



# Continuity and Access in an Academic Family Medicine Center

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**BACKGROUND AND OBJECTIVES:** A personal physician and enhanced access to care are principles of the patient-centered medical home. Despite the importance of these concepts, measuring and improving interpersonal continuity of care and access to care in academic family medicine centers has received little attention. The authors describe their program's methods and results to maximize continuity of care and minimize delays for care using proven principles from improvement science.

**METHODS:** In 2004, a diverse quality improvement team from our family medicine center joined a breakthrough collaborative with other primary care practices focused on improving appointment access and continuity of care. We followed the model for improvement with a specific aim, explicit measures, and ambitious goals. The team adapted and applied principles from a change package presented in the collaborative to improve access and continuity. We planned and performed small tests of change that were subsequently optimized and spread to the entire practice.

**RESULTS:** Average time to third available appointment for a routine physical improved from 22 days to 8 days. Average usual provider continuity (UPC) across all primary care physicians in the practice improved from 54% to 68%. Among resident physicians, UPC improved from 55% to 68%. These results have been sustained over 5 years.

**CONCLUSIONS:** Despite multiple challenges in academic teaching practices, the continuous use of improvement methods to apply proven change concepts minimizes delay for care and maximizes continuity of care. The residency continuity practice can and should be a cornerstone of residency curriculum.

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Despite its presence in the family medicine literature for over a decade, confusion persists regarding the content, implementation, and results of advanced access in residency teaching

practices.<sup>1,2</sup> Personal doctoring lies at the heart of the patient-centered medical home,<sup>3</sup> and enhanced access and continuity of care with a patient's personal physician are necessary conditions for developing

ongoing continuity relationships. Residency is where future family physicians develop practice habits and learn the core principles of our discipline, yet residency practices struggle to provide trainees experience as a personal physician with their own panel of patients. In this paper we will describe our approach to managing interpersonal continuity and appointment access in a large academic family medicine center, share our results, and encourage other programs to routinely measure and improve interpersonal continuity and appointment access.

## Setting

The University of North Carolina (UNC) Family Medicine Center is a large academic teaching practice in Chapel Hill, NC. In 2004, the practice included 12,500 continuity patients who had 39,000 visits and were cared for by 44 different primary care physicians (PCPs) (24 residents plus faculty, including MD, DO, FNP, CNM) representing about 8.5 full-time equivalent (FTE) clinicians. By 2015 the practice had grown to 18,100 empaneled patients with 52,000 visits cared for by 64 different PCPs representing

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10.8 FTE. The residency expanded from an 8/8/8 to a 10/10/10 program in 2011 and continues to emphasize full scope training with inpatient and maternal and child health call throughout all years of training. Rotations are scheduled in 2–6 week blocks.

## Methods

### *Improvement Methodology*

In 2004, the UNC Family Medicine Center joined with other primary care practices in North Carolina to form a Breakthrough Series Collaborative focused on improving appointment access and efficiency and sponsored by the National Institute for Child Healthcare Quality (NICHQ).<sup>4,6</sup> As described elsewhere, a Breakthrough Series Collaborative brings together improvement teams from similar organizations (in this case, primary care practices) focused on improvement for 6–15 months.<sup>4</sup> Foundations of an improvement collaborative include a clearly defined topic for improvement, expert faculty with either expertise in the topic area or in improvement methods, and a body of knowledge with proven results—known as a change package—related to the focus of improvement. Practices apply to join a collaborative and, if accepted, form a multi-disciplinary team and submit pre-work prior to the first learning

session (meeting) of the collaborative. Learning sessions include didactic sessions introducing improvement methodology and the major principles of the change package (Table 1) and are interspersed with 3–4 month long action periods where teams apply what they have learned to improving their own practice.<sup>4</sup>

The initial improvement team included our scheduling coordinator who created clinic schedules and appointment templates, a customer service representative who scheduled appointments for patients, an LPN, the practice manager, and a faculty physician knowledgeable and experienced in quality improvement. Over time the team expanded to include both second-year residents as they rotated through a 6-week quality improvement rotation and graduate students from UNC's School of Public Health. Over the course of this work, the team's efforts to improve access and continuity had the unflagging support of our department chair.

