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Viewpoint: **The Unintended Consequences of Training Residents in Dysfunctional Outpatient Settings**

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Abstract

In the past 25 years, academic leaders and accreditation bodies in internal medicine and pediatrics have made multiple efforts to increase residents' exposure to ambulatory primary care medicine, to bring hospital-based residency training more in line with the career paths of graduates. Current proposals continue the trend of increasing ambulatory exposure through providing more clinical hours in the outpatient setting as a pedagogic strategy to improve residents' practical skills in providing quality care in outpatient settings. Resident clinics, however, are often understaffed and dysfunctional. Under these circumstances, the work environment encourages some residents to learn only that providing high-quality primary care is a frustrating and unrewarding form of labor. Leaders in medicine have used innovative organizational strategies to improve residents' outpatient experiences. Model primary care residency programs and clinics have been created. The diffusion of model primary care clinical practices and structures is, however, limited by the strain of generating sufficient clinical revenue to run an academic medical center efficiently and reliably in the current environment. Increased outpatient exposure, without attention to the quality of practice settings, is potentially counterproductive, generating an unintended consequence that is the opposite of the goals of policy: it may reinforce residents' interest in subspecialty practice.

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In the past 25 years, academic leaders and accreditation bodies in internal medicine and pediatrics have made multiple efforts to increase residents' clinical contact hours in the outpatient setting as a pedagogic strategy to improve their practical skills in providing quality care in such settings. Resident clinics, however, have historically been understaffed and dysfunctional.[1–2] In this article, we seek to remind readers of what they already know: that more outpatient exposure, without attention to the quality of practice settings, is potentially counterproductive. In other words, increased exposure to primary care in dysfunctional settings may, instead of generating increased interest in careers working in general practice outpatient settings, reinforce residents' desires for careers in subspecialty practice. Although we focus here on outpatient settings, our argument, in its most general form, applies to all dysfunctional settings. The specific types of unintended consequences produced by a dysfunctional setting depend on the outcome originally intended from that experience.

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Background

Since 2005, four major institutions in Internal Medicine—the American College of Physicians (ACP), the Society for General Internal Medicine (SGIM), the Association of Program Directors in Internal Medicine (APDIM), and the Alliance for Academic Internal Medicine (AAIM)—have called for the redesign of internal medicine residency training. The main goals of such reform are to better meet the educational needs of trainees and to improve preparation for their future practice.[3–6] All four reports emphasized the need to focus on the skills that graduates need for their future practices, and on improved training in outpatient medicine. In addition, these reports called for increasing residents' exposure to outpatient medicine, improving the balance between service and education, and customizing a portion of the training to each individual resident's career goals. There have been sequential increases in recent years in the number of resident clinic sessions (now 108) and in the percentage of time in the outpatient setting (now 33%) required for accreditation of a residency program in internal medicine by the Accreditation Council for Graduate Medical Education.[7,8] This suggests that educational policy leaders and program directors support the proposition that increased exposure to patients in outpatient settings during training in internal medicine is needed to produce physicians skilled in and eager to work in settings that provide outpatient primary care.

All the reports mentioned above acknowledge how difficult the realization of each of these goals is likely to be in practice. However, they fail to provide a full discussion of the reasons why this is the case, although they note the intensified challenges and conflicts that institutions face in an era of declining revenues. Academic health centers have multiple and competing goals. The need to provide high-quality outpatient care competes with other demands on the organization. The resources for model primary care clinics are scarce and allocated through a competitive process that includes the balancing of other organizational priorities that also require core support. These include providing infrastructure and administrative support for technologically intensive inpatient and specialty services, pursuing grant-based research, and creating a working

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environment for residents and students that supports learning practice skills in all specialties.[9]

The Dilemma

Chaotic clinics

Absent from the comprehensive assessment of residency training in recent reports is a fine-grained understanding of *what* is increased when the requirements for time in outpatient clinics are lengthened. Even as the reports from the ACP, APDIM, SGIM, and AAIM have acknowledged the limitations of current outpatient training, they have assumed that exposure, in and of itself, is beneficial. Whereas more contact hours may indeed improve residents' skills and confidence in outpatient medicine, the corollary that more residents will then choose outpatient general internal medicine holds only if the training experience in outpatient general internal medicine has been satisfying. An important intervening variable determining the impact of increased exposure to primary care settings is the organization of these settings. Based on our experience, our best guess is that residents' evaluations of both their clinic experiences and their choice of outpatient general internal medicine as a career are affected by how efficiently the clinics are organized.

