How Should We Measure System Quality?

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MVC
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Collaborative

Rapid Pace of Hospital Consolidation

Drivers of consolidation

- Market share
- Economies of scale
- Leverage with insurers
- Alternative payment models
- Population health management

Fewer hospitals are independent of health systems
Percent of community hospitals belonging to health systems, 1999–2016
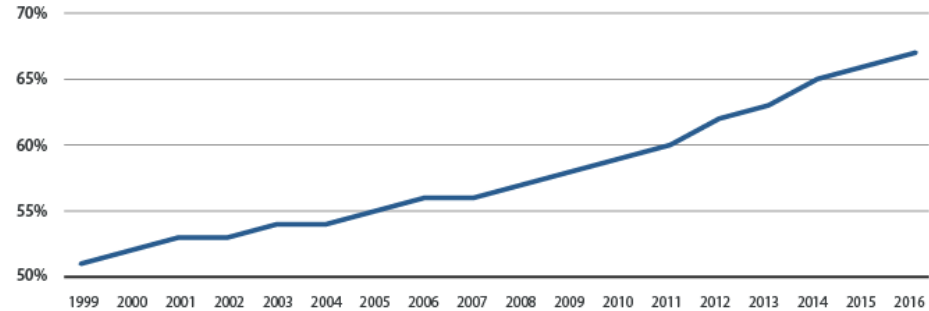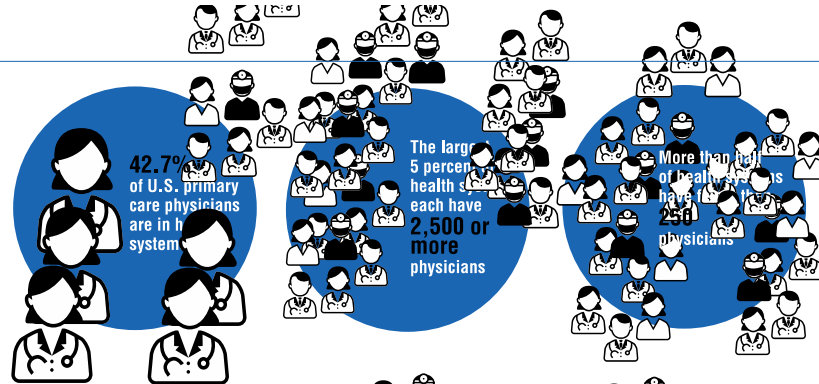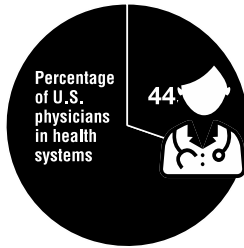

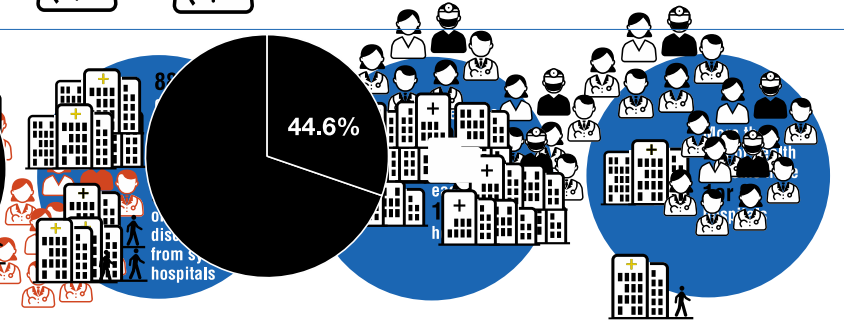Source: American Hospital Association, "Trendwatch Chartbook 2018" (2018), Table 2.1: Number of Community Hospitals, 1995–2016, available at https://www.aha.org/system/files/2018-05/2018-chartbook-table-2-1.pdf.
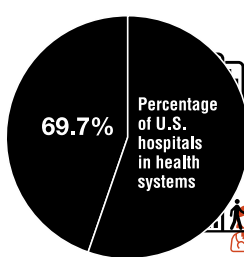
CAP