### *Model for Improvement*

The model for improvement is a proven improvement method that begins with three questions: first, "What are we trying to improve?" second, "What measure(s) will we use to know that a change is an improvement?" and third, "Based on

the principles in the change package, what changes can we make in our practice that will lead to improvement?" The team brainstorms possible changes that would improve access and/or continuity of care, chooses one to test on a small scale and plans (P) and does (D) a test of change. The team subsequently studies (S) the results of the test of change and determines next actions (A) based on results of the initial test.<sup>7</sup>

### *Measures*

Global measures are directly related to the aim statement of the improvement effort (Table 1). Supporting measures are related to global measures and are needed to inform and support tests of change. The global measure of interpersonal continuity is usual provider continuity (UPC).<sup>8</sup> UPC is measured from the patient's perspective as the percentage of visits by patients on each PCP's patient panel in the past month that are with the patient's PCP. UPC is calculated for each PCP in the practice each month. The average UPC of all the resident PCPs in the practice is reported as the resident UPC, and the average UPC of all PCPs in the practice is reported as the practice PCP. Supporting measures needed to improve UPC include the number of active patients in the practice (seen

**Table 1: Global Measures to Manage Continuity and Access**

Measure	Definition	Frequency and Goal
Usual Provider Continuity (UPC) for each PCP*	Percentage of continuity visits in the practice by patients of an individual PCP panel that are with the patient's PCP	Measured monthly (goal is >70%)
* Also measured and reported for each class of resident PCPs, all resident PCPs, faculty PCPs, and all PCPs in the practice		
Usual Team Continuity (UTC) for each team of PCPs (Continuity Care Team)*	The percentage of continuity visits in the practice by patients of a team of PCPs) that are with one of the PCPs on the team	Measured monthly (goal is >90%)
* Measured for each team of PCPs and for the practice.		
Time to third available appointment (TTA) for each PCP*	Number of calendar days between the date measured and the date of third available appointment for a routine physical.	Measured weekly; reported monthly (goal is <10 days)
* Also measured and reported for each class of resident PCPs, all resident PCPs, faculty PCPs, and all PCPs in the practice		

PCP—primary care physician

in a continuity appointment within the past 18 months), the % of active patients that are empaneled (have a valid PCP from within the practice), total continuity FTE for the practice and for each PCP, and panel sizes (expected, actual, weighted, and weighted /expected %) for each PCP.<sup>9</sup>

The global measure of appointment access is time to third available appointment (TTA) for a routine physical.<sup>6</sup> This measure mirrors a patient's experience when requesting an appointment for a routine physical exam with their PCP. TTA is the number of calendar days between the date of measurement and the date of the third available appointment for a routine physical exam. TTA is measured for each PCP in the practice weekly, and the average for each PCP is reported monthly. The average TTA for the practice as a whole is the average TTA of all PCPs in the practice. The UNC Family Medicine Center goal for practice time to third available is less than 10 days (Table 1). Supporting measures to improve appointment access include the number of requests for an appointment each day (appointment demand) and the number of appointment slots each day (appointment supply).

The data and methods presented in this paper were approved by the University of North Carolina Institutional Review Board and exempted from full review as a quality improvement activity that does not include patient identifiers.

**Adapting Improvement Methods to Academic Practices.** The improvement methods described above were adapted to our large academic practice by engaging residents, promoting a culture of transparent data reporting, and celebrating successes whenever possible. These tactics increased support for experimentation, encouraged intermittent reflective moments to celebrate recent achievements, and rekindled motivation for the hard work of practice transformation. Residents learn the importance of interpersonal continuity

and appointment access during intern orientation and get involved in the ongoing improvement work during a second-year rotation. During these rotations, residents contribute suggestions for improvement and are encouraged to participate in tests of change.

