From accountable care organizations to integrated delivery systems: how organizations shape quality and cost outcomes

Valerie A. Lewis, PhD
Health Policy and Management
Gillings School of Global Public Health

Today’s talk

Accountable care organizations: The good, the bad, and the ugly

Inside a successful ACO

Thinking broadly and carefully about health systems

A quick plug for collaborators!

Accountable Care: The good, the bad, and the ugly

Why and what exactly are ACOs?

Dual problems: uneven quality, high (and rising) health care spending

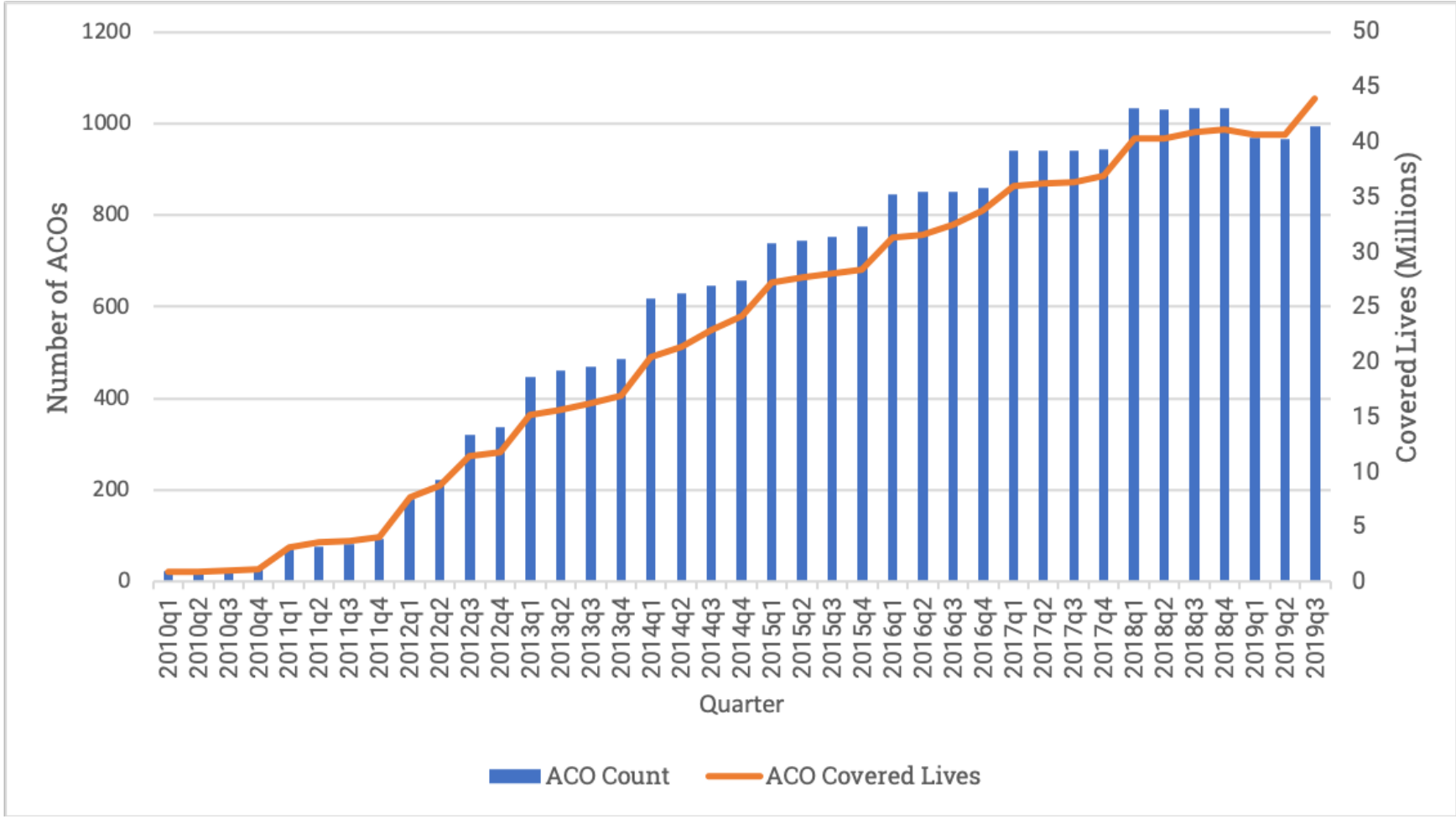
- Desire to avoid backlash like managed care of the 90s experienced

ACO is a group of providers collectively held responsible for the cost and quality of care delivered to a defined patient population

Policy and implementation

- Private payer pilots began around 2011
- ACA authorized CMS to implement in 2012; CMMI tested models as well
- Many states implementing within state Medicaid programs

ACOs have proliferated



Muhlestein, David, William K. Bleser, Robert Saunders, Robert Richards, Elizabeth Singletary, and Mark McClellan. ” Spread of ACOs And Value-Based Payment Models In 2019: Gauging the Impact of Pathways to Success." *Health Affairs Blog.* Oct 21 (2019).

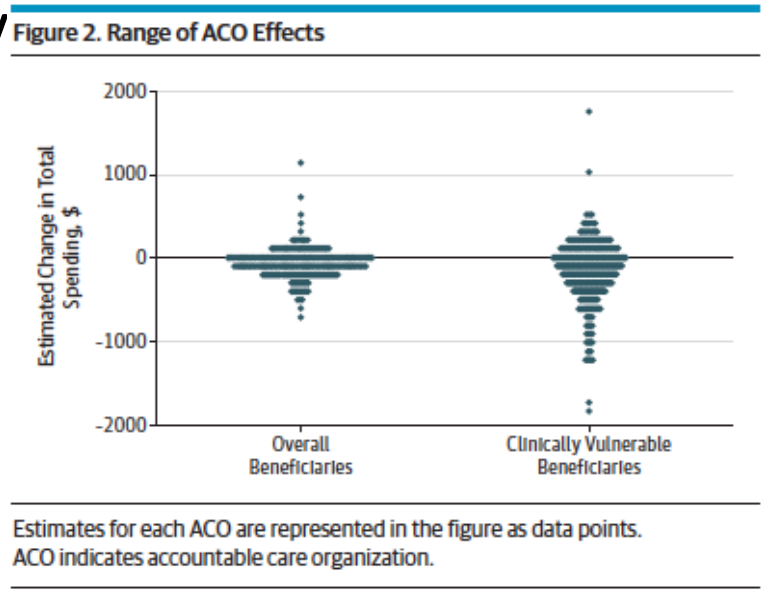
ACO results: modest successes

Best estimates are ~1% savings the first year providers are in the program, and perhaps up to ~5% savings by y

