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Integration and the Practice of Medicine: A Case Study

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ABSTRACT

How do medical practitioners integrate what they know about patients? Having access to information or knowledge about patients is an integral part of how medical practitioners provide quality services to patients. However, not all knowledge about a patient rests with one practitioner such as an internist, other healthcare practitioners such as specialists, nutritionists, or physical therapists may know something that might be integral to patient care. Most medical facilities from doctor's offices to hospitals are not well organized to enable the integration of patient knowledge by healthcare professionals. Integrating patient knowledge is becoming increasing important as changes in the healthcare system in the United States take effect. By patient knowledge we mean information about what might be wrong with a patient, treatment options for a patient, or simply general knowledge about a patient's wellbeing. Using existing theory from the fields of strategy, management, and innovation to develop a theoretical framework for integration in healthcare. Then we use a case study to illustrate some best practices for overcoming the barriers to knowledge integration in the practice of healthcare.

Integration and the Practice of Medicine: A Case Study

The central role of knowledge in management, innovation, and organizational strategy has been well established with theories of the firm and scholarly focus on innovation (Leonard-Barton, 1995). From this work we know that knowledge can be sticky, hard to move, and often tied up in a work context or practice (Lave and Wenger, 1991; Szulanski, 1996; von Hippel, 1994). Research also suggests that in order to create new products or services and drive new initiatives across organizations that knowledge needs to be shared across different parts of organizations (e.g. Dougherty, Borrelli, Munir and O'Sullivan 2000).

The healthcare industry in the United States is changing, medical doctors and other medical practitioners who could once work efficiently on their own or at small practices are being pushed to integrate their work with practitioners at other practices and in larger healthcare systems. Examples of systems that require integration include Accountable Care Organizations and Patient-Centered Medical Homes. There is a new imperative for integration in healthcare and along with it there are new challenges.

Drawing on existing research on knowledge sharing for organizational strategy and innovation the purpose of this paper is to explore the barriers to knowledge integration in healthcare and to highlight some best practices that practitioners might be able to use to overcome these barriers. Using a case study we illustrate both the challenges of integration and we highlight some best practices for overcoming the

barriers to knowledge integration in the practice of healthcare. This case is an example of an organization that has overcome the barriers and has a clear focus on integration.

Similar to how the global manufacturing companies of the 1990s had to build functional capabilities and get different disciplines to work together in order to adapt to a changing competitive environment (Leonard-Barton et al., 1994), today's healthcare practitioners need to integrate what they know about their patients. As people work to make the healthcare system in the U.S. more efficient, new specializations in areas such as patient navigation and nursing are going to create the need for even more integration in an already struggling system. The advice given by Leonard-Barton and colleagues (1994) to the companies of the 90s was to use development projects creatively. While healthcare organizations of all sizes, from small practices to large hospital systems, are being pushed to integrate patient knowledge through electronic medical records systems, there are few new ideas about how medical professionals can truly integrate what they know about patients beyond using information technology.

The research question that guides this study is: How do medical practitioners integrate what they know about patients? Integrating patient care means that practitioners need to share knowledge about patients. We explore existing research and theory on integration. We use a case study of what we refer to in this paper as "the Center." The Center is an integrative medical practice with a focus on primary care. Integrative medicine is concerned with the holistic treatment of patients through the integration of traditional biomedical specialties such as family and internal medicine, with alternative or complementary specialties such as Chinese medicine. This is an ideal

context in which to study integration because the goal of integration in this practice is explicit. Developing an understanding of how practitioners integrate around patient care will extend existing research on knowledge integration and innovation.

This research makes the assumption that there is a need for integration in healthcare. It is important to note that not all patients may need high levels of integrated care. A healthy person may only need a general medicine doctor for the occasional check-up. However, many people especially those with chronic or acute issues as well as those with physical injuries may need some level of integrated care. By integrated care we mean someone who sees more than one type of medical practitioner.

We begin by building a theoretical framework that highlights the barriers to integrating knowledge in healthcare. Then we use this case of a medical practice with a focus on integration to highlight best practices for integration in healthcare.

