RAND CORPORATION

Research Report

M. SUSAN RIDGELY, JUSTIN W. TIMBIE, LAURA J. WOLF, ERIN LINDSEY DUFFY, CHRISTINE BUTTORFF, ASHLYN TOM, MARY E. VAIANA

Consolidation by Any Other Name

The Emergence of Clinically Integrated Networks

The Patient Protection and Affordable Care Act (ACA) has created new opportunities for the federal government to design and test innovative care delivery and payment models, with the goal of improving health care quality and reducing health care spending (Abrams et al., 2015). Because of its emphasis on integration and care coordination, the ACA has arguably been responsible for the most recent wave of consolidation in the health care industry (Swisher and Gordon 2014; Garcia 2015). Although the trend toward payment tied to *value* rather than *volume* began at least a decade earlier, the ACA has captured the attention of health care providers by rapidly expanding value-based payment nationally in the Medicare program. According to Secretary Alex Azar of the U.S. Department of Health and Human Services, there is no turning back to an "unsustainable" payment system: The only option is to "charge forward" (Azar, 2018).

In response, health care organizations have sought ways to increase efficiency quickly, improve their ability to coordinate care, and enhance patient outcomes as reflected in publicly available performance measures. Value-based payment models have also been pushing health care organizations to assume more financial risk (LaPointe, 2016). As a result, the trend toward horizontal integration (e.g., hospitals acquiring other hospitals) has been supplanted by a trend toward *vertical integration*, in which health systems have been acquiring physician groups, other acute care providers (e.g., ambulatory clinics, ambulatory surgery centers), and

KEY FINDINGS

- Clinically integrated networks (CINs) are a significant but under-the-radar feature of health care markets.
- We know from prior literature that CINs exist, but we know nothing about what they actually look like on the ground.
- CINs are potentially a way for health systems to improve their negotiating leverage with payers. In theory, quality should improve with the alignment of health care providers, but, at this point, there is no empirical evidence that CINs are improving quality.
- CINs bear watching because their effects on price and quality are potentially as important as the effects of mergers and acquisitions.

post-acute care providers (e.g., home health agencies) to achieve the necessary breadth of providers (and a large enough patient population) to assume risk (Heeringa et al., 2020).

In the context of these trends, another form of organization has emerged: the *clinically integrated network* (CIN). This organizational form has been around for more than 25 years, but it "quickly jumped to the forefront of industry transformation" after the passage of the ACA (Casalino, 2006; Hathaway et al., 2013, p. 1). A CIN is commonly defined as a group of health care providers that join together to improve patient care, reduce costs, and demonstrate market value (Casalino, 2006; Strilesky, undated). The provider organizations in CINs do not formally merge; rather, they contract to jointly provide care and share profits. Health systems offer CINs to health plans and other payers under managed care contracts.

The Federal Trade Commission (FTC) and U.S. Department of Justice have provided joint guidance for CINs to determine whether cooperation among these otherwise competing organizations to jointly negotiate fees runs afoul of antitrust law. (For simplicity, we will refer only to the FTC for the remainder of this report.) However, little is known about whether CINs conform to FTC guidance. The FTC does not formally monitor CINs, and health systems wanting to establish a CIN are not required to seek FTC approval. As a result, CINs are basically invisible to regulators and health services researchers, although CINs have the potential to produce negative market effects, such as increasing prices without a corresponding increase in quality.

By partnering, that gives us scale—geographic as well as size of provider group—to be able to contract both directly with employers and with insurers and offer a competitive position [compared] to much larger integrated health systems.

—Senior vice president of Olive Health

In this report, we offer an initial assessment of CINs according to interviews with health system executives, describe how health systems (large and small) are using CINs strategically to compete in crowded health care markets, and identify why CINs bear watching by the FTC and the larger health care community. Our analysis is based on a study of 24 health systems across four states that was undertaken by the RAND Center of Excellence on Health System Performance as part of a national initiative to identify, map, and track health systems and to describe the characteristics of high-performing health systems (Ridgely, Duffy, et al., 2019).

The health system executives we interviewed described a variety of experiences and challenges associated with CINs, but the views of health system executives are not the only views that matter. The perspective of others who might be more skeptical about CINs (such as employers, insurers, patient advocates, and regulators) are equally important. A comprehensive exploration of CINs, and detailed consideration of the appropriate policy response to their emergence, should incorporate a broader range of other, perhaps competing, views. However, our interviews reflect how CINs are perceived and used by a group of executives who are responsible for their health system's strategic posture. Although this analysis does not incorporate those other perspectives, it is an important first step toward that more comprehensive analysis and provides a sound empirical baseline to guide future work to understand the role of CINs in an increasingly consolidated health care market.

Health Care Consolidation and the Federal Trade Commission

The FTC's role is to protect consumers by keeping markets competitive. With respect to health care consolidation, the FTC weighs potential harms and benefits to consumers, whether by merger, acquisition, or other organizational forms (Ohlhausen, 2015).

The FTC defines a *CIN* as an entity that providers join for the purposes of joint contracting (Donovan, 2013; Schaff and Anderson, 2015). The

The Federal Trade Commission and Antitrust Law

- There are no special antitrust laws that govern health care.
- The courts apply the same federal antitrust laws to health care organizations as they do to other businesses.
- The principal enforcers of antitrust laws are the FTC, the U.S. Department of Justice Antitrust Division, and the state attorneys general.
- Antitrust regulators are focused on protecting the consumer by protecting competition.
- Competition in a health care market is threatened when a health care organization acquires too much bargaining leverage with payers.
- Federal antitrust regulators communicate policy through advisory opinions, congressional testimony, speeches, reports, and other documents, as well as through enforcement actions.
- The primary "relief" sought by enforcers is either a *structural* remedy (e.g., blocking a merger or divestiture) or a *conduct* remedy (e.g., an agreement not to engage in similar conduct in the future).
- The main focus of FTC action in health care has been to challenge hospital mergers, but the FTC has also challenged hospital acquisition of physician groups (e.g., *FTC v. St. Luke's Health System, Ltd.*).

SOURCE: Sage, 2017.

FTC has not prescribed a particular organizational model for CINs; however, a variety of FTC documents (in particular, FTC advisory opinions [FTC, undated]) indicate that the FTC believes CINs will withstand antitrust scrutiny if they have the following characteristics:

- active participation by physicians in developing and operating the CIN
- a commitment to shared goals of quality, efficiency, reduced utilization, and lower costs
- inclusion of only efficient providers
- a formal process for reviewing provider performance and removing inefficient providers
- development and implementation of evidence-based clinical guidelines
- use of interoperable health information technology (IT) to ensure integration of care
- a nonexclusive network (i.e., allowing participants to contract with payers outside the CIN)
- restricted access to provider pricing information (Casalino, 2006; FTC, 2013; Kumar and Levine, 2016; Turcotte and Yanci, undated).

