Patient-centered innovation in health care organizations: A conceptual framework and case study application

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Background: Patient-centered innovation is spreading at the federal and state levels. A conceptual framework can help frame real-world examples and extract systematic learning from an array of innovative applications currently underway. The statutory, economic, and political environment in Washington State offers a special contextual laboratory for observing the interplay of these factors.
Purpose: We propose a framework for understanding the process of initiating patient-centered innovations—particularly innovations addressing patient-centered goals of improved access, continuity, communication and coordination, cultural competency, and family- and person-focused care over time. The framework to a case study of a provider organization in Washington State actively engaged in such innovations was applied in this article.
Methods: We conducted a selective review of peer-reviewed evidence and theory regarding determinants of organizational change. On the basis of the literature review and the particular examples of patient-centric innovation, we developed a conceptual framework. Semistructured key informant interviews were conducted to illustrate the framework with concrete examples of patient-centered innovation.

Key words: innovation, organizational change, patient-centered care

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Findings: The primary determinants of initiating patient-centered innovation are (a) effective leadership, with the necessary technical and professional expertise and creative skills; (b) strong internal and external motivation to change; (c) clear and internally consistent organizational mission; (d) aligned organizational strategy; (e) robust organizational capability; and (f) continuous feedback and organizational learning. The internal hierarchy of actors is important in shaping patient-centered innovation. External financial incentives and government regulations also significantly shape innovation.

Practice Implications: Patient-centered care innovation is a complex process. A general framework that could help managers and executives organize their thoughts around innovation within their organization is presented.

Patient-centered innovation is spreading at the federal and state levels. Nationally, the Patient Protection and Affordable Care Act authorizes the Department of Health and Human Services to test the patient-centered medical home (PCMH) and other innovative patient-centered models of care with the goal of improving quality and reducing cost (Reid et al., 2010). States have emerged as laboratories of innovation: They have both a financial interest in reducing costs because of their roles in financing Medicaid and a responsibility as one of the "executors" of the national objectives of improving health (U.S. Department of Health and Human Services, 2000). Because of the renewed urgency to improve quality, reduce costs to all parties, and act on Patient Protection and Affordable Care Act, legislators and policymakers are actively pursuing practical examples where localities and health care organizations are initiating patient-centered innovations. Policymakers seek examples of such innovations initiated in different contexts and of lessons that can be applied to other settings and organizations. Viewing the process of innovation through a conceptual framework can help understand the real-world examples and extract systematic learning across the many patient-centered innovation projects currently underway.

In this article, we propose such a framework for understanding the process of initiating patient-centered innovation, drawing on peer-reviewed evidence and theory regarding determinants of organizational change: leadership, strong motivators of change, organizational mission and culture, organizational strategy, organizational capability, and continuous feedback. Using an extended case study of an organization in Washington State as an example, we then illustrate the framework's applicability and usefulness for understanding the process of innovation. We begin by explicitly defining "innovation."

Defining Innovation

The term "innovation" in health care is often used to mean creativity, strategic change, or simply doing things differently (Crossan & Apaydin, 2010). However, innovation is more than these individual actions. It is a process involving several steps from the creation of a novel idea to its adoption, implementation, and spread (diffusion) within and/or across organizations (Crossan & Apaydin, 2010; Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004). Organizations typically innovate with the intention of gaining a competitive advantage—to become more efficient and to produce a higher-quality good or service (Crossan & Apaydin, 2010). Innovation can occur at different levels of an industry or organization and can be relatively (rather than absolutely) new to an industry, organization, or subunit (Crossan & Apaydin, 2010). In addition, an innovation can be technical or administrative. Technical innovations can be technology based (e.g., electronic medical record), process based (e.g., care coordination), or product based (e.g., shared decision-making tools; Crossan & Apaydin, 2010). Administrative innovations include, for example, changing workflows, organizational structure, or human resource management (Crossan & Apaydin, 2010). Understanding how an organization can foster or hinder innovations is critical for identifying practices that work, can be sustained, and spread to other organizations.