THEORETICAL BACKGROUND

The emphasis on integration in healthcare is not a new theme in healthcare management. Glouberman and Mintzberg (2001: 70) explain the need to increase integration in the highly differentiated system they label "health care and disease cure." Integration has been a theme in organizational theory since work was broken down into discrete tasks to create greater efficiencies. On the practical side, the idea that integration in healthcare is challenging is unlikely to be a surprise most people who access healthcare systems. However, understanding why integration is so challenging and how some healthcare organizations have addressed this challenge is important for management research and practice.

In much knowledge intensive and innovative work, integration across different functions, departments, and specialties, is particularly important. In order to create new products or offer new services innovators need to link knowledge of possible new product characteristics that is often found in research departments with knowledge of customer needs often found in marketing departments (Dougherty, Borrelli, Munir and O'Sullivan, 2000). For some time a significant amount of research has focused on how to integrate across organizations (e. g. Lawrence and Lorsch, 1967). However, in particular types of organizations such as healthcare organizations, there remain significant challenges in the area of integration (Bohmer and Knopp, 2007).

In healthcare organizations such as medical practices and hospitals, there is a significant need to integrate patient and medical knowledge across different medical specialties, but the structure and culture of these organizations creates barriers to integration. These healthcare organizations have been characterized as "highly professionalized" (Ferlie et al 2005). In Glouberman and Mintzberg (2001) hospitals are referred to as "professional bureaucracies" (along with large law practices and universities). Glouberman and Mintzberg (2001: 70) explain that the "health care and disease cure" system has "an enormously high degree of differentiation yet rather low levels of integration," and that there is a significant need for increased levels of integration in healthcare. They further identify the coordination problem as being one in which the system "…can overwhelm the favored method of coordination, namely rather standardized exchanges based on what are assumed to be identifiable and isolatable spheres of expertise. This rather automatic means of coordination – that if everyone does

as expected, the system will work smoothly—too often fails because problems arise that cannot be predicted" (Glouberman and Mintzberg 2001: 72).

The nature of the work in medicine is similar to certain types of innovation where there are high levels of uncertainty about user needs (in drug development for example, there is uncertainty around if a drug will work or not in a patient population) as well as development knowledge (Dougherty and Dunne 2013). Two conditions that are widely considered challenging to manage by researchers and practitioners in organization strategy research are situations that involve high levels of uncertainty and high levels of risk. The nature of the work in the practice of medicine involves both high uncertainty and high risk (Nembhard et al 2009). There are significant amounts of uncertainty in terms of diagnosing and treating patients and medical knowledge is expanding rapidly (Bohmer and Knoop 2007; Nembhard et al 2009; Nembhard and Tucker 2011). There are still significant limits to what medical practitioners and scientists know about how the human body works and how it interacts with various drugs and other types of medical treatments. This uncertainty is combined with the risk that a patient might die: "Thus, the work is risky, can harm the consumer (the patient), and is solely at the discretion of an individual service provider (the physician)" (Nembhard et al 2009: 27-28).

Research on the management of innovation has developed a large body of research that helps explain how integration works and how to manage the risks involved in innovation. When developing a new product in the late 80s Eastman Kodak solved some initially challenging development issues by putting together a "small, dedicated team of engineering, manufacturing, and marketing people, who shared the same work

space" (Leonard-Barton, 1994: 122) a novel idea at the time. Organizational leaders have also traditionally had a responsibility for integration in an organization. A clear vision is something that is important in innovation projects (Leonard-Barton et al., 1994). Tools such as prototyping are commonly used to test out ideas and mitigate potential risks.

The type of interdisciplinary collaboration that is commonplace in much innovation work related to the creation of new products or services is often missing in the practice of medicine. However, studies of innovation and knowledge integration may provide a framework for studies of integration in medicine (Carlile 2004; Bechky 2003). Carlile (2004) and Bechky (2003) point to the importance of knowledge integration for product innovation. Carlile (2004) identifies different types of boundaries in innovation work. Bechky (2003) discusses how people transform their knowledge to build a better understanding of the products and problems in their work. The concept of knowledge objects has also played an important role in the work on innovation. Ewenstein and Whyte (2009) explore different types of objects in knowledge work, including boundary objects (Carlile 2004; Bechky 2003), epistemic objects (Knorr-Cetina 1997) and technical objects. Boundary objects help integrate across disciplinary boundaries and epistemic objects help motivate knowing in practice. These studies point to some important characteristics of integration that may be important in this study of the practice of medicine.