Publicly displaying and presenting unmasked individual PCP data fosters data transparency. Time to third available, UPC, and usual team continuity results are posted monthly in the FMC. Bar charts are used to compare PCPs with their peers for both TTA and UPC. Run charts are used to display how the practice is progressing over time. Residents present monthly results for TTA and UPC for each year of training to their peers during monthly resident business meetings.

Taking time to celebrate progress facilitates communication and encourages continued engagement over time. An early celebration was a “Bon Voyage” party celebrating the departure of the same day clinic. Later we began awarding quarterly and annual “glue stick” (to the PCP at each level of training with the highest UPC) and “rubber ducky” (the PCP in each residency class and among the faculty who had most successfully “drained their bathtub” of appointment delay and had the lowest TTA) awards during regular practice meetings.

#### *Summary of Change Concepts to Improve Continuity and Access (Table 2)*

Understanding demand for appointments and balancing supply to meet appointment demand is the single most important lever to improve access and continuity and is particularly important at multiple different levels in practices with part-time PCPs. For any academic practice, demand must first be measured daily and balanced with supply for the practice as a whole and subsequently for each PCP's patient panel (quarterly). For large academic practices with multiple teams of PCPs, supply and demand must also

be balanced at the level of each continuity team (daily). A special challenge in residency programs relates to variation in appointment supply from week to week due to resident rotations. Weekly demand from a PCP's panel is relatively constant and predictable. To maximize continuity and minimize delay, weekly appointment supply should also be relatively constant and right sized to match demand from the PCP's panel. Deficits of weekly appointment supply from forecasted weekly demand during different resident rotations is a root cause of resident discontinuity and must be addressed to improve resident continuity.

Finally, there are different streams of appointment demand as time between the appointment request and the visit date varies, and these need to be balanced as well. A PCP often requests a follow-up appointment more than 3 months into the future. This internal (request comes from the PCP or the practice) demand stream is best satisfied with an appropriately timed reminder to schedule with the PCP rather than by reserving an actual date and time more than 3 months into the future. Reminder notices or recall appointments minimize the waste and rework associated with no shows, cancellations, and reschedules when actual appointments are scheduled more than 3 months into the future. Internal requests for an appointment less than 3 months into the future are best satisfied with a return appointment with the PCP. Both of these internal demand streams are best met with appointments early in the day and late in the week to ensure capacity for external appointment demand directly from patients.

Appointment supply to meet external demand is two pronged: we first offer patients the first available appointments with their PCP—hopefully the next day their PCP is in patient care. If this is not convenient with the patient, we offer the first available appointment with a different PCP on the same continuity team that day.

**Table 2: Change Package Concepts to Improve Access and Continuity of Care and Examples of How They Were Applied in an Academic Practice**

Change Package Concept	Applications in an Academic Practice
Understand and balance supply and demand across the practice.	Daily, measure appointment demand for continuity of care visit types; use historical data to forecast future daily demand.
	Daily, deploy appointment supply to meet demand.
Balance supply and demand for each PCP.	Weekly, minimize variation in each PCP's appointment supply.
	Quarterly, measure PCP panel size and balance actual or weighted panel sizes with expected panel sizes.
	Annually, reassign patients of graduating residents to balance resident actual/expected panel sizes and panel demographics.
Balance supply and demand for each PCP team.	Ideally daily, but at least weekly, deploy each team's appointment supply to meet team appointment demand.
Balance demand streams over time.	Daily, balance individual continuity with each PCP as soon as possible with team continuity today.
Simplify appointment types and durations.	Appointment types: simplify appointment types to match demand streams in time.
	Appointment slots: allow several different appointment types to be booked into each slot.
	Appointment duration: measure PCP time in exam room and simplify durations to either single duration or x and 2x allowing any two adjacent slots to be pulled together.
Reduce appointment demand.	Increase interpersonal continuity—integrate same-day demand from continuity patients back to each team of PCPs.
	Make the most of each visit.
	Extend return visit intervals whenever possible.
Develop contingency plans.	Predictable disruptions in supply: professional meetings, spring break, in-service exams. Remaining providers must increase supply if many PCPs are away.
	Predictable demand peaks: flu season, camp or sports physicals, Tuesdays after long weekend. Flex supply to meet demand peaks.
	Shape elective return demand away from days with inadequate supply.
Reduce backlog.	Anticipate and prevent backlog from forming with “individual contingency plans.”
	Develop a culture of individual accountability for backlog reduction—“self management of access.”
	Study backlog; identify alternatives to visit with PCP; transiently increase appointment supply.

