

SPECIAL COMMUNICATION

Preparing the Personal Physician for Practice (P⁴): Redesigning Family Medicine Residencies: New Wine, New Wineskins, Learning, Unlearning, and a Journey to Authenticity

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The family medicine community has come together in the Future of Family Medicine Project in an attempt to be clear about its work and values and to address the frustrations of both its own practitioners and the public. A new model has been proposed, offering several attractive features for both patients and practitioners. The project has generated momentum around the notion that it is really possible to redesign family medicine residency programs. This article reviews assumptions about the redesign and 10 interventions in 3 categories. The categories are both familiar and new, and knowledge, skills, and attitudes are reframed. The interventions include learning portfolios, a curriculum that goes beyond rotations, becoming explicit about locally useful knowledge, getting discretion and discipline right, linking evaluations to system improvement, attention to the science of clinical practice, simulation, validating resident feelings, educating to mastery, and attention to group and individual formation. (J Am Board Fam Med 2007;20:342–347.)

One of the authors (DCL) spent his childhood summers in the southern tier of New York State in Woodhull, a town of 300 surrounded by a few hundred farmers in the outlying districts. Dr. McDonald was the town's only doctor. His training was almost certainly preFlexnerian (he retired in the early 1950s). He offered the town equanimity. Crises were determined to be important or not and resolved. His available interventions would pale in the face of modern medicine, yet he offered experience, judgment, and skill as well as the shared

vulnerability of being a human among humans and being one who had thought about it. If not always loved, he was at the heart of the town's sense of belonging to the larger issues of life. He was practical; he was trusted.

Today's first-year family medicine resident will graduate roughly 100 years after Dr. McDonald finished his formal training. No Family Medicine residency was available to Dr. McDonald. He retired before Family Medicine became a recognized specialty. Yet, as inadequate as his resources were, he offered something good, something that patients and physicians now crave more than ever: *authenticity*.

The Family Medicine community has come together in the Future of Family Medicine Project, "Preparing the Personal Physician for Practice" (P⁴), in an attempt to be more clear about its work and values and to address the frustrations of both its own practitioners and the public. These include frustrations about how medicine is practiced in the United States at the beginning of the 21st century. A new model (P⁴) has been proposed; it offers attributes such as a personal medical home, patient-centered care, a team approach, elimination of barriers to access, advanced information systems, re-

This article was externally peer reviewed.

Submitted 7 March 2007; revised 27 April 2007; accepted 1 May 2007.

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Funding: The preparation of this manuscript was done at the request of the P⁴ Steering Committee and the authors received a modest honorarium from P⁴ funds.

Conflict of interest: This manuscript was produced at the request of the P⁴ Steering Committee and the authors received a modest honorarium.

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The URL for the P⁴ project is: <http://www.transformed.com/p4.cfm>.

designed offices, a whole-person orientation, care provided within a community context, an emphasis on quality and safety, enhanced financing, and making the full basket of services available. These features are attractive and contain implications good for both practitioners and patients. How should family medicine residents prepare for the world described in the P⁴ model? The P⁴ Project has generated momentum around the notion that it is possible to redesign family medicine residency programs, to shape the experience in ways that will allow both modernization and fidelity to traditional values. But what specifically should medical educators pay attention to in the redesign work? How can the profession of family medicine preserve the goodness offered by the thousands of previous Dr. McDonalds who preceded the future Dr. McDonalds, while incorporating systems theory, quality improvement, and the best scientific evidence into the work? What needs to be learned? What needs to be unlearned? How will the specialty and its residents proceed on the journey to authenticity?

Pfeffer and Sutton¹ are critical of the way we use facts, accept dangerous half-truths, and adopt total nonsense in our organizations. They offer 6 questions to consider before trying a new idea or practice:

- What assumptions does the idea or practice make about people and organizations?
- What would have to be true about people and organizations for the idea or practice to be effective?
- Which of these assumptions seem reasonable and correct to you and your colleagues? Which seem wrong or suspect?
- Could this idea or practice still succeed if the assumptions turned out to be wrong?
- How might you and your colleagues quickly and inexpensively gather some data to test the reasonableness of the underlying assumptions?
- What other ideas or management practices can you think of that would address the same problem or issue *and* be more consistent with what you believe to be true about people and organizations?

Ten interventions in 3 categories are offered in this article and are based on the following assumptions:

- The formation of the family medicine physician of the future depends on the development of the doctor as a person.