- Lots of debates about magnitude
- Some debate over the role of selection

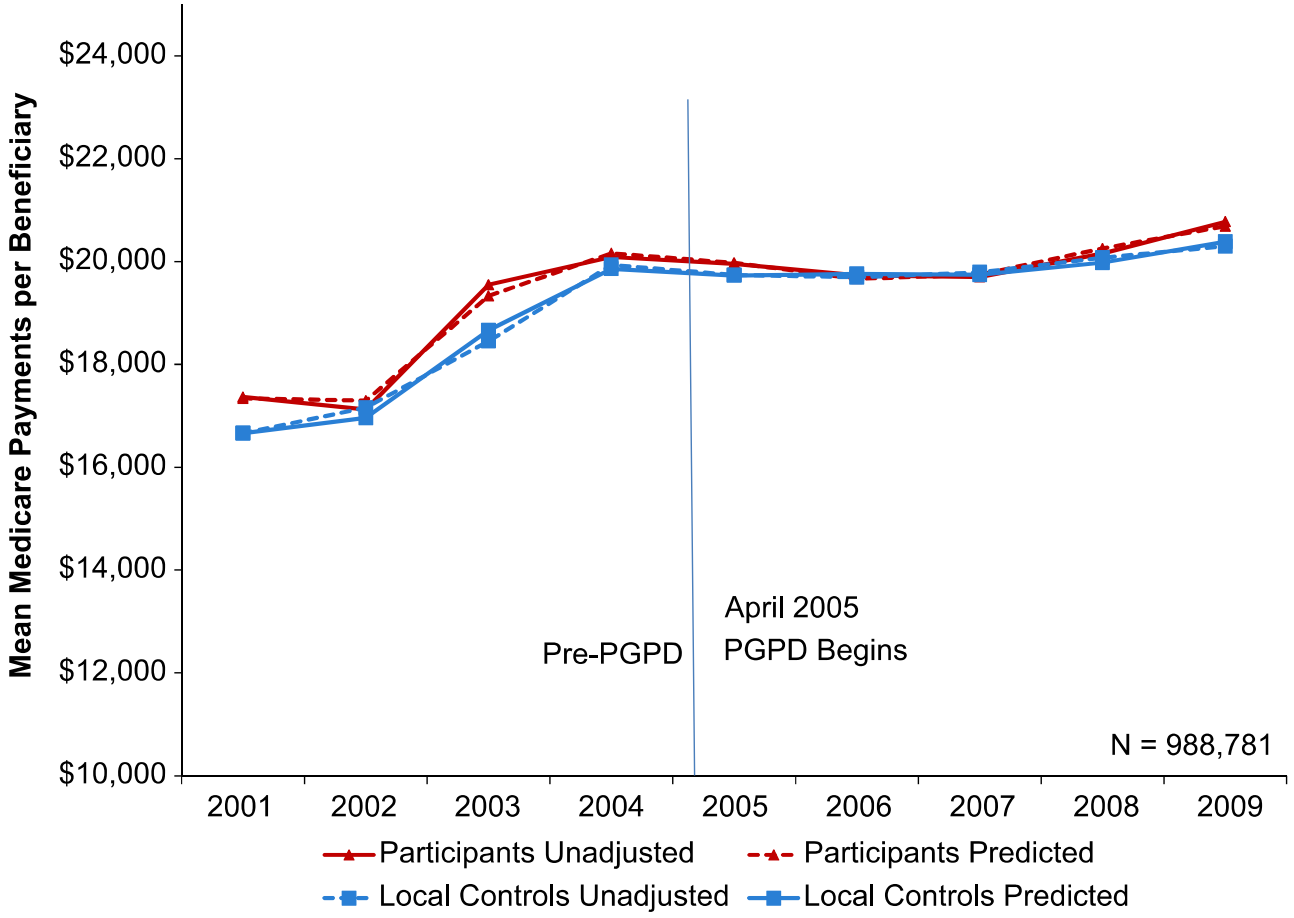
Improvements in measured quality

- Almost everything measured improves over time



Colla, Carrie H., Valerie A. Lewis, et al. "Association between Medicare accountable care organization implementation and spending among clinically vulnerable beneficiaries." *JAMA Internal Medicine*. 2016;176(8):1167-1175.

Scattered papers on cancer



Virtually all of the savings are in acute care payments; some increases in cancer-specific payments, and no differences in imaging, hospice, procedures

Colla, Carrie H., Valerie A. Lewis, Daniel Gottlieb, and Elliott S. Fisher. 2013. "Cancer spending and accountable care organizations: Evidence from the Physician Group Practice Demonstration." *Healthcare* 1(100-107).

Scattered papers on cancer

VOLUME 36 · NUMBER 29 · OCTOBER 10, 2018

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

Spending Among Patients With Cancer in the First 2 Years of Accountable Care Organization Participation

Miranda B. Lam, Jose F. Figueroa, Jie Zheng, E. John Orav, and Ashish K. Jha

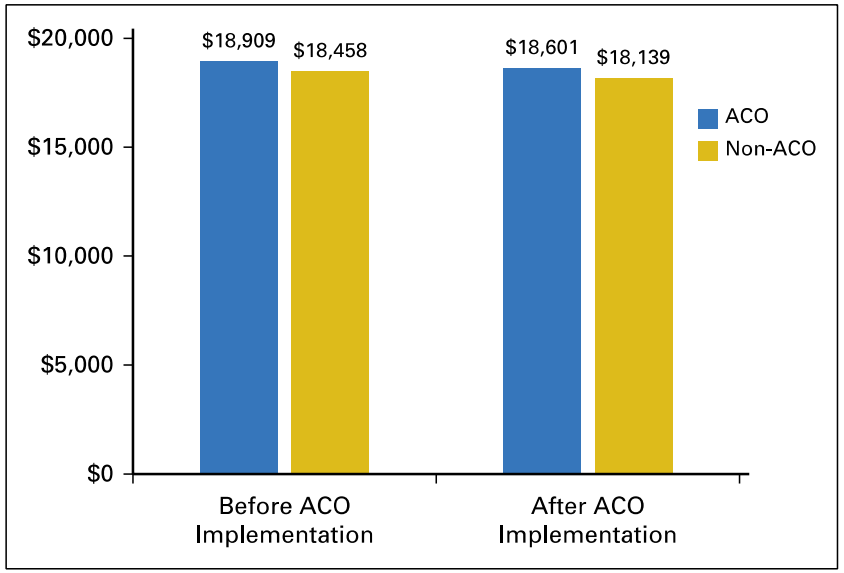


Fig 1. Total mean spending between Accountable Care Organization (ACO) and non-ACO beneficiaries with a cancer diagnosis, before and after ACO implementation. Spending in the pre-ACO period was significantly lower for non-ACO patients compared with ACO patients ($P = .006$). Difference-in-difference $P = .94$.

Table 2. Mean Total Spending in ACO Versus Non-ACO Patients With Cancer by Cancer Diagnosis

Cancer	Total Spending ($)* ACO	Non-ACO	Difference-in-Difference *P*
Lung			.95
Before ACO	35,041	34,734	
After ACO	34,330	33,988	
Hematologic			.79
Before ACO	26,446	25,540	
After ACO	26,479	25,440	
GI			.27
Before ACO	26,217	25,386	
After ACO	25,147	24,825	
Breast			.24
Before ACO	13,583	13,142	
After ACO	13,910	13,210	
Genitourinary			.44
Before ACO	13,407	13,111	
After ACO	12,901	12,734	
Gynecologic			.18
Before ACO	16,153	16,441	
After ACO	16,505	16,005	
Head and neck			.18
Before ACO	19,404	19,342	
After ACO	19,569	18,486	
Sarcoma			.45
Before ACO	17,549	16,561	
After ACO	18,019	16,180	
Melanoma			.50
Before ACO	11,563	11,458	
After ACO	11,345	11,562	
CNS			.06
Before ACO	19,007	17,118	
After ACO	18,080	17,641	
Metastatic disease (primary unknown)			.13
Before ACO	21,580	22,789	
After ACO	22,300	21,695	