PCP—primary care physician

Reducing appointment types and times is based in queuing theory and is the second change concept to minimize delay and maximize continuity of care.<sup>10</sup> Appointments can be simplified in their duration with single length appointments and, when needed, pulling any two adjacent slots together to make a longer duration. Medical directors can simplify appointment types by

matching appointment types to specific demand streams (eg, new, return to PCP, return to member of PCP's team) rather than the agenda of the visit (eg, well baby, acute, physical exam, follow-up diabetes). Building templates so that each appointment slot is bookable with any of several different appointment types is a practical application of queuing theory to minimize delay.

Changes to reduce demand are the third element of the change package to improve appointment access and continuity. Three demand reduction tactics were most useful in our program. First, improving interpersonal continuity creates a virtuous cycle that reduces return demand and improves appointment access. After we had ensured an adequate daily appointment supply for the practice

as a whole, we closed a stand-alone same-day clinic for our continuity patients and pulled patients previously seen there back into our continuity care teams. Second—and only after we had changed to single length appointments—we encouraged physicians and staff to “make the most of each visit.” Making the most of each visit is a paradigm shift from “What are the vital few things I need to do to get this patient out of the office today” to “What are all the things our care team can do to help keep this patient from having to return for the next 6 months.” While not appropriate for many visits, applying the principle to make the most of each visit with a few visits each day will have a surprisingly large impact in reducing appointment demand. Third, we asked faculty and residents alike to think critically about return visit intervals. When it can be done without impacting quality of care, extending return visit intervals can improve patient satisfaction, reduce no-show rates, and reduce appointment demand.

Successfully managing access and continuity of care requires future planning to identify predictable, regular events that disrupt access and/or continuity and developing contingency plans to offset these disruptions. Disruptive events for access and continuity may be categorized as either those that increase appointment demand (eg, flu season, camp physicals in the spring, sports physicals in the summer) or those that decrease appointment supply (eg, spring break in the local school system, STFM meetings when many faculty request to be off at the same time, in-training exams for residents, etc). Contingencies to mitigate disruptive events include shaping elective return demand away from weeks with suboptimal appointment supply and flexing supply to meet times of unusually high appointment demand.

The final change concept—working down the backlog of scheduled appointments—needs to be reframed

for academic practices. In community practices, working down the backlog is often highlighted more prominently and sequenced earlier in the transformation to advanced access and improved continuity. At its core, working down the backlog requires a brief period of increased work to remove a backlog of scheduled appointments in the short term to enjoy better days ahead. We chose to reorder the change principles and to move this to the final change principle by focusing on using the change principles listed above to prevent backlogs from forming.

Unfortunately, even with purposeful and persistent attention to the other change principles, there are times when developing an individual backlog reduction plan is necessary. Key elements of a backlog reduction plan are to review what’s in the backlog (“know your bathtub”), identify alternatives to a visit for patients caught up in a backlog, and transiently increase appointment supply to work down the backlog. For faculty who precept residents in the practice as well as manage their own panel of patients, adjusting their schedules by reducing precepting sessions and increasing patient care for several weeks represents no increase in their FMC time commitment and will quickly work down a backlog. We now use this strategy routinely after stints on our inpatient service or faculty vacations. For additional details regarding our methods, please refer to the appendix (available from the corresponding author on request).