These FTC *guardrails* for CINs are intended to promote competition while improving care or lowering costs. But there is little information about how CINs actually operate in practice. Some industry trade publications describe CINs as a way for independent physician practices to align with hospitals without losing their independence (Malcoun and Damore, 2018). However, the peer-reviewed health services research literature is practically silent on the CIN phenomenon and its implications for health care delivery.

What We Know About Clinically Integrated Networks

We reviewed the peer-reviewed and gray literature covering years 2004 to 2019 and identified only 19 articles on CINs. A majority of the articles (16) described CINs, defined them in some way, discussed how to implement them (noting the challenges and benefits to implementation), or discussed how the market's shift to value-based payment was pressuring providers to reduce costs while continuing to provide high-quality care. When discussing the rationale for creating a CIN, articles often cited the need for better care coordination. The remaining three articles described some aspect of FTC guidance and oversight.

We found no studies that evaluated the impact of CINs or that attributed improved performance outcomes to them.

Most articles defined a CIN as a structured, single organizing entity allowing health systems to expand through joint contract agreements with hospitals, physician groups, and independent physician practices (Ezzell-Nelson, 2014; Grauman et al., 2014; Greenstein, 2014; Marino, Faber, and Duncan, 2015; Moore and Coddington, 2016; Pofeldt, 2016; Redding, 2013). The articles noted that CINs enable a health system to form a coordinated structure of mutually beneficial partnerships, often with a shared electronic health record (EHR), that collaborate to improve the quality and management of their patient populations through a continuum of care (Grauman et al., 2014; Greenstein, 2014; Malcoun and Damore, 2018; Moore and Coddington, 2016; Redding, 2013; Turcotte and Yanci, undated). One article described CINs as an alternative to a hospital employment model for physicians: Health systems can partner with physician groups while keeping operating expenses low and increasing provider productivity and efficiency (Guest et al., 2015). Another article defined CINs as a way of creating interdependence among physician groups and promoting a shared commitment to creating better-quality patient care and lowering costs (Kaplan and Guest, 2012). Overall, articles consistently described CINs as a strategy to legally link with providers without directly employing them, with an overarching mission to better align care coordination and delivery within a single cooperating network.

Methods

In 2015, the Agency for Healthcare Research and Quality launched the Comparative Health System Performance Initiative to study whether and how health systems promote the use of evidence-based practices in care delivery. The five-year initiative provided $52 million to three centers of excellence and a coordinating center to identify, classify, track, and compare health systems. As part of the Comparative Health System Performance Initiative, the RAND Center of Excellence on Health System Performance studied the operations of health systems through extensive interviews with senior executives who make the strategic and operational decisions for their health systems.

Definitions

- A *health system* comprises two or more health care organizations (at least one hospital and one physician organization) that are affiliated with each other through shared ownership or a contracting relationship for payment and service delivery.
- A *physician organization* is a medical group, an independent practice association, a medical foundation, or a faculty practice.
- A *medical group* is a collection of physicians who come together contractually or in partnership for the purpose of managing a medical practice and sharing the care of patients.
- An *IPA*, or *independent practice association*, is a business entity organized and owned by a network of independent physician practices for the purpose of reducing overhead or pursuing business ventures (such as contracts with employers or insurers).
- A *medical foundation* is an arrangement in which a not-for-profit hospital acquires a physician practice's tangible and intangible assets and the physicians then form a medical group that contracts with the foundation on an exclusive basis.
- A *faculty practice* is an organized structure within a university health system that provides services (such as billing, collections, revenue distribution, and financial services) to full-time teaching faculty.
- An *ACO*, or *accountable care organization*, is a provider-led organization with a strong base of primary care that is collectively accountable for quality and per capita costs across the continuum of care. Payments from Medicare or commercial insurance are linked to quality improvements and reduced costs.

Sampling

Using secondary data sources, we identified the health system affiliations of all physician organizations publicly reporting performance data in California, Washington, Minnesota, and Wisconsin. We selected these states because each hosts a health care measurement and improvement collaborative that agreed to provide performance data and help recruit health systems. From the universe of health systems, we selected a purposive sample of 24 health systems to achieve variability on important attributes (e.g., size and performance). (For more information on sampling, see Ridgely, Duffy, et al., 2019.)

Data Collection, Coding, and Analysis

We studied the 24 health systems using in-depth interviews, descriptive surveys, and document review. We organized virtual site visits, comprising individual 60–90-minute telephone interviews with five to eight senior executives per health system (a total of 162 executives). Site visits were conducted between July 2017 and March 2019. Topics for these interviews were informed by a literature review and modified Delphi panel process (Ridgely, Ahluwalia, et al., 2020). Interview protocols were tailored to each executive's sphere of responsibility. Topics included market context, health system's origin, structural organization and governance, and the influence of the health system on hospital and physician organization operations.

All interviews were coded thematically using Dedoose, a web platform for analyzing qualitative and mixed methods research data. We developed a codebook deductively from the interview guides to summarize themes and identify patterns (see Ridgely, Duffy, et al., 2019). After a multistage process of testing and refining codes, two experienced qualitative researchers independently coded each transcript from the first five site visits, achieving high interrater reliability (pooled kappa of 0.84). Transcripts from the remaining site visits were coded by one experienced researcher; coding was reviewed by a second experienced researcher, with a full team review for any unresolved differences. We used the coded data to compare the organization and structure of health systems and the associated development of CINs in our sample.

Our study has limitations. The findings may not be generalizable to all health systems. Our data came from a convenience sample of four states with prior engagement in public reporting and quality improvement collaboratives. Our selection of health systems within states was purposive and nonrandom according to select attributes, such as size and performance.

In addition, our study presents data from the point of view of senior executives. We recognize the value of other perspectives but focused our interviews on obtaining high-level information on organizational dynamics and strategic choices. We looked across respondents within a health system for areas of agreement and disagreement. We also acknowledge that self-report data may suffer from social desirability bias; however, executives knew that the identities of the health systems would be blinded for reporting purposes, so we believe that risk is minimal.

Results

In this section, we first describe the motivations that executives reported for developing and deploying a CIN. We then describe the structure and governance of the CINs within these health systems. Finally, we identify key features of the CINs. We also note how these motivations, structures, and features are (or are not) consistent with FTC guidance on CINs. (Pseudonyms are used to identify the health systems in text, tables, and figures in accord with institutional review board requirements.)