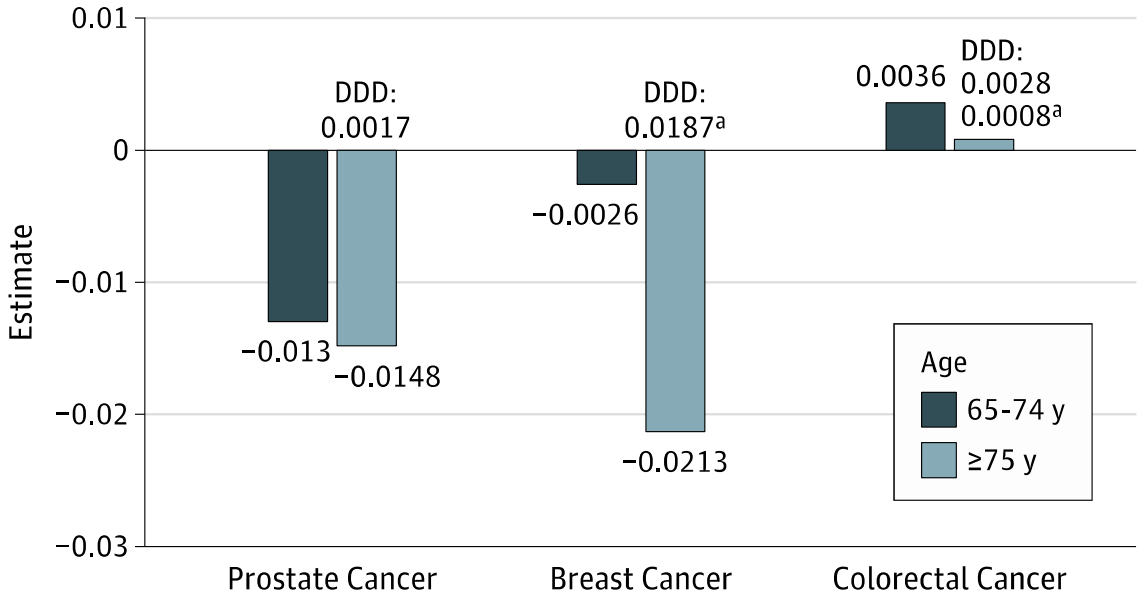
Abbreviation: ACO, Accountable Care Organization.
*Differences in spending in the pre-ACO period between ACO and non-ACO patients were not significantly different, except for GI, breast, genitourinary, and CNS cancers where spending was lower for non-ACO patients compared with ACO patients ($P = .04$, $P = .01$, $P = .04$, and $P = .002$, respectively).

Scattered papers on cancer

Medicare Accountable Care Organization Enrollment and Appropriateness of Cancer Screening

Matthew J. Resnick, MD, MPH, MMHC; Amy J. Graves, SM, MPH; Sunita Thapa, MPH; Robert Gambrel, MA; Mark D. Tyson, MD; Daniel Lee, MD; Melinda B. Buntin, PhD; David F. Penson, MD, MPH, MMHC, FACS

Figure 1. Accountable Care Organization–Driven Changes in Breast, Colorectal, and Prostate Cancer Screening by Age



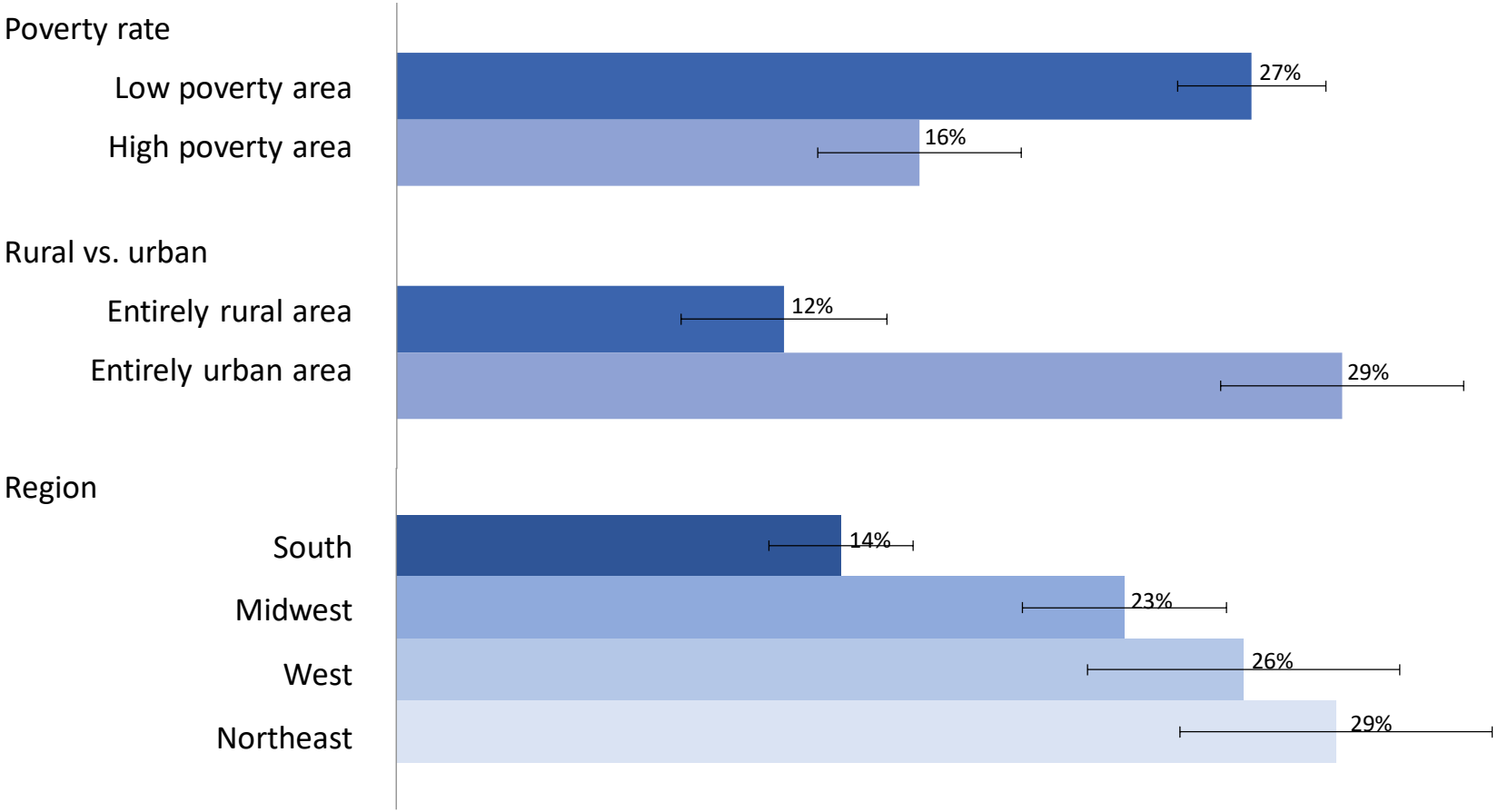
Difference-in-difference (DD) and difference-in-difference-in-difference (DDD) estimates are shown for Accountable Care Organization–driven changes in prostate, breast, and colorectal cancer screening by age. [a]$P < .001$.

The bad: equity concerns

ACOs might harm equity through

- Selection of providers into ACOs
- Providers selecting against patients
- Financially rewarding patients at the top

Where are ACOs forming?



Lewis, Valerie A., Carrie H. Colla, Kathleen L. Carluzzo, Sarah E. Kler and Elliott S. Fisher. 2013. "Accountable Care Organizations in the United States: Market and Demographic Factors Associated with Formation." *Health Services Research* 48(6):1840-1848.

