How to Scale Up Primary Care Transformation: What We Know and What We Need to Know?

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Becoming a medical home is a radical change, requiring both a new mental model for primary care and the skills and resources to accomplish it. Although numerous reports indicate practice change is feasible—particularly with technical support and either insulation from or alignment with financial incentives—sustained transformation appears difficult. We identified the following critical success factors: leadership, financial resources, personal and organizational relationships, engagement with patients and families, competence in management, improvement methods and coaching, health information technology properly applied, care coordination support, and staff development. Each factor raises researchable questions about what policies can facilitate achieving success so that transformation becomes mainstream rather than the province of the innovative few.

KEY WORDS: medical home; primary care; transformation; patient centered medical home.

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INTRODUCTION

"Transformation" implies radical change: a transformed practice is aiming at fundamentally different goals than those of "usual" primary care. Successful transformation will require a "new mental model"¹ about primary care as well as new support structures for primary care that measure and reward practices for something other than visits. This transformed model is focused on creation of value for patients and for the delivery system, and involves committing to provide care for a population of patients across time, disease and care setting.² In the new model, physicians will not personally provide all this care; rather, they will take responsibility to manage and coordinate care by developing information systems, advanced protocols under which newly trained staff operate, and tracking systems to assure patients reliably get what they need when they need it and in the most appropriate setting. The ecosystem created by the current fee for service reimbursement system is hostile to the care model we envision. Sustainable, large scale change will occur only if the reimbursement system changes to focus more on value, stimulating practices to undertake transformational change. But how do existing practices transform to that "new model"? What

kinds of changes are involved, and what are the key drivers of success? What do we know, and what do we need to know?

We frame our discussion in a theory of change offered by Nickols³ positing three important "framing" questions for managing and understanding change: "Why?" asked by those who are reflecting on where the world is going and their potential place in that new world. "What?" asked by those who are visualizing a defined end state. And "How?" asked by those who want to know how to get there. Other authors in this volume are addressing the "Why" and "What" questions; our primary focus here is the "How". Nonetheless, to ground our discussion in a shared understanding of the PCMH entity, we briefly posit our own answers to the "why transform" and "transform to what" questions here.

The answer to "why transform" lies in the inadequate performance of our health care system in terms of quality and cost as well as in the widespread dissatisfaction with the practice of primary care, particularly among those caring for adults. The more interesting question is "why now?" and that appears to be because policy makers and purchasers now believe advanced models of primary care could be a critical part of a re-designed health care system that achieves better access, higher quality and lower costs than the one we have now, and because having greater primary care availability will be crucial as financial access to care expands.⁴ As a result, they are now willing to provide new resources and support to practices undertaking transformation.

Our assumptions about "What" a transformed practice looks like include greater accessibility (e.g., advanced access scheduling systems, availability by e-mail and phone); coordination of care (engaging the practice in non-visit based communication with patients, families and many other providers of care); and management of information (assuring that information about patients is maintained securely and able to support appropriate care both within and outside of the practice; working with structured data; and developing ongoing performance reporting and improvement efforts based on those data). Patients and families will be engaged as key partners in the transformation process in a manner responsive to their preferences and culture, not just as passive actors carrying out physician scripted activities. And physicians will need a set of core skills to transform and function successfully within these new practices. The American Board of Internal Medicine defines these skills as being an expert diagnostician; a patient advocate; an effective communicator; a team leader and effective teammate; a systems manager; an effective user of health information technology and health data; a change agent; and a practitioner accountable for efficient accessible care.⁵ Although these skills might fit within the required

competency for physicians of “system based practice,” they remain under-emphasized in medical education.

How?

Having briefly described the why and the what, the focus for the remainder of the paper is how...how to promote transformation, first among the willing and then across the full universe of primary care.

In order to address this question, we primarily reflected upon our own substantial experience in promoting both improvement and transformation in clinical office practice, as well as on the experience of one of the authors (RB) currently transforming his own practice. We supplemented this reflection with a selective review of key articles evaluating improvement and transformative efforts,^{6–11} with interviews of selected individuals known to the authors who either were themselves promoting transformation or had successfully achieved dramatic change in their own clinical practice, and with the written reflection of experts on their experiences.^{12–15} These informed our selection of ten key transformative elements. Areas of disagreement or uncertainty informed our discussion of researchable policy questions within each.

