab in a nursing home or home health
  - Transfer with little information, potentially too early
  - Unprepared for self-management
  - Risk of re-hospitalization high
  - Setting-specific financial incentives
- Transition to long-term care
  - Medicare doesn't cover; Medicaid problematic



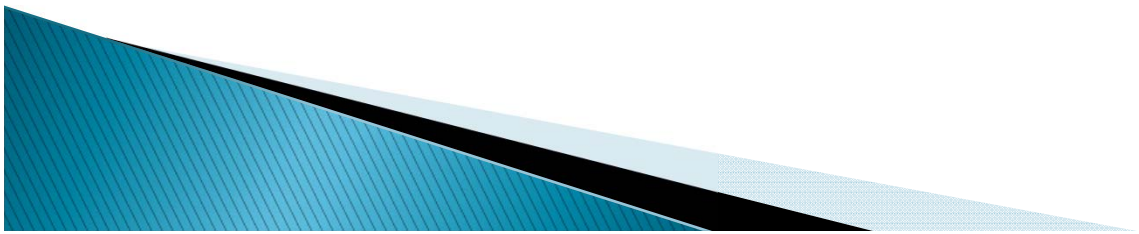
Fragmentation is bad

- Providers don't communicate and each has separate/conflicting incentives
- Fragmentation associated with lack of coordination across settings
- Medical and health services literature warns that lack of coordination associated with:
  - Poor quality of care
  - Inefficiency/ higher cost



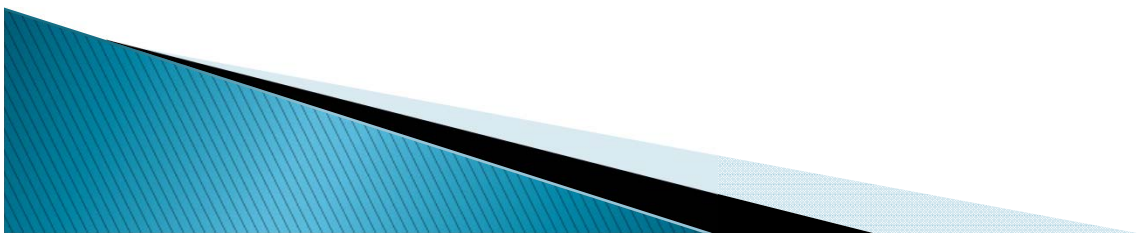
Focus on Increasing Coordination

- Policy makers have instituted policies intended to increase coordination
  - Accountable Care Organizations (ACOs)
  - Bundled payments
  - Readmissions penalties
  - Medicare/Medicaid alignment
- These policies may encourage integration across settings



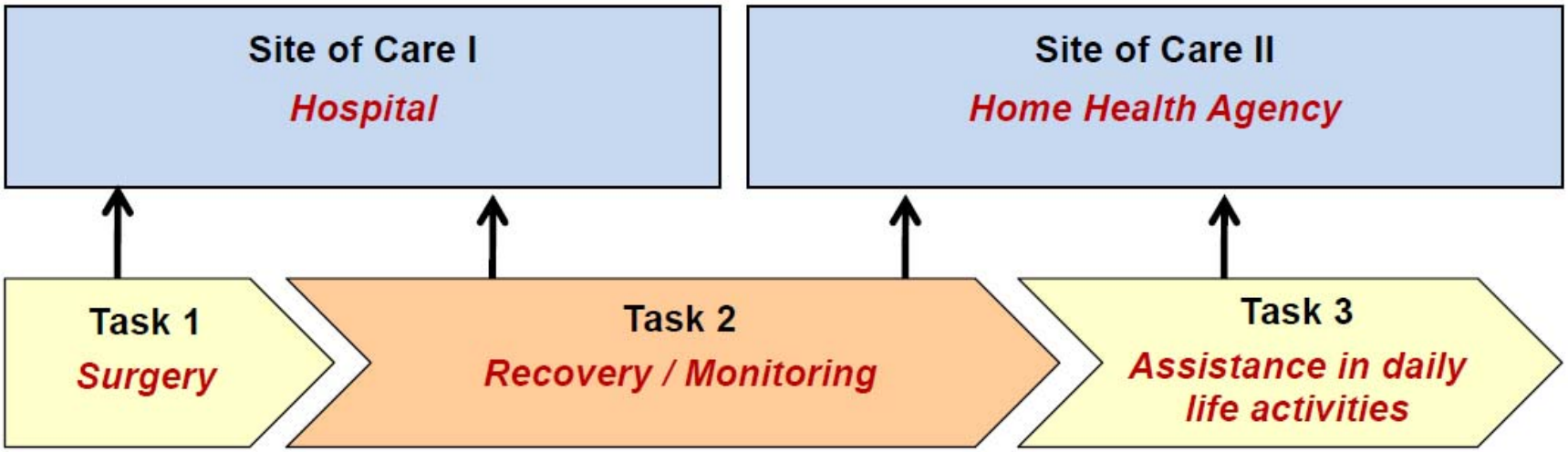
Is integration good?