Patient-Centeredness and Innovation

Because *patient-centered* innovation, in particular, is the subject of this article, we begin by framing the relevance of patient-centeredness to the study of innovation. The core principles of the PCMH (Berwick, 2009; Davis et al., 2005; Kilo & Wasson, 2010; Wise et al., 2011) provide a foundation for defining patient-centeredness. Those principles emphasize the following attributes of patient-centered care: access, continuity, comprehensiveness, coordination and communication, cultural competency, family and person-focus, and payment alignment. Focusing on the early part of the process of innovation, this article's authors posit that the fundamental *nature* of organizational innovation is not different for patient-centered change as compared with other forms of organizational change, but the primary goal of patient-centered innovation is quite specific to the above core principles. Accordingly, although the conceptual framework offered in this article draws heavily on a synthesis of previous conceptual and empirical work on organizational change in general, we pay special attention in our case study to patient-centered innovation.

Methods

A selective review of peer-reviewed evidence and theory regarding determinants of organizational change was conducted. We used the earlier work of Cooke (1979), Greenhalgh et al. (2004), Nadler (1981), and Nembhard, Alexander, Hoff, and Ramanujam (2009) regarding organizational change as a spring board for our selected literature review and to serve as the motivating framework for our understanding of key informant interviews. Our intention is to focus on the early steps in adoption and implementation of patient-centered innovation within the broader domain of organizational change, and we have drawn on literature and theory that speaks to change—especially concentrating on examples from literature on the PCMH. We provide a high-level overview of the characteristics necessary for innovation. Therefore, we present a targeted literature review—beginning with seminal articles in organizational change and innovation and supplementing this work with searches on MEDLINE and ISI Web of Knowledge. Although there is much overlap between characteristics necessary for initiation of innovation and those needed for successful implementation and spread, we conceive of the processes as distinct—experimentation versus full-fledged implementation versus diffusion (Alexander & Hearld, 2011; Helfrich, Li, Sharp, & Sales, 2009).

For the ISI Web of Knowledge search, we began with a combined search of the terms “innovation” and “healthcare/health care,” yielding 1,655 articles. We refined the search further by combining the former search with the factors identified as important for change in the early work of Cooke (1979), Greenhalgh et al. (2004), Nadler (1981), and Nembhard et al. (2009). The following terms were used and yielded the number of articles in parentheses: organizational culture or culture (88), leadership (123), continuous feedback (38), organizational learning (24), and patient centered care (28). Each article was read by the two senior authors, and key learnings were distilled from discussions with the project team. We choose the selected articles because they were helpful in framing organizational change and innovation. We further supplemented these articles through a snowball approach of reviewing article bibliographies. Although we may have missed some articles, we do not think they would have changed our conceptual framework significantly but rather would provide more support for our proposed framework. On the basis of that literature review–and in particular, examples of patient-centric innovation—the authors developed a conceptual framework.

Semistructured key informant interviews were conducted to illustrate the framework with concrete examples of patient-centered innovation. Each semistructured key informant interview lasted 45–60 minutes. Interviews were conducted in person, recorded, and then transcribed by a third-party service. To capture the perspectives of both the executive leadership of the organization and the practice site level leadership and providers, we selected informants from each level.

At the provider organization level, we interviewed a senior medical leader and a senior administrative leader. At the practice level, two primary care practice sites (“innovator” and “comparison”) were selected by the organization’s executives based on their patient-centered care activities. Both the “innovator” and “comparison” sites are engaged in patient-centered innovation; however, the “innovator” sites were judged by the parent organization’s executives to be further along in implementation. Although this was difficult to measure objectively, structurally both practices were similar with respect to electronic medical record implementation, use of shared decision-making tools, and provider compensation. However, the innovator had fewer full-time equivalents than the comparison site, 2.6 versus 13, and had a different revenue stream than the comparison site. Overall, the innovator and comparison site were very similar, and we draw comparisons between the clinics to illustrate how the framework can help identify differences or similarities between the two in the process of innovation. We do not intend for the case study to validate the framework but rather illustrate the framework in a real-world practice. We think this could help managers and executives organize their thoughts around innovation within their organization. At each practice site, we interviewed the medical leader, quality improvement leader, administrator or manager, and a primary care provider without one of these administrative roles.