- Authenticity of the specialty and of the whole profession depends on paying attention to the person's journey to authenticity during residency training and beyond: a journey related to but not limited to competence.
- The future physician will practice interdependently with a variety of other professionals.
- The future family medicine physician will have a greater sense of mastery based on awareness and understanding of the context of care—for the patient and for the population of patients cared for. The socialization of family medicine residents will shift from a model of coping to one of mastery.
- The specialty and the profession will take the lead in determining the cost/value relationships for health services offered rather than accepting or protesting the calculations and financial models of others.
- Many of the features of family medicine residencies that are now good, such as mentoring from faculty, use of Balint groups, etc, will become part of the new model.

The 3 categories of interventions: *knowledge*, *skill*, and *attitudes*, are both familiar and at the same time new. They have provided a frame for resident formation for a long time but they are now reframed in ways that might not be immediately recognizable. Knowledge will no longer be limited to scientific knowledge but will include a deeper knowledge of context. Skills will include system design skills and attitudes will include attention to the relationships with patients, colleagues, and society and go through and beyond equanimity into responsibility.

The 10 interventions include resident use of learning portfolios as a tool for interactive professional development; a curriculum that goes beyond and may eliminate rotation-based learning; becoming more explicit about locally useful knowledge; getting discretion and discipline right; linking evaluations to system improvement; equal attention to the science of disease biology and the science of clinical practice; simulation; validating and mining the resident's feelings; educating not just to cope but to mastery and leadership; and attention to group as well as individual formation.

1) Learning Portfolios

A learning portfolio is a collection of evidence about competence and an interactive tool for on-

going professional development. Competence may be defined as the habitual demonstration of reflective practice.^{2,3} It goes beyond knowledge, skill, and attitude, beyond mere potential, and is demonstrated by actual performance. One hundred years ago, when Dr. McDonald completed his formal training, the big issue for the profession was to distinguish the qualified from the quacks. This task was accomplished by a system requiring graduation from an accredited medical school and receiving a medical license. Eventually, graduating from an accredited residency and passing a written examination to become board certified also became important. For the past 7 years the task before the profession has been to develop a system that goes beyond “qualified” to address competence. This task has not yet been completed. The naming of the relevant competencies has been accomplished with widespread agreement across specialties and regulatory bodies.⁴ There is less widespread agreement about how to assess them. From what we know now, the process will involve multiple types of assessments done over time both during and beyond residency, inasmuch as certification now requires maintenance and is already more than a multiple-choice examination.⁵ There is now widespread acknowledgment that competence emerges over a continuum that ranges from novice to master and that there is a genuine need for continuous professional development. Further, data would suggest that actual competence decays with the length of time after residency.⁶ The days in which it was acceptable that a physician was most competent during his/her year as chief resident and that it was acceptable to go downhill from there are drawing to a close.

A tool is needed for interactive lifelong professional development: a tool that can be initiated and owned by the resident/physician; can support the confidential reflections needed for learning; can document key events, experiences, and processes in a resident’s development; and can incorporate patient care results and national, uniform, valid, and reliable assessment tools into their development. It should also be structured in such a way as to be able to generate reports relevant to regulatory bodies (including program directors, designated institutional officials, the residency review committee, the Institutional Review Committee, the American Board of Family Practice, hospital credentialing committees, licensing boards, and the public) to

enable them to understand what types of patients and experiences the doctor has had.

The Accreditation Council for Graduate Medical Education is developing such a learning portfolio that may offer a partial solution to this need; however, the issue goes well beyond any given residency. The family medicine community can contribute to the governance, content, and principles of a lifelong professional learning portfolio for the larger community. It will be convenient to begin in residency via both the Family Medicine Residency Review Committee and the American Board of Family Practice, but it is not too soon to begin conversations about next steps.

Learning needed: Use of electronic learning portfolios as an interactive professional development tool; the primacy of experience and reflection on experience.

Unlearning needed: Traditions called “education” that may not be very effective for learning, eg, noon conferences.

Journey to Authenticity: Telling the truth to oneself and others.

2) A Curriculum That Goes Beyond Rotations

There is a flaw in the current educational model that can be fixed as the P⁴ model is made real. The flaw equates rotational experiences with educational content. It assumes that if I am “on Dermatology,” I am getting a balanced experience of dermatology cases that are relevant to family medicine and that I am being taught by people enthusiastic about that work. Much work has been done in an attempt to document that these assumptions are true, but the full expression of the competency movement will open other doors, and behind those doors are both threats and opportunities. If it can be documented that a resident has achieved competence in all of the elements of a curriculum, does it matter whether it took more or less than 3 years? It is well known that people learn in different ways and at different speeds. Can there now be more flexibility? What counts: real experiences, simulations, numbers of cases, cases followed over time, critical incidents, quality of care?

Funding, of course, is currently linked with time. However, credible evidence that competence has been established may open a dialogue about new models of funding.