However, before understanding the role of knowledge objects in the practice of medicine it is first important to understand the boundaries in medicine. Boundaries exist between the various specialties and between the hierarchical levels in organizations.

Additionally, there are boundaries between professionals with different perspectives on complementary or alternative medicine. For example, doctors work with nurses on a regular basis, but may not necessarily work with an acupuncturist on a regular basis. A study published in a qualitative healthcare journal looked at how 15 family physicians in Israel (Shuval, Gross, Ashkenazi, and Schachter, 2012). The study found that practitioners did not have significant problems with epistemological and cognitive boundaries between complementary and alternative medicine, but organizational boundaries posed a significant problem (Shuval, Gross, Ashkenazi, and Schachter, 2012). This study suggests that if traditional and alternative medicine is practiced within the same physical space that these types of boundaries may not be as significant (Shuval, Gross, Ashkenazi, and Schachter, 2012). From more of an organization perspective, Law and Singleton (2005) attempt to follow patients in the trajectory of a disease and call alcoholic liver disease. They identify the disease as an object and note research from Mol (2002) that also seems to suggest that the disease is an important type of object in the practice of medicine. Further, information technology advances surrounding the practice of medicine may suggest that IT systems may play a significant role in the knowledge creation and integration in the practice of medicine. Electronic charting may be integral to knowledge sharing.

There are characteristics of the workforce in medicine that also make integration challenging (Nembhard et al 2009) creating barriers that must be crossed. The workforce is extremely specialized: "By some estimates, the expertise of more than 20 health professionals must be integrated to provide care for a single patient in a hospital (Bohmer

and Knopp 2007)" (Nembhard et al 2009: 29). Alternative or complementary medicine adds to the number of specialties that must be integrated in patient care.

The culture of medicine involves a workforce that is hierarchical and individualistic (Nembhard et al 2009). Many management studies have explored the socialization processes of doctors (e.g. Pratt, Rockmann and Kaufmann 2006; Kellogg 2012). Nembhard and colleagues (2009) also point out that medical practitioners also have limited identification with the organizations that they work for. Just as divisional or functional boundaries can create barriers in product development, different functional aspects of healthcare also create barriers to integration. Socialization into different medical specialties creates barriers (e.g. an internist and an OB/GYN). While medical doctors (MDs) all go to medical school, residency programs help doctors develop different specialties creating potential barriers to joint work. There are also professional barriers between doctors and nurses and between medical staff and office staff such as administrators, billers, and front desk staff. Another important barrier is between MDs and other healthcare professionals such as those practicing different healing modalities such as acupuncture, in addition to nutritionists and physical therapists. Ferlie and colleauges (2005) also note knowledge and cognitive boundaries in the practice of medicine. They define a boundary p. 125 as "a relatively impermeable frontier between different professional groups that inhibits the spread of new work practices….focus[ing] attention on…the underpinning social and cognitive boundaries that membership of a profession creates in relation to other professions…" (Ferlie et al., 2005: 125).

Additionally Brunton and Matheny (2009) study healthcare organizations consisting of various subcultures.

Consistent with innovation management research, work that looks at employee-employee relationships and high performing organizations suggests that cross-functional work practices contribute to the development of relational coordination which can be vital for integrating (Gittell, Seidner, and Wimbush, 2010). Gittell and colleagues (2010: 493) examine six high-performance work practices that emphasize cross-functional work (cross-functional selection, conflict resolution, performance measurement, rewards, meetings, and boundary spanners). These practices seem to have positive relationships to shared goals, shared knowledge, and mutual respect enabling people to supporting problem-solving communication and overall coordination generally leading to higher quality and efficiency outcomes (Gittel 2006; Gittell et al. 2010). According to Gittell and colleagues (2010: 494): "Previous studies have show that coordination between care providers is positively related to both quality and efficiency. Specifically, coordination is associated with provider-perceived (Argote 1982) and patient-perceived quality of care (Gittel 2000) and with reduced lengths of hospital stay (Gittell et al. 2000, Shortell et al 1994)."