Thoughtful residents, who are dedicated to doing a good job taking care of outpatients, are frustrated when organizational obstacles impede efforts to offer the level of care that some patients need.[10] The statement by the Education Committee of the ACP captured the problem:

> Since ambulatory training experiences frequently take place in teaching clinics with many dysfunctional components, trainees are immersed in frustrating practice models that discourage rather than excite them. It must be recognized that managing patients with multiple, complex problems in the ambulatory setting requires information technology and a prepared staff of assistants.[5(p390)]

Information technology and a prepared staff of assistants are costly additions to a health care system preoccupied with reducing costs. They are also frequently unavailable in some outpatient settings.

Patients seen in busy urban university clinics frequently have two or three concurrent, chronic, complex, dynamic, and interacting medical problems that are made more challenging to manage when the multiple financial and social barriers that prevent optimal self-care are taken into consideration. Barriers to optimal self-care on the part of patients include the inability to afford medicines, the complexity of therapeutic regimens, and the physical and emotional stress placed on patients who are providing care for even sicker and poorer members of their immediate or extended families.[11] Those patients whose health status is declining may need a doctor who is in the office every day or a practice with midlevel practitioners to help in comanaging them, because their management now requires surveillance of a dynamic problem rather than the more leisurely monitoring of a stable one. The clinic itself needs to have the "surge" capacity for urgent appointments and improved systems for telephone message delivery and coverage when the primary resident physician is not available. These features have been adopted in many model clinics in primary care residency programs, but they are unavailable in other primary care clinics in which residents learn and provide care. Clinic staff may themselves become frustrated in an understaffed office where there are not enough clerks to answer the phones or medical assistants to take vital signs and ensure smooth patient flow from check-in to physician to checkout. Patients may also be frustrated in these environments, reducing their satisfaction with their care. They may convey this to their resident physicians, increasing the physicians' dissatisfaction.

Exposure to a dysfunctional clinic setting is a potential source of discouragement for residents who might otherwise pursue careers in outpatient medicine. Residents who have demands on their labor increased (because, for example, of inadequately staffed clinics, angry patients whose phone calls have gone unanswered, and patients who have been unable to comply with treatment plans because requests for prescription refills were neither received nor responded to or who have failed to respond appropriately to new, troubling symptoms because of misdirected telephone messages and lost patient charts) experience how organizational obstacles frustrate efforts to provide quality care. But when, in addition to these ordinary obstacles, there are others (such as spending time meeting redundant administrative requirements, making the specialist appointments for their patients because their patients cannot afford to wait the three to six months that is the standard unit of delay for "next available" appointment without their personal intervention, or negotiating insurance company preauthorizations for imaging and medications for patients on restrictive Medicaid managed care plans—all tasks that full-time primary care physicians typically delegate to their practice nurses and clerks), the residents may find that increased exposure to primary care gives them only an increased appreciation of the all-too-numerous practical difficulties to providing good primary care. One hopes that frustrating experiences and the negative lessons about primary care drawn from them are uncommon. Unfortunately, this is not the case; it is not difficult to locate reports of residents who labor in chaotic clinics, facing the financial constraints that are familiar to all academic health centers.[12]

AQ: A

Those residents whose increased exposure to primary care comes when they are serving as physicians in underresourced settings, treating patients who are, on average, sicker and needier than those of the average physician in private practice,[13] are, we maintain, as likely to be discouraged as encouraged from pursuing careers in primary care. One overgeneralization that is easy for residents to make when they have experienced chaotic, underresourced delivery settings is that primary care is poorly compensated, frustrating, and overwhelming. Residents do not avoid choosing careers in primary care only because they have no experience serving as primary care physicians and no role models on which to base their choices. The problem is more profound than a simple *lack of exposure model* suggests. As we have already suggested, on occasion, the *nature of the exposure* serving in primary care clinics is itself a part of the problem for residents. Many residents leave training with the experience of attempting to be an adequate primary care physician and failing. From this, many draw the lesson that delivering adequate primary care in an unsatisfying work environment is an onerous task best left to others.