- Seems self-evident if fragmentation is bad
- Integrated providers should have joint objectives and communicate with each other
  - More coordinated care
  - Reduce unnecessary care and transitions
  - Improve information flow
  - Efficiency gains from better allocation of resources
    - Hospital length of stay vs rehab length of stay
  - Lower costs?



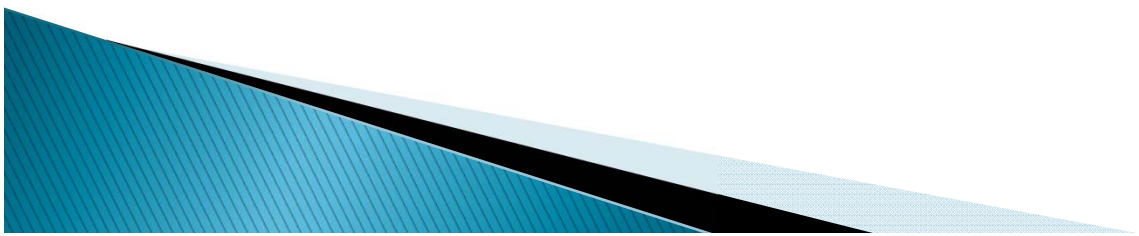
How can integration help? (David, Rawley, Polsky 2013)

Figure 1
An illustration of asset-dedicated and general tasks along the care continuum.



The dismal economist view

- Economists have been studying integration for a long time – also known as collusion
- Integration may create efficiency gains
- Integration may be anticompetitive
  - Patient beds/referrals assured
  - Access to competitors blocked
- With less competition, incentives for quality and efficiency may be blunted



Not just economists…

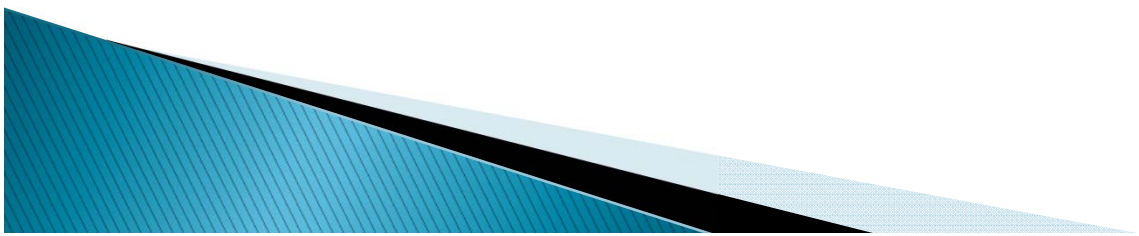
"It is only natural that hospitals would use vertical linkages with other hospitals and physician groups to maximize income."

Kevin A. Schulman, MD and Barak D. Richman, JD, PhD

JAMA, August 16, 2016

Integration terminology

- **Horizontal** : joining of firms of similar services
  - Hospital mergers, nursing home chains



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- **Vertical**: joining of firms at different stages of "production process"
  - Hospitals with post-acute care providers
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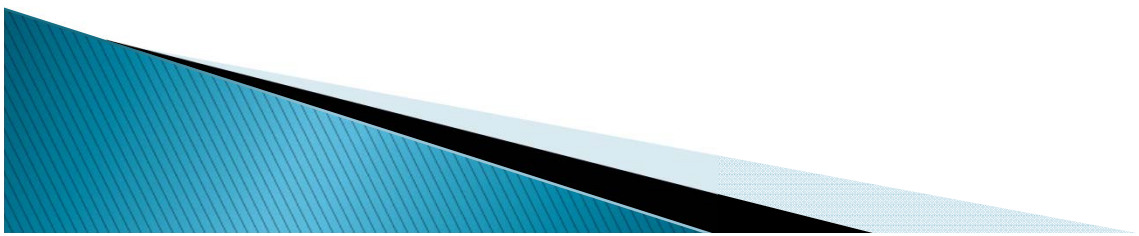