Over 90% of Medicare discharges occur from hospital systems

Heterogeneity of Systems: An Opportunity to Learn What Works

PHYSICIANS

Percentage of U.S. physicians in health systems — 44%

42.7% of U.S. primary care physicians are in health systems

The largest 5 percent of health systems each have **2,500 or more** physicians

More than half of health systems have less than 250 physicians

HOSPITALS

69.7% — Percentage of U.S. hospitals in health systems

44.6%
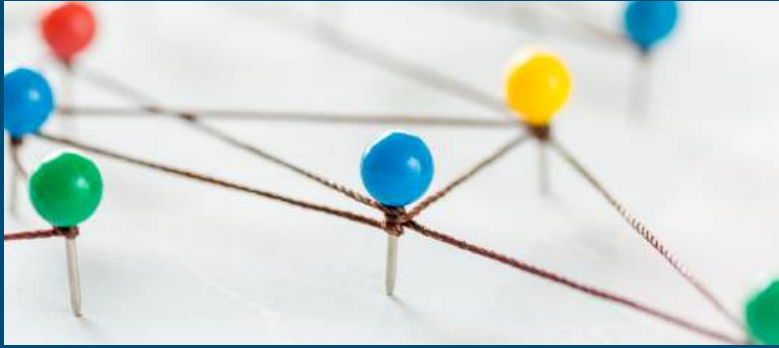
Advantages of hospital systems

Rationalization of sites of care

Internal selective referral

Avoid low-volume surgery

Create "focused factories"

Disseminate best practices

Attributed population

Systems Can Address Barriers to Care Optimization

|			
	Care coordination infrastructure	✓	**Improving EHR integration/interoperability, telehealth**
	Attribution of patients	✓	**Population health model evolution**
	Skin in the game from referring docs	✓	**Referring docs within system or tightly related**
	Hospital competition	✓	**Hospitals in same system**
	Inequities in social risk and access to care	✓	**Bundled payments**
	Appropriateness	?	**This one is hard**

Consolidation Has Not Improved Care
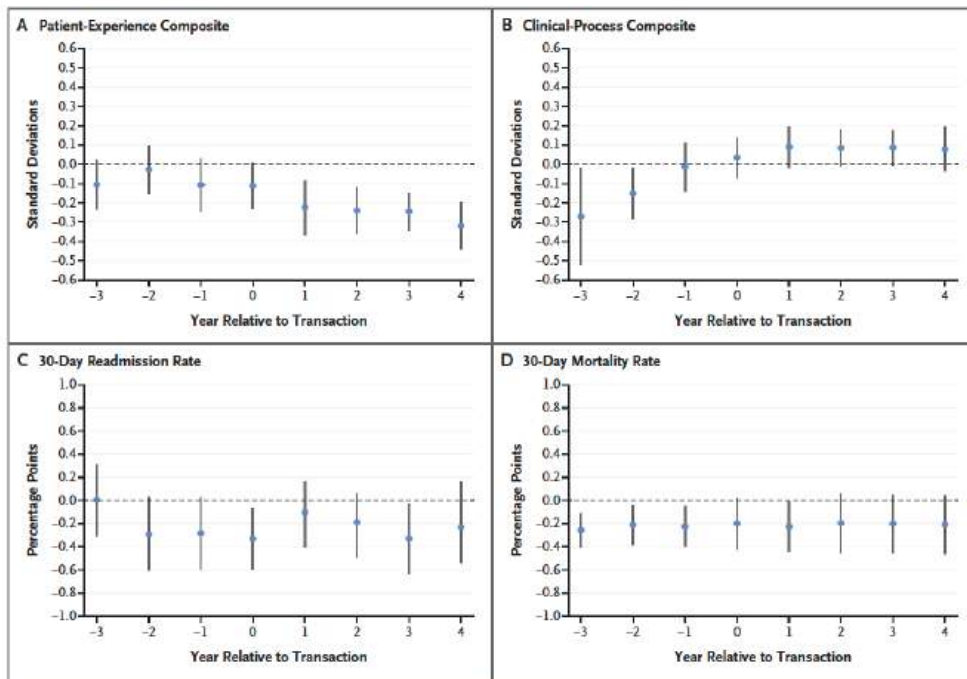
Figure 1. Differences in Performance between Acquired Hospitals and Control Hospitals before and after Acquisition.
The difference in adjusted performance between acquired hospitals and control hospitals is plotted for each year relative to the transaction year, with error bars denoting 95% confidence intervals.