Among the earlier studies of practice change were evaluations of programs intended to enhance the performance of preventive services in primary care practices through quality improvement methods. These innovators often deployed in-office consultants who coached teams using specific approaches to change management, combined with specific tools such as flow charts and reminder systems. Margolis' program of primary care office practice improvement in primary care settings¹⁶ showed significant improvements in the performance of preventive services in pediatrics; similarly the STEP-UP program in northern Ohio showed significant and sustained improvements (although absolute levels of performance remained lower than desirable)^{17,18} while other projects had less positive results.^{19–21} A reasonable conclusion from these projects is that, in some settings with sufficient support, practices could operate with a higher level of reliability in the performance of preventive interventions, but that meaningful and sustained adoption of these reliability practices was difficult. None of these studies were intended to trigger or study spread beyond those receiving the direct intervention.

These preventive services improvement programs were soon followed by activities to improve the primary care management of patients with specific chronic conditions. Many of these programs sought to help practices implement the Chronic Care Model developed by Ed Wagner and colleagues using the Breakthrough Series™ developed by the Institute for Healthcare Improvement and the Model for Improvement developed by Associates in Process Improvement. The most substantial initiative using this framework was the Health Disparities Collaborative conducted by the Bureau of Primary Health Care (BPHC), one of the component Bureaus of Health Resources Services Administration (HRSA). Involving ultimately hundreds of Federally Qualified Community Health Centers and leading to the creation of an improvement infrastructure for the Bureau, this initiative did lead to significant improvements in processes of care for numerous chronic conditions, and, in some instances, improvements in outcomes.^{11,22} Although most replications did show positive impact on the management of specific targeted conditions,⁹ at least one test

of this approach outside the BPHC context—engaging with two different private health care models but without the regional improvement structure or institutional incentives for participation and with potential contamination between study arms—was not successful in producing the desired changes in clinical processes.⁸ The BPHC has gone on to broaden the scope of its efforts to include substantial redesign of the community health center to enhance scheduling and operational efficiency and incorporate metrics reflecting community health.²³ In addition, another well-publicized report in pediatrics documented dramatic success in improving single condition management (e.g., asthma) in a Cincinnati based private practice network setting through the application of the Chronic Care Model, a system wide registry, training in self management support, and the implementation of a pay for performance program.²⁴

These various topic (preventive services) and condition based activities led to initiatives seeking broad scale practice transformation. For example, a team in New Hampshire, Carl Cooley and Jeanne McAllister, began nearly ten years ago to help transform pediatric practices to become medical homes for children with special health care needs through in-practice coaching. Their approach includes an especially strong emphasis on direct involvement of families in the process of improvement.²⁵ Cooley and McAllister later worked with the National Initiative for Children's Healthcare Quality (NICHQ) to implement the medical home model in 22 states through the learning collaborative approach.

Following the release of its Future of Family Medicine report, AAFP launched its TransforMED program. This initiative was intended to promote and study the transformation of practices and incorporated a clinical trial design. The study population included 32 selected practices all of whom had access to on-line materials and access to experts, but only half of them also had intensive coaching. No financial support was available to any of the practices, and their payment environment did not change. Preliminary observations indicate several substantial barriers to success: the complexity of the change, the inter-relatedness of the many components, the challenges in having current information technology resources actually facilitate better care, the importance of personal transformation of physicians, and the time such approaches take.²⁶

Our interpretation of the literature is that evidence supports the feasibility of improving the ability of practices to manage specific clinical conditions or provide preventive care; however, two of the strongest examples—the BPHC work and the Cincinnati experience—occurred in environments with well developed organizational quality improvement infrastructure, appropriate information technology, and either insulated from the payment system or benefiting from specific realignment of that system.

WHAT DO WE KNOW, AND WHAT DO WE NEED TO KNOW ABOUT “HOW”?

Ten critical elements appear necessary for transformation. Each element raises key policy questions.

1) Leadership

Committed, competent and passionate leadership is a *sine qua non* of successful transformative efforts regardless of

practice size. No different than leadership in areas outside of health care, leadership in practice transformation entails establishing and articulating a vision, building the relationships required to accomplish it, and allocating and prioritizing resources to enable it.