Motivations for Creating a Clinically Integrated Network

Market trends and payment reforms increasingly require health systems to assume risk and adopt value-based contracts. Executives in our study reported that their health systems were motivated to create CINs as a way to develop three characteristics that are critical for success in value-based payment contracting.

Sufficient size, depth, and breadth. To compete for managed care contracts with the largest insurers

and employers, executives said they needed to be able to offer scale: both geographic coverage and enough physicians (primary and specialty) to adequately serve a broad population. A CIN allows a health system to build and/or expand its geographic reach without capital outlays or the labor and expense of onboarding processes to bring new organizations into the existing health system.

The ability to direct patient care across multiple settings and providers. Including new partner organizations across the continuum of care allows health systems to direct patients to lower-cost settings (e.g., ambulatory surgery centers instead of hospitals) and providers (e.g., community-based primary care providers instead of faculty physicians).

The ability to manage population health and improve quality of care. A challenge for health systems with value-based contracting is that often they are treating patients who also receive regular care elsewhere. A CIN allows the entities to coordinate to keep patients in-network and thereby improve care to meet the quality metrics in value-based contracts.

CINs offer health systems additional operational advantages. CINs create a single signature authority, simplifying the contracting process for the health system and affiliated physicians. CINs also position health systems to negotiate contracts directly with employers or to offer their own health insurance products. Executives from Cypress Health System reported that developing a CIN allowed them to offer a Medicare Advantage product (which, in their state, has a higher service capacity requirement) rather than pursue the ACO model under fee-for-service Medicare.

CINs also offer mutually beneficial arrangements for independent physician practices. While retaining independence, physicians can access a variety of services, including (1) managed care contracts in which they could not otherwise participate, (2) interoperable health IT, including hardware and support, (3) branding as part of a well-known health system, and/or (4) administrative assistance with quality reporting (sometimes handled by the CIN for certain government payers). Physicians in a CIN are free to continue to run their own private practices, although health systems might require them to submit quality metrics or generally standardize their care processes. From the physician perspective, the allure of running one's own practice while operating under an umbrella structure that provides access to risk-based contracting and simplifies quality reporting can be very attractive.

Clinically Integrated Network Structure and Governance

Within our sample of 24 health systems, executives in ten health systems reported having an active CIN; an eleventh system was in the process of launching a CIN at the time of data collection (2017–2019). With the exception of one multistate health system that operated different CINs in different geographic regions, each health system had a single CIN (Table 1).

Table 1 summarizes key characteristics of the 11 health systems that sponsor a CIN ($n = 7$) or participate in a jointly sponsored CIN with another health system ($n = 4$). These include seven nonprofit health systems, three academic (or academic-affiliated) systems, and one quasi-public system. They range from large, multistate systems (51 hospitals and three physician organizations) to small, single-entity health

We cannot sit with our 10 percent market share and survive in any marketplace, but definitely not in ours. We've got to have a larger, more dependable market share.

—Chief executive officer of physician organization, Azalea University Health System

Part of it is to capture lives, right—it's a clinically integrated network—the objective is to improve the flow so that patients within the region that we serve are seen in the appropriate facilities.

—Chief financial officer, Magnolia University Health System

Table 1. Key Characteristics of Health Systems and Their Clinically Integrated Networks

	Aspen Health System	Chestnut Clinics	Cypress Health System	ElmCare	Maple Health System	Spruce Health Care	Willow Clinics	Azalea U. Health System	Magnolia U. Health System	Sequoia Health	Olive Health
Health system characteristics											
Type	Nonprofit	Nonprofit	Nonprofit	Nonprofit	Nonprofit	Nonprofit	Nonprofit	Academic	Academic	Academic affiliation agreement	Quasi-public
Region served	Multiple counties within a state	Multiple counties across 3 states	Multiple counties across 2 states	Multiple counties within a state	Multiple counties within a state	Multiple counties across 2 states	Multiple counties across 2 states	Multiple counties within a state	Multiple counties within a state	Multiple counties within a state	Two counties within a state
HS is a single legal entity	Yes	Yes*	Yes	Yes*	No	Yes*	No	No	No	No	Yes
Number of hospitals	7 owned	49 owned; 2 JV	8 owned	2 owned; 1 JV	8 owned	12 owned	2 owned	3 owned; 7 affiliated; 1 JV	5 owned	13 owned	2 owned
Number of POs	0	3	1	1	2	1	0	1	2	2	1
PO practice type	Employment	Medical foundation	Employment	Medical foundation	Employment	Employment	Employment	Faculty practice	Faculty practice and medical group	Faculty practice and employment	Employment
Enterprise-wide single instance EHR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Risk assumption											
At-risk contracting	Yes (small %)	Yes (small %)	Yes (50%)	Yes (small %)	Yes (small %)	Yes (small %)	Yes (small %)	Yes (small %)	Yes (small %)	Yes (large %)	Yes (small %)
ACO participation	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CIN characteristics											
Years since launch	Less than 2	More than 5	2 to 5	2 to 5	2 to 5	More than 5	More than 5	Less than 2	N/A	More than 5	Less than 2
Single or multisystem	Single	Multisystem	Single	Multisystem	Single	Single	Single	Single	Multisystem	Single	Multisystem
Separate entity	No	Varies	No	Yes	Yes	No	Yes	Yes	Unclear	No	Yes

SOURCE: Health system interview data collected by authors. Information is current as of the date of the site visit (2017–2019).

NOTES: *Academic*: university-based health system. *Academic affiliation agreement*: incorporates parts of a university health system and a nonprofit health system operated under joint governance. *Quasi-public corporation*: private company supported by government; public mandate and funding to provide a given service. Asterisk indicates *single legal entity* with subsidiaries. *Hospitals*: number of acute general hospitals. *Owned*: hospitals the health system owns and operates. *Affiliated*: hospitals managed by health system under affiliation agreements (such as memoranda of understanding or contracts). *JV*: joint venture. *PO*: physician organization. *Medical foundation*: 1206(l) foundations in California. A mark of "0" in the "Number of POs" row indicates that the health system is a single legal entity providing ambulatory physician services without separate, identifiable physician organization entities. *Enterprise-wide*: EHR that most or all system-affiliated providers use. *Single instance*: single copy of content that multiple users or computers share. *At-risk contracting*: percentage of business at global, full, or partial risk. *Single*: CIN operated by a single health system. *Multisystem*: CIN sponsored by two or more health systems.

You put the CIN together so the physicians can work together interdependently and do all of the things you would do for population-based health . . . all of which you would not do realistically on a fee-for-service chassis in a primary care practice because there is zero margin to do those extra things.

