

Clinic First: 6 Actions to Transform Ambulatory Residency Training

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“So let me begin by stating what some may consider obvious, and others a heresy: patient-centered care and medical education—as currently practiced—cannot coexist,” a medical educator graphically wrote last year.¹ Teaching clinics are often poorly organized, discouraging trainees from choosing primary care or outpatient-based careers.^{2,3} This perspective makes the case that resident teaching clinics can provide patient-centered care and excellent resident education, and that the 2 goals can be in harmony.

Traditionally, most residents spend 1 to 2 half-days per week in clinic. This undermines the foundational principle of continuity for patients, staff, and learners. The priorities in training do not match those in the world beyond residency. In 2010, Americans made 600 million primary care visits compared with 35 million hospital admissions.⁴ Since the advent of the hospitalist, primary care physicians and some medical specialists spend little or no time providing inpatient care.⁵ Yet, in many residency programs, the hospital comes first and the clinic second.

A research team from the Center for Excellence in Primary Care at the University of California, San Francisco, conducted site visits to 18 internal medicine, family medicine, and pediatric residency teaching clinics. We chose the sites using reputational sampling.⁶ Members of our research team asked 17 national experts in graduate medical education to name highly regarded teaching practices. The 17 experts were chosen from professional contacts we personally knew and from authors of publications on residency program issues. Site visits included interviews and observations using a structured site visit guide. Site visit reports were coded and analyzed through an iterative process to identify themes.

Six common themes emerged, which we distilled into a model called “Clinic First” (BOX). The Clinic First model emphasizes that ambulatory training is a top priority, and creating high-performing teaching clinics is paramount. We found that programs embrac-

ing the Clinic First goal have implemented the following 6 actions.

1. Design resident schedules that prioritize continuity of care and eliminate tension between inpatient and outpatient duties

Scheduling residents to be in clinic predictably and without long absences increases continuity of care from both the patient and resident perspectives.⁷ Moreover, residents state that running between the hospital and clinic on the same day is highly stressful: it divides their attention and adulterates learning in both environments. Several programs have implemented alternative scheduling models that focus on outpatient experiences uninterrupted by inpatient responsibilities and prioritize resident clinic schedules over (or rank them equal to) other service obligations. In a recent survey, internal medicine residents reported that separating inpatient and outpatient responsibilities provides safe care, the best learning experience, and enough time to manage patients in both inpatient and ambulatory settings.⁸

For example, in the Tufts-Baystate internal medicine residency program, inpatient and outpatient rotations alternate in 2-week mini-blocks in order to ensure that residents are not away from clinic more than 2 weeks, to preserve continuity. This change resulted in a 35% increase in residents seeing their own patients. Consequently, residents focus entirely on inpatient or ambulatory patient needs, rather than juggling between them.⁹ The University of Cincinnati internal medicine residency program pioneered the ambulatory long block, during which residents spend 12 months with uninterrupted ambulatory training. This redesign resulted in enhanced resident and patient satisfaction, improved quality metrics, and greater continuity of care. During the long block year, 70% to 80% of patient visits are with their own resident physician.¹⁰ For block models to improve continuity of care, schedules need to be created that preserve patient continuity measured from resident and patient perspectives, and continuity metrics must be regularly tracked.

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2. Develop a small core of clinic faculty

When faculty are present in clinic 1 to 2 half-days per week, teaching is fragmented and patient continuity is impaired. Our observations found that a small core of full-time clinic faculty provides day-to-day leadership, improves continuity of care, allows stable teams, and does not tolerate clinic dysfunction because the clinic is their professional life. At the Greater Lawrence Family Health Center, leaders explained that faculty was reduced from 40 part-time physicians to 14 faculty members engaged in teaching and clinical care. Each faculty member has 3 to 5 patient care sessions per week, plus 1 to 2 precepting sessions. In the Tufts-Baystate internal medicine program, 11 core faculty members are scheduled for 6 clinical and 2 teaching sessions per week. In these programs, managing patient panels and teaching primary care are the center of faculty members' professional lives. Clinic leadership report that faculty are more invested in clinic functioning rather than being "visitors" in the clinic, and thus serve as the "glue" of patient care teams.

