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Matthews, Marc, Matthews, Allison, Anderson, Rose, Bernau, Jo and Ross, Lorna

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# Reevaluating the value of Primary Care using Design Thinking

Allison Matthews, Marc Matthews

## Introduction

Primary care in the United States is at a critical crossroads. Despite years of constant discussion that healthcare costs are not sustainable, costs continue to rise while outcomes have not improved. The average healthcare expenditure in the United States is approximately \$8000 per capita, compared to approximately \$3200 in other industrialized countries (The Lancet, Volume 384, Issue 9937, Pages 83 - 92, 5 July 2014). Despite spending far more than any other country, our patient important health outcomes lag far behind all industrialized countries (The Lancet, Volume 384, Issue 9937, Pages 83 - 92, 5 July 2014).

Society, the government, and payers are no longer willing to pay so much for these poor returns. We have begun to see a market shift towards shared risk models and industry experts project significant declines in fee for service contracts in the next few years, to be replaced by condition based payments, population based payments, and eventually total cost of care contracts .

Our current delivery systems in the United States are unsustainable and lack the resilience to survive in these new environments where total cost of care, patient experience, and patient centered outcomes are the primary determinants of success. In order for primary care to remain relevant and viable, new solutions must be created that are practical and transformative, attract and retain new patients and provide high value, high satisfaction services that meet their consumer needs. Primary care must be able to demonstrate our value in coordinating care, especially in managing populations of patients and subpopulations with multiple chronic conditions. Our cost of care must come down and our quality must remain high in order for us to be able to deliver affordable care in future reimbursement realities.

The healthcare industry in the United States has traditionally lacked intentional design and has been built up in ways that support its providers rather than its customers. Moving from a system that was never designed to one that is more thoughtful presents us with a unique opportunity. The most important insight that we have discovered to date is that we cannot solve the problems in primary care with the same thinking that got us into this predicament in the first place.

Primary care providers have traditionally seen their value in maintaining a longitudinal provider-patient relationship. Research and experience have demonstrated that, when fully realized, this relationship decreases total healthcare expenditures with improved quality outcomes. However, regulatory and payment changes that started about a decade ago are now gaining momentum and will have significant impact on the ability of primary care providers to maintain this same depth of relationships with all of their patients. More people will now have access to health insurance and because of this there will be increasing demand on a shrinking pool of primary care providers. One option would be to simply continue as we always have and try to maintain relationships with more and more patients. Widely cited research shows that to accomplish all the necessary preventive

services for the current average panel size would take 27 hours a day. And yet, because the work necessary to keep people healthy isn't valued enough to be reimbursed properly, primary care practices have become places where acute illnesses are treated while long term health goals are pushed aside to maintain higher and higher volumes and productivity. Another option would be to look around us at the dedicated nursing and support staff in our clinics and tap into their vastly underutilized skills and knowledge to distribute the work of maintaining relationships and caring for more and more patients.

It is often assumed that because Primary Care physicians are the main contact between patients and the healthcare system that the physician has a monopoly on the accurate understanding of patient needs and desires. It was only when the Mayo Clinic Department of Family Medicine brought in a team of service designers from the Mayo Clinic Center for Innovation (CFI) that the true desires and needs of patients were revealed and evaluated that the assumption that physicians know their patients best was challenged.

The Mayo Clinic Center for Innovation is a multidisciplinary group that seeks to transform the delivery and experience of healthcare through service design. In this case, the designers were tasked with understanding the needs of our customers, the patients, and transforming the delivery of Primary Care to better serve the customers' needs.

Mayo Clinic, a charitable, nonprofit corporation, is a large academic medical center with its principal location in Rochester, Minnesota. Mayo Clinic provides comprehensive medical care, education in clinical medicine and medical sciences, and extensive programs in research.