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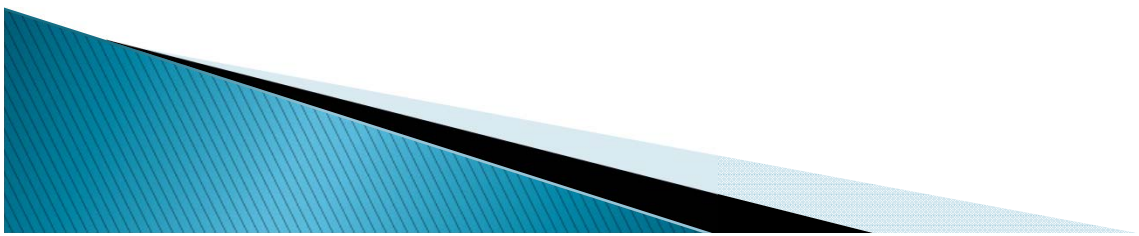

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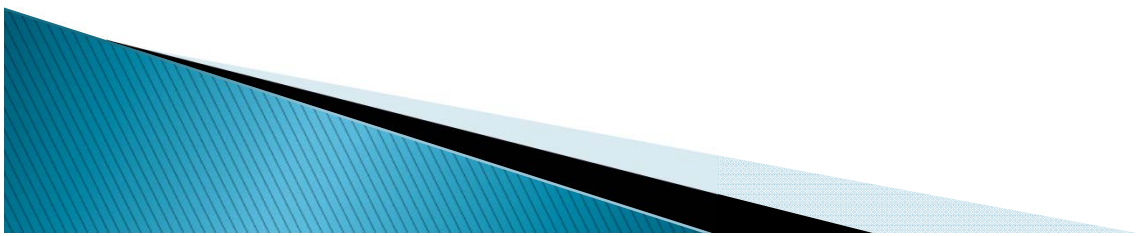
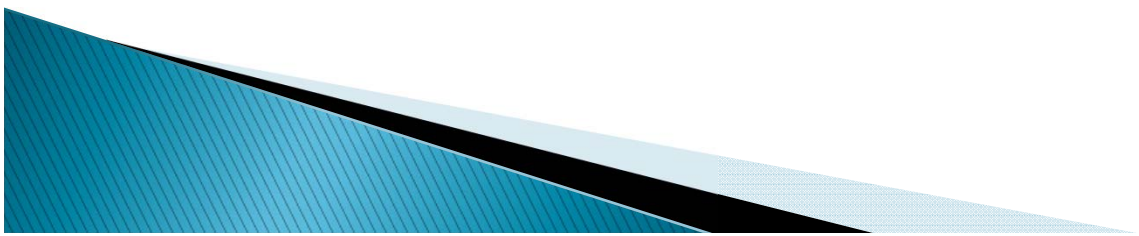
- **Formal**: joint legal ownership
- **Informal**: Interdependence and coordination without legal connection
  - shared electronic health records
  - shared physicians or nurses across settings
  - preferentially sharing patients



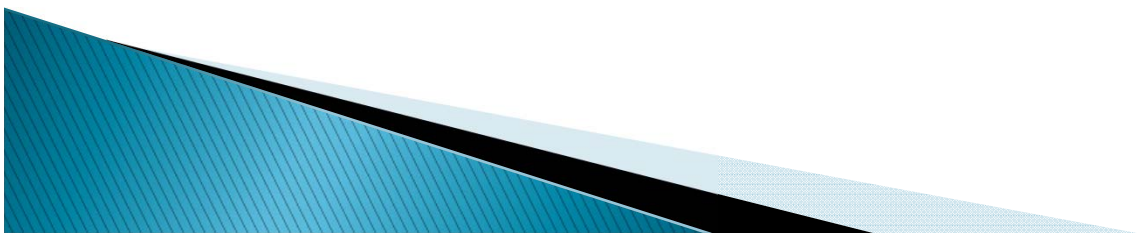
(Formal) Horizontal integration: What do we know?

- A lot (at least based on US & UK hospitals)
- horizontal mergers nearly always reduce competition
- effects of reduced competition on quality and costs are mixed
- Depends on cost vs quality competition:
  - In the hospital setting with regulated prices, reduced competition almost always reduces quality
  - With unregulated prices, effects uncertain (Gaynor and Town 2012)



Vertical integration: What do we know?