3. Create operationally excellent clinics

In too many teaching clinics, dysfunction leads to professional burnout, patient dissatisfaction, and residents poorly equipped to care for their complex patients.^{2,11} Learners need to practice in well-functioning, efficient ambulatory settings that deliver high-quality care if they are to leave training enthusiastic about primary care.^{12,13} High-performing clinics offer improved access and continuity of care, population management, data-driven improvement processes, and coordination of care with their medical neighborhood.¹⁴

For example, Group Health Cooperative's family medicine residency trains residents in an integrated delivery system centered on an advanced primary care model that is nationally regarded for its operational excellence.¹⁵ The clinic tracks physician-level performance data, including for residents, and has achieved high continuity of care, patient access, and patient satisfaction targets. Clinical work is shared with team members working to their highest level of training; such sharing of responsibility can improve outcomes and reduce physician stress.^{16,17} This advanced care model provides a learning environment that allows residents to experience firsthand the essential elements of high-functioning primary care.¹⁵

4. Build stable clinic teams that give residents, staff, and patients a sense of belonging

Robust team care models prioritize consistency, whereby the same staff, residents, and faculty work

BOX 6 Action Steps to Fix Primary Care Residency Training

1. Design resident schedules that prioritize continuity of care and eliminate tension between inpatient and outpatient duties
2. Develop a small core of clinic faculty
3. Create operationally excellent clinics
4. Build stable clinic teams that give residents, staff, and patients a sense of belonging
5. Increase resident time spent in primary care clinic to enhance ambulatory learning and patient access
6. Engage residents as coleaders of practice transformation

together whenever they are in clinic. Patients nearly always receive care within their team, which turns large, impersonal clinics into smaller friendly units. Studies have found that stable teams are associated with higher patient and resident satisfaction and improved resident learning opportunities.¹⁸⁻²⁰

For example, at Tufts-Baystate, internal medicine residents remain on the same team throughout residency and work with the same medical assistant nearly 80% of the time. When not in clinic, residents rely on their team nurse to address patients' needs. Teams are co-located into common spaces called pods, optimizing side-by-side teamwork. At the University of Utah's family medicine program, medical assistants served as scribes during the patient visit, entering documentation into the electronic health record for residents and attending physicians to sign. Clinical outcomes, patient satisfaction, and physician satisfaction increased.²¹ At the Greater Lawrence Family Health Center, residents stay on the same team their entire residency, turning a large impersonal clinic into a small comfortable home. Faculty and residents work with the same medical assistant 75% to 80% of the time, and at graduation residents may give specific thanks to the medical assistant they worked with throughout their training.

5. Increase resident time spent in primary care clinic to enhance ambulatory learning and patient access

Currently, resident graduates in ambulatory practice will spend more time in clinic in the first 3 months of an outpatient practice than they spend during the entire 3 years of residency.²² Increasing resident time in clinic is associated with improved continuity of care for patients and residents, increased quality of care, and increased resident satisfaction.^{10,23,24} At Tufts University Family Medicine Residency Program at Cambridge Health Alliance, second-year residents

spend 46% and third-year residents spend 63% of training time in primary care clinic. At Group Health Cooperative, Family Medicine Residency of Idaho, and Greater Lawrence Family Health Center, residents spend 30% of time in primary care clinic, well beyond the approximate 15% minimum required by the Accreditation Council for Graduate Medical Education.

6. Engage residents as coleaders of practice transformation

Academic health centers are being asked to train residents as drivers of health system improvement.²⁵ At Tufts-Cambridge Health Alliance, the residency goal of “developing leaders in the health care revolution” is actualized by residents coleading the multidisciplinary practice improvement team. At Erie Family Health Center in Chicago, all residents serve as assistant medical director for 3 months during the third year of residency. At Family Medicine Residency of Idaho, residents are empowered as change agents in their practice and in state-level health policy. One resident affirmed that “being a physician is not just about providing patient care, but also about being a leader and advocate.”

In conclusion, the Clinic First model, observed during visits to highly regarded internal medicine, family medicine, and pediatric residency programs, has the potential to transform our teaching clinics and restructure residency training to prioritize ambulatory practice. To improve both patient care and resident training, and to attract more medical students and residents to ambulatory care careers, the Clinic First model holds great promise.

