

**IMPLEMENTING THE NATION'S FIRST IBD MEDICAL HOME: LESSONS FOR  
ADMINISTRATORS**

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**ABSTRACT**

With increasing frequency, new models of care are being introduced across the country as part of broader population health management initiatives. The promotion of population health has been a longstanding goal of public health practice and policy. While much is written about the ultimate success of these new care models, comparatively less is known about their development. This report reviews the journey of the nation's first specialty medical home for Inflammatory Bowel Disease in an attempt to identify the factors that facilitated its successful creation. It identifies the following factors as being particularly important: 1) established working relationships between stakeholders, 2) clearly defined roles, 3) usable data, 4) gathering and using patient input, 5) complementary physician-administrator strengths, and 6) willingness to assume risk. These findings can be generalized and would have applicability at health systems looking to increase the speed with which their new models of care are brought to market.

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## 1.0 INTRODUCTION

This paper is an analysis of how the University of Pittsburgh Medical Center (UPMC) cultivated the nation's first specialty medical home. It will name and analyze factors that paved the way for its creation. While this is an analysis of a specific innovation for a specific population, this paper also aims to provide universal lessons about what other health systems can do to encourage new models of care. There is an abundance of articles and case studies on what healthcare systems around the United States have done to improve care. Kaiser Permanente in California nearly doubled the percentage from 44% to 80% of patients whose blood pressure readings were at a healthy level by instituting new interventions around the care of hypertension (McCarthy, 2009). A few years ago, Geisinger Health System in Pennsylvania successfully improved care coordination by providing each patient with a "Personal Health Navigator," which consisted of round-the-clock primary and specialty care access (Steele, 2010). The focus of extant coverage, however, is typically on the clinical success of these initiatives. There is comparably less literature on what was in place at their respective health systems that allowed those initiatives to flourish. The findings of this paper include the explicit assignment of roles, the availability of usable patient data, and healthy physician-administrator collaboration, among other factors. A discussion of those factors first necessitates a background on medical homes and the specific gastrointestinal disease that UPMC's specialty medical home revolves around. The overall arc

and intent of this paper, however, is to provide insights that might inform the efforts of other administrators in the facilitation of new care models.

It is necessary to define the scope of this analysis upfront. A significant pitfall of examining what might be necessary to bring an idea to market is choosing a perspective that is too broad. For example, it is true that our country needs a functioning legal system so that contracts and obligations are implemented downstream, but starting so broadly is both tedious and unnecessary. On the other hand, too high a power in magnification is counter-productive as well. For example, it might have been necessary for a specific contract between two parties to include a specific clause, but being so granular is neither generalizable nor interesting. One starting point found in an article on innovation is the desirability for payer-provider integration and a system-wide EHR (Paulus, 2008). But even that is too broad a perspective for the purposes of this analysis. This paper presumes that a system has already integrated a payer, or has at least tied their financial fate to one with some type of partnership arrangement. This paper is also not concerned with fostering innovation itself; there is already a small body of literature on what cultural elements are necessary to develop it within an organization (Lyles, 2013). The starting point here, then, is an integrated delivery system that already has a latent set of innovative care models that it desires to bring to market. The concern is with what key pieces need to be in place for an organization to efficiently realize that goal.

## 2.0 MEDICAL HOME

*Medical Home (n.) - The medical home is best described as a model or philosophy of primary care that is patient-centered, comprehensive, team-based, coordinated, accessible, and focused on quality and safety (PCPCC, 2015).*

The rise of the medical home model has been a sharp but welcome departure from the traditional patient experience. Traditionally, patients see many physicians for different ailments, with little coordination or communication between those physicians. In a medical home, a small team of caregivers serves as the main point-of-contact for the patient and serves as the coordinator for all of the patient's care. In addition to providing a more satisfying and unified patient experience, using a centralized team potentially eliminates unnecessary care, prioritizes preventive care, and enhances access to care. A care team in a medical home typically consists of nurses, social workers, and educators, with a primary care physician (PCP) at the center (Backer, 2007). It makes sense to have a PCP directing care since the PCP is usually the physician most often seen. But what if a patient suffers from a chronic disease that a PCP isn't fully equipped to treat, either clinically or technologically? It is often the case those patients will end up seeing a specialist for their disease more often, in which case placing the specialist at the heart of the