- Less (and mostly about price, not quality)
- Early studies: hospital-physician integration
- Inconclusive/inconsistent results from 1990s:
  - anticompetitive effects of integration increased prices (Cuellar and Gertler 2006)
  - Little/no effect on quality or prices (Ciliberto and Dranove 2006; Madison 2004; Burns and Muller 2008)
- More recent (2000s):
  - vertical integration associated with higher prices and spending (Baker, Bundorf et al. 2014; Neprash, Chernew et al. 2015)



Integration of Hospitals and Post-Acute Care (PAC) Providers

- A transition point of current policy focus
  - Traditionally little coordination
  - Rehospitalizations are costly
  - Post-acute care is costly
- More than 5 million Medicare beneficiaries use PAC annually; 38% of hospital discharges
- PAC providers dominated by nursing homes (SNFs) and home health care
- Fastest growing major spending category for Medicare

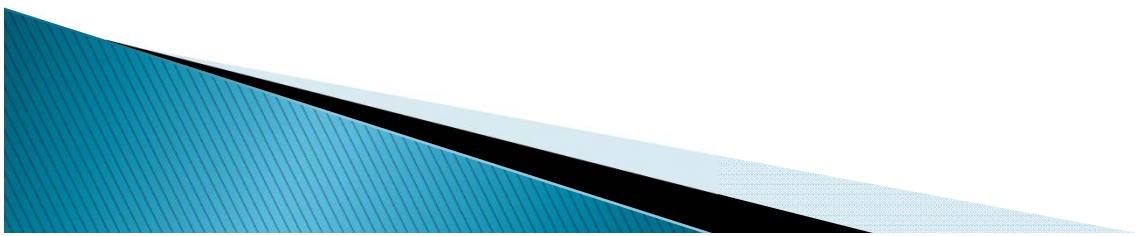
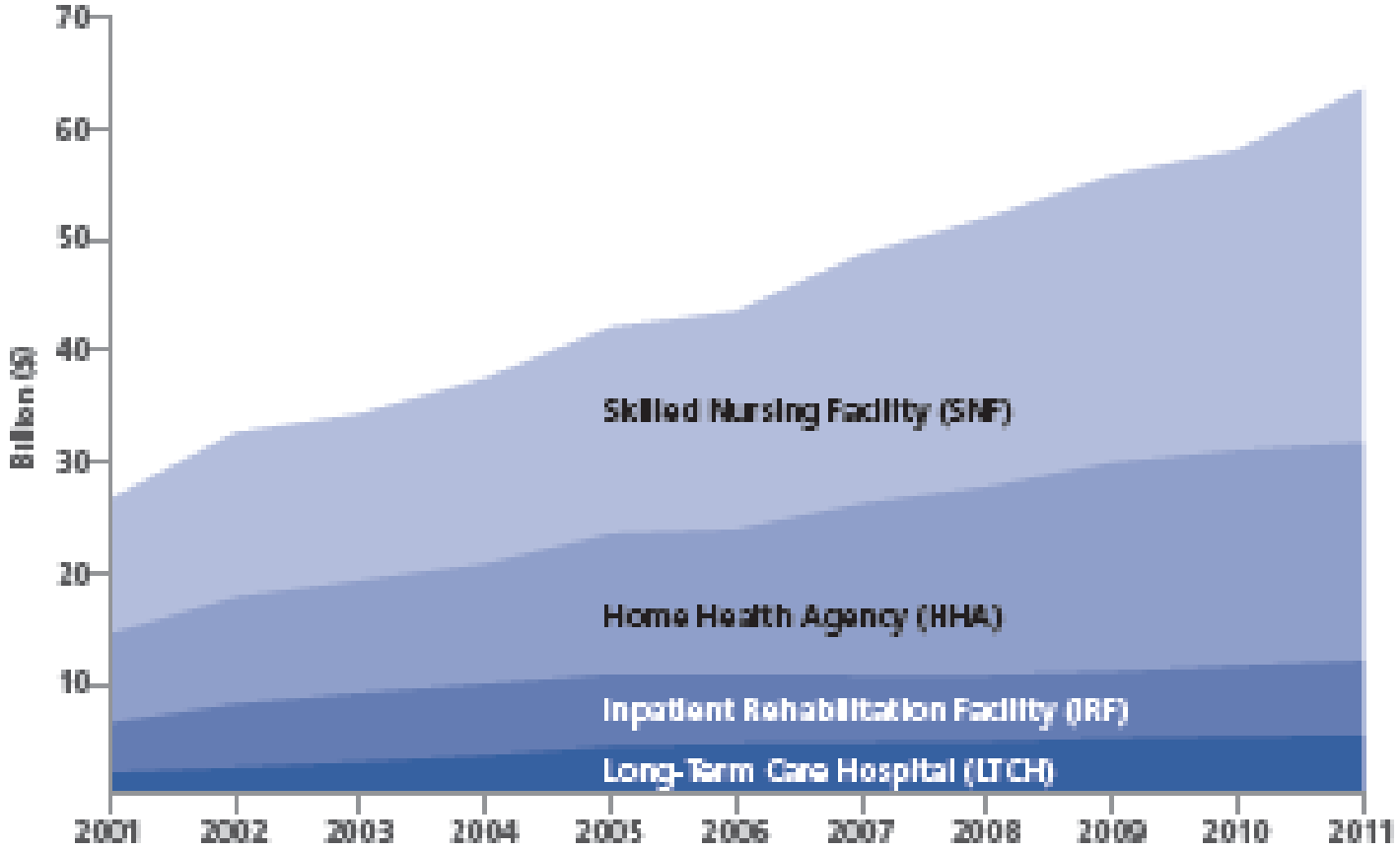
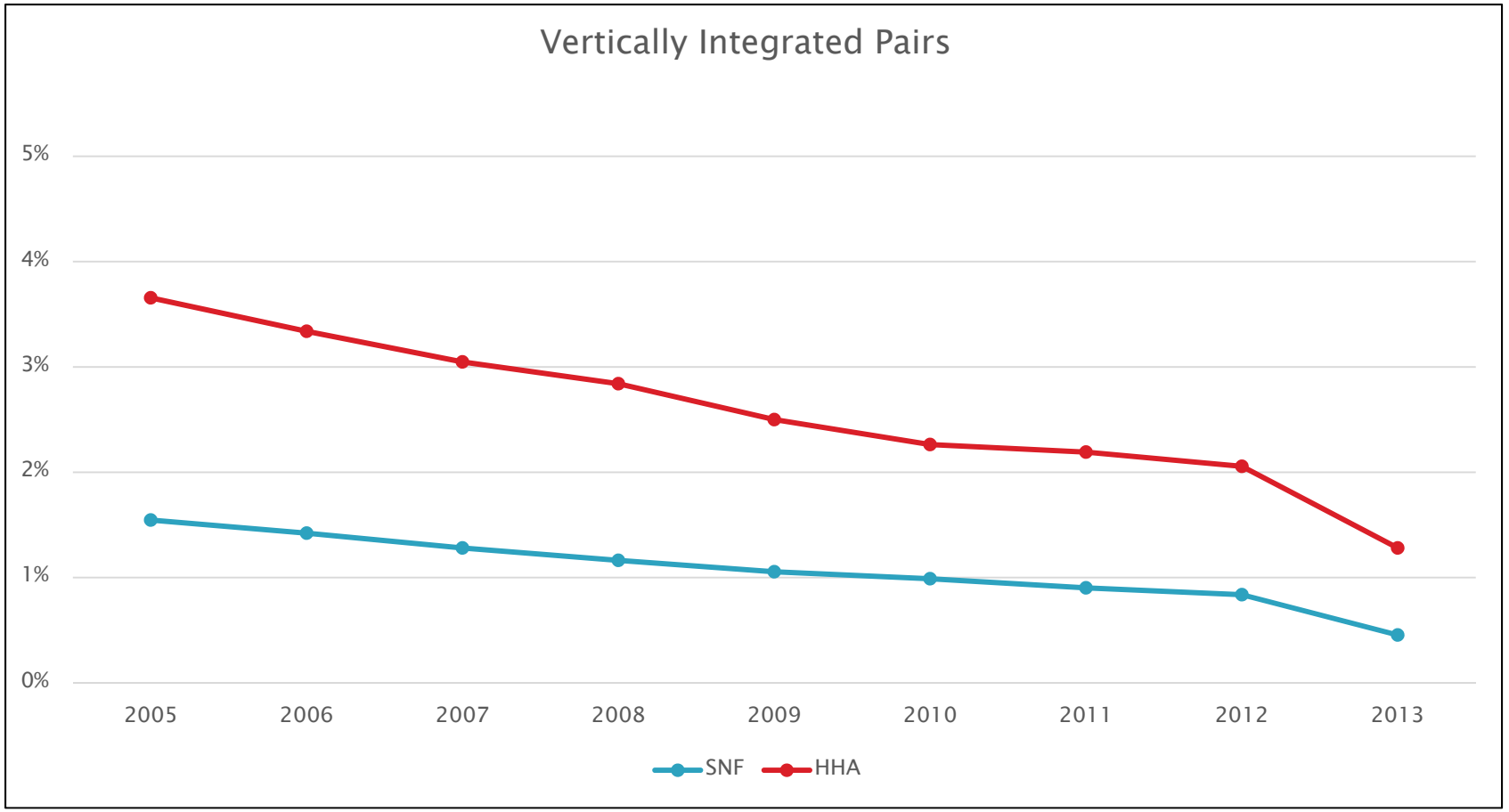