References

- Weber EJ. Practicing what we teach: in order to teach patient-centered care, we need to deliver it. *Acad Med*. 2015;90(1):14–15.
- Keirns CC, Bosk CL. Perspective: the unintended consequences of training residents in dysfunctional outpatient settings. *Acad Med*. 2008;83(5):498–502.
- Nadkarni M, Reddy S, Bates CK, et al. Ambulatory-based education in internal medicine: current organization and implications for transformation. Results of a national survey of resident continuity clinic directors. *J Gen Intern Med*. 2010;26(1):16–20.
- National Center for Health Statistics. Health, United States, 2013. <http://www.cdc.gov/nchs/data/abus/abus13.pdf>. Accessed June 13, 2016.
- Meltzer DO. Hospitalists and primary care. *J Gen Intern Med*. 2015;30(5):541–542.
- Blaikie N. *Designing Social Research*. 2nd ed. Malden, MA: Polity Press; 2010:179.
- Francis MD, Wieland ML, Drake S, et al. Clinic design and continuity in internal medicine resident clinics. *J Grad Med Educ*. 2015;7(1):36–41.
- Francis MD, Thomas K, Langan M, et al. Clinic design, key practice metrics, and resident satisfaction in internal medicine continuity clinics. *J Grad Med Educ*. 2014;6(2):249–255.
- Rosenblum MJ, Hinchey KT. Rapid resident cycling: the 14 day mini-block. *Acad Intern Med Insight*. 2009;7(4):10–11.
- Warm EJ, Schauer DP, Diers T, et al. The ambulatory long-block: an Accreditation Council for Graduate Medical Education (ACGME) educational innovations project (EIP). *J Gen Intern Med*. 2008;23(7):921–926.
- Weinberger SE, Smith LG, Collier VU, et al. Redesigning training for internal medicine. *Ann Intern Med*. 2006;144(12):927–932.
- Wagner EH. Academia, chronic care, and the future of primary care. *J Gen Intern Med*. 2010;25(suppl 4):636–638.
- Bowen JL, Salerno SM, Chamberlain JK, et al. Changing habits of practice. Transforming internal medicine residency education in ambulatory settings. *J Gen Intern Med*. 2005;20(12):1181–1187.
- Bodenheimer T, Ghorob A, Willard-Grace R, et al. The 10 building blocks of high-performing primary care. *Ann Fam Med*. 2014;12(2):166–171.
- Barnes K, Morris CG. Clinic first: prioritizing primary care outpatient training for family medicine residents at Group Health Cooperative. *J Gen Intern Med*. 2015;30(10):1557–1560.
- Willard-Grace R, Hessler D, Rogers E, et al. Team structure and culture are associated with lower burnout in primary care. *J Am Board Fam Med*. 2014;27(2):229–238.
- Ghorob A, Bodenheimer T. Building teams in primary care: a practical guide. *Fam Syst Health*. 2015;33(3):182–192.
- Hochman ME, Asch S, Jibilian A, et al. Patient-centered medical home intervention at an internal medicine resident safety-net clinic. *JAMA Intern Med*. 2013;173(18):1694–1701.
- Roth LM, Markova T, Monsur JC, et al. Effects of implementation of a team model on physician and staff perceptions of a clinic’s organizational and learning environments. *Fam Med*. 2009;41(6):434–439.
- Gupta R, Davis E, Horton C. Interval examination: building primary care teams in an urban academic teaching clinic. *J Gen Intern Med*. 2013;28(11):1517–1521.
- Blash L, Dower C, Chapman S. University of Utah community clinics—medical assistant teams enhance patient-centered, physician-efficient care. http://healthforce.ucsf.edu/sites/healthforce.ucsf.edu/files/publication-pdf/3.1%202011_04_University_of_Utah_Community_Clinics-Medical_Assistant_Teams_

- Enhance_Patient-Centered_Physician-Efficient%20Care.pdf. Accessed June 13, 2016.
22. Holmboe ES, Bowen JL, Green M, et al. Reforming internal medicine residency training. A report from the Society of General Internal Medicine's task force for residency reform. *J Gen Intern Med.* 2005;20(12):1165–1172.
 23. McBurney PG, Moran CM, Ector WL, et al. Time in continuity clinic as a predictor of continuity of care for pediatric residents. *Pediatrics.* 2004;114(4):1023–1027.
 24. Francis MD, Zahnd WE, Varney A, et al. Effect of number of clinics and panel size on patient continuity for medical residents. *J Grad Med Educ.* 2009;1(2):310–315.
 25. Grumbach K, Lucey CR, Johnston SC. Transforming from centers of learning to learning health systems: the challenge for academic health centers. *JAMA.* 2014;311(11):1109–1110.



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