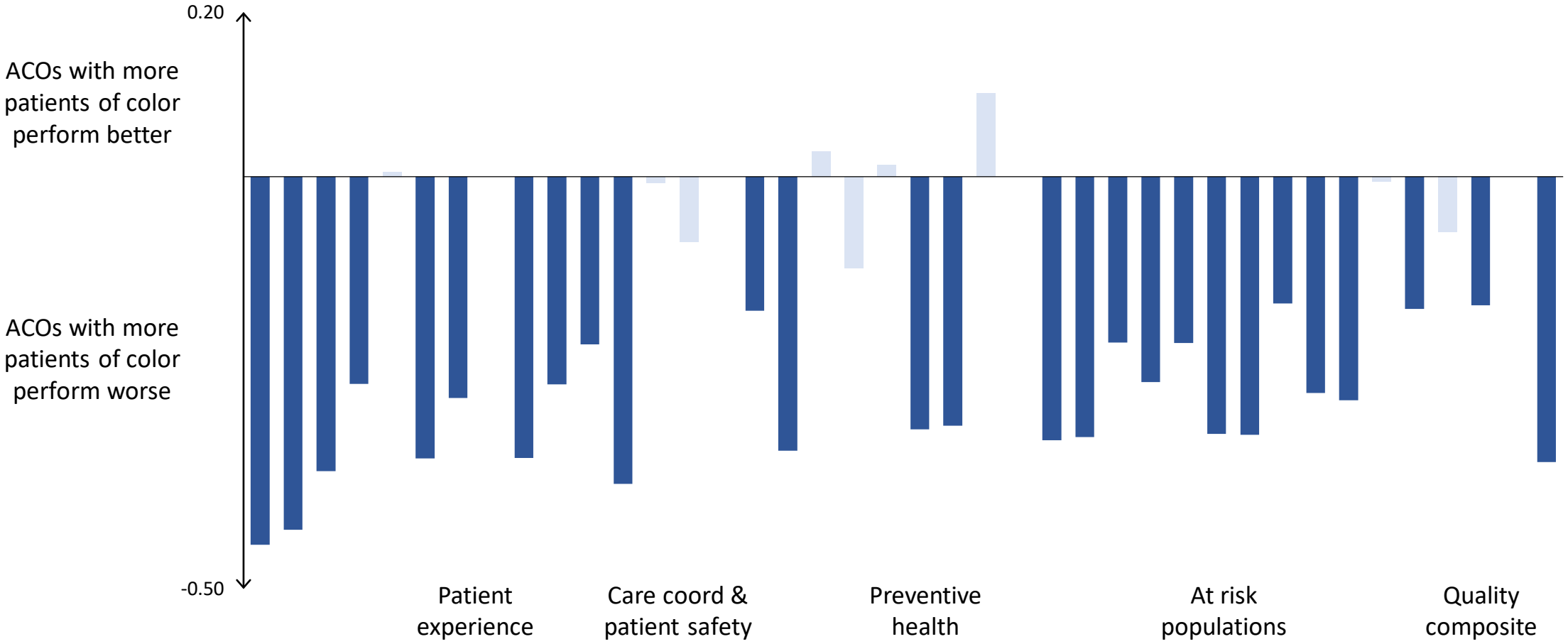
Where are ACOs forming?

Areas with ACOs…

- Lower poverty rates
- More likely to be urban
- Higher performance on quality
- Higher on Medicare per capita spending
- Fewer primary care physician groups
- Greater managed care penetration

Lewis, Valerie A., Carrie H. Colla, Kathleen L. Carluzzo, Sarah E. Kler and Elliott S. Fisher. 2013. "Accountable Care Organizations in the United States: Market and Demographic Factors Associated with Formation." *Health Services Research* 48(6):1840-1848.

Correlation of proportion patients of color and Medicare ACO performance outcomes



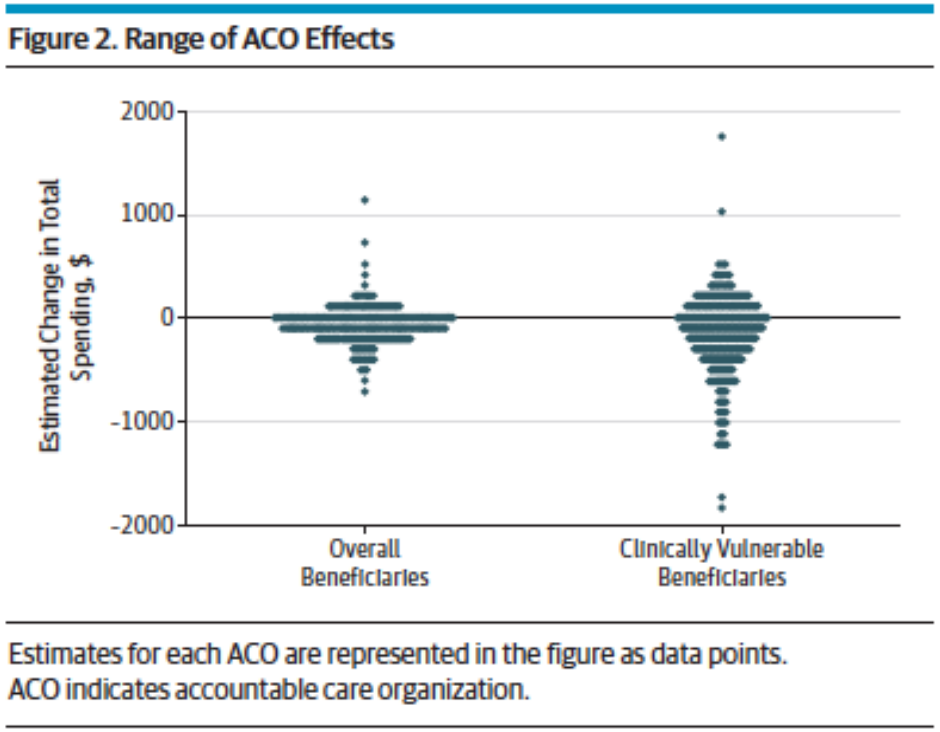
Lewis, Valerie A., Taressa Fraze, Elliott S. Fisher, Stephen M. Shortell, and Carrie H. Colla. January 2017. "ACOs Serving High Proportions Of Racial And Ethnic Minorities Lag In Quality Performance." *Health Affairs* 36(1):57-66.

Accountable Care: The ugly

Almost no evidence on what creates a high performing ACO

There is probably no “secret sauce” from an intervention perspective

Huge problem ng providers



Colla, Carrie H., Valerie A. Lewis, et al. “Association between Medicare accountable care organization implementation and spending among clinically vulnerable beneficiaries.” *JAMA Internal Medicine*. 2016;176(8):1167-1175.

We abou

ORIGINAL ARTICLE

Preventive Care Quality of Medicare Accountable Care Organizations

Associations of Organizational Characteristics With

Benjamin B. Albright, MS,† Valerie A. Lewis*

Redesigning care delivery with patient support personnel: Learning from accountable care organizations

Ksenia O Gorbenko, Taressa Fraze, Valerie A Lewis

First Published November 10, 2016 | Research Article

https://doi.org/10.1177/2053434516676080

Article information

Abstract

Introduction

Empirical Research

An Early Assessment of Accountable Care Organizations' Efforts to

Medical Care Research and Review 2015, Vol. 72(5) 580–604

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Accountable Care Or

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Gregory Kennedy, Valerie A. Le

First Published July 2, 2018

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Article information

Abstract

Due to high magnitude and

organizations (ACOs) are fo

through relationships with pre

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and quality measures. Su

BEHAVIORAL HEALTH IN ACCOUNTABLE CARE

By Valerie A. Lewis, Carrie H. Colla, Katherine Tierney, Erica D. Van Citters, Elliott S. Fisher, and Ellen Meara

Few ACOs Pursue Innovative Models That Integrate Care

Mental

Abuse

RESEARCH

Role of Pharmacy Ser

Carrie

Brendin R. Beau

ABSTRACT

BACKGROUND: The accountable care organization (ACO)

Care Tra

ACCOUNTABLE CARE

By Valerie A. Lewis, Thomas D'Aunno, Geneva F. Murray, Stephen M. Shortell, and Carrie

The Hidden Roles That Management Partners Play In Accountable Care Organizations

ABSTRACT Accountable care organizations (ACOs) are often discussed a

promoted as driven by physicians, hospitals, and other health care

providers. However, because of the flexible nature of ACO contracts,

management organizations may also become partners in ACOs. We used

data from 2013–15 on 276 ACOs from the National Survey of Accountable

Care Organizations to understand the prevalence of nonprovider

management partners' involvement in ACOs, the services these partners

provide, and the structure of ACOs that have such partners. We found

that 37 percent of ACOs reported having a management partner, and

two-thirds of these ACOs reported that the partner shared in the financial

risks or rewards. Among ACOs with partners, 94 percent had data services

68 percent received educational services, and 66 percent received care

coordination services. Half received all four of these services from their

partner. ACOs with and without partners were more heavily primary care than other

and quality in Medicare ACO programs. Our findings suggest that

management partners play a central role in many ACOs, perhaps

supplying smaller and physician-run ACOs with services or expertise

perceived as necessary for ACO success.