FIGURE 1
Medicare spending on Post-Acute Care, 2001 to 2011

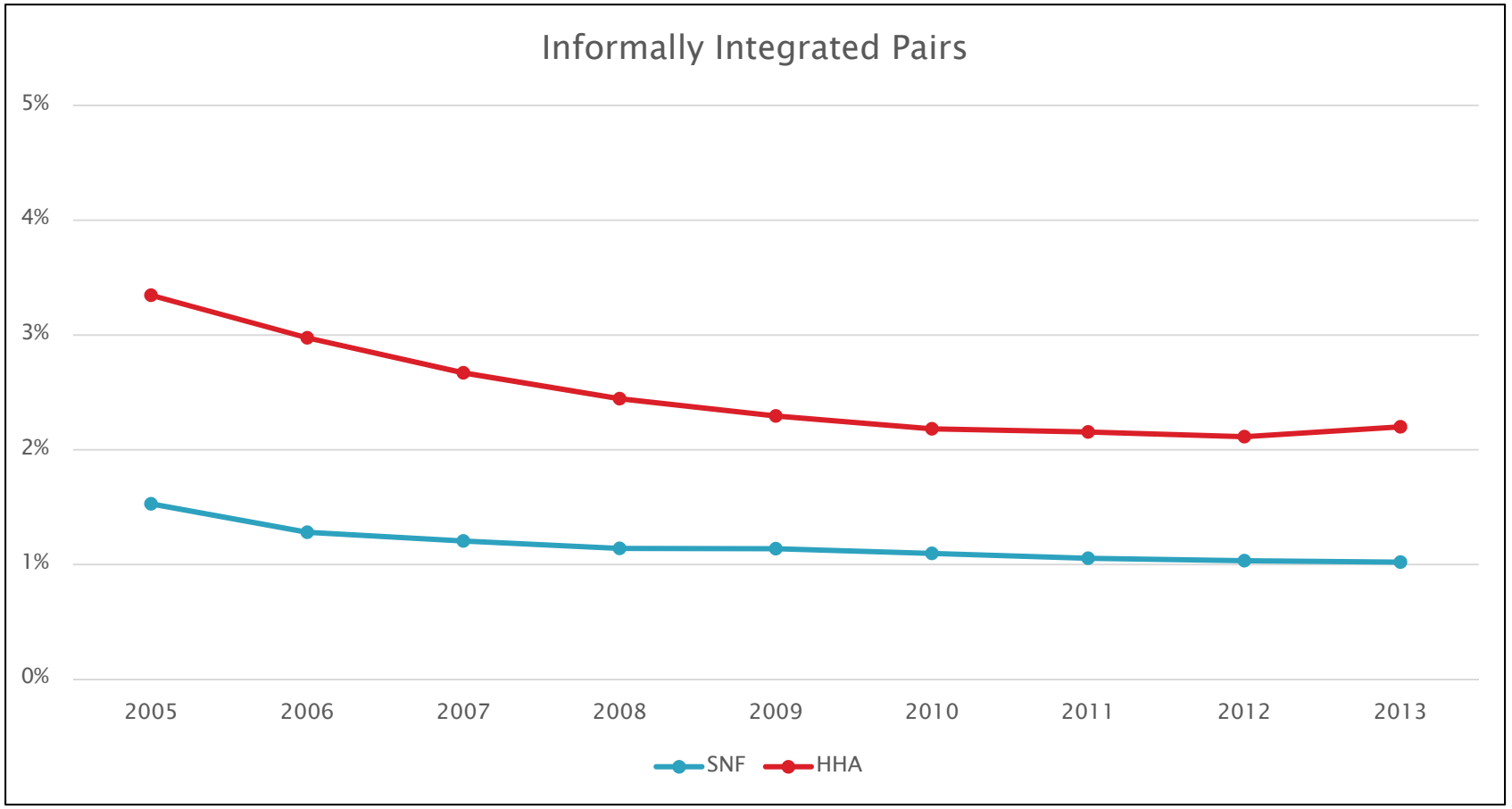


Source: Medicare Payment Advisory Commission (MedPAC). A Data Book: Health Care Spending and the Medicare Program, June 2012, p. 118, available at www.medpac.gov/documents/Jun12DataBookEntireReport.pdf