Theory and Conceptual Framework

Organizations are complex systems with many interdependent parts. They exist in a broader environmental context that influences their functioning by presenting constraints, opportunities, demands, and resources (Nadler, 1981). Health care organizations pose special challenges to innovation in that they are often fragmented and employ many different professional groups, each with its own professional views, norms, and socialization (Chreim, Williams, Janz, & Dastmalchian, 2010). Recognizing the complexity of organizations, several researchers have highlighted the need to use multilevel, multidimensional models for studying organizational innovation (Crossan & Apaydin, 2010), managing change (Nadler, 1981), and implementing quality improvement (Ferlie & Shortell, 2001). Figure 1 depicts a proposed framework and illustrates the dynamic interaction of leadership (Crossan & Apaydin, 2010; Ferlie & Shortell, 2001; Nadler & Tushman, 1990), strong motivators of change (Cooke, 1979; Crossan & Apaydin, 2010; Ziegenfuss, 1991), organizational mission and culture (O’Brien et al., 1995; Phills, 2005), organizational strategy (Nadler

Figure 1

A framework for patient-centered innovation in health care

& Tushman, 1990; O'Brien et al., 1995; Phills, 2005), organizational capability (Crossan & Apaydin, 2010; O'Brien et al., 1995), and continuous feedback (Nembhard et al., 2009) in explaining the initiation and successful adoption of patient-centered innovation. In particular, the framework allows for flexibility in its application to different health care organizational structures.

Leadership

Superior organizational leadership is the first requirement for initiating innovation. Leaders craft a vision for the proposed innovation, energize and motivate the organization's members to innovate (Bommer, Gregory, & Rubin, 2005), and enable innovation on the ground by establishing emotional and structural support (Nadler & Tushman, 1990). They also serve as role models, provide inspiration, shape organizational vision and strategy, and establish the organization's structural components such as effective management teams and processes. The ability of executive leaders to effectuate change is extended through the senior management team, middle managers, and the development of leadership across professional groups (e.g., administrative, clinical; Chreim et al., 2010; Nadler & Tushman, 1990). Thus, leadership is translated into action through change agents at all levels (Ferlie & Shortell, 2001), both horizontally and vertically (Chreim et al., 2010), and is not dependent on any one person within an organization (Chreim et al., 2010).

The senior leader must have the technical and creative skills necessary to direct innovation. A tolerance for ambiguity, unconventionality, proactivity, and change itself are equally necessary to create a culture supportive of innovation. Other characteristics of innovative leaders include self-confidence, determination to succeed, and personal initiative (Crossan & Apaydin, 2010). Importantly, although innovation may begin with senior leadership, its impact can be enhanced or attenuated by strong internal or external motivators such as employee satisfaction, financial viability, or public policy.

Strong Motivators of Organizational Innovation

Motivators of innovation include both external and internal factors. Five types of external environmental factors are economic (competition and organizational survival), cultural (shift toward patient-centered care), political (health reform legislation), ecological (community initiatives to improve public health), and technological (advancements in electronic medical records; Cooke, 1979). External factors are often excluded from organizational frameworks for change because, although important, they are perceived to be beyond the organizational sphere of influence (Crossan & Apaydin, 2010). However, the collaborative nature of community-based health care organizations such as community health centers and the strong force of organized industry on the political and economic environment demonstrate that organizations can collectively have tremendous impact on their environmental context. Internal motivators include individual compensation and promotion systems and transfer pricing mechanisms that seek to align financial incentives with certain desired behaviors, as well as knowledge and organizational resources (Crossan & Apaydin, 2010). Recognition programs are another internal motivator of organizational innovation.

Organizational Mission and Culture

An organization's mission represents its source of direction, inspiration, and motivation for staff, funders, stakeholders and supporters and is set by organizational leadership (Phills, 2005). Culture sets the tone for how the organization operates. It includes beliefs, values, norms and behaviors, which are reflected in the organization's mission and goals (O'Brien et al., 1995). Organizations that have a learning culture, where learning and experimentation occur at all levels, tend to foster innovation (Rushmer, Kelly, Lough, Wilkinson, & Davies, 2004). Individuals in such organizations initiate change proactively, as opposed to solely reacting to external pressure or direction. These organizations tackle barriers and improve processes that hinder the delivery of patient care (Rushmer et al., 2004). Spurred by innovative leadership willing to experiment and take risks, learning organizations have a tolerance for mistakes, are outward-looking, and avoid complacency (Rushmer et al., 2004). Celebration of success, belief in human potential, and openness and trust all support innovation among employees who then feel that open questioning is valued within the organization (Rushmer et al., 2004).