medical home starts to become more sensible. For many of Dr. Miguel Regueiro's patients who suffer from Inflammatory Bowel Disease (IBD), that is certainly the case. Dr. Regueiro is a gastroenterologist who is also a Professor at the University of Pittsburgh School of Medicine and the Clinical Head and Co-Director of the Inflammatory Bowel Disease Center at the University of Pittsburgh Medical Center. His work over the years with the IBD Center led him to the build the nation's first IBD specialty medical home (Regueiro, 2015).

### **3.0 INFLAMMATORY BOWEL DISEASE**

It is worth becoming more familiar with Inflammatory Bowel Disease (IBD) to truly understand why this particular disease and its treatment has made it a good candidate to revolve a specialty medical home around. IBD is a general medical classification. Crohn's Disease and Ulcerative Colitis are the most frequent specific inflammatory bowel diseases in the United States. Their causes are unknown, but they are defined by inflammation in the digestive tract that can ultimately lead to pain, vomiting, diarrhea, wasting, and bowel damage. Patients with IBD can have disability that significantly lowers their quality of life and can lead to premature death. Treatment can include massive lifestyle changes, risky and expensive medications, and multiple major surgeries. While there is no cure, Dr. Regueiro has developed a treatment regimen that focuses on symptom prevention and behavior. Namely, he uses the BESST Approach, which is an acronym for BE-havioral skills, Social skills, and Stress reduction Training. The BESST approach is the brainchild of Dr. Eva Szigethy, MD, PhD, who is a psychiatrist boarded in pediatric and adult psychiatry with a career focus on inflammatory bowel disease. Her collaboration with Dr. Regueiro is what makes the IBD Center a multidisciplinary and truly patient-centered endeavor. Dr. Regueiro also makes use of other newer, non-traditional treatment methods such as

telemedicine, peer groups, and after-hours behavioral health specialists. Those methods are not recognized by all health plans as reimbursable services.

Greater than 50% of IBD patients have pain, stress, and coping difficulties that worsen inflammation and increase healthcare utilization. Dr. Regueiro's IBD Center tailors the care plan to the patient and has seen success in adherence to treatment and lower use of resources while also improving the patient's quality of life. As an example, one particular patient was admitted to the hospital 23 times in one year, had 19 CT scans and 7 endoscopic procedures in the same year, but had 0 admissions and tests the following year after completing a number of behavioral and relaxation sessions with the IBD Center. It is precisely this type of preventive and holistic care that can be properly rewarded with shared savings and properly prioritized in the context of a medical home. A medical home and the accompanying shared savings arrangement aligns incentives for the reduction of unnecessary care while preserving or improving patient outcomes. A traditional fee-for-service model does not provide a link between these two concepts.

#### **4.0 FROM IBD CENTER TO IBD HOME**

The path Dr. Regueiro's medical home took from concept to market was a relatively straight one. Dr. Regueiro had already worked with administrators in the University of Pittsburgh Physicians' Department of Medicine on his IBD Center, so they were already familiar with his unique treatment approach (Rudolph, 2015). His approach had successfully resulted in

statistically significant declines in PCP visits, IBD visits, ED visits, and Hospital Days. Once they together determined that partnering with the UPMC Health Plan (“Health Plan”) might help further their goals, Annmarie Lyons, Executive Administrator in the Department of Medicine (DOM), worked with the Health Plan to have Dr. Regueiro formally present his medical home concept. Dr. Regueiro presented many times to various decision makers at the Health Plan, who after an internal vetting process decided to move forward with a shared savings arrangement. While the journey was relatively straightforward, why it was successful is not as obvious.

## **5.0 KEY FACTORS**

Below are some key factors that facilitated the progression of the medical home. This section will discuss six factors: 1) Relationships, 2) Role Designation, 3) Data, 4) Patient Inclusion, 5) Collaboration and 6) Risk.