Competition for residents' attention

When internal medicine residents are in their outpatient clinics, they are often distracted by calls requesting information, assistance, and orders for their very sick inpatients. The problems of the patient in the office with an upper respiratory infection take the resident away from a patient in the hospital with a new diagnosis of cancer. No matter how unfair the comparison, the problems of the outpatients are generally less compelling than the urgent needs of the inpatients. Meeting requirements for 108 successive weekly clinic sessions and also adding (1) clinic sessions to intensive care unit rotations, (2) night float rotations, and (3) more clinic sessions to inpatient services with high acuity of care and high censuses exacerbate this tension between inpatient and outpatient responsibilities.[14] The solution proposed by the APDIM of separating inpatient and outpatient time into block rotations, rather than squeezing additional weekly clinics into already busy inpatient service months, is a sensible recommendation, one that permits residents to focus on their outpatients and become more familiar with the outpatient practice environment.[4] Reducing conflict between inpatient and outpatient responsibilities may also improve communication in the clinical encounter, and patient satisfaction.[15]

Financing of residency training

Some of the organizational inefficiency of outpatient primary care that frustrates residents stems from an accounting issue that is related to the declining portion of reimbursement for outpatient medical care that supports the public good of training the next generation of physicians. For example, a clinic that sees primarily Medicaid patients probably cannot fund an adequate number of faculty preceptors if funds from patient revenues must cover not only the costs of preceptor time devoted to training but must also provide funds to hire clerks to answer the telephone or nurses to field routine questions.[16–18] Scheduling systems that are difficult to operate create long waits for follow-up visits. Long intervals contribute to a high no-show rate, and no-show rates amplify problems in generating revenue and increase challenges in meeting residency review committee requirements for residents' outpatient volume. To residents with a knowledge of systems-based performance, but whose clinical experience of outpatient medicine has been in an underfunded, urban, hospital-based clinic, the discussions of open-access scheduling, nurse case management, and information technology supports for model outpatient care discussed in policy documents have the feel of utopian fantasy.[19]

Dissatisfaction of practicing primary care physicians

Finally, exposure to primary care outpatient practice in academic health centers means that residents observe attending faculty grappling with their own growing dissatisfactions generated by the work environment. Practicing primary care physicians voice frustration with declining reimbursement, increasing practice costs, and expanding administrative mandates within a fragmented health care system, and they are truly bitter about losing control of clinical decisions,[20–22] which, when taken together, make the choice of primary care look like a fool's errand[23] even to trainees who are not drawn to the increased prestige and substantially higher salaries in subspecialty practice ($370,295 for cardiologists and $356,388 for gastroenterologists compared with $193,162 in general internal medicine, according to the 2007 Physician Compensation Survey by the American Medical Group Association[24]). Policy makers, however, possess a steadfast faith in the promise of primary care as a vehicle for providing appropriate, timely, cost-effective care—a promise that requires not only new primary care doctors but also additional resources in a resource-constrained delivery environment.[25,26]

Career choices

Many factors, including salary and lifestyle, pull today's trainees toward specialization, but the issue here is how to push effectively against these incentives with a counterweight. Residents whose only or main exposure to outpatient practice is frustrating and chaotic have reduced incentives for considering careers in primary care. In hospital-based and specialty careers, the hierarchy clearly visible to trainees demonstrates that their own working conditions will improve as they move up the ranks. But for trainees who do not see an efficiently run outpatient practice, and who instead struggle with challenging and complex patients with inadequate clinic systems, the available satisfactions of a career as a full-time outpatient physician are not so apparent. Since the mid-1990s, there has been a clear movement of trainees away from primary care specialties such as family practice; within pediatrics and internal medicine, the movement has been away from generalist practice.[27–34] This trend is part of a long-standing pattern of increasing specialization in the U.S. physician workforce since the 1920s despite repeated policy initiatives to reverse this trend.[35,36] Without more surveys and qualitative studies with students and residents *at the time that they make their specialty choices*, or, even better, longitudinal cohort studies following changes in these choices, it is difficult to make systematic assessments of what factors are important to trainees.[37,38] The possibility that trainees may make a lifetime career decision without ever realizing how different their resident clinic experience might be from their experience as an attending physician in outpatient medicine stacks the deck even further against primary care.