Organizational Strategy

A health care organization's strategy is driven by its estimation of alternative futures, its overall ability to perform and to attain its targeted outcomes, and its ability to compete with other organizations through its market position (Phills, 2005). Although its behavior is constrained by economic realities, an organization's values, including social values, also shape its strategies.

Setting strategy involves making choices about the organization's goals, policies and actions—essentially, how it will position itself in the health care marketplace (Phills, 2005). For organizational strategy to be effective, the organization must have clarity of purpose, specific change objectives, and coherent strategic and operational plans.

Organizational Capability

Organizational capability refers to structural elements such as size, organizational design, coordination mechanisms, and robust information systems that communicate relevant data and processes to facilitate continuous learning, task design, and human resource management (Cooke, 1979; Crossan & Apaydin, 2010; O'Brien et al., 1995). Technological elements include availability; adoption; and diffusion of relevant medical, informational, and administrative technology. Furthermore, the ability to initiate and sustain change in times of stress and rapid change is impacted by an organization's adaptive reserve. Adaptive reserve expresses itself as a "relationship infrastructure, or alignment of management functions, in which clinical care, practice operations, and financial functions share and reflect a consistent vision; facilitative leadership; teamwork, sense-making; a positive work environment; and a culture of learning" (Nutting et al., 2010).

Continuous Feedback and Organizational Learning

The dynamic nature of innovation requires feedback loops between organizational leadership and motivators for change and between changing organizational strategy and organizational capability (Crossan & Apaydin, 2010). Feedback is required for adjustment of strategic, cultural, structural, or technological dimensions of the organization. For example, the plan-do-study-act cycle in quality improvement methodology illustrates one concrete approach to systematic and continuous feedback (Nembhard, 2009).

Findings

The primary determinants of implementing and sustaining innovation within organizations are the following: (a) effective organizational leadership at all levels (Ferlie & Shortell, 2001) with the necessary technical and professional expertise and creative skills (Crossan & Apaydin, 2010), (b) strong motivators to change (external and/or internal drivers; Cooke, 1979; Crossan & Apaydin, 2010;

Ziegenfuss, 1991), (c) organizational mission that is clear and internally consistent (Phills, 2005; Rushmer et al., 2004), (d) aligned organizational strategy (Phills, 2005), (e) robust organizational capability having necessary structural and technological elements (Crossan & Apaydin, 2010; O'Brien et al., 1995), and (f) continuous feedback (Nembhard et al., 2009) and promotion of ongoing organizational learning (O'Brien et al., 1995; Meade, 2005).

The hierarchy of actors shaping internal organizational change comprises the individual, the group or team, and the organization, and robust innovation requires the planned interplay of all three sets of actors (Ferlie & Shortell, 2001).

Case Study of a Provider Organization

We apply the conceptual framework for innovation to an extended case study of a large provider organization. We do not intend for this example to validate particular elements of the framework, rather we aim for the framework to give structure to a real-world example of patient-centered innovation and to help managers and executives understand the process of innovation within their organizations. The organization presented is part of a larger study of patient-centered innovations in Washington State. The larger study includes five health plans and five provider organizations selected for their diversity in culture, organizational structure, delivery system integration, and market environment. Results of the larger study are presented elsewhere (Reed et al., 2012). The focus of our larger study was to examine patient-centered innovation in these organizations to understand organizational change and identify themes across the organizations with regard to specific strategic goals and objectives, strategies and activities, and barriers and facilitators to achieving those goals and objectives. Although overlapping in purpose, the larger study compares the specific components of the framework across the organizations rather than validating the framework. The presented case study is meant to provide an example of how the framework could be useful to health care executives.

