INNOVATION AND IMPROVEMENT

Training for Primary Care's Future

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*E*ditor's note: With support from the California HealthCare Foundation, JGIM is pleased to continue this occasional series of first-person narrative reports on clinical innovation. In its current incarnation (formerly "Interval Examination," now called "Frontline Account"), this series will continue to highlight clinical quality improvement, but with a special emphasis on primary care, often from the perspective of trainees. Contributors will share their perspectives as participant-observers in the development or implementation of a quality-enhancing innovation. The series is edited by two JGIM contributing editors: Ishani Ganguli, MD, an internal medicine resident at the Massachusetts General Hospital and practicing journalist who has written for the *Boston Globe* and *New York Times*; and Thomas Bodenheimer, MD, an expert in primary care policy and faculty physician at San Francisco General Hospital. In this lead-off article, Dr. Ganguli describes her experience as a resident participating in the Massachusetts General Hospital Ambulatory Practice of the Future.

There's a certain sense of futility that internal medicine residents come to expect in their continuity clinic experience. Worn down by 3 AM pages for narcotic prescription refills and lengthy problem lists that hinder preventive health, they resort to competing over who has more patients scheduled in an afternoon or has sent the largest percentage to the emergency department from clinic as if they were perverse quality measures.

Their experiences reflect a primary care system in need of repair. Mine has offered me a glimpse into how to fix it.

As a third-year resident in the primary care track of Massachusetts General Hospital's (MGH) Internal Medicine Residency Program, I work at the Ambulatory Practice of the Future (APF).¹ This innovation lab for primary care was launched in Spring 2010 as the joint effort of primary care providers, patients, and administrators looking for a change. MGH agreed to finance the clinic as a testing ground for patient-centered care delivery that could improve outcomes, lower costs for many of its

23,000-plus self-insured employees, and apply to other MGH practices.

The clinic's name evokes *The Jetsons* and to some extent, the practice delivers on that promise. Patients are greeted by touch-screen check-in kiosks. In a waiting room that overlooks the Boston skyline, they can sip tea and nibble trail mix while reading tips on surviving flu season that flash across a flat-screen television. The "innovation learning room" with floor-to-ceiling white boards offers weights and exercise machines to promote patient fitness.

The amenities are nice. But what I've come to value about APF as my outpatient clinical home is not its aesthetics so much as the way we deliver primary care and how that has shaped my view of the field's potential.

As health care shifts further to the outpatient setting and new models like the Accountable Care Organization emphasize primary care as the backbone of the enterprise, the need for effective primary care training has returned to the fore. But residency programs, traditionally hospital-based, have had trouble keeping up, prompting concerns that residents leave their training better prepared to run a code blue than to diagnose plantar fasciitis.

It wasn't until 1971 that a predecessor of the Accreditation Council for Graduate Medical Education (ACGME) recommended any sort of ambulatory training for internal medicine residents. In 1980, regulators first required a continuity clinic and set a vague minimum of one half-day per week; today, the ACGME firmly requires 130 of these sessions over 30 months of training.²

As the required hours in clinic have increased, the quality of the training has become a matter of growing concern. At stake is not only imparting the unique, challenging skills required in primary care, but also the recruitment and retention of internal medicine residents into this field.³ Some argue that greater exposure to dysfunctional clinic settings may even be counterproductive to these goals.⁴

The problems with continuity clinics are many: At most programs, residents' schedules are dictated by inpatient rotations that leave little room for true continuity in the outpatient setting. Residents are pulled from these inpatient rotations, where they work alongside co-resident friends, to clinic sessions that leave them not only overwhelmed, but also physically and socially isolated. Resident clinics tend to serve sicker patients with disadvantaged socioeconomic

backgrounds.^{5,6} Run by academic centers with competing research and clinical demands, the clinics are often understaffed and poorly organized.^{4,6}

It doesn't have to be this way.

Before James' first appointment with me at APF, I scroll through the 100-plus visit notes he has accrued over a decade and peg him as the classic resident patient. He is a 45-year-old hospital courier—a longtime smoker with poorly-controlled diabetes, hypertension, hyperlipidemia, and a body mass index of 50.