The key research question is how to scale up the development and promotion of this type of leadership beyond the innovators and early adopters who likely have composed most of the programs described to date. Do these leaders need to be physicians? Can leadership be a criterion for selection into health professional schools? Can this kind of leadership be taught? What types of training and support are needed to develop and strengthen practice leaders and how will this training be supported?

2) Resources

To achieve transformation, additional investments in primary care will be necessary. Existing primary care resources are dedicated largely to providing visits. Much of the activities described in transformed practices represent new, currently unfunded activities such as asynchronous interactions via e-mail, population health management and outreach, as well as care coordination. In that sense, a PCMH is a “new business” for primary care practices,¹ one that will require both an up front investment to undertake the transformation and a reliable revenue stream for ongoing operation.

We need to understand the magnitude, timing and feasible financing models to support practice investments in new personnel, space, and systems. We also need to know how payments should be made in order to better align the priorities of the practice with the goal of transformation, as well as how non-cash supports (e.g., co-located case managers paid for by insurance companies as has been done at Geisinger in Pennsylvania and at Independent Health in Buffalo, or support for electronic health record (EHR) adoption/implementation) can affect the pace of change. A particular challenge is the development of feasible models to achieve multi-payer support for transformation; a number of pilot efforts undertaken by large insurers acting alone (including IBM/Aetna in Texas, United in Florida) failed to get off the ground because, in a fragmented payment system, one payer—even a large one—supporting only its share of practice patients could not provide sufficient financial resources to support comprehensive practice transformation. Given the importance of new payment systems for supporting transformation, this should be a high priority activity for research.

3) Relationships

All types of transformation require skill in establishing and maintaining relationships. Transformation entails transforming from a provider/physician focused, autonomous practice to team-oriented practices maintaining productive relationships with patients and families, with the community and its resources, and with the medical neighborhood of specialists, hospitals, plans and agencies. Research might identify optimal methods and timing of training and supervision through the various stages of health professional training that can promote skills in building and maintaining such relationships.

4) Patient and family engagement

One core element of the Patient Centered Medical Home is a changed relationship between health professional and family/patient, particularly concerning the management of chronic conditions. Substantial research supports the importance of

engaging patients and families in their care, particularly in the care of chronic illness. New capacities created by health information technology—such as patient portals and personal health records—may help to engage patients directly in their care and to drive change in health care organizational performance. Research questions should address how and to what extent patient access to clinical information stimulates practice transformation, as well as which models of patient/family engagement work best in actual practices.

Several demonstration programs—such as the evolving Massachusetts Medical Home Demonstration—emphasize a strong role for patients and families in driving or at least directly informing transformation process itself. In our experience, the unique perspective that family members bring refocuses transformation efforts away from provider concerns and toward bringing value for families and patients. Research is needed to identify the ways in which engaging patients and families in the transformation process influences the pace and nature of the transformation. Additional research can examine how to best provide training and support to patients and families so they can most productively participate in this transformative effort, and what training is needed to better enable health professionals to work with families. This research will be especially valuable since few of the major demonstration projects now underway include family participation as a critical component.

5) Competent management and finances

Change is stressful and requires a base of organizational stability. Competent management, particularly but not only financial management, establishes the requisite foundation for transformation to occur. The TransforMED investigators have identified a capability of practices they term “adaptive capacity”²⁷ that indicates, in their view, the ability of a practice to undertake rapid and ongoing change. Defining and implementing systematic ways to assess whether a practice is “well functioning” and, beyond that, whether it has “adaptive capacity” would be a high value research activity as it may provide tools to assess and improve the “readiness” of practices to undertake transformation.

6) Improvement Technique

All of the transformation projects of which we are aware used one or more specific techniques or models for practices to undertake change, although the specific change models (model for improvement, lean, six sigma, or a more home grown approach) vary. We would predict that the optimal technique to promote practice transformation will be context specific and depend on the size, leadership and organizational setting of the individual practice. Maintenance of certification programs now require physicians to measure and improve performance at the practice level on a population basis. These programs have had a large volume of participating physicians, many from small practices, and the role of this process in raising consciousness and engaging practicing physicians is worthy of further study. Overall, research should examine how context and technique interact to produce results.