The provider organization illustrated here is a not-for-profit, multihospital integrated delivery system with an aligned multispecialty group practice with several sites throughout greater Seattle. It was one of the first health care organizations to create a PCMH prior to the establishment of the Washington Patient-Centered Medical Home Collaborative (Washington State Health Care Authority, 2009). Like other integrated health systems in the Puget Sound region, the organization has adopted Lean thinking as a management framework (Young & McClean, 2009). The primary care practice sites presented here are both part of a family practice residency training program but differ in size and focus.

Applying the Framework: Empirical Evidence From a Provider Organization

Leadership

A relatively recent CEO change at the provider organization level has made the organization more receptive to innovation and shifted the organizational focus from predominantly clinical to patient-centered. Prior to the change, there was little explicit commitment or interest in addressing primary care or community health. A senior medical leader stated that the new CEO wants the organization to grow in order to survive and also wants to "help innovate and create new processes that naturally can be mimicked [by other organizations]." He has created a division of innovation and health care delivery to coordinate innovation and clinical projects around redesigning health care delivery. The same senior medical leader stated that, although the change in emphasis has been met with some resistance, the CEO has hired other executives supportive of this vision who want to "put it into practice" and who "can deal with the naysayers and the finance people that say, 'It'll never work.'" The CEO also emphasized the need to be more responsible to the community regarding the cost of services. Moreover, organizational leadership has a vision that care for its patients involves much more than what happens within the institution's four walls.

The role of organizational leadership in delineating goals that were adopted by the medical practices surfaced as a crucial determinant of patient-centered innovation in this provider organization. For instance, the medical leader at the innovator site described how his objectives of delivering good patient care, lowering the cost of care for each patient, and demonstrating accomplishment of those goals came from "higher ups" who had a vision for delivering care via the PCMH. His objectives were supported by the CEO and Vice President, who are very supportive of primary care: "They really see it as being the right thing to do and a lot of the future of medicine in general." Furthermore, these goals were acted upon by providers at this practice site, as shown by one provider's initiative in developing a system to control and track the coordination of referrals. Since initiating this innovation, providers have seen an increase in routine feedback on referrals. At the comparison site, the medical leader stated the clinic's objectives of maximizing the use of their electronic medical care system using team-based care to improve patient care and providing more timely feedback to patients about their care were also selected by the parent organization, because organizational leaders think the PCMH is important, a value shared by the clinic leadership.

Strong Motivators of Change

The federal health care reform legislation and the organization's realization that the current fee-for-service (FFS) payment model is unsustainable are significant external motivators for the provider organization to change from an acute care focused organization to one with a focus on integration and care coordination. For example, one executive stated that "The financing of health care just isn't going to be the same tomorrow as it is today, and we have to be prepared for that. [The organization] is working very, very hard to reduce its cost structure for delivering the same or greater service. In 2009, [it] eliminated $100 million from its expenses." This sentiment is particularly keen in the innovator practice site, where the medical leader stated that lowering the cost of care for each patient is a primary strategic priority. At the clinic level, a strong internal motivator for adopting the medical home model is a senior medical leader's vision for delivering this model of care, and a strong external motivator is the desire to make family medicine and primary care more attractive to medical students.

Another external motivator at the organization level is the trend towards consolidation, which is driving the organization to reevaluate its position in the marketplace and ask, "Are we going to be the consolidator or 'consolidatee' (Senior medical leader)?" Part of the organization's strategy is to grow its presence and consolidate, but in a way that will benefit the community's overall health.

Organizational Mission and Culture

The overall mission of the organization is to improve the health and well-being of each person served. As stated on its Web site, its vision is to demonstrate the highest-quality, best-value health care to all patients seen within the system or by its aligned providers. Its organizational values include patient-centered care, respect, caring, and compassion; teamwork and partnership; continuous learning and improvement; and leadership. A senior administrative leader described the change in organizational culture from "being a workshop for the best and the brightest" to "being patient-centered, community oriented, and fiscally responsible to the community." According to that leader, the former culture was a product of the FFS payment scheme that facilitated the focus on an acute, insured population, whereas the shift in culture is toward managing and caring about health status. As a large organization, it is challenging to align the organizational mission and culture among its several thousand employees. A senior medical leader stated many managers are fixed on staying "in the black" and keeping their jobs, and it is hard to change that mindset. As described earlier, the new CEO has hired executive level management that is supportive of patient-centered innovation.