Rates of formal hospital-PAC integration



Rates of informal hospital-PAC integration

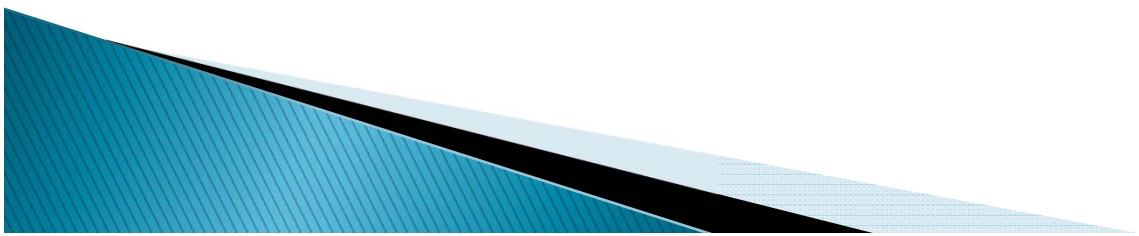


Main methodological issues in assessing effects of integration

- **Provider selection.** Integrated organizations may be different from non-integrated organizations
  - Measurable: profit status, size, location
  - Unmeasurable: management skills and strategic outlook
- **Patient selection.** Patients who choose integrated providers may be different from patients who don't
  - Measurable: some health status, location, demographics
  - Unmeasurable: some health status, preferences

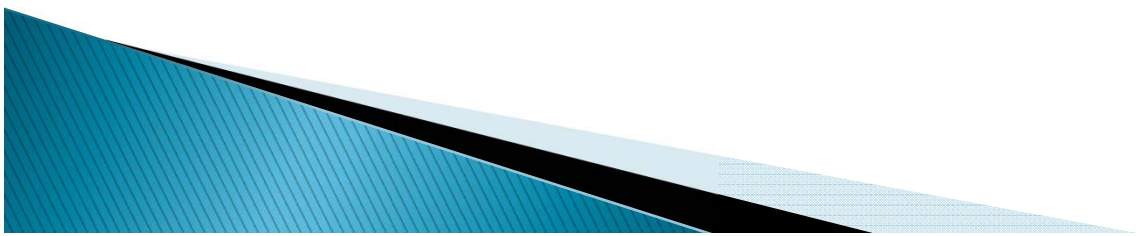
David, Rawley, Polsky…

- 2005 national Medicare data
- Solved *provider selection* problem.
- Found that hospital integration with home health and nursing home providers led to:
  - Earlier shift from hospital to post-acute setting
  - Lower rehospitalization from nursing homes, no change for home health
- Conclusion: Vertical integration reduces coordination problems



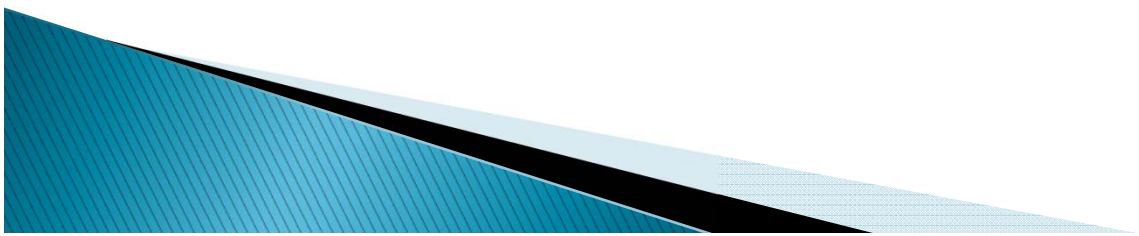
Rahman, Norton, Grabowski (2016)

- 2009 national Medicare data
- Solved *patient selection* problem.
- Found that patients who go to integrated (hospital-based) SNF had:
  - Shorter SNF stay, more days in community
  - Lower Medicare spending
  - Lower risk of rehospitalization in first week
- Conclusion: Patients who go to integrated SNFs have shorter stays and lower costs



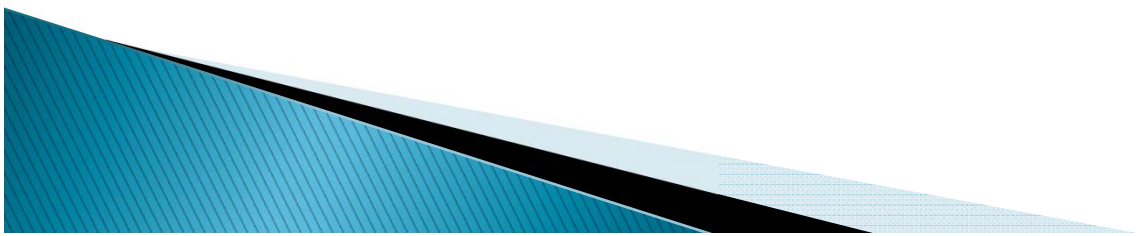
Konetzka, Stuart, Werner (2016)