Learning needed: Understanding of competence and when it is attained.

Unlearning needed: Discarding rotational models that may not be effective.

Journey to Authenticity: Tighter link between experience and assessment; telling the truth; seeking what is good for the resident

3) *Becoming Explicit about Locally Useful Knowledge; Knowledge of the Particular and the Generalizable*

Residents frequently carry 2 types of learning aids in their pockets: a Washington Manual or the equivalent that contains generalizable knowledge in a “what to do if . . .” format and, secondly, a set of instructions about how to get things done in the various settings in which they work and learn. The latter might include such things as “Hand carry consult to MRI and Urology, others can be sent via computer request,” or “Social services contact is available on Tuesdays.” Both learning aids are useful to early learners; they provide the rules that must be mastered to function. However, both contain embedded flaws. As to the first, residents are encouraged by the rules to prune the patient’s story in ways that make application of the rule logical. They frequently strive to provide a coherent story to attending physicians. They hear a patient’s story, convert it to a “doctor’s story” (ie, using language and assumptions that enable a logical conclusion to emerge so that the attending physician may say, “I see that you really understand this case”). Meanwhile the patient’s story has been pruned and parts that do not add coherence are left out. There is a systematic diminishment of the particular context of the patient. Generalizable knowledge comes about by randomized control studies, which by design reduce the influence of context on the variable under study. Randomized control studies diminish knowledge of the particular: the particulars of the patient and the particulars of the system in which care is provided. We need generalizable knowledge and randomized control studies are good (they have added tremendously to our knowledge), but the opportunity for growth in residency (proceeding along the continuum described by Dreyfus⁷) is associated with a shift from rule-based behavior to a rule- and context-based behavior. Good judgment depends on a deep knowledge of the patient, not just the rules.

The second kind of knowledge, locally useful knowledge of the system, documents and describes the issues operating in the particular system in

which the resident is working. This knowledge offers a tremendous opportunity to learn about and to redesign systems of care into something safer and more effective. Coherence is frequently a distant dream. Faculty would rather not know “how the sausage is made,” they only want to see that things get done. Hence, this knowledge becomes part of the hidden curriculum: residents talk about it with other residents but not with faculty.

As residents prepare for the P⁴ model, it will become important to put system issues on the table as legitimate elements of the curriculum. In some ways, residents are the experts in system-based practice because they live with the system every day.

Learning needed: The importance of context; system diagnosis and redesign skills.

Unlearning needed: That biomedical knowledge alone is sufficient.

Journey to Authenticity: From equanimity to responsibility.

4) *Getting Discretion and Discipline Right*

Dr. McDonald was almost certainly taught that the most important thing he offered patients was his judgment. As medicine moved from small practices into large systems and from best guess to credible evidence-based recommendations, and as the extent of medical error and its consequences became apparent to both the profession and the public, system approaches to enhance safety were developed. Rene Amalberti⁸ has demonstrated that safe systems can only be achieved if actors constrain the autonomy of inappropriate discretion and dependably offer the evidence-based disciplined behavior of better, safer care. He reports that only 2 types of health care offer safety that is in any way comparable to the safety levels of the commercial airline industry or the nuclear power industry: class I anesthesia and blood banking. In both of these examples, doctors have yielded some of their autonomy to common protocols that make it very difficult to make a mistake. The new curriculum for family medicine residents can help foster a deep understanding about the proper use of discretion and the proper adherence to evidence-based discipline in the care of patients including the use of guidelines.

Learning needed: Evidence-based protocols for disciplined, safer care; practice rehearsal; safety; balancing discretion and discipline in patient care.

Unlearning needed: That discretionary judgment is always best and safer.

Journey to Authenticity: Accountability to patients, team members, and society.

5) Linking Evaluations to System Improvement

The current system has compartmentalized education and patient care and this is a missed opportunity. It has been very important to clarify that residents are students and not employees, and it assumes that the intense pressures of service would compromise and diminish the educational agenda. This is half true, and the existing accreditation system frequently cites residency programs for just that. Yet there are some wonderful examples of a different model. A combined preventive medicine residency program at Dartmouth College in Hanover, New Hampshire, combines with any of 9 categorical programs (including family medicine) and is limited to Dartmouth residents in any one of the 9 categorical programs, and is approved for 40 positions. Combined with the categorical program, it adds 2 years to training; during this time the resident gains a master's degree and becomes board eligible in preventive medicine and their categorical program. Preventive medicine as a stand-alone specialty has not been growing, but this new approach has generated real excitement and the program has become the largest in the country and is growing. There is early evidence that residents are applying to the categorical programs just to get into the combined program. The practicum year is an attractor. During that year the resident must fix a system problem. Dartmouth regularly puts its clinical outcomes on a public Web site (www.dartmouth-hitchcock.org). The chief executive officer and the program director ask the resident to identify an area in which Dartmouth can improve (eg, the treatment of community-acquired pneumonia) and the resident, reporting directly to the chief executive officer, improves health care. The chief executive officer is very enthusiastic and has given financial support to the program because it enables him to achieve the common goal of improving Dartmouth's clinical outcomes and enhancing resident education. The resident's grade depends to some extent on improving, for example, the treatment of community-acquired pneumonia.

