Patient-centred care plus medical home do not equal patient-centred medical home: why layering models of care may not lead to better outcomes

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Abstract

Introduction

This article outlines the original Medical Home model and Patient-Centred Care approach to identify the disjoint between their concurrent application and the development of the Patient Centred Medical Home (PCMH) to answer the question—why is the whole (i.e. the PCMH model) not yet greater than the sum of its parts? We focus on the issue of evaluation and measurement, and more specifically, how patient-centeredness must be incorporated when considering how to measure outcomes such as quality of care in the context of the PCMH. We conclude with a discussion of measurement issues to be addressed to adequately understand how patient-centeredness drives the healthcare system.

Conclusion

Focusing on the implementation of health information technology and patient-centred interventions within the PCMH has the potential to improve the Medical Home, but efforts must be made to develop and test appropriate measures of patient-centeredness and other key features of the PCMH. By keeping the patient in the center of decision-making about the design, development and evaluation of the PCMH, this care delivery model will be more likely to succeed in efforts to achieve the Institute of Medicine’s triple aim of better care for patients, decreased costs and improved population health.

Introduction

Among practitioners, practices, payers and policymakers, there is a strong push toward the establishment of patient-centred medical homes (PCMH) as a means of improving primary care. Each stakeholder has articulated a need to address the serious shortcomings in the current system, noting that strides must be made to advance safety, quality and satisfaction in primary care. However, the on-going discourse on PCMH fails to reconcile the normative with the empirical; the former is driven by ideals and goals, and the latter by competing pressures and dynamics.

The PCMH organisational design has been proposed as a model of care that can transform primary healthcare in the United States1. PCMHs are structured to address the problematic issues of fragmentation of care, high costs, patient dissatisfaction and suboptimal quality of care. Moreover, PCMHs are intended to help achieve the triple aim of enhanced patient experiences, decreased per capita costs and improved health for populations2. While early investigations have supported claims that a PCMH can indeed achieve aspects of the triple aim2, the gains have proved to be neither uniform nor universal1,3.

The variability in outcomes associated with the PCMH model may be attributable to a translational problem. While efforts to advance PCMH have been on-going, two separate and related efforts have also seen significant support—medical homes (MHs) and patient-centred care (PCC). While MHs and PCC share a number of ideas, they emerged from different normative philosophies and perspectives. The move towards MHs can be described as an approach to population health management4,5 where standardisation of care meets care coordination. In contrast, a truly patient-centred model of care argues for denormalisation of care and a move towards personalised medicine that encourages and requires patient empowerment and engagement.

As a result, the two approaches to care do not simply amalgamate to a sum that is greater than the parts because the parts do not fit perfectly together. Current evaluation models have focused on what can easily be measured as opposed to what should be measured based on a conceptual understanding of patient-centeredness. As a result, measures have focused on meeting criteria for what a PCMH should look like as opposed to the outcomes that purportedly related to their implementation.

This article outlines the original MH model and PCC approach to identify the disjoint between their concurrent application and the development of the PCMH to answer the question—why is the whole (i.e. the PCMH model) not yet greater than the sum of its parts? We focus on the issue of evaluation and measurement, and more specifically, how patient-centeredness must be incorporated when considering how to measure outcomes such as quality of care in the context of the PCMH. We conclude with a discussion of measurement issues to be addressed to adequately understand...
how patient-centeredness drives the healthcare system.

**Discussion**

**What is a medical home?**

The medical home (MH) concept is not new. In 1967, the American Academy of Pediatrics (AAP) initially proposed MH as an approach to care for children with complex medical needs to provide ‘accessible, continuous, comprehensive and culturally effective’ care that is ‘delivered or directed by well-trained physicians providing primary care’6-8. With increasing recognition that primary care was critical to providing high-quality care with improved outcomes at a lower cost came renewed interest in the MH model17,18. The MH concept was then expanded to adult populations in 200719,20 to include the following:

- Evidence-based decision support tools
- Use of the chronic care model with all patients
- Integrated care plans for ongoing medical care, focused on partnerships with the patient and family
- Enhanced and convenient access
- Key quality indicators
- Use of health information technology (HIT)
- A system of feedback and guidance.

MHs seek to reduce the barriers to collaboration and coordination experienced by providers. The ‘home’ metaphor was meant to increase the centrality of primary care provision in the healthcare delivery ecosystem and central to patient care. While coordination is seen as a benefit to the patient, its express purpose is one of increasing accountability and quality in the context of decreasing navigation costs to the patient. To that end, recent expansions of HIT capabilities have also increased communication among providers, patients, and practices that health service professionals note has concomitant population health management benefits19,20 which in turn increases support for the MH model.