Many questions remain but based on this research we ask several more specific research questions that the best practices explored in the findings address. Is it possible for healthcare professions to identify with something beyond their profession? How might that happen? Is it possible for healthcare professionals and the patients themselves to be boundary spanners or champions? And is it possible for professional bureaucracies

to transform into learning organizations in spite of significant constraints of time and space exist?

METHODS

This study develops a descriptive case study to illustrate some best practices for integration in healthcare. As the literature and ad hoc patient experience makes clear, integration is a challenge and a necessity in the healthcare system in the United States. This study is an example of how one medical practice is able to integrate patient care. Our methodology follows (Yin, 2003)

This case study draws on data in the form of six interviews with practitioners and other staff at the Center. The interviews took place over the course of several months in the Spring of 2013. Five interviews were at the Center and one interview was over the phone. Of the six interviews four were recorded and transcribed. The remaining two interviews were recorded by note taking. Additionally, we leverage archival data sources, several newspaper/magazine articles on the Center, and an in depth article that covers an interview with the executive director of the Center.

Next we outline the case, and then we develop several propositions about integration in healthcare settings such as this. These propositions are based on the best practices for integration at the Center and existing theory and previous studies in the areas of management, innovation, and healthcare. As the case was being developed several themes in the interviews became clear.

The Center is an ideal setting to begin to develop a better idea of integration in healthcare because of its commitment to integrative medicine. The Center has an articulated goal of collaboration across different types of practitioners. Its physical location houses these different types of practitioners side by side instead of in separate departments. In additional to the typical barriers of integration we might find in the practice of medicine this setting must also address the barrier of perceptions of legitimacy for some of their practices such as being proponents of yoga and acupuncture (news articles suggesting skepticism). Some of the practices and practitioners at the Center fight an ongoing battle for legitimacy in addition to the typical challenges in their work.

The Case: The Center for Health and Healing

The Center is located in Manhattan, New York and is also the Department of Integrative Medicine at Beth Israel Medical Center. Beth Israel Medical Center is a medical care facility with more than 1,100 inpatient beds at two facilities in the area, one in Manhattan (main location) and one in Brooklyn (Hoovers 2014). The Center for Health and Healing is will be referred to throughout as this paper as the "Center."

The Center opened in June of 2000 with a handful of practitioners including a full time pediatrician, OB/GYN, internist, family medicine doctor, chiropractor-acupuncturist, and a nutritionist. The idea behind the center started when a group of people interested in integrative medicine in the community and associated with the hospital; they began discussing the potential for a clinical program in integrative medicine (interview data).

Integrative medicine is defined on the Center's as something that is evolving but is generally considered the combination of different healing modalities. On a practical

level this means a medical doctor at the Center might consider conventional medical prescriptions as well as traditional East Asian medicine. The Center's website defines integrative care as healthcare that looks at a whole person this includes considering lifestyle, nutrition, exercise, and stress. They use gentle therapies in place of or in conjunction with biomedicine, offering a range of services from primary and specialty conventional medical care to plant-based medicines, nutrition, chiropractic, and stress reduction techniques.

In 1997 after a two-day think tank type meeting with hospital power brokers Beth Israel decided to go ahead with an integrative medicine program. With the support of the hospital CEO and a "shepherd on the hospital board" the idea for the Center began to look like a reality. In 1998 they hired an executive director and a medical director for the Center and they started recruiting practitioners. The then Medical Director described the Center's selling point as:

> "An opportunity to integrate the care that we have all been offering in a very disintegrated fashion, to work together as a team, and to have patients get more coordinated and higher level quality of care because we will all be in the same place with the same records, the same conversations will be happening about the patient."

Before they opened the Center they thought a lot about the physical environment or the space for the Center. The atmosphere at the Center was carefully designed carefully leveraging a green influence architect and a Feng Shui master. They created an atmosphere that was calming and open. Patients at the Center do not experience the

medical or antiseptic smell of many doctor's offices and news articles have compared the atmosphere at the Center to a spa.