- 2005-2013 national Medicare data
- Addresses *provider and patient selection*
- Formal vertical integration between hospitals and SNFs led to:
  - Lower rate of readmissions to hospital from SNF
  - Longer SNF length of stay
  - $2,400 more in Medicare payments per discharge
- Little effect for home health
- Little effect for informal integration



Conclusions from hospital-PAC studies

- Controlling for patient and provider selection matters
- Formal hospital-PAC integration appears to improve quality (reduce rehospitalizations) from SNFs



Conclusions from hospital-PAC studies

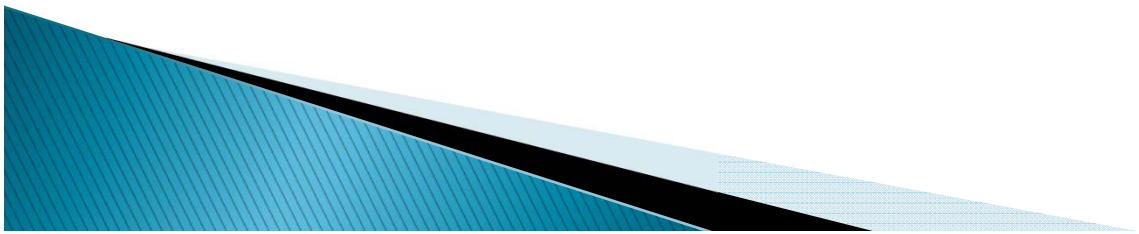
- Controlling for patient and provider selection matters
- Formal hospital-PAC integration appears to improve quality (reduce rehospitalizations) from SNFs

But:

- More integration is unlikely to save money
- Integration does not appear to improve home health outcomes
- "Informal" integration has little effect

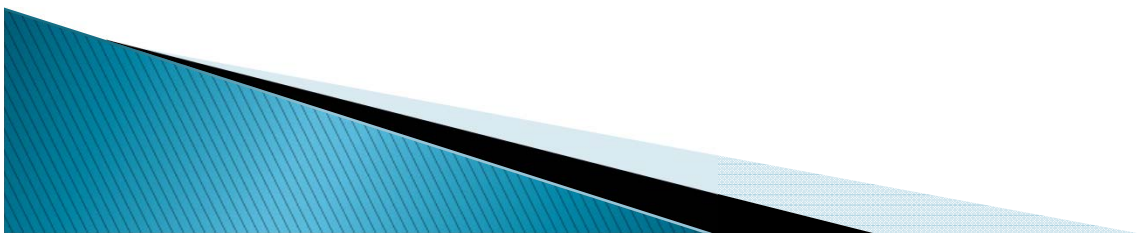
Early evidence from ACOs (mostly informal integration)

- ACOs now cover more than 28 million Americans
- Mixed results so far:
  - Improvements in quality tied to bonuses
  - Cost savings to Medicare negligible (0.4%) but some behavior change
    - Referring to lower-cost providers
    - Reducing unnecessary care



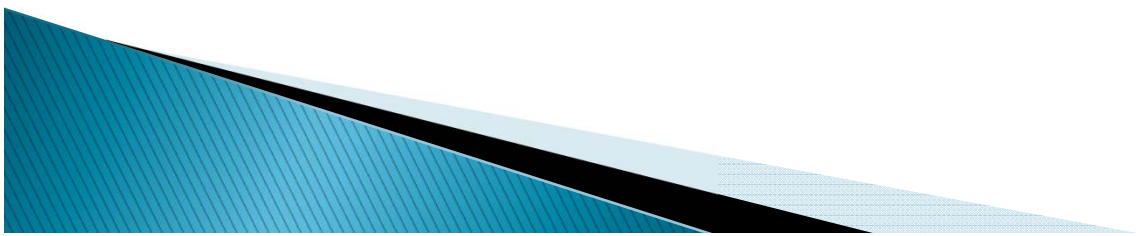
Little/mixed evidence

- Payment bundling, Medicare/Medicaid alignment
  - Too new for rigorous evidence
- Smaller-scale attempts to increase coordination in long-term care
  - Medicare PACE program
  - Many other state-based or community-based programs



Policy Implications

- Policies that encourage integration may have unintended consequences
- Payment incentives matter
  - Home health has per-discharge payment; SNF has per diem payment
- Success likely depends on:
  - alignment of the underlying payment policy to counter anti-competitive effects
  - the strength of the incentives



What do we still need to know?

- What is the right combination of incentives that will:
  - increase the benefits of coordination
  - constrain anti-competitive effects
- What are the effects of prevalent integration models on long-term care outcomes?
- Is aligning payment enough to induce care coordination?