**What is patient-centred care?**

In contrast to the MH model, a concurrent effort has been made to encourage patients to engage further in their own care. That new approach, described as a partnership between patients and providers to ensure that patients are active participants in the process of healthcare decision-making and illness management14, is called patient-centred care (PCC). Under this model, patients are viewed as partners in care, with responsibilities for what had been previously clinical tasks, and considered an integral part of the health service delivery ecosystem as both patient and provider. The patient’s new role in their care created the opportunity to shift the operating paradigm from physician-directed care to a team focus to facilitate a broad approach to the delivery of care.

PCC as a philosophy of care has evolved in concept and seen an increasing amount research. A PubMed search for ‘patient-centred’ showed 199 citations through 1994 but increased to 1,494 by 2012. The societal trend toward customer-centred service, the growth and dissemination of randomised clinical trials and systematic reviews, and the concurrent push for evidence-based medicine in practice have all contributed to the on-going development of a care model that is patient centred. Health-system-level trends such as growth of managed care in the 1980s and 1990s and subsequent disinterest on the part of patients and providers further contributed to the rise of PCC. More formally, the 2001 landmark publication from the Institute of Medicine (IOM), *Crossing the Quality Chasm*, identified PCC as one of the six essential elements of quality improvement15. Since then, PCC has been embraced by leading providers and policymakers in the healthcare industry16, and interest has been further sparked by increasing attention paid to patient autonomy and shared decision-making (SDM).

There is mounting evidence that PCC can improve patient knowledge, use of health services, health behaviour and health status17,18. In addition, research has shown that hospitals that embrace PCC reap a number of financial benefits, including lower cost per case, decreased adverse events, higher employee retention rates, decreased malpractice claims and increased market share16.

Meanwhile, the role of patient in the PCC model has evolved. Early studies suggested that treatment plans that were sensitive to patient preferences resulted in better outcomes, leading to the idea that patient-centeredness necessitates patient engagement. As a result, there has been a significant push in research, such as through recent efforts by the Patient Centred Outcomes Research Institute (PCORI) and the Agency for Health Research and Quality (AHRQ), to explore, articulate and support efforts to transform care through patient engagement.

Figure 1 illustrates the shift in focus present in a PCC approach. Figure 1A presents patients as one stakeholder among many; however, the PCC paradigm (Figure 1B) repositions patients’ needs as primary among others. While the goal of increasing coordination across all stakeholders is an important one, it is perhaps even more important to focus on the opportunity presented by Figure 1C—an illustration of patient engagement in a PCC environment where all arrows lead to the patient.

**Patient engagement and PCC**

Coulter18 proposes a framework for patient engagement focused on the patient–provider relationship that includes three elements: health literacy, SDM and quality improvement (see Figure 2)19. Health literacy interventions to improve understanding, which are most effective when tailored to the needs of the patient19,20,
Critical review

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Figure 1: Illustrating the shift to patient-centred care.

Patient 
Provider 
Payor 
Practice

1A: Healthcare delivery has been positioned as a partnership among four stakeholders

1B: However, there has been an increased demand to make the patient the center of the healthcare system, rather than just one partner.

1C: Patient Centered Care focuses on improving health system outcomes that are meaningful to patients.

Figure 2: Patient engagement classified by how information is exchanged.

Patient 
Provider 
Payor 
Practice

Health Literacy

Shared Decision Making

System Quality Improvement

are presented as arrows in Figure 2, pointing in toward the patient to clarify that the provider, practice and payer can each play a role in effective knowledge translation. SDM involves patients working with providers, practices and payers to select treatments, provide supportive services and more effectively manage care, and is shown by the bidirectional arrows in Figure 2. Finally, quality improve-ment, or systematic feedback about patient experiences, is represented in Figure 2 by dashed lines extending from the patient and solid lines between the health system elements. Although there is a history of data moving among providers, practices and payers, efforts to improve patient engagement require including ‘the voice of the customer’, aka the patient, and determining how to ensure and measure this involvement21.

Within the PCC context, patient engagement is about building a collaboraƟve partnership between providers and patients, grounded in mutual respect. Key to this is the acknowledge-ment that within the doctor-patient partnership, both partners bring expertise to the relationship22, with the patient bringing an in-depth knowledge of the risk factors, beha viours and social circumstances that inform the aetiology of the disease as well as a clear knowledge of compli ance with the treatment regimen.