Due to the support of the hospital and board members they were able to raise a significant amount of funding to support the center. As they recruited initial practitioners they looked for people who had established practices and would bring their patients to the Center. Some of the initial practitioners did find working with the hospital bureaucracy to be challenging and not all of the initial practitioners stayed with the practice.

At the outset they had a business plan that involved a significant amount of revenue coming in from fee-for service physician consult practices and they didn't plan to take much insurance. But the demand for those services wasn't as high as anticipated and that model didn't work out as planned. However, there was a huge demand for primary care (integrative primary care). So they started adding on primary care practitioners and people who took insurance. This created a hybrid model where people could do integrated primary care and also do consultations. So they moved to a regular practice model accepting some insurance and developing regular patients.

The focus today is more on primary care and less on consults although they still do consults. The other areas of the Center: Acupuncture, nutrition, chiropractic, and psychotherapy doing reasonably well. Then in 2004/2005 the hospital closed a division and there was a busy sports medicine group that needed a home and they came to the Center. They turned out to be an open minded group and they found a lot of synergies (referring patients etc.). By the mid to late 2000s the Center was still struggling to make money and in 2008 they become a department of the hospital.

By the late 2000 the Center was seeing a larger number of patients and they were in the black. Then they got a donor who wants to give a million dollars to expand and the hospital put up money and November 2012 they opened a new floor. They brought in new practitioners and introduced a medical fitness model to incorporate exercise and nutrition into medical care. The new floor has a gym and a healthy physical therapy practice with 8 or 9 physical therapists, an occupational therapist, a chiropractor, a podiatrist, a cardiologist, and a second nutritionist. They also have an x-ray and were trying to get a dermatologist. The current number of practitioners listed on their website is 38. Of the 38 people listed 12 have MD.

The practitioners at the Center have different billing models, some take insurance and others do not. The Center does its own billing rather than the hospital doing its billing. Typically if you are in a hospital system you have to take all their plans and they don't do that. But this also presents challenges because the practitioners are not salaried so any time spent collaborating is their own time. But the Center successfully runs research and education programs along side their clinical program. In an interview with a journal the executive director said:

> "One challenge we continually face is more internal to our practice. And it is a challenge to most clinical integrative centers. This is to not just have an integrative practice defined as individual providers with a broader range of therapies in their tool kit but to have all the providers' practices integrated with each other. Time to meet and work with each other is critical. We have been fortunate to be able to do this as part of a funded fellowship training program that

compensates our providers for their time to meet with trainees and each other in didactic and experiential sessions. But without this funding in a structure that is contract-based, it would be a real challenge to keep the lines of communication open with each other via regular meetings. It still is."

FINDINGS

The research question that this paper addresses is: How do medical practitioners integrate what they know about patients? Three key themes emerged in interviews with people who work at the center. These themes illustrate three best practices that enable people to integrate what they know in the work of healthcare: Create a shared organizational identity, Seeing patients as a whole, and creating continual learning. These three best practices also address the more specific research questions that we concluded the theoretical background section with.

The first theme is that this is a mission driven medical practice. The Center uses structural tools to create and emphasize the mission. Belief in the underlying mission of providing holistic care for patients provides a common meaning that enables the people at this practice to work together. The second theme is that the practitioners focus on the whole person. The holistic perspective makes it possible for the practitioners to work within the organization taking responsibility for their patients even when that means working outside of their specialty. The practitioners collaborate with each other making the responsibility for integration of patient knowledge rest with them instead of solely with the patient. The third theme is that these practitioners create time and space for

learning. Each functional area I spoke to brought up some aspect of continuous learning or education that was part of their routine work. Often the time for learning was done voluntarily, but it was a consistent theme throughout these interviews. The rest of this section provides additional details about how each of these themes are illustrated in this case and why they are so important for integration.