- M&A 2009-2013
- Data through 2016
- No change in readmissions, mortality, or clinical process measures
- Worse patient experience

Beaulieu ND et al, NEJM 2020.

What Makes a High-Quality System?

- Highest-quality systems
  - Fewer hospitals
  - Geographically concentrated hospitals
  - More procedures per hospital
- Diverse structural phenotypes

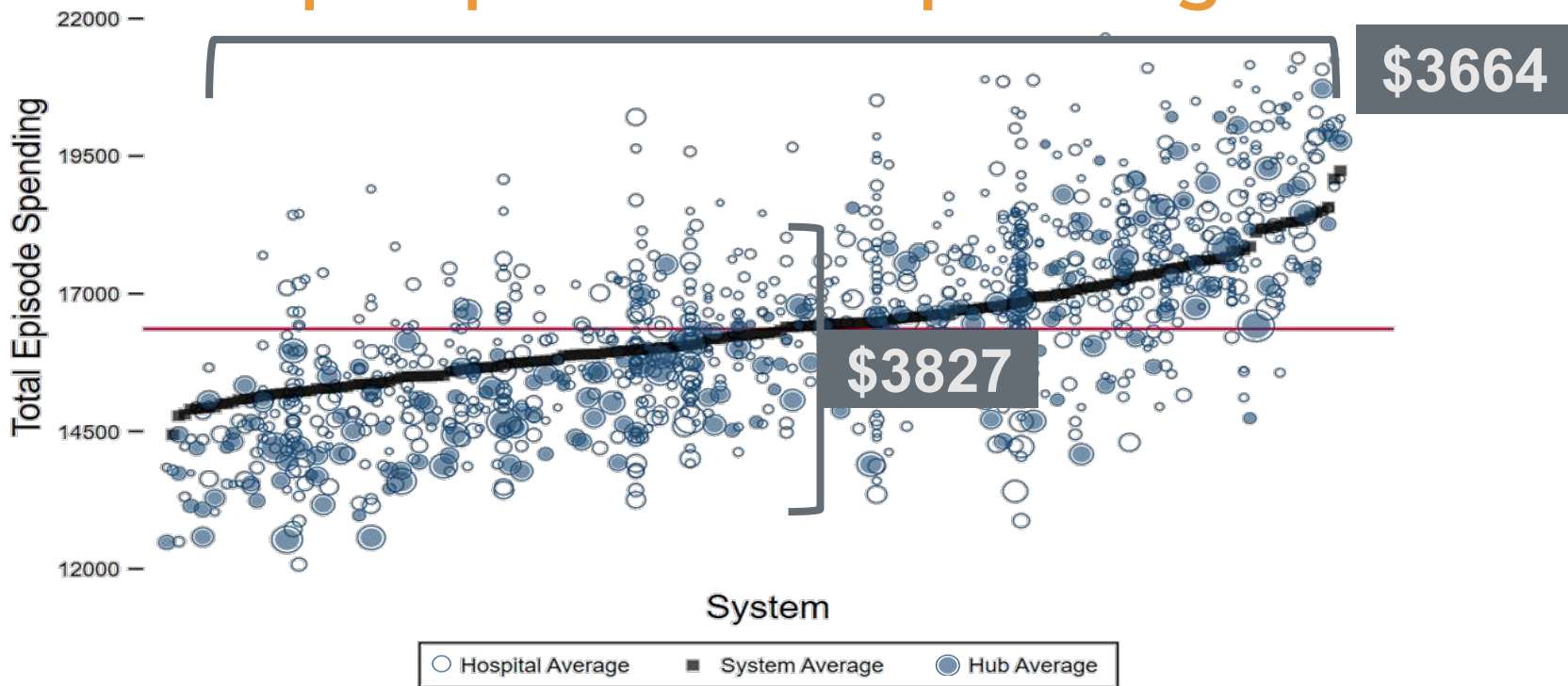Schaefer SL, Kalata S, Nuliyalu U, Ibrahim AM, Nathan H. Ann Surg Epub ahead of print.
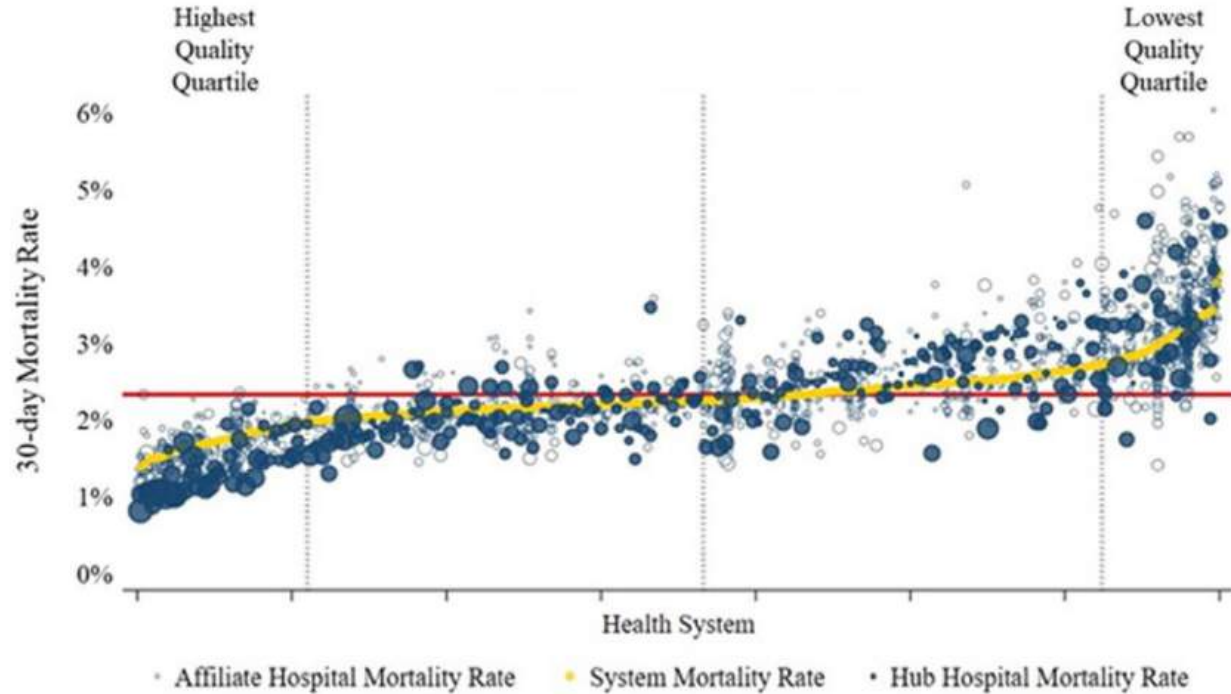
Learning From Success Stories

Providence St. Joseph Health System (Oregon)