## Results

### *Time to Third Available*

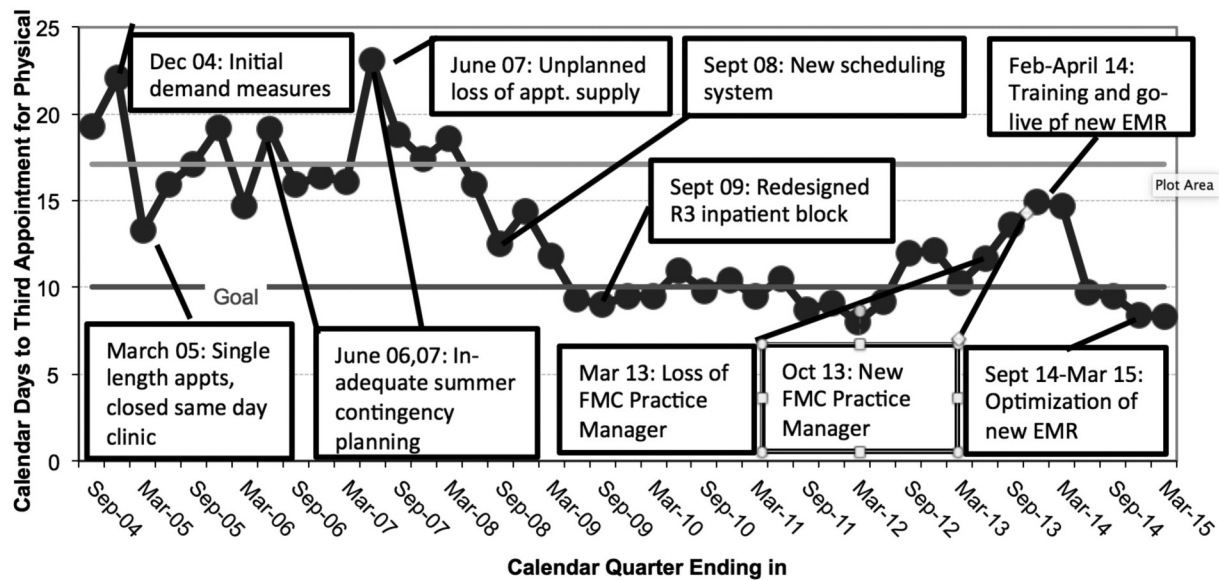
Data was available from the second quarter of 2004 (Figure 1). Between then and the second quarter of 2009, the average TTA appointment for a routine physical exam fell from 19 days to 9 days and has been managed between 8 and 15 days (average of 10 days) in the subsequent 5 years. Annotations on the run chart document the changes that led to

rapid improvement: single length appointment durations, closing the same-day clinic, and a new scheduling system that allowed a specific appointment type for continuity visits with the PCP and switches in appointment types (see appendix for more details, available from the corresponding author on request). What may be less obvious is the importance of faculty flexibility in the timing of their clinical responsibilities from week to week, incremental improvements in the accuracy of forecasting future appointment demand and, most importantly, a dedicated scheduling coordinator steeped in the principles of the change package and empowered to manage daily appointment supply to meet forecasted appointment demand as she builds the clinic schedule.

### *Usual Provider Continuity*

Between the third quarter of 2004 and the third quarter of 2009, the average UPC for all PCPs within the practice increased from 54% to 67% with similar performance (average of 68% in the subsequent 5 years) (Figure 2). Remarkably, the percentage of our active patient population who were empaneled with a valid PCP in the practice increased from 88% to 98% over the same time frame. The annotations document annual decreases in continuity of care in the first quarter after resident graduation due to inadequate appointment supply and large numbers of patients with a new resident PCP. This pattern was reversed in 2008 with the implementation of the return continuity appointment type and switch rules (see above). The most dramatic improvements in average UPC (Figures 2 and 3) occurred in the third quarter of 2009 with the redesigned FMIS service that smoothed weekly R-3 appointment supply to meet the demands of their relatively large patient panels (see appendix for additional details, available from the corresponding author on request).