—Chief medical officer, ElmCare

We found that if we had a single signature ability . . . one signature, one contract, and we had board governance in place that oversaw how we were managing those contracts—we'd be much more efficient and friendly to the marketplace.

—Senior vice president of finance, Cypress Health System

systems. Four of the 11 have operated their CIN for more than five years; three have operated their CIN for less than two years. Two of the CINs in our sample operate as part of a health system, and five are organized as separate legal entities (executives in the others did not specifically discuss legal structure). Despite the differences in structure, the ways in which health system executives talked about CIN operations were largely similar across the systems.

Each health system included (or planned to include) employed physicians and private practice physicians. Executives in four of the health systems (Spruce Health Care, Cypress Health System, Willow Clinics, and Aspen Health System) reported that all employed physicians were included in the CIN.

In two health systems (Willow Clinics and Cypress Health System), the CIN was the system's sole contracting vehicle. In Willow Clinics, all CIN participants joined in all risk-based contracts; in Cypress Health, there were different levels of participation. The most-active participants joined in all contracts; others participated only in local employer-sponsored contracts. Conversely, the health system handled contracting for the CIN in at least one instance (Maple Health System). At Olive Health, the CIN handled some contracting directly, while the health system handled the bulk of the contracting.

Although the FTC has not prescribed a specific organizational model for CINs, it has established expectations regarding governance: In particular, there must be evidence that physicians actively participate in developing and operating the CIN. Executives of nine of the health systems discussed their CIN's governance in detail. All reported that their CIN had a dedicated governing board or was in the process of developing a board. The boards ranged from nine to 23 participants. Board membership was based on multiple factors (e.g., employed versus affiliated providers, percentage of equity ownership in the CIN, representation across practice areas; providers versus administrators). Executives who specifically discussed physician representation characterized it as substantial.

To illustrate the variety of configurations that CINs may take, we provide simplified diagrams of the structure of two health systems (Figures 1 and 2).

Spruce Health Care is a nonprofit, single-entity health system that was formed over a decade (from the 1980s to the 1990s) through a series of mergers (Figure 1). It operates a dozen hospitals, 60 clinics, and some post-acute care services. In addition to an employed medical group, Spruce Health Care also owns and operates a CIN (Spruce Integrated Medical Network) that includes both employed and private practice physicians. The employed physicians within the CIN (about 750 physicians) work exclusively for Spruce, but the private practice physicians within the CIN (another 750 physicians) maintain their own practices. The CIN physicians work in the Spruce owned and operated hospitals and clinics. There are also specialist physicians working in Spruce facilities under physician service arrangements—some of whom maintain private practices and work for other health systems. In terms of influence over clinical practice, Spruce Health Care has the highest level of influence over physicians who are employed and

Figure 1. Clinically Integrated Network

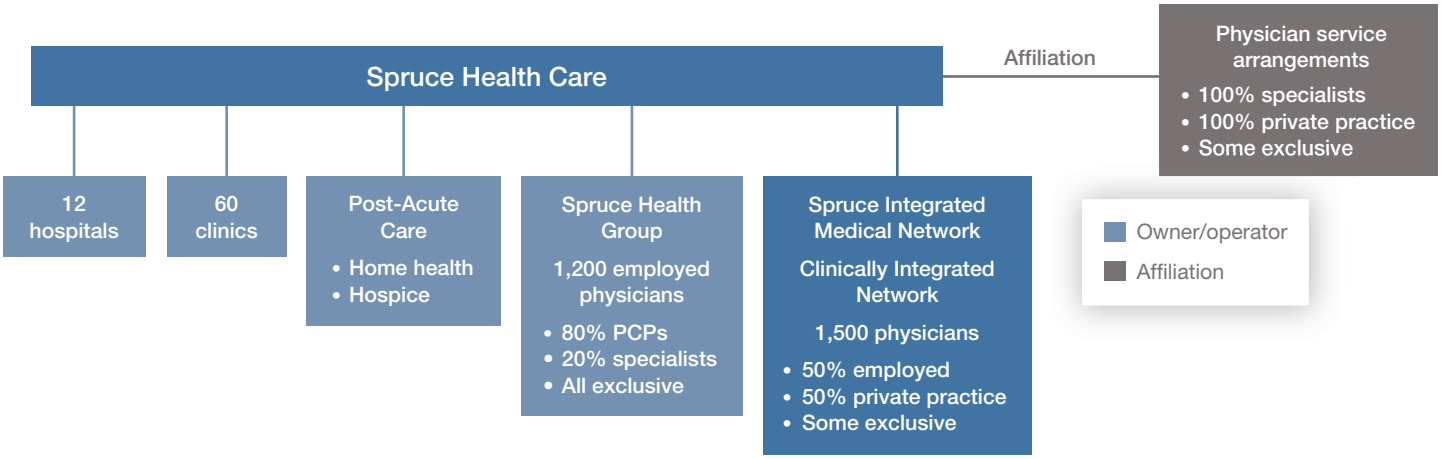
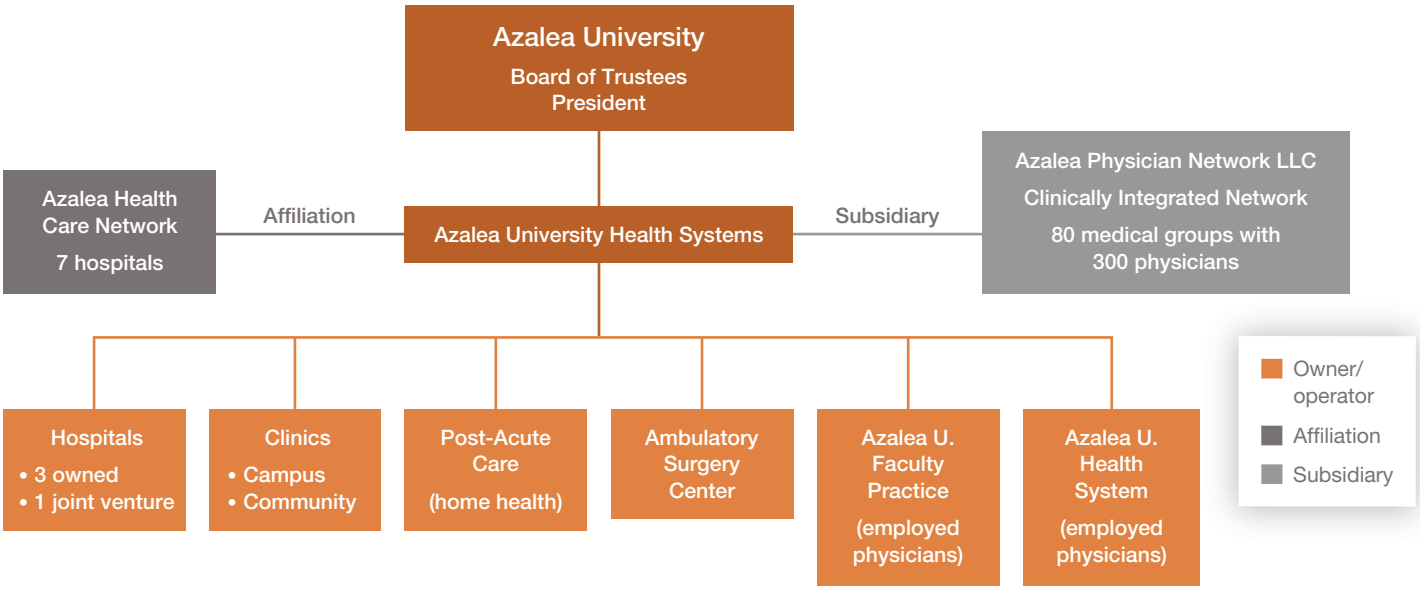