Medical students and residents are not naïve. They know that their future will call on them to have the skills needed to change and improve

health care. They are attracted to educational systems that prepare them for that task.

Learning needed: How to integrate educational goals and patient care goals.

Unlearning needed: That education should be compartmentalized.

Journey to Authenticity: Integration of knowledge, skill, and judgment toward true patient care excellence.

6) Attention to the Science of Disease Biology and the Science of Clinical Practice

The current educational model focuses on the science of disease biology: the doctor is the detective, diagnosing and curing disease. However, comparable attention should be paid to the diagnosis and treatment of systems of practice. Four skills are needed: 1) an understanding of the relevant generalizable scientific knowledge; 2) understanding the particular identity (processes, habits, traditions, failures) of the patient and the system in which one is practicing; 3) the knowledge needed to plan the application of the generalizable knowledge in the particular context and system; and 4) the ability to execute a plan of action in whatever system one finds oneself. Residencies pay relatively little overt attention to the latter 4 tasks. The P⁴ model brings these areas to the forefront and offers an opportunity to add these skills to the learner's repertoire.

Learning needed: The Science of clinical practice.

Unlearning needed: That the science of disease biology by itself is adequate to care for patients.

Journey to Authenticity: Practical wisdom.

7) Simulation

Simulated learning by health professionals is about respect, for the patient, for one's colleagues, and for oneself. Basic clinical skills can be taught away from the patient. Gone are the days in which a sweaty resident and a sweaty patient both endured first attempts at procedures. Technology now enables residents to learn and practice skills and approach the patient armed with confidence and experience. Family medicine could be a leader in this approach, deploying these methods wherever possible. The P⁴ model could encourage team rehearsals about all types of procedures. Residents' competence and confidence in their skills and the profession's confidence in the specialty could be enhanced.

Learning needed: Rehearsals and simulation as a regular part of the work of faculty and residents.

Unlearning needed: See one, do one, teach one.

Journey to Authenticity: Respect; telling the truth.

8) Validating and Mining the Resident's Feelings

Embedded in the higher-education process is a systematic discounting of the subjective; it is thought to be a source of bias and unreliability. However, the journey to authenticity as a physician requires more than simple attention to the objective details in our world. Compassion, empathy, and deep respect are all dependent on the truths revealed by the human heart. Parker Palmer⁹ argues that residents are moral agents who can keep the health care system honest about its dealings with patients. As such, they should be taught not to distrust their hearts but to depend on them and to acquire the discipline of discernment that they offer.

Learning needed: The skills of the heart should be added to the skills of the head and hand.

Unlearning needed: That one cannot trust the heart.

Journey to Authenticity: Deeper truth telling; accepting moral agency.

9) Educating to Mastery

For generations, doctors have been socialized to cope with broken systems of care. Residents commonly state: "It's really weird how they do things around here." The socialization process rewards successful stories of dealing with the broken system. Family physicians of the future will be expected to step up to the daunting task of fixing the broken system. Although incorporating knowledge and skill, this is also an attitude of responsibility and accountability that can be rewarded in the socialization processes of residency.

Learning needed: The skills of leadership.

Unlearning needed: That we are victims of a system over which we have no control.

Journey to Authenticity: Accountability.

10) Attention to Group and Individual Formation

More than many other specialties, family medicine already pays attention to small group dynamics. The P⁴ model is explicit in the need for a team approach to care. The journey to authenticity has been viewed as an individual journey. New educa-

tional models are needed; these will enable the emergence of authentic truths discovered by small groups that will tackle the large barriers imposed by institutional life. Parker Palmer⁹ feels that attention to small-group formation will enable individual formation.

Learning needed: Deep listening to others; using community to find clarity.

Unlearning needed: That cowboys win.

Journey to Authenticity: Professional accountability.

Dr. McDonald has handed the baton on to other family physicians. It is said, "Don't follow you mentor; follow what your mentor was following." In other words, we are bound to his aim of improving patient care, but in a world that did not exist for him. Values are enduring and practices are ephemeral. The question becomes one of achieving effectiveness and fidelity. What can we do to preserve values and modify practices in a more authentic way than what is now being done?

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