Figure 1: Time to Third Available Appointment for Routine Physical Exam (Average of All PCPs)



PCP—primary care provider

### Resident Usual Provider Continuity

Between third quarter of 2004 and the third quarter of 2006, average resident UPC fell for resident PCPs from 55% to 43% (Figure 3). The major drivers for this decrease were a large number of severely over-paneled faculty PCPs and the before mentioned concerted effort to increase empanelment. We learned that over-paneled faculty lead to poor resident continuity of care for residents on the same team as the over-paneled faculty. Severely over-paneled faculty drive poor faculty access with resident clinics becoming urgent care clinics for faculty patients. Demand from the patients of over-paneled faculty competes with demand from the resident's own patient panel and decreases resident continuity. In addition, the empanelment improvements described above disproportionately increased resident panel sizes, making it more difficult for residents to reach our continuity goal. Gradual improvements in right sizing faculty patient panels with active panel management and the new scheduling system led to modest improvements in resident continuity from 43% to 49% during the second quarter of 2009. The key change

that led to the dramatic improvement (from 49% to 65%) was the redesigned FMIS hospitalist blocks for third-year residents. Since that change, resident UPC has averaged 67% for 5 years (see the appendix for more details, available from the corresponding author on request).

### Discussion

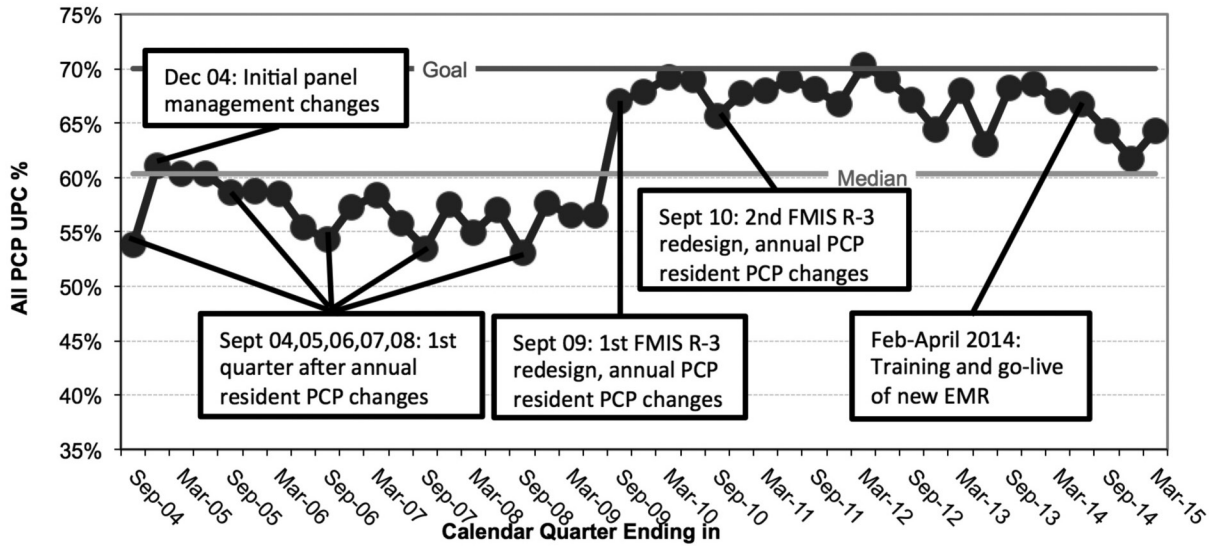
The first principle of the patient-centered medical home is a personal physician—"Each patient has an ongoing relationship with a personal physician trained to provide first contact, continuous, and comprehensive care."<sup>3</sup> The current Accreditation Council for Graduate Medical Education (ACGME) requirements for residency programs in family medicine begin with "Family medicine is a primary care specialty which demonstrates high-quality care within the context of a personal doctor-patient relationship and with an appreciation for the individual, family, and community connections. Continuity of comprehensive care for the diverse patient population family physicians serve is foundational to the specialty."<sup>11</sup> Given the central importance our discipline places on continuity relationships between patients and their personal physician, the dearth