Figure 2. Clinically Integrated Network (Separate Entity)



exclusive to Spruce and has the lowest level of influence over physicians who are in private practice and not exclusive to the health system.

Azalea University Health System also operates a CIN, developed initially via contracts with individual physician groups but now operating as a separate legal entity (a limited liability corporation; Figure 2). The CIN includes 80 independent medical groups (about 300 physicians total). According to executives, while other local health systems were acquiring physician practices, this university-based health system lacked the required capital. The system developed the CIN to extend its reach. No capital has changed hands between the system and the physician practices, and the profits and losses of these physician groups do not accrue to the health system. The health system simply partners with physician groups for purposes of contracting and patient management, and (for some of the physician groups) the health system provides subsidy and IT support to promote integration into its enterprise-wide EHR. The CIN acts as a feeder system to its tertiary and quaternary facilities and gives the health system access to non-faculty primary care physicians (whose services can be billed out at lower rates) to fill out its network for managed care contracts.

We don't have an ownership relationship with [the health system]. We don't have financial integration with them at all. It's not a merger . . . we contract together and we participate in value-based arrangements together and we do clinical integration activities together.

—President of CIN, Willow Clinics

Features of Clinically Integrated Networks

FTC guidance for CINs is neither crystal clear nor prescriptive. However, in the guidance documents, the FTC has identified a variety of CIN characteristics that might be *indicative of compliance*: for example, physician governance, nonexclusivity, adherence to clinical guidelines, and use of an interoperative EHR. Health systems have been left largely on their own to interpret the guidance documents. We endeavored to see what choices they made and why.

Among the health systems we studied, we identified nine strategies that health system executives used to achieve the broad objectives of FTC guidance. We grouped these strategies into three domains: (1) providing infrastructure support, (2) improving clinical integration, and (3) ensuring accountability (Table 2). Health system executives noted that it could be challenging to achieve high-quality care consistently across their CIN; as a result, they typically used multiple strategies to achieve these objectives.

Infrastructure Support

Health systems often provide support to CIN participants, which vary in size and sophistication. These strategies are designed to ease some burdens on CIN participants and to provide the necessary infrastructure to support clinical integration.

Practice management services. Many health systems provided at least some practice management services to CIN participants, akin to those provided by management services organizations. Services included providing population health management platforms (Maple Health System), data analytics support (Chestnut Clinics), and quality reporting support for the Medicare Merit-Based Incentive Payment System (Cypress Health System); extending purchasing discounts for medical malpractice insurance (Cypress Health System); offering health insurance (Sequoia Health); offering interpreter services (Sequoia Health); and offering training and education opportunities for CIN participants (Sequoia Health). At only one health system (Olive Health) did executives report providing no practice management services.

There are at least 13 different electronic medical record systems used by independent practice groups affiliated with [our CIN], and the physicians working outside [our] instance of EPIC do not interact with the health system's decision support tools and performance measurement.

—Senior vice president and chief information officer, Spruce Health Care

Enterprise-wide EHR adoption. Executives regarded health IT integration as essential to the CIN's success because of the role that EHRs play in care delivery and practice improvement. Most health systems encouraged their CIN participants to adopt the health system's enterprise-wide EHR. Many of the health systems use Epic's Community Connect program to extend their EHRs to participating independent physician practices, and they often provided subsidies. ElmCare required CIN participants to adopt its version of Epic and offered an 85 percent subsidy for the transition.

Executives reported mixed success persuading CIN participants to adopt the health system's enterprise-wide EHR. One executive reported that only 50 percent of their CIN's participants transitioned to the EHR (Azalea University Health System); another reported that all but one participant made the transition (Willow Clinics). In contrast, an executive from a multistate health system (Chestnut Clinics) reported that most CIN providers chose not to adopt the health system's EHR.

Table 2. Features of Clinically Integrated Networks

Strategy	Infrastructure Support	Clinical Integration	Accountability
Providing practice management services	X		
Subsidizing the cost of adopting enterprise-wide EHR	X	X	
Implementing common guidelines and protocols		X	
Conducting quality measurement and feedback		X	X
Encouraging colocation of providers		X	
Providing for health information exchange		X	
Allocating incentive payments to reward quality and value			X
Using tools to steer care toward high-value providers			X
Addressing noncompliant providers			X

Clinical Integration

Health system executives report that their CINs used multiple strategies to promote clinical integration, including implementing common clinical protocols, measuring performance of and providing feedback reports to physicians, colocating practices, and requiring participation in health information exchanges.

Common clinical protocols. Several executives reported using common clinical protocols within their CINs to standardize care. In nearly all cases, CIN participants codeveloped their protocols using standing committees and often posted protocols on their CIN's public website. Executives in four health systems (Willow Clinics, ElmCare, Magnolia University Health System, Maple Health System) reported that CIN participants are obligated to follow clinical protocols, and executives in two health systems (ElmCare, Willow Clinics) noted that participants can be excluded from the CIN if they fail to adhere to the protocols. Although other health system executives did not report the use of common protocols, they noted that their EHRs contained clinical decision support tools, which are often derived from existing clinical protocols.