Measurement issues with PCC and patient engagement

While scholars suggest that PCC components and measures of PCC should drive care, many of the current metrics fail to meet the challenge. Current measures importantly emphasise issues of expanded office hours or greater access to health providers. Yet these metrics fail to permit comprehensive evaluation of the patient experience in either the primary care setting or throughout the healthcare system. Similarly, the patient engage-ment construct, while often cited, is not consistently defined or measured. For example, when considering the use of HIT in patient care, there are various approaches to measure patient engagement as shown in Table 1. In 2006, Audet et al. operationalised patient engagement with HIT as the ‘use of computerized or manual patient reminder systems for preventative follow-up care’23. In
Goroll and colleagues conceptualized patient engagement; in this alternative, the physician was seen as a catalyst who sanctioned information-seeking behaviour by the patient. In addition, Coulter et al. emphasized a multi-faceted approach comprising of policies, feedback and technology. At their core, these studies may collectively reflect an increased focus on efforts to engage patients using HIT, but none provide measures of levels of engagement by the patient per se.

Here, then is a significant problem: the measures we attribute to patient engagement identify non-generalizable outcomes and position them as outcomes to support the claim of an engaged community of clients. A patient-centred model would thus ask whether we provide opportunities that align with the patient’s preferences for engagement, while patient engagement speaks to the effectiveness of PCMHs has primarily showcased small demonstration projects that involve generally high-performing clinics (e.g. AAFP demonstration projects) or studies including limited numbers of clinics within a single healthcare system or local community. While these studies provide useful lessons about coordinating care and measuring and improving performance, With respect to PCC, the NCQA further specifies five strategies to help put patients at the centre of primary care by demonstrating active patient engagement, supporting engagement through payment strategies, providing technical assistance for effective engagement, requiring HIT standards and requiring meaningful patient input, but evidence of the effectiveness of these strategies at promoting PCC is limited.

Existing literature demonstrating the effectiveness of PCMHs has primarily showcased small demonstration projects that involve generally high-performing clinics (e.g. AAFP demonstration projects) or studies including limited numbers of clinics within a single healthcare system or local community. While these studies provide useful lessons about the implementation of the PCMH model, evidence demonstrating the impact of the PCMH model on cost and quality outcomes is mixed and still sparse. Furthermore, these early investigations have not addressed the fundamental question of whether PCC is being delivered in the PCMH.

In practice, the PCMH model provides areas of intersect between the MH and PCC concepts, as shown in Figure 3. However, although these concepts may share many common elements, the overlap is not complete, thus highlighting the fact that the PCMH model is a distinct concept that requires its own metrics. Some metrics may be borrowed from the MH and PCC constructs, but PCMH metrics require additional tailoring and conceptualization.

PCMH indicators generally focus on population health rather than measures for individual patients; thus, the notion of PCC may, at times, be in conflict with the PCMH model. For example, under a PCMH model of care, incentives for providers and systems may be established to deliver guideline-based care, based on evidence from a population of patients, but this approach to care may reduce patient autonomy for the individual patient being treated. Using a PCC framework, however, the choice of whether to perform an intervention or follow a guideline should be made at the individual patient level and include an SDM process involving the provider and patient. An additional challenge emerges when providers need to develop care plans for the unique needs of multi-morbidity patients. For instance, in cases where the treatment of one condition is found to exacerbate another, research has supported withholding guideline-recommended disease-specific care. However, such actions are negatively reinforced when calculating achievements based on PCMH indicators.

At its core the PCMH concept involves an important supposition—that including patients actively in the management of their disease states will result in more effective care.
chronic disease management (CDM), increased receipt of preventive services and improvements in care quality. Furthermore, there is an explicit expectation that only when patients are engaged will they rise to the challenge of managing their own care and that engagement necessitates a contextually defined approach that is unique to each patient. This concept—and its implementation—is what separates a PCMH from a simple MH. However, until appropriate metrics are developed to measure patient-centeredness and PCC elements such as patient engagement and SDM, complete evaluation of the impact of the PCMH model will not be feasible.

Conclusion

Patient-centeredness is the critical element of high-quality primary care. Understanding the basic concepts of PCC and how these interact within the MH are critical to the successful implementation of a truly patient-centred medical home. Focusing on the implementation of HIT and patient-centred interventions within the PCMH has the potential to improve the MH, but efforts must be made to develop and test appropriate measures of patient-centeredness and other key features of the PCMH. By keeping the patient in the centre of decision-making about the design, development and evaluation of the PCMH, this care delivery model will be more likely to succeed in efforts to achieve the IOM’s triple aim of better care for patients, decreased costs and improved population health.

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