### **5.1 RELATIONSHIPS**

Knowing and maintaining good relationships with the right people was critical to putting Dr. Regueiro's proposal in front of the right audience within the Health Plan. The University of Pittsburgh Physicians and the Health Plan previously collaborated on a shared savings arrangement involving an internal medicine clinic at UPMC Presbyterian hospital. This arrangement's success yielded a good working relationship between Annmarie Lyons and Sandy McAnallen, the Senior Vice President of Clinical Affairs and Quality Performance at the Health Plan. They have a regular, standing meeting to review their results (Lyons, 2015). McAnallen leads strategic plan development at the Health Plan as well as the plan's Quality Assurance functions. Most notably, she spearheads the development of innovative new payment models. As any struggling salesperson will attest, being connected with a key decision-maker is often the

most essential yet difficult step in a sale. Not only did Lyons maintain regular communication with one of the key decision-makers at the Health Plan, she also had credibility from successfully partnering with the Health Plan in the past. The degree to which this sped up the development of the IBD home is not readily calculable, but it is worth noting that Dr. Regueiro's original expectation was that the process would take several years (Regueiro, 2015). Development of the IBD Home took eleven months. Systems looking to better facilitate the progress of new proposals, or at least eliminate some inefficiency, would do well to set up similar relationships between decision-makers from each silo. This can be accomplished formally via standing meetings and ideally under the direction of an overarching committee charged with facilitating collaboration.

## **5.2 ROLE DESIGNATION**

That the Health Plan designated someone to spearhead new care and payment models is important. If the Health Plan had not charged Sandy McAnallen with being the point of contact for administrators like Annmarie Lyons, not only would the credibility of the Health Plan's commitment to innovation be in question, but Lyons also likely would have spent unnecessary time seeking a champion. The assignment of specific job responsibilities and roles related to key initiatives for change was an important factor in the IBD Home's success. That factor was mirrored within the University of Pittsburgh Physicians' Department of Medicine as well, with

Dr. John Reilly designated as the Senior Medical Director of Population Health for UPMC. Both sides outwardly signaled that efforts such as Dr. Regueiro's specialty medical home were a priority and that they were dedicated to advancing new ideas. In contrast, the job description for Kate Rudolph, Director of Operations within the UPMC division of Gastroenterology, did not specifically outline responsibilities for exploring new care schemes. Rudolph worked extensively on the IBD Home, but her contributions were primarily a product of her desire to help and the accomplishment she felt rather than a specific charge (Rudolph, 2015). Relying upon a given individual's level of motivation is risky, however, which further brings into relief the need for explicit responsibilities and titles.

### **5.3 DATA**

Central to population health efforts is the use of data for identifying the population and its characteristics (Maddux 2013). Uncovering summary demographic statistics such as age or geographic location, or clinical statistics such as co-morbidities or prescription drug usage, are vital to determining strategies for enrollment and treatment. Validating that IBD is highly correlated with behavioral and mental issues justifies the inclusion of a psychiatrist like Dr. Eva Szigethy, for example. The UPMC Health Plan has been cited as a vanguard of predictive health analytics, and its proficiency with several types of data helped the IBD Home tremendously. For example, the Health Plan was recently the subject of a New York Times article that highlighted,

among other connections, the correlation between mail-order shopping and emergency room usage (Natasha Singer, "When a Health Plan Knows How You Shop," New York Times, June 28, 2014, accessed January 15, 2013). The article notes that while that particular correlation did not yield something actionable, it highlighted the extent to which the UPMC Health Plan analyzes data. In general, what this access to and ability to use data meant for Dr. Regueiro was that he was able to not only gain a better understanding of his population, but could start to segment it to better target his approach. Specifically, the Health Plan developed a tool, informally referred to as "the Noodle tool," that combined insurance, demographic, prescription drug, and spending data. It allows the user to apply various filters to the population and view summary statistics for that population. With this tool Dr. Regueiro was able to create a population that he felt would benefit from the medical home, and perhaps more importantly, determine whether the resulting population was large enough to warrant the health plan's investment. He could also see the highest-utilized drugs, the spread of medical spending across the population, and where patients lived. The latter would prove useful in formulating a marketing strategy for the home. Altogether, the access the Health Plan has to data was critical, but so was its effectiveness in wielding it. Many insurance companies have endless reams of data on their members, but it is inert unless they have invested in the technology and expertise to compile and generate reports. Without this ability, stakeholders in the IBD Home would not have had the proper information to determine whether they had a critical mass of patients, calculate ROI, develop enrollment or marketing strategies, or whether the home could be scaled to include different populations.