Quality measurement and feedback. Aside from using common protocols, executives reported implementing extensive quality measurement efforts and providing feedback reports to their CIN participants. Several executives described committees tasked with selecting quality measures, and, in at least one case, they used a wide variety of inputs to select measures (including payer contracts and regional care quality and health care improvement collaboratives). Some executives noted that gaps identified through their quality measurement efforts would directly inform CIN priorities for quality improvement (Cypress Health System). Executives in Willow Clinics and Spruce Health Care noted that CIN participants were expected to participate in quality improvement efforts.

Colocating practices. In two health systems, CIN providers were encouraged to colocate their practice with other CIN practices (Maple Health System) or in facilities owned by the health system (Spruce Health Care). This approach was viewed as a strategy to bring specialists together to facilitate coordination and was described as attempting to achieve a "practice without borders."

Health information exchange. Because not all CIN participants are able or choose to transition to

If you're going to compete in the value world, if you're going to sign up for Next Gen ACO, you can't get to improving performance unless you have a clinically integrated delivery system. The independent mom-and-pop shop of yesteryear is unmanageable for the purposes of trying to achieve the Triple Aims.

—President of CIN, Willow Clinics

a health system's enterprise-wide EHR, several CINs established a health information exchange to share health data (e.g., Spruce Health Care). Executives from Maple Health System reported that participation in the health information exchange was required for CIN participation. ElmCare was in the process of building a health information exchange even though all of its affiliated practices were on Epic's Care Everywhere network, which is designed to share information across different instances of Epic. An ElmCare executive noted that its health information exchange would "aggregate patient information much more effectively than what [was possible] with the native functionality that's built into the EHRs."

Accountability

Given the potential for generating savings or minimizing losses in their risk-based contracts, most health systems developed strategies to ensure the accountability of their CIN participants. These strategies included procedures for linking incentives to performance, sharing unblinded performance data, influencing future referrals to steer patients to high-value providers, and decertifying noncompliant providers.

Linking incentives to performance. Executives described several approaches to allocating incentive payments to improve the accountability of CIN participants for quality and cost. Cypress Health System and Maple Health System directly linked incentive payments to a group's performance on quality measures or to "population health value-added" activities, whereas Sequoia Health was in the process of redesigning its allocation method to better reward value. Cypress Health System provided unblinded individual physician performance data to all CIN participants to improve accountability.

Steering care to high-value providers. Several executives reported taking steps to change referral patterns within their networks using EHR-based tools. Executives at Willow Clinics reported that they planned to use cost and outcomes data to highlight providers that offered "high-value" care so that CIN participants might steer more of their patients to these providers.

Another executive described efforts to modify their health system's EHR-based referral tool to include CIN affiliation data (Maple Health System). Intended to minimize "leakage" from the network, this strategy assumed that accountability for patient care was better ensured when all care is delivered within the CIN with its agreed-upon clinical protocols.

> **Goals for clinical targets, along with medical cost improvement targets, will be annually reviewed and updated by the physician-led governing board of [the CIN]. Annual performance review by the governing board will determine the allocation of the surplus/deficit to the network participants.**
>
> *—Vice president, payer contracting, Maple Health System*

Decertifying noncompliant providers. Although the FTC expects that CINs will establish a system to ensure the accountability of their participants, the ways that CINs approached this responsibility varied. For example, executives at Willow Clinics reported developing a process to decertify CIN participants that failed to meet participation requirements (including the use of care pathways). At Magnolia University Health System, continued participation in the CIN was explicitly linked to meeting performance standards. However, executives at other health systems (e.g., Spruce Health Care) reported that some CIN participants could be exempt from selected requirements (such as participation in quality improvement projects) if the practice's share of at-risk patients was sufficiently small or if the project was too burdensome for small practices.

Discussion

In this report, we describe (1) the development of CINs within 11 health systems across four states, (2) the rationale for using a CIN to deliver health care, (3) differences in the organization and governance of CINs, and (4) how health systems use CINs to compete in local health care markets.

We have the opportunity to look at variability in most providers and see that the variability is supported by better outcomes or not. If they're not, then we have to go [with the] lowest cost alternative. We have the teeth as a CIN to be able to make that happen.

—President of CIN, Willow Clinics

Although we can identify an example of each of the FTC-expected attributes across the 11 CINs we examined, not every CIN would necessarily survive FTC scrutiny of its current structure, operations, and features. Yet some of the strategies described by executives were novel and not anticipated by the FTC, such as attempting to achieve "practice without borders" by encouraging colocation, linking physician incentive payments to performance, and providing practice management services to smaller and less sophisticated practices.

The CINs we studied used strategies designed to meet FTC expectations in the areas of infrastructure support, clinical integration, and accountability. Virtually all executives regarded interoperable health IT as critical to coordination of care and thus to their CIN's success. Most health systems encouraged CIN participants to adopt their enterprise-wide EHR, and some provided subsidies for the transition. Some CINs developed common clinical protocols, established cost and quality targets, undertook quality improvement initiatives, compiled and shared cost and quality data across the network, and developed tools to steer patients to high-value providers in the CIN.

We found mixed evidence on whether CINs had a formal process for reviewing provider performance and removing inefficient providers. For several health systems, all employed providers were included in the CIN—without differentiation relative to performance. The assumption could be that all physicians practicing within the health system are efficient providers because of internal health system requirements. Other CINs had credentialing or nominating committees of the board responsible for member requirements, although no specifics were provided. Some CINs had a formal process to decertify providers that fail to comply; other executives did not mention a formal process or reported that exemptions were allowed.

Our data did not clearly indicate whether CINs required their participants to observe care guidelines. Standardization of care across CINs should improve quality—although there is currently no evidence for that—and the coordination measures CINs put in place should reduce total costs of care. However, our findings raise questions about just how much standardization and coordination are actually going on within CINs and whether the average CIN as currently operating would meet FTC expectations for care integration and coordination (Swisher and Gordon, 2014).

Structurally, some health systems are operating the CIN *within* their health system, whereas others are creating separate legal entities; however, this seems to be a distinction without a difference because the specific features of CINs did not differ by organizational type. The CIN governing boards all included heavy physician participation (although criteria for representation on the CIN boards varied widely). Where there is no separate legal entity, however, the health system (and its governing board) might have more control over the operation of the CIN.

Overall, health systems are using CINs to adapt to competitive environments in several ways. CINs allow health systems to (1) extend geographic reach without the capital and administrative costs of merger and acquisition, (2) move care to lower-cost settings and lower-cost providers while retaining referral pathways for their tertiary facilities, (3) better manage financial risk with larger patient populations, and (4) improve population health and quality of care across a variety of providers. Health systems might also increase negotiating leverage with large payers while reducing contracting burden. Independent practice physicians might benefit from increased EHR access, practice management support, and purchasing discounts and/or access to managed care contracts while retaining business independence.