On the morning of his visit, our APF team sits down to run through the patients scheduled that day. When they get to James, they pull up the email I sent the night before: he'll need fasting lipids and a glycosylated hemoglobin (HgbA1c) test. James arrives at 3 PM and one of the medical assistants, Jasmine, brings him into a room to begin the visit and the electronic note. She emerges 10 min later, blood sample in hand, to pass the baton: he has normal vital signs, he's up to date on cancer screening and vaccines, and his main goals for the appointment are to discuss his diabetes and confirm his medications.

Now it's my turn to get to know our new patient: an earnest man with close-cropped brown hair and a "call me James, Jim, Jimmy" personality. As we review his medication list on a dual monitor screen, Jasmine pops in to hand me a point-of-care testing results slip. James' HgbA1c is up to 8.2. James and I strategize about controlling his diabetes and I answer his questions about how the disease can affect his kidneys and heart. Then we're on to smoking. I lay out some options: the patch, the gum, the lozenge, the pills. He's quit cold turkey before and tells me he wants to try that first.

After our hour-long visit (allotted to each new patient or annual physical), James sees Mary Ann, our registered nurse, to go through his food diary and blood sugar readings. He meets Ryan, our health coach, who draws out James' motivations to lose weight: James finds that he likes taking on new projects but struggles to control his portion sizes. In a year, he imagines himself exercising regularly, 50 lb lighter, with an HgbA1c under seven. Ryan helps him chart out his action plan for the next 3 months and follows up with phone calls and in-person visits.

When James needs a refill, he can drop an automated request to one of our medical assistants. If he has a question about his treatment plan, he can send an email via our medical secretary or look at his visit notes on a secure clinic website. For urgent issues, he can make a same day appointment to see one of our nurse practitioners or staff physicians if I'm tied up with an inpatient rotation. Throughout these encounters, James' other providers and I are in close contact by email and in person to update each other on his progress.

When I call James for a "virtual visit" (a scheduled call via telephone or web-camera), I discover he's been cigarette-free since our last appointment and has pared down his late-night snacking. James heard about the health benefits of quinoa from Mary Ann and is headed to the grocery store to find this mysterious grain.

By some standards, James is an outlier when it comes to patient motivation. But I've found that a coordinated effort, one that treats patients as members of the team and offers support from a complement of providers, shifts the entire curve to the right.⁷ The result benefits our patients and makes our experience caring for them more productive and satisfying.

The APF model cannot remedy the dearth of true continuity imposed by residents' inpatient schedules. But importantly, the model also presents unique challenges. In sharing "my" patients with other staff members, I've had to cede the sense of singular ownership and authority so engrained in us since our clinical training in medical school. I've had to work to build trusting relationships with my coworkers, to manage and be managed, to communicate at various levels of medical knowledge, to clarify who does what, to speak up when an interaction goes poorly, to ask for feedback, and to accept it genuinely. This requires skills that we don't traditionally cultivate in medical training—skills that are critical to practicing primary care of the future.

Several groups, including the American College of Physicians and the Society of General Internal Medicine, have called for the redesign of ambulatory clinics to fit the Patient-Centered Medical Home (PCMH) model more closely. A national survey of residency clinic directors found that we have a ways to go: directors reported great variability in the presence of team members such as case managers and nurse practitioners at these clinics, and showed that while most of them would be recognized as PCMHs in some form, they lacked the processes and coordination of care to put features like data tracking to good use.⁴ At APF, we are fortunate that such efforts are aided by the support of a large academic center and a population (still limited to MGH employees) that is more health literate than that of the average urban clinic. But APF is not the only practice at MGH or around the country that is experimenting with team-based care delivery and folding trainees into the process.

I wonder about the trade-offs of my clinic experience. By not fielding late-night narcotic requests or struggling to book a visiting nurse, I may leave residency unprepared to face the current realities of primary care. But practicing at a team-based clinic that is constantly re-evaluating itself and improving has trained me for the future of primary care. Working at APF, I learn through trial and error how much to lean on my colleagues and how to make the best

use of their training and mine. In doing so, I get to work alongside providers and staff who enjoy what they do and with patients who are excited to be involved in their health care and are better served by it. Sharing the responsibility for patients like James has reaffirmed my faith in primary care and taught me not to worry alone.

Conflict of Interest: *The author declares she does not have a conflict of interest.*

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