of reports on how best to structure and manage residency practices to foster continuity relationships is surprising. We encourage others to report their results, and we encourage both the Residency Review Committee (RRC) and National Committee for Quality Assurance (NCQA) to consider requiring programs to report empanelment, time to third available, and UPC for residency accreditation and PCMH recognition, respectively.

While residency teaching practices present unique challenges, the principles of advanced access as described by Murray are valid.<sup>6</sup> The particular circumstances of each residency practice must be considered, but the principles in the change package are appropriate foundations to guide improvement efforts in teaching practices. Iterative PDSA cycles to test changes can significantly increase continuity of care and reduce delays in care for patients of both faculty and resident physicians.

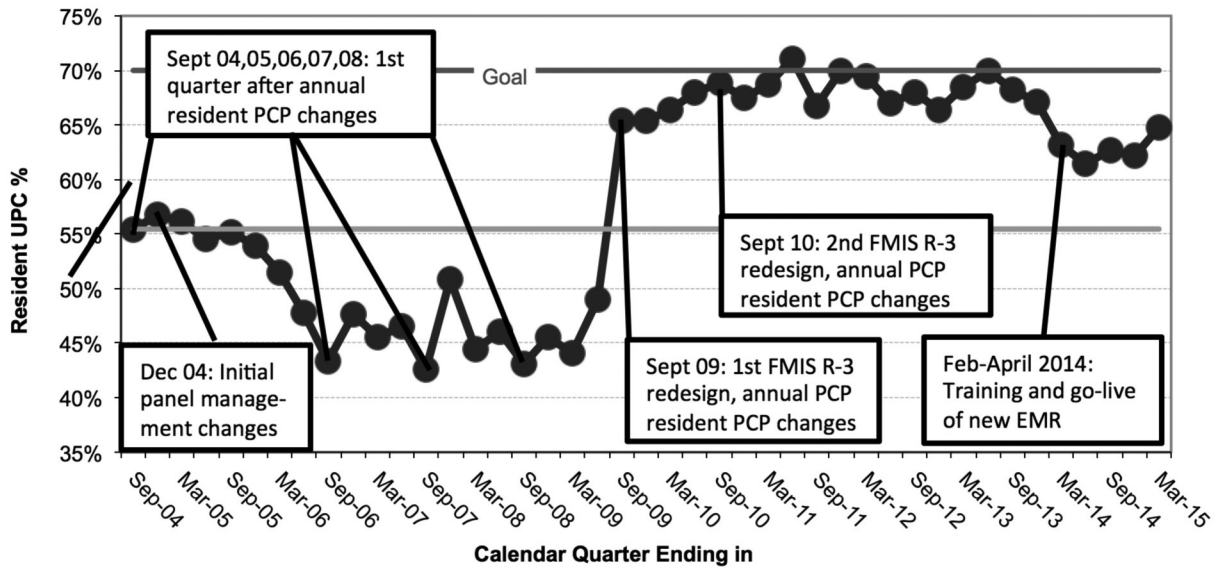
Our experience teaches two major lessons. First, access is a critical and often overlooked component of practice transformation. For a decade, policy voices have emphasized that chronic disease drives cost and morbidity, and our practice

**Figure 2: Percentage of Continuity Visits (Visit Types That All PCPs Provide) by Patients on Any FMC PCP's Patient Panel Seen by the PCPs**