The results presented here offer an initial description of CINs that have been implemented in

rapidly changing health care markets. Health systems face challenges in realizing the FTC's vision. The health systems must grapple with two key trade-offs. First, health systems are attempting to balance the need for clinical integration with the desire of physicians to remain independent. Second, the FTC is looking to CINs to lower prices, but health systems are forming them, in part, to gain leverage to negotiate more effectively. In fact, according to some analysts, "the predominant benefit providers realize through CIN participation is the ability to engage in joint contracting and negotiate better payment while focusing on improving quality" (Hathaway et al., 2013). Health system executives might argue that the aim is not to leverage the highest-paying contracts for providers but to secure more-favorable rates according to the CIN's ability to bring additional value.

Prior research on competition in health care markets has focused on mergers and acquisitions (Baker, Bundorf, and Kessler, 2014; Machta et al., 2019); however, CINs are an alternative approach to expansion. In particular, CINs allow independent practice physicians to share some of the strengths of a larger health system without capital outlays or administrative burden to either party. But it is not clear how CINs ultimately will affect the practice and price of health care. They might reduce variation in practice across communities and improve health outcomes. However, as independent practice physicians affiliate with health systems for contracting purposes, CINs could have the same negative impact as have traditional mergers and acquisitions: an increase in prices without necessarily improving the quality of care.

Our study has four key takeaways:

1. CINs are a significant but under-the-radar feature of health care markets. There is no standardization of how CINs are structured or function, and there is only theory, but no evidence, of a positive effect on quality. CINs bear watching because their effects on price and quality are potentially as important as the effects of mergers and acquisitions.
2. Until now, almost nothing has been documented in the empirical literature that addresses the *how* and *why* of CINs. We know from prior literature that CINs exist, but we know nothing about what they actually look like on the ground.
3. CINs are potentially a way for health systems to improve their negotiating leverage with payers, which should be a cause of concern for the FTC and the larger health care community. Health care consolidation via merger and acquisition is considered a threat, but is it possible that the threat is actually greater than recognized if less-visible affiliations (such as CINs) also threaten to drive up health care costs?
4. In theory, quality should improve with the alignment of health care organizations, but there is no evidence to support the assertion that CINs are improving quality. If we do not monitor CINs, and if researchers cannot even document in secondary data that they exist, how can we hope to evaluate whether a potential increase in prices is offset by better quality of care?

There is currently no systematic monitoring of CINs, except for those that operate under the Medicare Shared Savings Program (Scheffler, Shortell, and Wilensky, 2012). Nor are CINs included in current measures of market consolidation—not the least because they are difficult to identify from secondary sources. Regulators and researchers should consider these facts as we debate the impact of health care consolidation. Our analysis suggests that perhaps there should be more scrutiny of CINs as they develop: As with mergers and acquisitions, unwinding CINs after-the-fact may prove to be difficult and potentially disruptive to continuity of patient care.

References

Abrams, Melinda K., Rachel Nuzum, Mark A. Zezza, Jamie Ryan, Jordan Kiszla, and Stuart Guterman, "The Affordable Care Act's Payment and Delivery System Reforms: A Progress Report at Five Years," New York: Commonwealth Fund, May 7, 2015.

Azar, Alex M., II, "Remarks on Value-Based Transformation to the Federation of American Hospitals," Washington, DC.: U.S. Department of Health and Human Services, March 5, 2018.

Baker, Laurence C., M. Kate Bundorf, and Daniel P. Kessler, "Vertical Integration: Hospital Ownership of Physician Practices Is Associated with Higher Prices and Spending," *Health Affairs*, Vol. 33, No. 5, May 2014, pp. 756–763.

Casalino, Lawrence P., "The Federal Trade Commission, Clinical Integration, and the Organization of Physician Practice," *Journal of Health Politics, Policy and Law*, Vol. 31, No. 3, June 2006, pp. 569–585.

Donovan, Thomas A., "FTC Further Defines Clinical Integration," K&L Gates, March 25, 2013. As of February 29, 2020: http://www.klgates.com/ftc-further-defines-clinical-integration-03-25-2013/

Ezzell-Nelson, Melanie, "Population Health Management in a Clinically Integrated Network: Automation Yields a Wealth of Benefits for IT, Administrators, Clinicians and Patients," *Health Management Technology*, Vol. 35, No. 1, January 2014, pp. 18–19.

Federal Trade Commission, "Competition Advisory Opinions," webpage, undated. As of February 29, 2020: https://www.ftc.gov/tips-advice/competition-guidance/competition-advisory-opinions

———, "Norman Physician Hospital Organization," webpage, February 13, 2013. As of February 29, 2020: https://www.ftc.gov/policy/advisory-opinions/norman-physician-hospital-organization

FTC—*See* Federal Trade Commission.

Garcia, David R., and Helen C. Eckert, "There Is Potential Federal Inconsistency over ACOs," *Law360*, June 16, 2015.

Grauman, Daniel, John Harris, Idette Elizondo, and Sean Looby, "Developing a CIN for Strategic Value," *Healthcare Financial Management*, Vol. 68, No. 7, July 2014, pp. 52–58.

Greenstein, Jay S., "Commentary: Clinically Integrated Networks and Chiropractic," *ACA News*, Vol. 10, No. 7, September 2014, pp. 24–25.

Guest, Dorrie, Danna Campbell, Sara Larch, and Bob Williams, "Taking Smart Steps Toward Clinical Integration," *Healthcare Financial Management*, Vol. 69, No. 3, March 2015, pp. 56–64.

Hathaway, Lisa A., Rachel D. Ludwig, Peter A. Pavarini, and Michael F. Schaff, "Clinically Integrated Networks Give Providers and Payers an Opportunity for Transformative Collaboration," *BNA Health Law Reporter*, Vol. 22, No. 48, November 21, 2013.

Heeringa, Jessica, Anne Mutti, Michael F. Furukawa, Amanda Lechner, Kristin A. Maurer, and Eugene Rich, "Horizontal and Vertical Integration of Health Care Providers: A Framework for Understanding Various Provider Organizational Structures," *International Journal of Integrated Care*, January 20, 2020.

Kaplan, Alan, and Brad Guest, "Clinically Integrated Networks: Vision, Purpose and Development," *Physician Executive*, Vol. 38, No. 2, March–April 2012, pp. 60–62, 64, 66.