7) Expert and facilitated assistance

The practices with whom we spoke repeatedly emphasized the importance of external support for providing a) new ideas and approaches; b) access to the experience of others like them; c) a

framework for change. Sometimes this support came through consultative work from trained in office facilitators or QI experts, sometimes it came through collaborative learning projects (e.g., Hogg et al.).²⁷ We have seen successful support from professional societies (American Academy of Pediatrics (AAP), American College of Physicians (ACP), American Academy of Family Medicine (AAFM), Improving Performance in Practice (IPIP)), from state government, from organizations with expertise in improvement (NICHQ, IHI, Quality Improvement Organizations (QIO's), improvement partnerships).

A series of key research questions emerge: What form of support is most effective in promoting and sustaining transformation? What are the best coaching models? What are the optimal training and core skills of successful coaches? How critical are site visits/on site facilitation vs. collaborative learning programs? What is the role of virtual learning communities? Understanding the relative advantages and disadvantages of each of these approaches will inform state and federal policy choices

8) Health IT

Health IT plays four critical roles in enabling transformation. Each can be accomplished without IT, but well designed IT systems can facilitate each:

- a) Registry functionality and population management—identifying and managing the population of patients within a practice as a population.
- b) Care planning—populating and sharing the content of care plans efficiently.
- c) Communication—effective health IT can facilitate primary care/specialty communication, patient-doctor communication, and in-office team communication.
- d) Monitoring and tracking change and improvement.

But HIT itself only creates a “necessary but not sufficient” platform on which transformation takes place; the human interaction with technology must be the focus of further research:

- a) How best to achieve capacity for registry functionality as an “effortless by-product” of contemporaneous care documentation²⁸
- b) Since care plans, by their nature, will demand shared engagement of patients/families in the creation of a “care plan document”, what HIT tools, standards and work flows best support this activity?
- c) What are the respective roles of technical and work flow standardization in the facilitation of effective communication?
- d) What routine capacities for monitoring performance should be “hard-wired” into EHR products? And how can this be done without adding undue hassle and cost?

9) Capacity to Deliver Care Coordination

Research is needed to identify the optimal scale for care coordination, i.e., at what point does it make sense for the coordination function to be within a practice vs. outside. In either setting, it will be critical to understand the appropriate health professional skill required for this activity, and the training and requisite support. If care coordination capacity is located outside the practice, as it is in models such as the Help Me Grow program in Connecticut now undergoing replication, how best to maintain connection to the practice and avoid the shortcomings of simply outsourcing disease management—as

many failed insurance company programs appear to do—is another question of central import.²⁹

10) Professional and staff roles and training

Core principles of chronic care management and the general concept of transformation as articulated above entail the use of teams and more broadly shared responsibilities across health professionals and staff at a variety of levels and disciplines. Ample research confirms the capabilities of nurses and nurse practitioners to provide chronic care management and preventive services at levels at least comparable to that provided by physicians.^{30,31} Additional research is needed to determine appropriate mix of staffing and roles for health professionals and staff to achieve the desired outcomes and how to provide training to non-professional staff (e.g., medical assistants). It will be helpful to know what resources can help practices develop effective teams and what useful assessment instruments can be deployed to help practices measure and improve their team performance.

CONCLUSION

Many of the major elements comprising transformation of a primary care practice into a patient centered medical home are known and outlined in this report. The key questions raised here are how to move this process from an intensive, boutique effort in hothouse demonstration programs to the mainstream. For transformation of primary care to become widespread, the transformation cannot be limited to primary care offices but must also include payment reform, widespread application of health information technology, creation of shared community resources, engagement of a broader set of health professionals (especially nursing) and major changes in the roles and relationships between primary care and the other components of the health care system. Particular attention must be paid to how to better include patients and their families in the transformative process. The details and sequencing of transformative processes must be better understood so that coaching practices through the process becomes more of a technical task rather than the art form now practiced by highly skilled professionals.

In a fragmented delivery system with many extant primary care models ranging from solo practice to large integrated delivery system and many reimbursement models ranging from straight fee for service to full risk capitation at the integrated delivery system level, we should not be surprised to find more questions than answers about how to get to the ready availability of transformed, effective PCMH practices in the US. Given the importance of enhanced, effective primary care to a higher functioning health care system, we believe the research questions outlined here are of the highest priority. The opportunity for “return on research investment” is huge.

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