- 2 hospitals
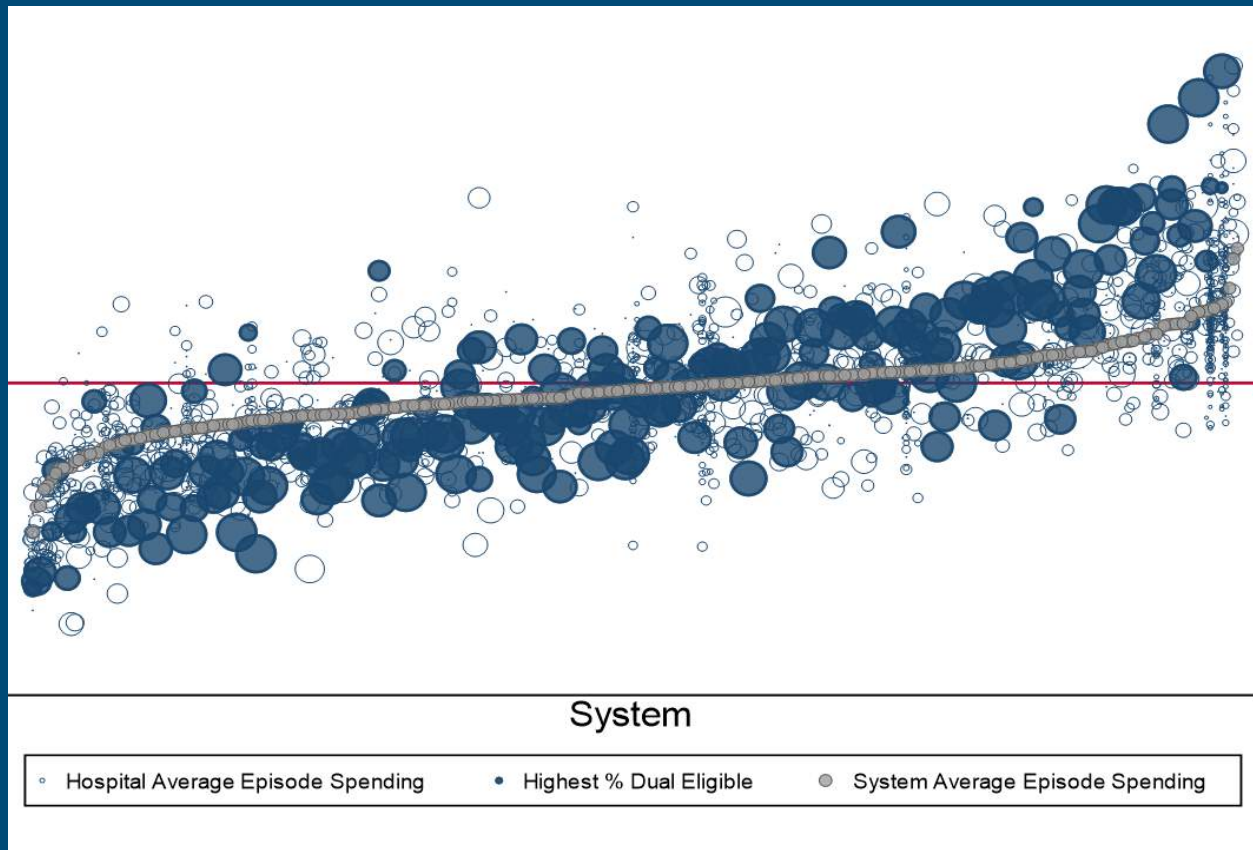- 40% of local cardiac surgery market
- 9 miles apart