The Mayo brothers pioneered the concept of a medical group practice before the turn of the century in Rochester, Minnesota, and Mayo Clinic has grown to become the nation's largest such practice, with campuses now in Jacksonville, FL (1986) and Scottsdale/Phoenix, AZ (1987). Mayo traditions encompass world-renowned clinical and surgical expertise, as well as extensive research and educational activities. Clinic-wide, the clinical and research mission is achieved through the work of 3,800 staff physicians, medical scientists, and clinical and research associates. In addition to the full-time staff, there are 3,600 residents, fellows, and medical students and 50,900 allied health professionals (2011, latest numbers). As of 2011, the organization attended to 1,113,000 patients each year (individual patients are counted once annually). Patients come from all regions of the United States and many foreign countries, although the majority (80%) is from within a 120-mile radius of Rochester.

The Mayo Clinic Health System provides a network of community-based health care across the region linking the expertise of Mayo Clinic with the health care delivery systems of more than 70 communities in Minnesota, Iowa and Wisconsin, thus providing a full spectrum of health care, ranging from primary care, with the local health care team, to highly specialized health care options, within the multidisciplinary practice at Mayo Clinic. Patients receive the vast majority of their care in their own communities, but if they choose to go to Mayo Clinic, they enjoy smooth access to care in Rochester. The Mayo Clinic Health System, employing 915 physicians and 13,321 allied health staff, includes 18 Mayo-owned hospitals and management contracts with 3 additional hospitals, along with 7 nursing homes. More than 100 Mayo Clinic physicians from 25 specialties regularly see patients at the Mayo Clinic Health System. In 2009, there were over 2.6 million visits in the Mayo Clinic Health System, including over 33,000 inpatient hospitalizations.

## Our Model

It is our position that population health and community care is best understood and improved through a patient experience construct. This construct categorizes the work of community care into four domains: Self-Care, Assessment/Detection, Treatment, and Management (Figure 1)

We envision the four domains as a continuum that patients move back and forth within while community care seeks to provide the most appropriate service at the right time and place. The goal is to help the people we care for remain in the Self-Care domain autonomously with only infrequent intervention from the clinic, or, for those currently within the other three domains, to help regain the capacity to return to the Self-Care domain. This means the healthcare system will at times need to offer support and knowledge in a different, less intensive and more effective way.

Currently, community care spends a lot of time and energy in the Self-Care domain doing things that are better suited to less-intensive modes of care. Activities such as wellness exams and follow-up for healthy individuals with no risk factors are done now as a way to ensure continued assessment of risk factors. There are less resource intense ways to gather that information now and communicate with and educate our patients but there are many factors preventing us from implementing. This is not intended to imply that the care team does not engage patients in the Self-Care domain; instead it implies that our current offerings are inappropriate for this patient population and that service offerings must be adjusted to meet the appropriate need of our patients based on their clinical, social and behavioral risk factors. .

When people in the Self-Care domain want to interact with their care team, it is usually to get answers to specific questions that will allow them to continue self-management. However, when they interact with us they often walk away with clinical services that they really don't want or need. It is the job of the care team to help people who are already at their best possible health state stay that way and to support them with the least amount of intervention and cost while continuing to gather data to assess changes in their risk status that would imply a need for potentially different ways to engage them.

In the Assessment and Detection domain, the line of inquiry becomes how we can ensure that community care providers are seeing the patients that really need their diagnostic and assessment skills. How do we provide the tools to the community care providers so that they can operate at the top of their licensure and help them feel competent in diagnosing and creating plans of care for patients with complex or multi-morbid conditions and have the tools and the time and the access to the required information to do so.

In the Treatment domain, the line of inquiry for development revolves around how we can leverage the skill sets of non-physician team members. How much chronic condition management can we provide by protocols? How do we support Care Team nurses carrying out plans of care? How do we support providers in drafting plans of care with anticipatory guidance? How do we incorporate behavioral health and social work into our teams to support the patients whose risk is elevated due to psychosocial and behavioral reasons?

In the Management domain, the questions focus on how we can increase the self-management capacity of the patient. How do we increase the ability and the capacity of a patient with diabetes to

manage their own disease and return them to the self-care domain? How might understanding different patient types lead to services that patients desire to interact with?

