Moving Ahead with the PCMH: Some Progress, but More Testing Needed

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The current plight of the primary care delivery system has been well described. Whether due to low reimbursement rates, low perceived prestige, or a chaotic and uncoordinated style of practice that has evolved under fee-for-service reimbursement, the US primary care system is at a crossroads. Many primary care physicians are approaching retirement age and few graduating medical students are choosing to enter primary care. Current projections show a marked shortfall in the number of primary care physicians needed to provide care, and these projections predate the passage of the Affordable Care Act (ACA), which will bring some 30-plus million persons into the primary care system.[1] Simply stated, the financing, organization, and delivery of primary care services must change, or within a relatively short period of time, there will be no functioning primary care system in the US.

There is reason for optimism, however. The above problems are front and center in policy debates, and various implementations of the patient centered medical home (PCMH) are rapidly being deployed in many parts of the country. The PCMH envisions a reformed primary care delivery system that is whole-person oriented and coordinated, and incorporates both enhanced access and systems for quality assurance. Most importantly, the PCMH requires a reformed payment system to support this enhanced functionality. In 2009, we characterized PCMH initiatives that included over 14,000 physicians caring for nearly five million patients operating throughout the country.[2] Since that time, there has been a significant increase in activity, including numerous state Medicaid programs as well as a number of initiatives from the Centers for Medicare & Medicaid Services (CMS), whose programs are expected to cover over one million Medicare beneficiaries by 2014.

Nonetheless, although there is much talk of improved outcomes and cost savings, relatively few publications documenting the success of the PCMH model have made it into the peer-reviewed literature to date. In addition, the two most prominent reports emerged from large integrated delivery systems that also provide their own insurance, and thus are not representative of typical practice in the US.[3,4] A recent systematic review of cost and quality under the PCMH model noted that there was insufficient evidence to evaluate most outcomes.[5]

This issue of *JGIM* contains two manuscripts by Fifield and colleagues reporting on the results of one of the first randomized controlled trials of an implementation of the PCMH.[6,7] The PCMH experiment was implemented by Emblem Health, a large health plan in New York City, with many small practices that are quite representative of primary care practices across the US. Once practices were recruited and consented by Emblem, they were cluster-randomized by the study team to intervention or control after stratification by size, presence of an electronic health record, community health center status, and measures of their patients' socioeconomic status. Ultimately, 37 practices were randomized, but five of these (including four from the control group) dropped out of the study. Thus, the analyses represent a "modified" intent-to-treat approach and include data from 18 intervention practices (43 physicians, 7,326 patients) and 14 controls (23 physicians, 5,726 patients).

The intervention practices received 6 months of intensive and 12 months of less intensive practice redesign support, 2 years of a revised payment plan, and 18 months of care management support equivalent to one care manager for every 1,000 Emblem patients. In addition, they also received a practice redesign facilitator who assisted with obtaining PCMH recognition from the National Committee for Quality Assurance (NCQA). Of note, the intervention was closely tied to Emblem patients with regards to care management support and payment redesign and it is unlikely there was much "spillover" to non-Emblem patients. Intervention practices were eligible for up to $2.50 per member per month (PMPM) based on NCQA level attainment, as well as an additional $2.50 PMPM for meeting specified quality targets. Control practices received $5,000 per year for submitting data and completing the NCQA self-assessment tool twice. On average, participating practices received an additional $13,000 per year, which

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represents a notably small component of total practice revenues.

In the first paper, the authors focus on the achievement of recognition from the National Committee for Quality Assurance (NCQA) based on the original 2008 Physician Practice Connections-PCMH tool.[8] These NCQA process measures evaluate practices based on nine standards that assess components of the PCMH model including enhanced access, care management, and a variety of electronic capabilities such e-prescribing, and referral tracking. Not surprisingly, intervention practices were far more likely to achieve NCQA recognition, with just a single practice remaining unrecognized after the intervention. Moreover, among those that achieved recognition, 80 % achieved the highest level of recognition (Level 3) as compared to just 14 % of the control practices. Thus, when given financial incentives and resources to assist in achieving NCQA recognition, even small practices were able to successfully achieve this endpoint. Although I believe that achieving recognition is a base from which improvement efforts should begin, rather than a goal that signifies attainment of the PCMH principles, achieving this milestone suggests that these practices have the capabilities needed to improve the delivery of primary care services in ways envisioned by the PCMH. It also suggests that aligning financial and practice transformation incentives can successfully promote fairly rapid practice change.

More important, however, is understanding whether transitioning to a PCMH impacts patient care, costs, and experiences. The second report by Fifield et al. assessed the impact of the intervention on both quality and efficiency of care.[7] Of the 11 quality measures assessed, six focused on screening tests that can be ascertained from medical claims (e.g., breast cancer screening rates) and five focused on intermediate outcomes of care such as blood pressure or diabetes control. Intermediate outcomes were assessed on the basis of CPT-II codes, which were submitted by the participating practices, but were not required for payment. Thus, as an outcome measure, the validity of these measures has not been well established, and there might even be concern related to the fact that self-report of these measures was provided by practices that were not masked to allocation status. From these 11 measures, just two showed significant improvements for intervention relative to control practices. The one with the largest incremental difference (control of blood pressure) was based on submitted CPT-II codes and the results show that almost no patients in the control practices achieved adequate blood pressure control, which might indicate under-ascertainment in the control practices rather than a true difference in measured quality. The other measure (breast cancer screening rates) showed a modest difference of approximately four percentage points attributable to the PCMH intervention.