The Mission

Since the idea for the Center was initially explored in the late 1990s the people involved (practitioners, nurses, administrators) with the Center have been driven by a very clear and inspiring mission to create a place that provides integrative care, research and education. The mission at the Center, generally described in practice as providing integrative or holistic care for patients, creates an organizational identity that motivates people to work together. As was outlined earlier in this paper one way coordination can be achieved is through norms. Socialization is a powerful tool and the establishment of common values and beliefs can be a powerful integration tool (Glouberman and Mintzberg, 2001).

When the people interviewed discussed the Center they said things such as this place is different. Examples include: The "feeling was different." When asked to compare the practice to other places where one person worked, she said it was nothing like this "it was a physician's office." For practical purposes the Center also functions as a physician's office, but the feeling that it generates to the people who work there is very different.

The common mission enables practitioners to work across professional boundaries that typically make integration difficult. Many of the practitioners interviewed repeated a similar phrase: "We have a shared mission of integrative medicine." The mission helps to create what one person called "the excitement" at the Center. The excitement was particularly strong at the beginning as the people involved new they were at the forefront of integrative medicine. It is a powerful mission. There are several structural characteristics that support the Mission and values of the organization. The physical structure of the Center is different than a traditional medical practice, as described in the case, great care was put into the physical space at the Center. The practitioners, nurses and administrators participate in off-sites where they talk about the mission at the Center and share what they do on a daily basis. Before the Center was opened they had an offsite and they recently had another one after the third floor expansion. There were also references to having retreats and a team building exercises.

One of the challenges in healthcare is that people have very strong professional identities, doctors in a particular specialty, nurses or nutritionists. These people have played well-defined, separate, roles in organizations such as hospitals and traditional doctors offices. The identities of people working in healthcare are very strong and typically people do not have a similar connection or identity associated with the organization that they work for (Nembhard et al., 2009). Motivating people to work together, to cross these deep and long standing boundaries, is extremely challenging. The mission that creates a shared organizational identity is a powerful tool for integration.

The Whole Person

The second theme that is throughout the data is the focus on understanding the patient as a whole person. The best practice seeing patients as whole people. In the practice of medicine many people see symptoms or problems such as a broken leg or a cold instead of a person with stresses and challenges. As one practitioner explained the difference with integrative medicine is that

> We are "not just treating symptoms, not just sending people away without knowing what's going on environmentally, what's going on socially, how is your family, what about work, …that's very different, really seeing the big picture and just really working from that point of view."

This focus on the whole person is prevalent throughout the work at the center. In interviews many people discussed the stress that their patients are under, suggesting an understanding and relationship with patients that is unique.

Seeing patients as whole people also creates a lot of stress for the people who work at the Center because as one person explained: "We do absorb a lot, it's a very stressful environment." Practitioners, nurses, physical therapists and others working at the Center talked about the role of stress in their patients' lives.

This perspective of the patients creates a responsibility for the patient too. One of the characteristics of current changes in the healthcare system is that navigators are being introduced to help people navigate the healthcare system. These navigators might be considered boundary spanners or patient champions. At the Center they do not need navigators or patient champions because the practitioners and the patients themselves

share the responsibility of navigating the system, they span boundaries, and they are the champions.

One practitioner describes how a patient was guided through the system: "I was able to work her into the system so she had immediate care are ruling out the things, otherwise she would had to have made another trip to another medical facility." This practitioner emphasized the importance from a medical standpoint of ruling things out right away. This practitioner guided the patient through the system. Other practitioners also described how they made connections with other practitioners about a patient. In other examples of characteristics of patients they were described as very demanding, suggesting that many patients also work as their own advocates. Throughout this system people take responsibility for their patients as a whole people.

Time to Learn

The third theme is that people at the Center, doctors, nurses, physical therapists, acupuncturists, and others all create time to learn. Most practitioners do not get paid for this time but they create time to learning. Creating time and physical space for continually learning is also an important best practice. This best practice is one of the most challenging to accomplish because time is perhaps the most valuable resource that these practitioners have. The financial structure of the Center, mostly, does not reimburse people for the time they spend in meetings, learning new skills, or collaborating about patient care. Numerous practitioners interviewed discussed specific weekly or monthly time that they spent within their discipline learning and discussing overall development of what they do. All the people interviewed talked about

communicating with other practitioners at the Center. For example a physical therapist might have a conversation with an ear nose and throat (ENT) doctor or an acupuncturist might connect with someone in orthopedics. The website at the Center is a clearinghouse for information about integrative medicine. People working at the Center were described as people who "love to learn."