From the beginning the designers used qualitative research methods and interviews to discover that patients were not currently able to communicate what they wanted from their healthcare experience. They began hearing feedback from patients that ran counter to what Primary Care was basing its service lines upon. Comments from patients such as: “I just want to be seen today and have my problem taken care of, I don’t really care who I see” and “My physician doesn’t seem like she is listening to me she just keeps telling me what she thought I should do” began to direct design conversations toward rethinking how Primary Care was delivered.

We also discovered that while we, as providers, were concerned with quality and preventative metrics like getting a patient’s A1C under control, that same patient was more concerned with having the energy to walk his daughter down the aisle the next month. While our goals were likely aligned and complementary in outcome, we weren’t speaking to patients in a language that they could understand or interact with.

We realized that patients spend a couple of hours a year in our offices yet we expect their health care decisions and commitments to be made then and there. In reality, patients are basing their decisions on many streams of information; everything from the internet, their next-door neighbor, or how their sister responded to her last antibiotic. We needed to create a system that embraced all of these streams of information and served as a funnel to help the patient determine what was trusted information, what was true and to help them base their decisions on the best sources.

The designers reformulated the care teams we had been working on giving each person on the team an equal level of value. They began to think of the care team as a tool kit for patients and their health. Each member had a skillset that was equally valued and utilized. This got all of our team members practicing to the top of their licensure: physicians and NPs were working with complex patients requiring diagnosis and care plan development, nurses were providing education along with protocol driven care that extended the care team relationship, and dieticians, pharmacists and social workers supported the care team by delivering on-demand and real time care to patients who were better served by these specialty providers.

This resulted in a group of care professionals that leveraged the talents of each team member. Nurses no longer spent their day triaging phone calls, physicians saw decreases in paperwork and unnecessary office visits and dieticians were able to reach the patients who were in the most need of their services.

This is a model in which the care team surrounds the patient to not only support the patient’s health but to understand the fundamental definition of what health means to the patient in the first place.

## Methods

Initial Patient and Staff Feedback:

During the prototyping and development of the team based care model that is at the heart of our population health framework, patients were interviewed at the conclusion of their visit by a design researcher who asked a standard series of questions regarding their experience with the new population health model (Figure 2). Each question was answered on a four point Likert scale. These interviews were conducted at a busy academic Family Medicine practice and the patients ranged from newborns to geriatric with concerns ranging from simple acute issues to chronic condition follow-up.

Staff who participated in prototyping the new model were also provided a short survey that asked them about their optimism around the future of their job and the level of support that they felt in the new care model.

## Results

### Initial Patient Satisfaction:

A total of 276 patients were randomly selected for post-visit interviews over the course of a two-week sampling period. Figure 3 displays the results. Patient satisfaction levels were comparable or improved when asked to compare to previous models of care.

### Initial Staff Satisfaction:

The staff survey was provided to all staff in the initial prototype clinic. This is a family medicine residency training clinic in a rural setting. All disciplines were represented in the responses and overall response rate was over 70%. Figure 4 displays the results. After implementation of the new model, a majority of staff felt optimistic about the future of their job and a similar majority felt that the new model provided them with the appropriate level of support needed to provide quality care to their patients.