## 5.4 PATIENT INCLUSION

The IBD Home incorporated patient experience and feedback in formulating its approach, which was fitting given its aims to be patient-centered medical home. Including a seat for the patient at the table has been an integral part of the strategy, and it continues today. For example, one of the cornerstones of the IBD Home is peer support, which was recently formalized as IBD Connect. It originated as a proposal by the family of a Crohn's Disease patient who identified a gap in support for hospitalized patients. With their suggestions and help, a volunteer program was created and incorporated into the hospital services. The goal of IBD Connect is to visit inpatients and provide: 1) peer and family support, 2) educational materials and 3) serve as a link to resources outside the hospital (Regueiro, 2015). The first patient was seen in September 2012 and the program has visited over 800 patients since, improving the patient experience within the hospital and encouraging open, de-stigmatized discussions of the disease. Marketing was also patient-focused. At town hall-type meetings designed to promote and answer questions about the new medical home, they allotted time for patients to give firsthand testimonials of their own experiences. Pointedly, Dr. Regueiro also included in his presentations to the Health Plan several anecdotes of patients he had cared for and helped. It was this focus on the patient that resonated with and impressed his audience at the Health Plan, since it was usually the Health Plan who tried to impress that message on physicians (Regueiro, 2015).

Patients have been involved in building their new home at every stage. Embracing them as a core component of development has been an integral part of strengthening the program and winning support.

## **5.5 COLLABORATION**

The IBD Home has been a model showcase for physician-administrator collaboration. This is a partnership that respects the physician's ownership of his vision and where the physician both provides and accepts direction. Indeed, building a specialty medical home was Dr. Regueiro's idea to begin with, a natural product of his innate ambition and forward-thinking. It was he who saw the trends in shared savings arrangements across the country and induced conversations with administrators and other stakeholders. Dr. Regueiro had the credibility needed for this change effort and he used it throughout this process for advocacy and promotion. Complementing his efforts were administrators such as Kate Rudolph, who prepared the necessary financial, productivity, and outcome measures she knew the Health Plan would inquire about during Dr. Regueiro's presentations. Rudolph also researched appropriate staffing ratios, developed operating budgets, and analyzed potential member data, all exercises she was relatively better-suited to perform than Dr. Regueiro. While it is not unusual to leverage complementary strengths, Dr. Regueiro continued to invest himself and participate in all phases. When it was time to settle on a staffing ratio, for example, Rudolph did not decide on ratios in a vacuum nor

did Dr. Regueiro absolve himself of the responsibility to review them. Rudolph drew upon her previous experience and proposed her thoughts to Dr. Regueiro who ratified, added to, or adjusted her assumptions. To wit, failing to defer to his expertise not only would have been disrespectful, it would have been irresponsible. When the administrators in the Chairman's office played with the "Noodle" tool that the Health Plan provided to manipulate data and determine whether enrollment would be sufficient, it would have been irresponsible to make assumptions about the makeup of patients who would be good candidates for a medical home. The starting point was Dr. Regueiro's clinical knowledge of what types of patients traditionally responded to his treatment. Regular meetings between Dr. Regueiro and administration still occur to this day, although the focus is now on operational, marketing, and strategic issues. One of the most common pieces of advice by seasoned healthcare executives is the need to work collaboratively with physicians, and the development of the IBD Home exemplifies how symbiotic the collaboration can be. In strictly practical terms, the arrangement was an efficient and sensible division of labor. From a project manager's perspective, however, it provided the teamwork dynamic necessary to accomplish a project with many stakeholders.