At the practice level, a medical leader at the innovator site described the practice culture as patient centered and systems driven. A primary care provider at the innovator clinic exemplifies how a patient-centered culture plays out on a daily basis: "I would love to say I offer all my patients the same thing, but I know very well that most of them can't do it, whether that be labs or physical therapy or seeing a specialist. So you offer everything, and then reality hits, and you make a plan based on what's actually going to be viable for that patient."

A medical leader at the comparison site described the culture as a "culture of learning" and "teaching" reflective of being a residency training program. In both practice settings, progress in implementing systematic shared decision making between clinicians and patients is still slow. This shared decision-making process innovation especially calls for a mutual culture shift, as providers and their patients learn together the keys to sharing information and jointly deciding on treatment choices that are both clinically appropriate and concordant with personal values and preferences.

Organizational Strategy

On the outpatient side, a strategy for preparing for the move away from FFS is to encourage non-face-to-face patient communication such as e-mail, electronic communication, and phone communication. Although these modes of communication are not currently directly reimbursed or rewarded within the current FFS model, a senior administrative leader describes the hope that there will be a way to finance it, whether as part of a new FFS e-mail visit or a part of a care management provider incentive.

On the inpatient side, the strategy to reduce cost is to improve postacute care coordination. As described by a senior administrative leader, the organization is setting up systems to ensure a smoother transition to the outpatient setting or to primary care providers. In this way, patients can be prepared with education about how to manage their disease before discharge, and providers can proactively follow up with their patients after discharge "in the patient's world, not the provider's world," thus supporting the organization's ultimate goal to decrease admissions and unnecessary emergency department (ED) visits.

Another way of extending care beyond the traditional health care setting is to establish community partnerships. According to a senior administrative leader, the provider organization recognizes that it cannot do everything for everyone and that collaborating with community groups will benefit the patient. The organization plans to create an infrastructure to manage patients receiving care involving skilled nursing facilities, assisted living, home health services, or durable medical equipment. It will create residential care teams of physicians and associated nurse practitioners that will treat patients wherever they live outside of the inpatient care setting (e.g., home, skilled nursing facility).

Forming partnerships specifically with public entities is equally important and requires more time and deliberation than other partnerships but adds considerable value to the provider organization and ultimately to patients. A senior administrative leader stated that the organization is focused on delivering superior acute care and did not "care a whole lot" about community/public resources and partnerships and is venturing into uncharted waters. However, as an organization concerned about health status, it is increasingly concerned about sustaining these partnerships and resources. Although some of these potential partners may be competitors in certain domains, they are experts in delivering services in other areas. These entities range from large formal institutions to "Mom and Pop" adult family homes, transportation services, Meals on Wheels, or the churches. In addition, a patient's more immediate social support system, such as neighbors and friends, is included in community resources because, for example, as part of a care plan, knowing that a homebound patient will have someone to bring them groceries is crucial in ensuring good clinical outcomes. Therefore, a strategy of the provider organization is to align its interests and integrate with these organizations in noncompetitive areas for the betterment of the patients. These are uncharted waters for the organization and health care delivery in general.

Organizational Capability

According to a senior medical leader and senior administrative leader, executing the strategy will require realigning the direction and incentives throughout the organization, but no new resources. As a senior administrative leader said, "[This strategy is like] trying to change the direction of an aircraft carrier with an oar or trying to change the direction of a battleship in the bathtub." This difficulty is exemplified at both the innovator and comparison practice sites, where medical leaders and designated quality improvement leaders stated they did not have sufficient resources to accomplish their goals. Administrators at these clinics stated they needed more primary care providers, clinical support staff, and physical space. Although these resource gaps can potentially serve as a barrier to accomplishing the organization's goals, at this particular organization, this apparent scarcity is more reflective of an old culture centered on acquiring the newest technology or gadget. Understanding that history can help elucidate ways to overcome the underlying cultural barriers.

At the comparison site, a medical leader described the challenge of preparing the cadre of physicians with the principles of the PCMH while living with the reality these new doctors may face in rural, urban, or under-resourced settings or in working in the FFS volume-based system. For example, although there is interest in the PCMH model, some residents have expressed to the medical leader their concerns about not being able to pursue most family medicine jobs if they are ill-equipped to manage a large volume of patients. Thus, the medical leader struggles to find a balance between training new providers in the PCMH model while acknowledging and giving them the skills they need to function in the prevailing volume-based system.