### Discussion:

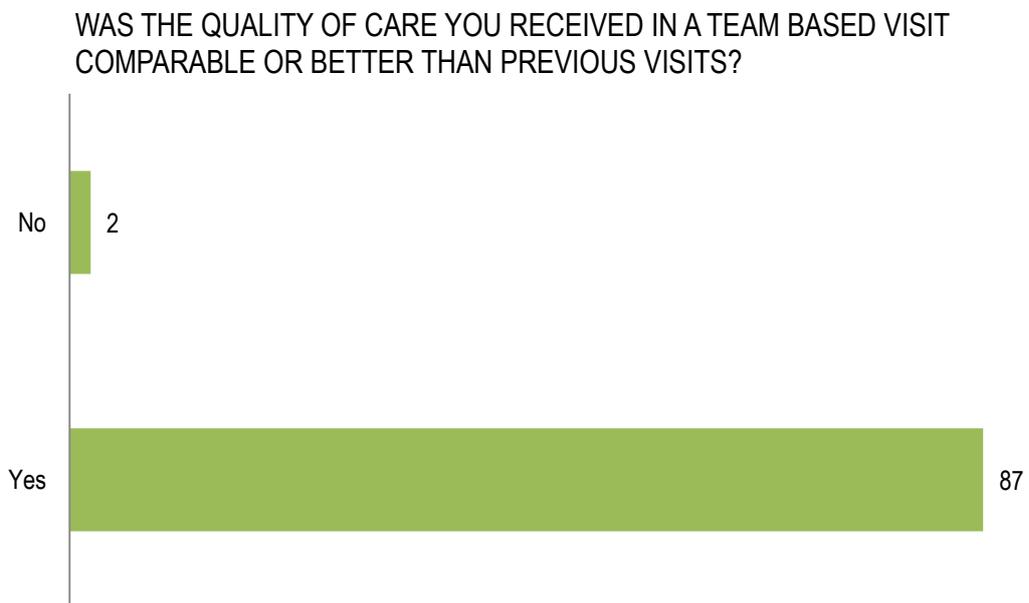
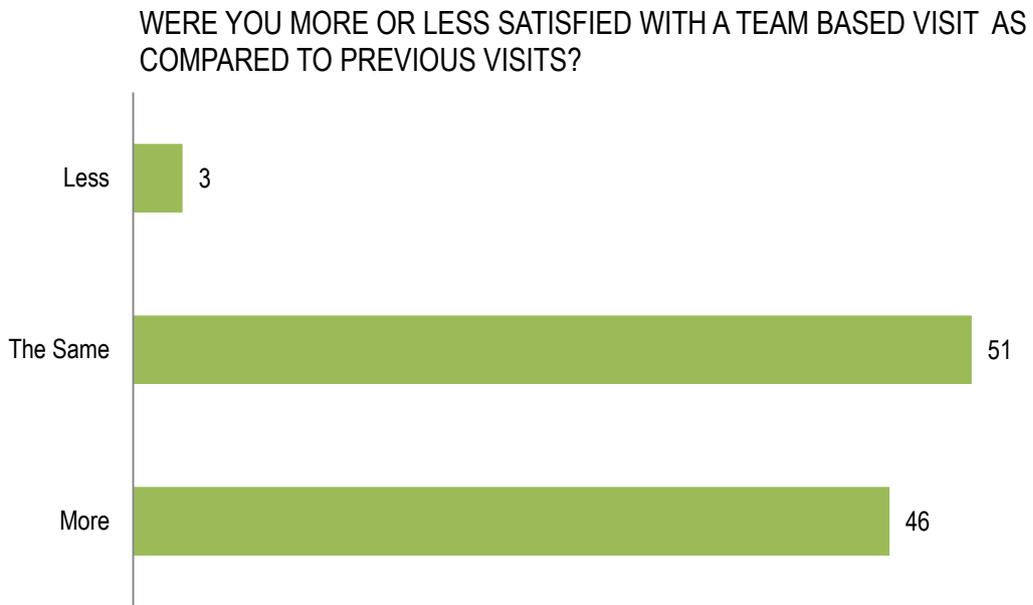
Our initial data demonstrates that patients are generally accepting of a new model of primary care based on a population health framework. For the average patient, the only significant change that they are likely to encounter is improved access or portions of the team based care model. Even with just this small taste of the new model, a majority of our patients found their care to be more satisfying and of higher or similar quality. Interestingly, patients in our prototype clinics spent an average of twelve additional minutes in the exam room as compared to the old model, but their perception of the visit was that it was more efficient than visits in the old model. We believe that this is because what used to be down time was filled with interactions with team members and that patients found these interactions to be valuable.

Our data also demonstrates that the staff at our prototype clinic found that the new model provided for increased meaning and sense of purpose, which led to improved job satisfaction measures. In an era of increasing burnout and staff turnover, we feel that these initial increases in staff meaning and purpose may be one of the most significant long-term benefits of the new model.