For more than a decade, proponents have sought to make accountable care organizations (ACOs) provider-centric, encouraging physicians and other health care providers to assume responsibility for redesigning care, providing high-value services, and driving quality and cost performance.[1,2] However, not all physicians and providers have the capacity to take on these goals alone. High start-up costs, limited financing, expertise in managing complex patients, or data management,[3,5,6] Some research has described the partnership activity between provider organizations,[7] but this literature does not speak to the involvement of nonprovider management organizations in ACOs. No published work on ACO

Population Health Management, VOL. 21,

Quality of Care Diabetes in Me Accountable C Characteristic

Taressa K. Fraze, Valerie A. Lewis

Published Online: 26 Sep 2018

Abstract

Accountable care organizati population health, which m overall, the ACO model is e ACOs are at impacting co such as composition, sta delivered to patients wit Program (MSSP) ACOs' used to analyze 162 M performance significa contract and an incre community health ce negatively associate management withir continued improve

HSR Health Services Research

Healthcare 5 (2017) 53–61

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Original Research

Determinants of success in Shared Savings Programs: An analysis of ACO and market characteristics

CrossMark

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ABSTRACT

Background: Medicare's Accountable Care Organization (ACO) programs introduced shared savings to traditional Medicare, which allow providers who reduce health care costs for their patients to retain a percentage of the savings they generate.
Objective: To examine ACO and market factors associated with superior financial performance in Medicare ACO programs.
Methods: We obtained financial performance data from the Centers for Medicare and Medicaid Services (CMS); we derived market-level characteristics from Medicare claims; and we collected ACO characteristics from the National Survey of ACOs for 215 ACOs. We examined the association between ACO financial performance and ACO provider composition, leadership structure, beneficiary characteristics, risk bearing experience, quality and process improvement capabilities, physician performance management, market competition, CMS-assigned financial benchmark, and ACO contract start date. We examined two outcomes from Medicare ACOs' first performance year: savings per Medicare beneficiary and earning shared savings payments (a dichotomous variable).
Results: When modeling the ACO ability to save and earn shared savings payments, we estimated positive regression coefficients for a greater proportion of primary care providers in the ACO, more practicing physicians on the governing board, physician leadership, active engagement in reducing hospital re-admissions, a greater proportion of disabled Medicare beneficiaries assigned to the ACO, financial incentives offered to physicians, a larger financial benchmark, and greater ACO market penetration. No characteristic of organizational structure was significantly associated with both outcomes of savings per beneficiary and likelihood of achieving shared savings. ACO prior experience with risk-bearing contracts was positively correlated with savings and significantly increased the likelihood of receiving shared savings payments.
Conclusions: In the first year, performance is quite heterogeneous, yet organizational structure does not consistently predict performance. Organizations with large financial benchmarks at baseline have greater opportunities to achieve savings. Findings on prior risk bearing suggest that ACOs learn over time under risk-bearing contracts.
Implications: Given the lack of predictive power for organizational characteristics, CMS should continue to encourage diversity in organizational structures for ACO participants, and provide alternative funding and risk bearing mechanisms to continue to allow a diverse group of organizations to participate.
Level of evidence: III

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1. Introduction

In recent years, there has been a growing interest in using shared savings as a new approach to the financing of health care, departing from fee-for-service payment arrangements. The 2010 Affordable Care Act introduced shared savings payment arrangement as a key component of the accountable care organization (ACO) model and the Centers for Medicare and Medicare Services (CMS) first tested it in the Medicare Physician Group Practice Demonstration before implementation in ACOs.[1,2] ACOs are intended to encourage coordination and cooperation among providers through financial incentives for high quality and lowered spending for a defined patient population. The ACO model was instituted through the Pioneer and the Medicare Shared Savings Program (MSSP) in 2012.[3] In both cases, ACOs that meet

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Clinical coordination in accountable care organizations: A qualitative study

OPEN

Valerie A. Lewis
Karen Schoenherr
Taressa Fraze
Aleen Cunningham

April–June • 2019

127

A. Stachowski, Lee-Sien Kao, Stephen M. Shortell, Colla

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ant factors to consider

David Peiris (dpeiris@hsph.harvard.edu) is a Harkness Fellow at the Harvard T. H. Chan School of Public Health, in Boston, Massachusetts.

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Courtney A. Stachowski is a research project specialist at the Dartmouth Institute for Health Policy and Clinical Practice, in Lebanon, New Hampshire.

Lee-Sien Kao is an associate at ideas42, in Washington, D.C. At the time of this study, she was a health policy fellow at the Dartmouth Institute for Health Policy and Clinical Practice.

Stephen M. Shortell is the Blue Cross of California Distinguished Professor of Health Policy and Management, a professor of organization behavior, director of the Center for Healthcare Organizational and Innovation Research, and dean emeritus, all at the School of Public Health, University of California, Berkeley.

Valerie A. Lewis is an assistant professor of health policy at the Dartmouth Institute for Health Policy and Clinical Practice.

OCTOBER 2016 35:10 HEALTH AFFAIRS 1849

for their patients.[8–11]

health policy, payment reform, primary care

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alth Integration, Codman Square Health Center, Boston, Massachusetts.
Institute for Health Policy and Clinical Practice, Geisel School of Medicine,

Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of

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Affordable Care Act introduced shared savings payment arrangement as a key component of the accountable care organization (ACO) model and the Centers for Medicare and Medicare Services (CMS) first tested it in the Medicare Physician Group Practice Demonstration before implementation in ACOs.[1,2] ACOs are intended to encourage coordination and cooperation among providers through financial incentives for high quality and lowered spending for a defined patient population. The ACO model was instituted through the Pioneer and the Medicare Shared Savings Program (MSSP) in 2012.[3] In both cases, ACOs that meet

Savings increase with time for physician-group ACOs, but not hospital-integrated ACOs