## **5.6 RISK**

A key discussion point when devising shared savings arrangements revolves around the assumption of risk. Specifically, who will assume downside risk? When the premise of a

partnership is that the provider will lower the cost of care for a population, what happens if costs actually end up rising? Alternatively, costs could remain stagnant but the venture would still result in a loss since it presumably has an operating budget. In some agreements, like the shared savings programs offered by the federal government, providers face no downside risk. In others, like advanced Accountable Care Organizations, risk is shared. In the case of the IBD Home, the Health Plan was willing to assume all risk in the initial year. In other words, the IBD Home has a grace period in which it can ramp up operations and reach a cruising altitude without needing to worry about cost reduction goals. This is a temporary concession but a key one. It was not only a literal indicator of support by the Health Plan of the new model, but also a figurative one. In other words, it not only provided the capital and financial latitude necessary to give the Home time to grow, it was also a signal of the Health Plan's confidence and belief in Dr. Regueiro's efforts. The Health Plan almost exclusively supports scalable projects; scalable projects by definition can start small but are expected to be adapted for larger populations (Rosenberg, 2012). A belief in allowing ideas to be piloted before they're expanded is directly in line with their philosophy around scalability.

## 6.0 CONCLUSION

Population health management is a term that has been co-opted by corporate health systems to refer to any number of new approaches to care. To be clear, there is a difference between population health management as it is referred to in the public health realm, which has a much larger circumference, from its use as a descriptor by health systems like UPMC. But innovations like Dr. Regueiro's IBD medical home still approach care from the same direction, and with the same goal – to care for a population while optimizing resource utilization. The population health approach seems to have become the weapon of choice in the fight for profitability and higher quality care. While forming an integrated delivery network is not a prerequisite for wielding that weapon, it certainly aligns incentives towards that aim. That is being seen in the market, with an ever-growing number of hospital networks across the country joining forces with health plans and other ancillary care providers. But the partnership alone of a provider and health plan does not automatically produce new care models or create the working relationships needed to truly produce change. If the experience with the IBD Home at UPMC can be generalized, establishing working relationships, designating roles, making data usable, including patient input, and fostering physician-administrator collaboration, are qualities worth implementing. While this list is not exhaustive, it should prove instructive for administrators who are looking to improve the efficiency with which their ideas are shepherded through their respective systems.

## BIBLIOGRAPHY

- Backer, Leigh Ann. "The medical home: an idea whose time has come... again." *Family Practice Management* 14, no. 8 (2007): 38.
- Lyons, Annmarie. "IBD Home Interview." Interview by author. February 4, 2015.
- Maddux, Franklin W., Stephen McMurray, and Allen R. Nissenson. "Toward population management in an integrated care model." *Clinical Journal of the American Society of Nephrology* (2013): CJN-09050912.
- McCarthy, Douglas, Kimberly Mueller, and Jennifer Wrenn. *Kaiser Permanente: Bridging the quality divide with integrated practice, group accountability, and health information technology*. New York: Commonwealth Fund, 2009.
- Paulus, Ronald A., Karen Davis, and Glenn D. Steele. "Continuous innovation in health care: implications of the Geisinger experience." *Health Affairs* 27, no. 5 (2008): 1235-1245.
- PCPCC (Patient-Centered Primary Care Collaborative). "Defining the Medical Home." *Defining the Medical Home*. Accessed February 10, 2015. <https://www.pcpcc.org/about/medical-home>.
- Regueiro, Miguel. "IBD Home Interview." Interview by author. March 3, 2015.
- Rosenberg, Cynthia Napier, Pamela Peele, Donna Keyser, Sandra McAnallen, and Diane Holder. "Results from a patient-centered medical home pilot at UPMC Health Plan hold lessons for broader adoption of the model." *Health Affairs* 31, no. 11 (2012): 2423-2431.
- Rudolph, Kate. "IBD Home Interview." Interview by author. January 16, 2015.
- Steele, Glenn D., Jean A. Haynes, Duane E. Davis, Janet Tomcavage, Walter F. Stewart, Tom R. Graf, Ronald A. Paulus, Karena Weikel, and Janet Shikles. "How Geisinger's advanced medical home model argues the case for rapid-cycle innovation." *Health Affairs* 29, no. 11 (2010): 2047-2053.