PCP—primary care physician  
 FMC—family medical center

**Figure 3: Percentage of Continuity Visits (Visit Types That All PCPs Provide) by Patients on a Resident Physician's Patient Panel Seen by the Resident PCP**



PCP—primary care physician

transformation agenda has often exclusively focused on redesign for chronic care. Our inattention to access has made us vulnerable to minute clinics and freestanding urgent care. We think getting patients in to see their preferred clinician

with minimal delay is just as important as improving care for our patients with chronic medical conditions. Leadership and sustained effort are necessary, as are putting in place the systems to support advanced access and continuity, such

as ongoing measurement of supply and demand, active panel management, and improving non-visit communication processes. Sustainability means building these processes and systems into job descriptions and performance incentives.

In the current environment, many hospital systems and influential consultants like the Advisory Board are suggesting that “continuity” is overrated. Yet the philosophical core of family medicine is interpersonal continuity of care and personal doctoring.<sup>8</sup> There is good evidence that personal relationships play a key role in improving health outcomes. The challenge is to build and improve practice processes and systems to encourage and nurture patient-PCP relationships over time. The foundation of strong patient-PCP continuity relationships is needed to build effective patient-specific multidisciplinary care teams.

Finally, it is not too early to make a case for changes in the next revision of the FM-RC standards. We believe that the residency continuity practice should be a major part of the curriculum. Should we not review our residencies annually based on the quality of care they provide—and not only chronic care but also patient experience, access, and measured continuity? It is in residency where lifelong habits are developed; don't we want our residents to start with good habits?

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Patient-Centered Medical Homes” at the 2011 Society of Teachers of Family Medicine Annual Spring Conference, New Orleans, LA.

**Conflict of Interest Declaration:** From 2008 to 2012, Dr Weir worked sporadically as a part-time consultant with Mark Murray and Associates. He is no longer doing this work.

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## References

- Baxley EG, Weir SS. Advanced access in academic settings: definitional challenges. *Ann Fam Med* 2009;7(1):90-1.
- Murray MF. Evaluating open access: problems with the program or the studies. *Ann Intern Med* 2008;149(12):909; author reply 911.
- [http://www.aafp.org/dam/AAFP/documents/practice\\_management/pcmh/initiatives/PCMH-Joint.pdf](http://www.aafp.org/dam/AAFP/documents/practice_management/pcmh/initiatives/PCMH-Joint.pdf). Accessed November 24, 2014.
- The Breakthrough Series: IHI's collaborative model for achieving breakthrough improvement. IHI Innovation Series white paper. Boston: Institute for Healthcare Improvement, 2003.
- <http://www.nichq.org/about/expertise/crosssector-collaboration>. Accessed November 24, 2014.
- Murray M, Berwick DM. Advanced access: reducing waiting and delays in primary care. *JAMA* 2003;289:1035-40.
- Langley GJ, Nolan KM, Norman CL, Provost LP, Nolan TW. *The improvement guide: a practical approach to enhancing organizational performance*, first edition. New York: Jossey-Bass, 1996.
- Saultz J. Defining and measuring interpersonal continuity of care. *Ann Fam Med* 2003;1(3):134-43.
- Murray M, Davies M, Boushon B. Panel size: how many patients can one doctor manage? *Fam Pract Manag* 2007 Apr;14(4):44-51.
- Hammack B. Why the other line is likely to move faster. [https://www.youtube.com/watch?v=F5Ri\\_HhziI0](https://www.youtube.com/watch?v=F5Ri_HhziI0). Accessed April 30, 2015.
- <http://www.acgme.org/acgmeweb/tabid/132/ProgramandInstitutionalAccreditation/MedicalSpecialties/FamilyMedicine.aspx>. Accessed August 24, 2014.
- Sampson F, Pickin M, O'Cathain A, Goodall S, Salisbury C. Impact of same-day appointments on patient satisfaction with general practice appointment systems. *Br J Gen Pract* 2008;58(554):641-3.