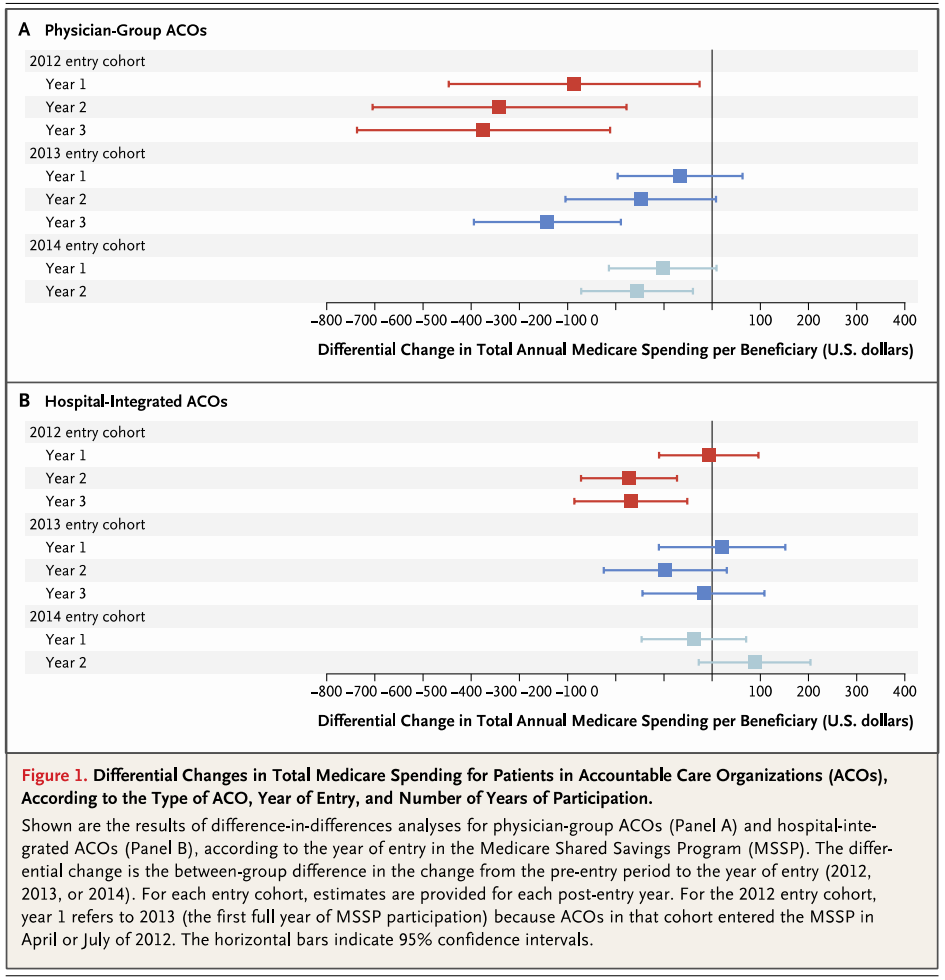
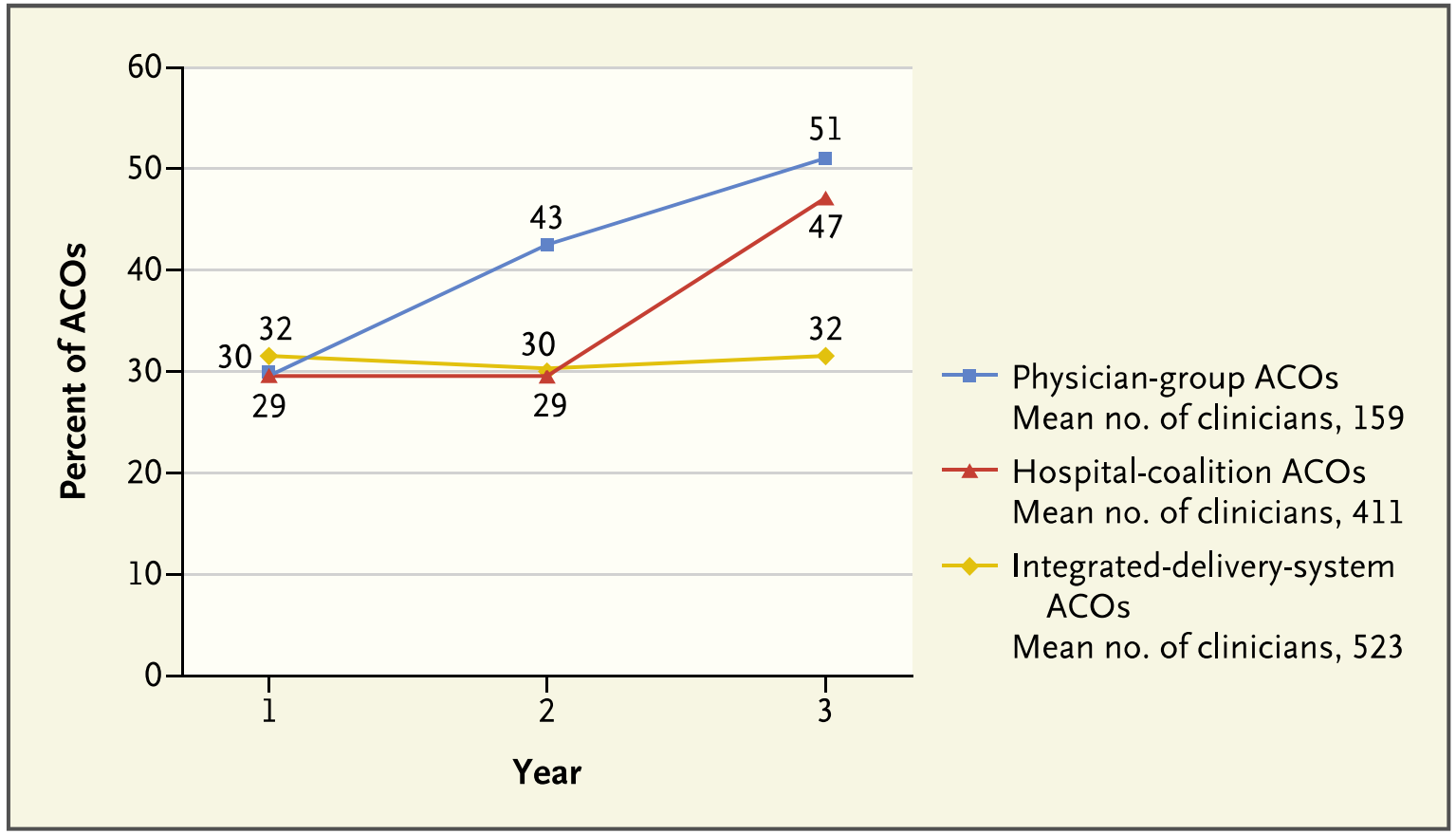


Figure 1. Differential Changes in Total Medicare Spending for Patients in Accountable Care Organizations (ACOs), According to the Type of ACO, Year of Entry, and Number of Years of Participation.

Shown are the results of difference-in-differences analyses for physician-group ACOs (Panel A) and hospital-integrated ACOs (Panel B), according to the year of entry in the Medicare Shared Savings Program (MSSP). The differential change is the between-group difference in the change from the pre-entry period to the year of entry (2012, 2013, or 2014). For each entry cohort, estimates are provided for each post-entry year. For the 2012 entry cohort, year 1 refers to 2013 (the first full year of MSSP participation) because ACOs in that cohort entered the MSSP in April or July of 2012. The horizontal bars indicate 95% confidence intervals.

McWilliams, J. Michael, Laura A. Hatfield, Bruce E. Landon, Pasha Hamed, and Michael E. Chernew. "Medicare Spending After 3 years of the Medicare Shared Savings Program." *NEJM* . 2018 Sept 5.

The organization form really matters



Roughly 80% of ACOs involve new partnerships between otherwise independent providers

Lewis, Valerie A., Carrie H. Colla, and Elliott S. Fisher. 2017. "Explaining sluggish savings under accountable care." *New England Journal of Medicine* 377(19):2809-1811.

Lewis, Valerie A., Katherine I. Tierney, Carrie H. Colla, and Stephen M. Shortell. "The New Frontier of Strategic Alliances in Health Care: New Partnerships under Accountable Care Organizations." *Social Science & Medicine*, 2017

Deep dive:
A high performing ACO

A case study ACO

10 independent, primary care focused medical groups

Began ACO contract Jan 2013

Unlikely success

- No payment reform experience
- Independent clinics: few shared systems, no management structure
- Poor history of collaboration

But – a lot of success

- Achieved three straight years of savings
    - Utilization: ED visits down 18%, admissions down 8%
- Hit quality targets every year
- Significant amount of clinical transformation as observed by our team

Data

Longitudinal: 2012-2019 (ongoing)

9 site visits:

- ~100 Semi structured interviews: clinic leadership and staff at multiple levels
- Observations: 27 formal meetings; informal interactions

70 documents

Phone interviews

Roughly 3,000 pages of primary source data

What do I argue?

Health care problems can be “solved” by empowering practices (and their clinicians) within a larger setting of transparency, shared learning, and accountability.

The best solution is perhaps an *organizational* one, not a *technical* one.