Solutions

Improved outpatient experiences

In a policy environment dedicated to reducing costs, creating ideal outpatient residency training settings is a challenge for academic health centers. Increased time in outpatient settings has the potential to increase residents' confidence with common outpatient problems, but for the quality of primary care and its attractiveness as a career option to improve, structural changes in residents' schedules and clinics are necessary. Scheduling residents for alternating ambulatory and inpatient block rotations, as proposed by the ACP's Education Committee, rather than trying to fit increased outpatient experiences into predominantly inpatient blocks, would allow residents to focus on their outpatients and to get to know clinic staff, improving their own as well as the clinic's efficiency.

Moving as many resident continuity clinics as feasible into smaller practices where residents see patients alongside attending physicians who are full-time clinicians, enthusiastic about primary care and dedicated to teaching the skills of outpatient medicine, would improve both patient care and resident education.

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Finally, programs are needed to improve formal training in practical skills for outpatient management, such as the organization of telephone triage and off-hours telephone calls, the management of progressive conditions over time, the coordination of teamwork with nurses and midlevel practitioners, the sharing of responsibility or comanagement of patients with other specialists, and the development of guidelines for when to refer difficult cases.[39–41]

AQ: B Training is also critical in some of the interpersonal skills important to longitudinal outpatient care such as building productive long-term relationships with patients, handling the emotional content of patient visits, using counseling techniques for behavior change, and handling difficult patient situations. Exposure to the approaches that experienced practitioners use for managing these systems issues and for improving interpersonal skills makes the work of primary care less intimidating for residents and improves patient satisfaction.[42] These changes would benefit all internal medicine residents, not just those who go into primary care, because all subspecialists need these skills for the outpatient aspects of their specialty practices.

Alternative models for outpatient training

Family medicine and primary care internal medicine residents have much greater exposure to outpatient medicine during residency training than do internal medicine residents, but, perhaps more important, they are much more likely to practice side-by-side with faculty in smaller clinic settings and to have their outpatient experiences structured without simultaneous competing demands from inpatient services. Many of these programs use the structure of their clinics to address to take advantage of comanagement with attending physicians and midlevel providers to provide the pedagogic benefits of role-modeling and the continuity of care for outpatients, which can be difficult in the once-a-week resident continuity clinic model. According to the American Medical Association's FREIDA database of training opportunities, the average number of residents and fellows in an internal medicine training site is 57.2 (19 per class), whereas in family medicine it is 20.3 (six to seven per class).[43] In the largest internal medicine residency programs, with 30 to 50 residents per class, clinics in which residents practice ambulatory medicine with faculty supervision, but in which faculty do not practice independently, are still common. Clinics in family medicine and primary care internal medicine in which residents practice alongside attending physicians benefit from increased administrative resources and the problem solving of full-time outpatient practitioners who are able to offer specific advice about clinical problems and who also are able to recognize and have an incentive to improve systems in the clinic.[44] Either the resident clinics need to work more like an efficient primary care practice, or residents who are considering careers in primary care need exposure to community practices and a systematic curriculum in the medical, behavioral, and systems aspects of primary care practice that differ from the inpatient setting.

Summing Up

Increasing the exposure of internal medicine residents to outpatient settings is likely to improve residents' knowledge of the management of common medical problems.[10] But if the goal is to increase the number of residents who choose careers in primary care, improving knowledge is not enough. Residents need to see functioning and efficient systems of care, and they need to feel comfortable working as part of an office-based clinical team, a model of care very different from most resident continuity clinics. Increasing exposure to dysfunctional clinic settings—especially by adding "extra" clinic sessions to inpatient ward and ICU months—is likely to have the unintended consequence of decreasing interest in primary care practice. Ultimately, the quality of outpatient medical training experiences is likely to matter more than sheer quantity if we want residents to leave training enthusiastic rather than discouraged about primary care.

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Disclaimer

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AUTHOR QUERIES

AUTHOR PLEASE ANSWER ALL QUERIES **1**

A—AU: For clarity, the word "complex" (after "comanaging") was deleted from this sentence; please confirm whether this change is acceptable.

B—AU: For clarity, the phrase "is also critical" was moved from the end of this sentence to the beginning. Please confirm whether this change is acceptable.