Kumar, Pooja, and Edward Levine, "Clinically Integrated Networks: Can They Create Value?" McKinsey, June 2016. As of February 29, 2020: https://healthcare.mckinsey.com/clinically-integrated-networks-can-they-create-value

LaPointe, Jacqueline, "Examining the Role of Financial Risk in Value-Based Care," RevCycleIntelligence, July 25, 2016. As of June 27, 2020: https://revcycleintelligence.com/news/examining-the-role-of-financial-risk-in-value-based-care

Machta, Rachel M., Kristin A. Maurer, David J. Jones, Michael F. Furukawa, and Eugene C. Rich, "A Systematic Review of Vertical Integration and Quality of Care, Efficiency, and Patient-Centered Outcomes," *Health Care Management Review*, Vol. 44, No. 2, April–June 2019, pp. 159–173.

Malcoun, Tony, and Joe Damore, *Ready, Risk, Reward: Aligning for Success with the Second Generation of Clinically Integrated Networks*, Charlotte, N.C.: Premier, March 26, 2018.

Marino, Daniel J., William Faber, and Meredith Duncan, "Patient Access Innovations: Integrating Patients Within the System of Care," *Healthcare Financial Management*, Vol. 69, No. 12, December 2015, pp. 48–54.

Moore, Keith D., and Dean C. Coddington, "A Progress Check on 7 Aspects of CINs," *Healthcare Financial Management*, Vol. 70, No. 2, February 2016, pp. 78–80.

Ohlhausen, Maureen, "Beyond Law Enforcement: The FTC's Role in Promoting Health Care Competition and Innovation," *Health Affairs Blog*, January 26, 2015. As of June 27, 2020: https://www.healthaffairs.org/do/10.1377/hblog20150126.044035/full/

Pofeldt, Elaine, "Understanding Clinically Integrated Networks," *Medical Economics*, Vol. 93, No. 3, February 10, 2016, pp. 41–44.

Redding, John, "Achieving Clinical Integration," *Healthcare Financial Management*, Vol. 67, No. 11, November 2013, pp. 56–58, 60.

Ridgely, M. Susan, Sangeeta C. Ahluwalia, Ashlyn Tom, Mary E. Vaiana, Aneesa Motala, Marissa Silverman, Alice Kim, Cheryl L. Damberg, and Paul G. Shekelle, "What Are the Determinants of Health System Performance? Findings from the Literature and a Technical Expert Panel," *Joint Commission Journal on Quality and Patient Safety*, Vol. 46, No. 2, February 2020, pp. 87–98.

Ridgely, M. Susan, Erin Duffy, Laura Wolf, Mary Vaiana, Dennis Scanlon, Christine Buttorff, Brigitt Leitzell, Sangeeta Ahluwalia, Lara Hilton, Denis Agniel, Amelia Haviland, and Cheryl L. Damberg, "Understanding U.S. Health Systems: Using Mixed Methods to Unpack Organizational Complexity," *eGEMs*, Vol. 7, No. 1, Article 39, 2019, pp. 1–9.

Sage, William M., "Antitrust Enforcement and the Future of Healthcare Competition," in I. Glenn Cohen, Allison K. Hoffman, and William M. Sage, eds., *The Oxford Handbook of U.S. Health Law*, New York: Oxford University Press, 2017.

Schaff, Michael F., and Gregory D. Anderson, *The Nuts and Bolts of Establishing a Clinically Integrated Network*, Las Vegas, Nev.: American Health Lawyers Association, Physicians and Hospitals Law Institute, February 2, 2015. As of June 27, 2020: http://cdn2.hubspot.net/hub/345447/file-2402958872-pdf/HORNE_The_Nuts__Bolts_012315.pdf?t=1422568193753

Scheffler, Richard M., Stephen M. Shortell, and Gail R. Wilensky, "Accountable Care Organizations and Antitrust: Restructuring the Health Care Market," *JAMA*, Vol. 307, No. 14, April 11, 2012, pp. 1493–1494.

Strilesky, Michael, "The 7 Components of a Clinical Integration Network," Becker's Hospital Review, undated. As of February 29, 2020: https://www.beckershospitalreview.com/hospital-physician-relationships/the-7-components-of-a-clinical-integration-network.html

Swisher, Anthony W., and Christopher H. Gordon, "The Importance of Clinical Integration to Provider Networks Under the Affordable Care Act," *Journal of Health and Life Sciences Law*, Vol. 8, No. 1, October 2014, pp. 1–28.

Turcotte, Claire, and Jim Yanci, "Clinically Integrated Networks: Business and Legal Considerations," Bricker & Eckler and DHG Healthcare, undated. As of February 29, 2020: https://www.ohiohospitals.org/getattachment/Member-Services/Personal-Membership-Groups/OSHRM/Turcotte-Yanci-Presentation.pdf.aspx

About This Report

The research described in this report was supported by the RAND Center of Excellence on Health System Performance, which is funded through a cooperative agreement (1U19HS024067-01) between the RAND Corporation and the Agency for Healthcare Research and Quality. The Center's charter is to identify, classify, track, and compare health systems in today's rapidly changing health care markets and to pinpoint the attributes that promote rapid implementation of evidence-based medicine into routine medical practice.

The content and opinions expressed in this publication are solely the responsibility of the authors and do not reflect the official position of the Agency or the U.S. Department of Health and Human Services. The work was carried out within the Access and Delivery Program in RAND Health Care.

The RAND Health Care quality assurance process employs peer reviewers, including at least one who is external to the RAND Corporation. This study benefited from two rigorous technical reviews that improved the quality of the report.

RAND Health Care, a division of the RAND Corporation, promotes healthier societies by improving health care systems in the United States and other countries. We do this by providing health care decisionmakers, practitioners, and consumers with actionable, rigorous, objective evidence to support their most complex decisions. For more information, see www.rand.org/health-care, or contact

RAND Health Care Communications
1776 Main Street
P.O. Box 2138
Santa Monica, CA 90407-2138
(310) 393-0411, ext. 7775
RAND_Health-Care@rand.org

About the Authors

M. Susan Ridgely is a senior health policy researcher at the RAND Corporation and codirects the RAND Center of Excellence on Health System Performance.

Justin W. Timbie is a senior health policy analyst at the RAND Corporation.

Laura J. Wolf is a senior research support associate at Pennsylvania State University, Center for Health Care and Policy Research.

Erin Lindsey Duffy is an adjunct policy analyst at the RAND Corporation and a postdoctoral research fellow at the Leonard D. Schaeffer Center for Health Policy and Economics at the University of Southern California.

Christine Buttorff is a policy researcher at the RAND Corporation.

Ashlyn Tom is a policy analyst at the RAND Corporation.

Mary E. Vaiana is a senior research communications analyst at the RAND Corporation.

For more information on this publication, visit www.rand.org/t/RRA370-1.

www.rand.org