Gluckman TY, Zelensky JK, Oseran DJ. NEJM Catalyst 2020.
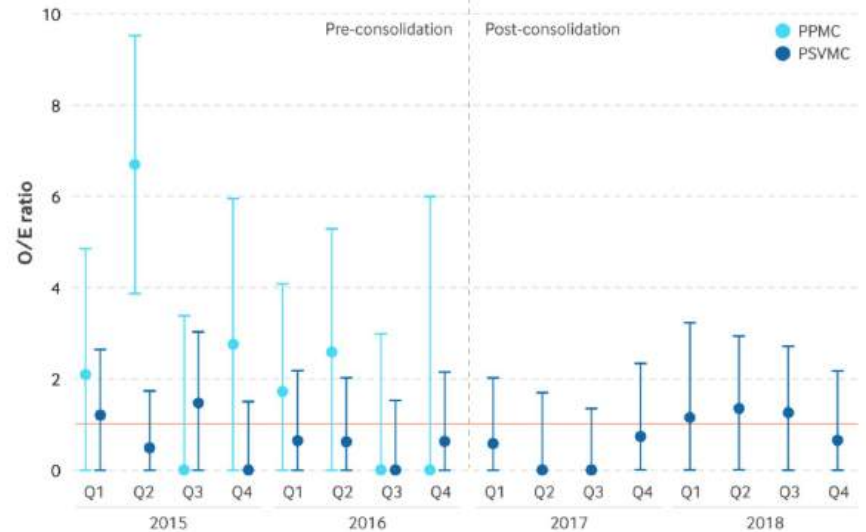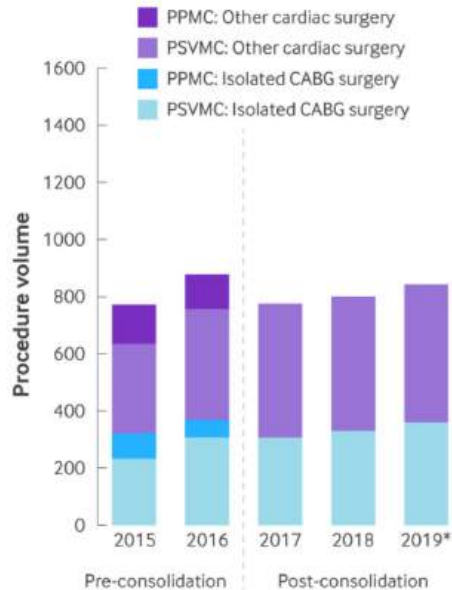
System Variation in Hip Replacement Spending

Chhabra KR, Sheetz KH, Regenbogen SE, Dimick JB, Nathan H. Ann Surg 2019.
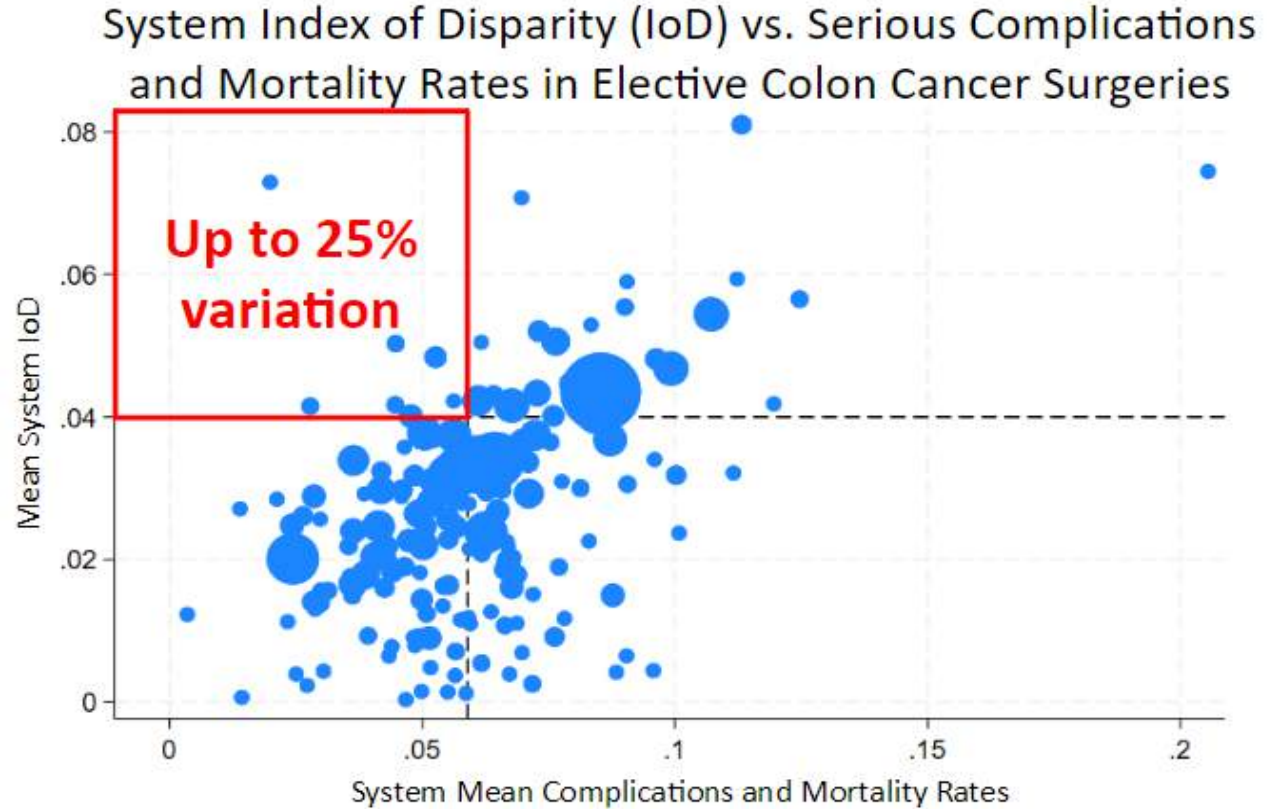
Systems Can Mitigate Social Risk