Focus here: how they achieve improved quality, reduced costs

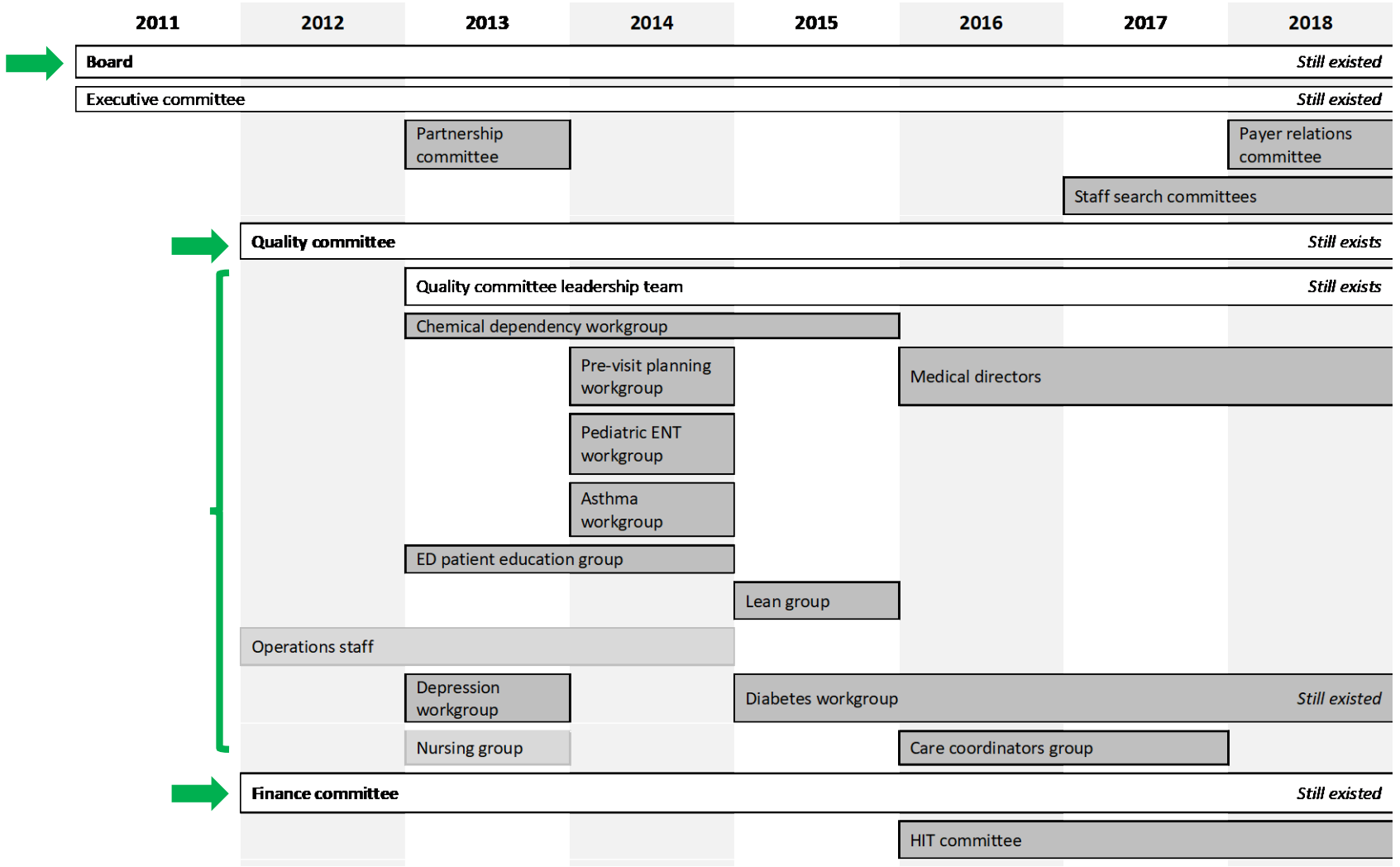
Tension

And so at the first meeting, when I went to the board meeting, and one of the newer directors who didn't know anything about [our medical group] was going around the table saying, "Here's the program. What do y'all think?"

When he got to me I said, "I don't see this warm and fuzzy, we're all going to come together and play nicely in the sand box, because when I [needed help] for our clinic, no one in this room would give me [help]." And so I thought, "Well, I don't see them coming together and working as a team." That's just—we're competitors, resources are limited.

[Over 200 pages of data on conflict and tension!]

Formal structure



Formal structure creates robust informal networks

Regular, on-going, in person meetings

- Expectations of full attendance and engagement
- Transparency about performance across members

Allowing meeting attendees to participate in setting meeting agendas (enough to make these valuable)

Participants recreate norms once they are in place

Many people derive value or benefit

Multiple people in varied roles at each organization experience benefits of alliances they can apply in their own jobs

- Formal settings facilitate shared learning
- Personal networks facilitate sharing resources, advice, social support, additional collaborations

Buffers against conflict and turnover instability

Transparency: sharing unblinded data

LEVEL SETTING

PROBLEM SOLVING FOCUS

Shared learning

Most Formal

Most informal

Clinic presentations

Workgroups and pilot projects

Open discussion meetings

Clinic to clinic interaction

Sharing resources and advice

The thing I wanted to mention about [the alliance] is actually just the importance to have colleagues and the opportunity to chat with each other and use each other as resources. . . . I don't know if you noticed yesterday, but as we were sitting there waiting for it, [other clinics] were saying, "Hey, how do you run lists for this?" And I can say, "We run it like this." And then the person next to me is like, "Oh our reproductive health program found cheap condoms here," or whatever it is. Literally, we have an opportunity to connect and figure out how we can reference each other, which is really nice.

Like for example I just emailed Beth at [clinic 3], because we're supposed to be doing for like – you're supposed to be auditing chart access, and so I wonder – and don't really – because we don't know if our employees are accessing appropriate charts or not.... And I know she has some report that she runs, and I – and I emailed her to say hey how do you do that?

Shared learning: outcomes

Group is doing a level of standardization through protocols

- Members then implement on their own
- High degree of autonomy to implement
- Adaptation as necessary

Great deal of formal and informal shared learning

- Best practices “organically” spread

Much accountability for participation and implementation

Making meetings useful

Interviewer: How do you feel about going to [quality committee meetings]?

Interviewee: I actually love going to them.

Interviewer: Yeah?

Interviewee: Yeah.

Interviewee: Me, too. Normally those best practices are always – I'm always like, "Hey Gloria didn't you like those standing orders?" We have standing orders and I really like how they have it all framed up. . . . Typically I really enjoy those best practices and we get tips from them. We steal shamelessly.

Interviewee: Yeah, we do. But you know what? Everybody wants to know what each other's kind of doing, if they're successful. If they're not that's even good to know, too. I feel like our group really works together well now.

Interviewee: Yeah. It's good just to network and people to call people up and – and I feel like there's good participation from all the clinics.

Ease of accountability

Formal

- Money allocated by performance
- Unblinded performance data
- Calling out shirking in meetings

Informal

- Drawing on personal ties

Summary of a successful ACO

Formal (useful) meetings

- Formal shared learning
- Gives way to personal networks and informal shared learning

Transparency in performance

Accountability for engagement

Main drawback: slow work, frustration, ongoing conflict

Integrated delivery systems and health care outcomes

Health care systems are on the rise

Literature on quality outcomes is thin

- Large literature on prices and costs
- Much focused on hospital systems and outcomes (not primary care or population health)