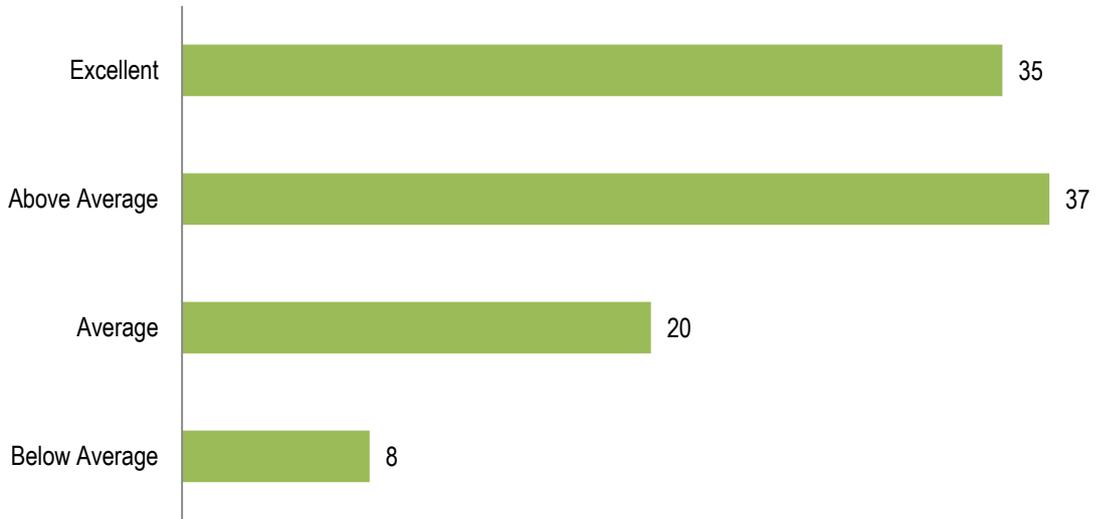
Figure 1- The domains of primary care



Figure 2- Patient Satisfaction Data



HOW WOULD YOU RATE THE TIMELINESS AND EFFICIENCY OF TEAM BASED VISITS AS COMPARED TO PREVIOUS VISITS?



WAS THE TEAM ABLE TO ADDRESS ALL OF YOUR NEEDS TODAY?

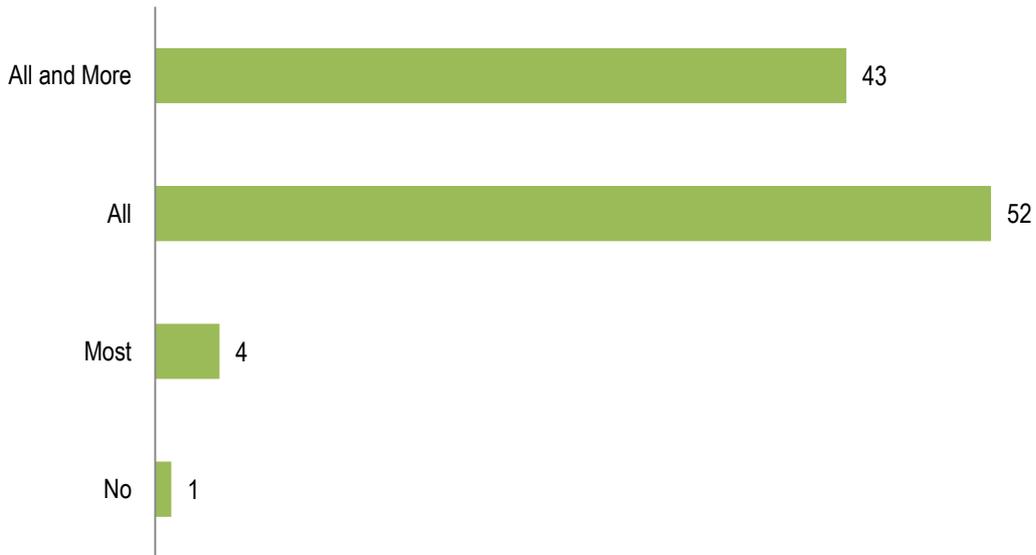


Figure 3- Initial Staff Satisfaction Results