Continuous Feedback and Organizational Learning

Embracing one of the key attributes of Lean production principles (Young & McClean, 2009), this organization has instituted an online tool to encourage frontline staff to find ways to innovate and improve patient care. A senior medical leader stated that this sends the message that although executive leadership is "'steering the ship,' the employees are the 'engine.'"

At both practice sites, financial performance is compared with other practices within the organization by the administrative leader who can easily generate financial reports in real time. The provider organization conducts patient experience surveys, but results are not disaggregated at the practice site level. Clinical performance for some preventive screening and chronic disease measures is monitored at the innovator site. Reports are generated by a part-time data analyst who works with clinicians to check the quality of data used to run the reports and to ensure the reports are consistent with current clinical guidelines. In addition, providers use the reports to identify patients who are overdue for exams and to proactively reach out to them to schedule visits.

According to a primary care provider at the innovator site, a major barrier to active outreach is that providers cannot pull these reports by themselves or generate a list of their patient panel but must depend on the analyst. Another barrier is being dependent on ED and specialist colleagues to notify them if one's patient has been seen in those settings. However, as part of a new project, one of the health plans notifies the clinic in real time if a patient on its panel has gone to the ED or has been admitted to a hospital anywhere within or outside the system. The goal is for the providers to follow up with the patient soon after discharge. Another health plan also notifies the clinic of patients who have visited the ED via monthly summary reports; the leaders at this practice site are working with the plan to get this information in a more timely manner.

Practice Implications

Patient-centered care innovation is a dynamic process in health care organizations. This article has presented a conceptual framework that integrates the central forces shaping organizational change: environmental context, strong internal and external motivators for change, a supportive organizational mission and culture, clear and coherent strategy, and organizational capability. The framework highlights the importance of continuous feedback mechanisms within the innovating organization—especially at the nexus between strategy and organizational capability. This could help managers and executives organize their thoughts around innovation within their organization. The statutory, economic, and political environment in Washington State offers a special contextual laboratory for observing the interplay of these factors.

By using the conceptual framework to conceptualize the process of patient-centered innovation, breakdowns in the process are more easily identified and solutions are more easily generated. For example, the strategy of coordinating care to accomplish the goal of delivering good patient care and lowering the per-patient cost of care is chronically challenged by breakdowns in communication between primary care providers and specialist colleagues, EDs, and out of network providers. Although an ongoing challenge at the provider organization, at the innovative clinic level primary care providers tried to overcome this barrier by proactively communicating with their colleagues about mutual patients and asking specialist and the ED to copy them on clinical notes on mutual patients. The success of this virtual care coordination is dependent on medical records' identification of the patient's primary care provider, a field incorporated into electronic medical record by the parent organization. To streamline coordination processes and to generalize the practice of copying colleagues on clinical notes to other departments, the organization is developing a referral communication policy.

Our interview discussions and the evolution of regional health care markets in Washington State imply that organizational capability to innovate is significantly enhanced by electronic clinical information systems. Linkage of clinical and economic information is still at an embryonic stage of development across all the organizations, but there is emerging evidence of better coordinated care among primary care, specialty care, inpatient, and emergency room care through use of a common electronic medical record.

The framework has several limitations. First, it suggests a sequential process leading to the patient-centered innovation. In reality, innovation is a dynamic, nonlinear process with different components occurring at the same time. Second, we do not discuss the transition between components because our main goal is to present the overall innovation framework, rather than to probe relationships among different components. Third, the model is based on a selective literature review and needs further application in the field to determine its accuracy and relevance for health care organizations, especially as they face a higher "bar" in innovation with care models that are truly patient centered. The latter form of care truly challenges current paradigms. That said, the model's simple structure allows one to distill the innovation process into its most important components. In summary, this article has articulated a framework for understanding the adoption and early implementation of health care organizational innovation. Using Washington State as the environmental context, one observes the crucial importance of leadership and motivation for change as the impetus for innovation.

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