In addition to quality, the authors assessed ten efficiency measures, several of which assessed the extent to which either Emergency Department or Hospital use was averted for episodes of care that were identified by a commercial episode grouper. A small decrease in ED visits was the only significant finding of the ten efficiency measures examined. More importantly, there were no differences in trends for aggregate measures of costs. Thus, although these findings represent a glimmer of hope, the overall findings from Fifield et al. do not show a consistent cost advantage for the intervention versus control practices. On the other hand, there is little evidence that implementation of PCMH model led to unintended increases in the costs of care delivered.

It should be acknowledged, however, that there were several methodological issues that might have limited the ability to detect meaningful changes in clinical outcomes for this study. First, claims data used for the analyses of quality and efficiency were aggregated to the practice level and did not include patient-level demographic or health status information. Thus, even with random allocation, there might have been differences in the patient populations. Second, the post-intervention period for the assessment of quality and efficiency was the 1-year period that began just 6 months after the intervention started. Thus, there might not have been enough time to achieve meaningful changes in practice. Finally, although the randomized design is desirable, the differential loss to follow-up of approximately one fourth of the control practices and the relatively small number of intervention practices limits to some degree the expected benefits of randomization, although this still remains a more valid experiment than the uncontrolled "before–after intervention" studies that are more typical of the field.[9] In addition, the sample sizes for some of the clinical quality measures were very small (e.g., the mean number of Emblem diabetes patients per practice was just eight) and likely not sufficient to detect changes in aggregate measures of spending.[10]

Nonetheless, the work by Fifield et al. is important because it is among the first reports of implementation of a PCMH program in typical small and medium sized practices that dominate many parts of the country, and it is one of the few randomized controlled trial that have been conducted. It also demonstrates some of the challenges and pitfalls of this type of approach, and suggests future directions to enhance both the evaluation and the impact of PCMH interventions. First, although a large payer, Emblem patients represented a small minority of the patients being cared for in the enrolled practices. Even though the demonstration included enhanced payments, when spread across the entire patient panel, these were unlikely to have been sufficient to drive meaningful changes in the practices. Unless implemented by an overwhelmingly dominant payer in an area, such single payer demonstrations likely are doomed to fail unless they expand to include additional payers that cover more substantial proportions of patients—ideally over 60 %. For this reason, recently launched programs of the Center for

Medicare and Medicaid Innovation, such as the Comprehensive Primary Care Initiative, require the participation of private payers alongside Medicare and are bringing in larger, more sustainable revenue streams to participating practices.[11]

Second, short-lived interventions with a defined stopping point are unlikely to lead to substantive and persistent changes. In this case, since there was a defined stopping point to the project at 2 years, it is unlikely that practices would have made sufficient additional investments in transforming care when the enhanced payments were scheduled to sunset. More importantly, transforming primary care practice is no easy task. PCP practices have been optimized to function within the current fee-for-service system, and it takes both time and effort to change these deeply ingrained habits. Although the use of transformation facilitators might accelerate this process, substantially more time and money is likely needed to achieve substantive and lasting changes in practice. A recent meta-analysis did show that facilitated primary care transformation is associated with improved outcomes, though.[12]

Third, payment reform needs to be real, substantive, and sustained if the primary care system is to be reinvigorated. In this case, practices received a relatively small incremental payment that would have been insufficient to change deeply ingrained FFS behaviors and practices. To be clear, an aggregate mean of $26,000 over 2 years would not even cover one half of a care manager's salary for 1 year; it would be hard to impact utilization without better care management within the practice. In addition, a greater proportion of payment needs to be divorced from typical FFS payments, whether in the form of enhanced PMPM payments, quality incentives, or shared savings programs.[13]

The "triple aim", as articulated by Don Berwick, makes explicit the goals of better patient experiences and quality with lower resource use—hence the achievement of higher value care. Achieving the triple aim will likely require a robust and substantially reformed primary care system capable of actively managing populations of patients. In order to invest in the PCMH, however, payers and policy makers will require robust data showing improved quality and patient experiences accompanied by cost savings, or at least budget neutrality. The studies by Fifield et al. represent a good starting place and show that typical practices can achieve recognition as PCMHs relatively rapidly, which can be thought of as an adequate platform to ***begin to build*** care transformation. They also add to a growing literature suggesting a possibility for improvements in quality and efficiency, but on these questions, the jury is still out. Many would argue that in order to preserve our primary care system, this model of care should be implemented widely, even in the absence of definitive data. Ultimately, however, stronger data will be required for wide-scale adoption of these new payment and delivery models. There is thus a need for continued well-designed evaluations such as the one by Fifield et al. in parallel with the implementation of this model of care across the country. Implementation science teaches us that innovations such as the PCMH will evolve over time as more is learned and the model is adapted to different contexts, so no single study will ever provide the definitive resolution to this issue. In the meantime, it is time to keep testing, collecting data, and refining our payment and delivery models to reflect what we learn.

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