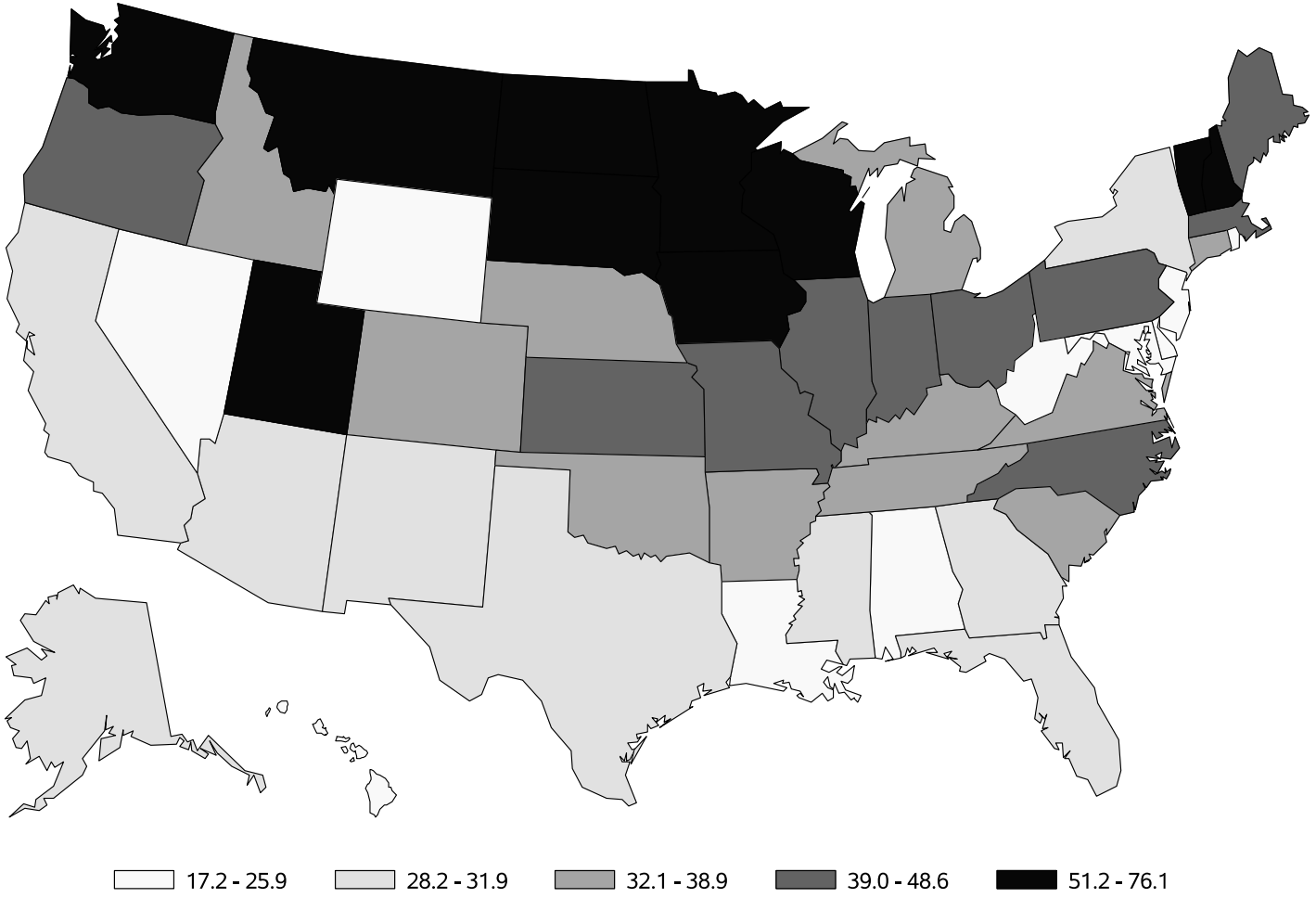
Results that do exist are mixed

- Recent systematic review found some positive evidence, some mixed or negative, and numerous papers with no significant results

Limited frameworks

- Most work on consolidation or health care systems involving outpatient care ignores variation across systems
- Work in this area is dominated by economic theory, and is comparatively weak in applying organizational theory

Share of Medicare beneficiaries receiving primary care from a system (vs. independent practice) in 2016

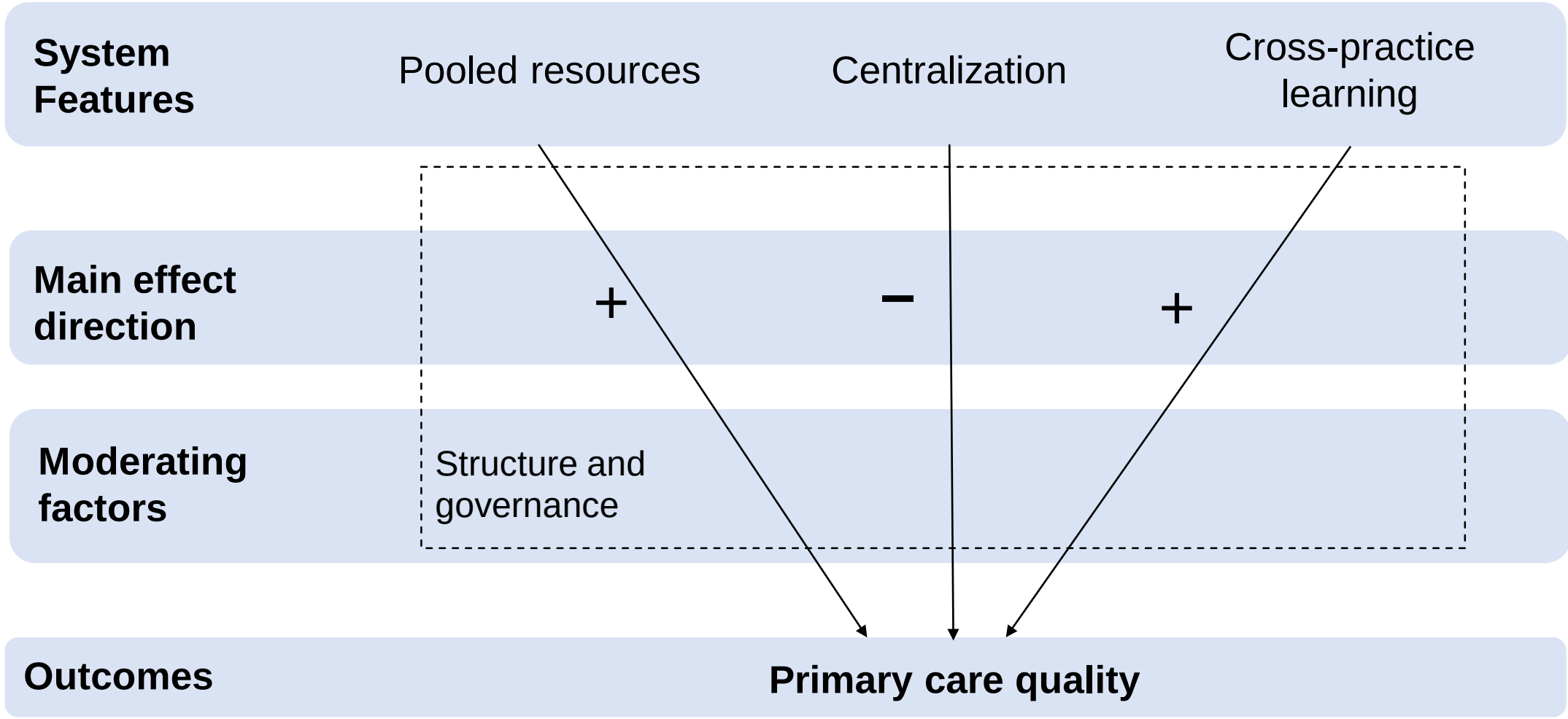


Competing logics about how systems influence quality

Systems will *improve* quality through better coordination, communication, and collaboration between providers and facilitating joint investment

Systems will *inhibit* quality by increasing bureaucracy and complexity that hinder clinicians' ability to deliver the best care to each patient

A conceptual model of organizational factors influencing system quality performance



Ongoing work

Using new data (IQVIA OneKey) we can build organizations in administrative claims

- Smallest unit (e.g. physician practice), to the unit over it, to the system
- Nest patients in physicians, in practices, in systems
- Surveys at multiple levels about organization capabilities

Examine how organizational capabilities are associated with outcomes

- Do large vs. small systems perform better on patient outcomes?
- Is HIT, care coordination associated with better outcomes?

In-depth qualitative work to further refine (then test) our conceptual model

Many potential cancer applications

How does quality of independent vs. owned providers compare?

- Within systems, how do outcomes compare for employed vs. affiliated practices?

How much do systems matter right now?

- Do clinicians within a system have similar outcomes or practice patterns?

What should the system control tightly, and what should it leave to the component practices?

- Balance of centralization and autonomy

What kind of shared learning structures can regions or systems build to improve cancer care?

Where are oncologists working?
(Don’t believe this yet!)

	2011	2017
Outpatient practice	63%	67%
Work at >1 practice	38%	35%
Work at independent practice	39%	20%
Any attending privileges	35%	35%
>1 attending hospital	8%	7%
Any admitting privileges	64%	42%
>1 admitting hospital	51%	42%

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[are you next???]

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Thank you!

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