Another finding in this study is that these practitioners were able to cross the significant boundaries in the healthcare system. In addition to these three best practices the people at the practice leverage boundary objects to cross these professional, cognitive, and institutional boundaries. The Center has had an electronic medical records (EMR) system since it was opened in 2000. Practitioners talked about using the EMR to flag things and this generally a very important integration tool. While EMR systems will be commonplace in the future this practice was an early adopter and that has affected how people work together, how they integrate what they know about patients. A recent New York Times article said that five years ago only 10 percent of hospitals and doctors offices used electronic records (NYTimes, 2014).

To summarize, this study illustrates three best practices that promote integration in patient care at a healthcare organization: Creating a motivating organizational identity, Seeing the patient as a whole, and Creating time and space for learning. In addition, boundary objects such as EMR systems can also be important integration tools.

At its core, this case is a case of a primary care practice that integrates numerous specialties into holistic patient care. There are numerous questions faces the healthcare system in the United States and many of them center on how to provide primary care to

more people and how to provide better primary care. The problems in the U.S. system are significant: too few primary care doctors, ancient information technology, a disjointed distributed system, costs that have very little relationship to services, and payers (insurance companies) that detached from people receiving services (patients).

DISCUSSION

Space and time for learning in the practice of medicine will be increasingly important as the healthcare system in the U.S. changes. Pressure for higher quality and more efficient services are already straining a difficult system. There are many ideas about how the healthcare system in the U.S. should and could change but it is clear that much work needs to be done. These best practices connect to other research in the area of healthcare and changes to the system. Porter, Pabo and Lee (2013) discuss how to redesign the primary care system in the U.S.

Porter and colleagues (2013) emphasize the need for integration of care. They explain: "developing teams that are focused on care integration and improvement for each subgroup. For most primary care practices, the development of effective teams that are true drivers of care integration would be the greatest departure from the status quo" (Porter et al., 2013: 519).

As they explain: "Only through achieving better outcomes that matter to patients, reducing the costs required to deliver those outcomes, or both can we unite the interests of all key stakeholders" (Porter et al., 2013: 516). Through integration and these best

practices, the Center is integrating care and achieving this goal of providing more value to patients.

They also suggest that primary care systems organize around patient needs and leverage the use of teams (Porter et al., 2013). Teams are clearly going to be an important part of the future of healthcare in the U.S.. This means that management scholars need to continue to think about what teams in healthcare mean, how are they different and similar to the product innovation and cross-functional teams that are often studied.

One aspect that the Center excels in is that everyone is located in one space, but space is also a challenge as the Center has had tremendous growth since its inception. As practices expand and redesign they should consider the holistic approaches of the Center along side of how teams may work in the future:

> "…Space should be designed to facilitate the effectiveness of the teams. For example, some primary care practices have been redesigned to put physicians and the personnel with whom they work in closer proximity, so they can collaborate more reliably. One approach is to have "flow stations," in which the physician and medical assistant sit adjacent to each other and deal with paperwork together. Many practices now include common workrooms for clinicians and support staff, so that clinicians can interact spontaneously with each other and with schedulers and other administrative personnel in between contact with patients in examination rooms. Mental health specialists or other types of clinicians—including palliative care consultants, pain specialists, and psychiatrists—may also

work out of such shared space, potentially on designated days during the week."

(Porter et al., 2013: 519-520)

Understanding the best use of space in healthcare affects integration, teamwork, quality and value. The Center exhibits many of the characteristics of integration and interdisciplinary teamwork that are keys to these new ideas about how to redesign primary care. While it is limited to only one case, only one example, the illustration of how the Center works helps to show how many of these ideas are in fact possible.

Management and healthcare scholars need to continue the study of integration and change. While new legislation has begun to create changes in the U.S. system, there are many more to come. Scholars need to consider many more aspects of these organizations including measurement, systems, specialization, scalability of new ideas, and the implications of mergers.

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