Lowest spending systems
- Lower spending for DE patients
- Less variation in spending between DE and Medicare
- More concentrated volume

System

Hospital Average Episode Spending   •   Highest % Dual Eligible   ○   System Average Episode Spending
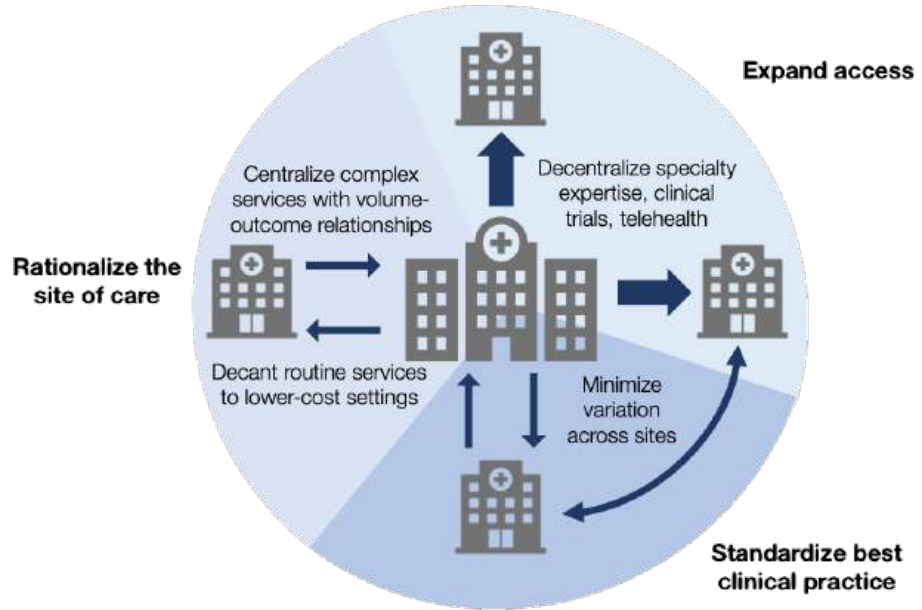
Measuring "Systemness": Consistency is Key

- What is "Systemness?"

- Index of Disparity: how different are hospital outcomes in the same system?

- Summary measure of consistency of outcomes

- Track over time

System Index of Disparity (IoD) vs. Serious Complications and Mortality Rates in Elective Colon Cancer Surgeries

A Vision for Hospital System Optimization

Rationalize the site of care

Centralize complex services with volume-outcome relationships

Decant routine services to lower-cost settings

Expand access

Decentralize specialty expertise, clinical trials, telehealth

Minimize variation across sites

Standardize best clinical practice

Future Directions

What can we learn from high-performing systems?

How do we create the right incentives for hospital systems to improve quality and costs?

How should we measure hospital system performance?

How can systems ensure equity in care delivery?

Discussion Questions

What is your organization doing at a system-level that you would want to be measured on and/or receive credit for improving?

What are some opportunities that you would like to see incentivized to increase support and progress on the initiative?

What metrics/measures would you want to monitor for variation across the system?

Enter your group's responses at
www.menti.com
code 2970 3111