Interprofessional Care in Teaching Practices: Lessons From “Bright Spots”

Thomas Bodenheimer, MD, Margae Knox, MPH, and Sara Syer, MS, PA-C

T. Bodenheimer is the Founding Director of the Center for Excellence in Primary Care, University of California, San Francisco, San Francisco, California.

M. Knox is the Transforming Teaching Practices project manager at the Center for Excellence in Primary Care, University of California, San Francisco, San Francisco, California.

S. Syer is a practice coach, trainer, and consultant at the Center for Excellence in Primary Care, University of California, San Francisco, San Francisco, California.

Correspondence should be addressed to Thomas Bodenheimer, Center for Excellence in Primary Care, University of California, San Francisco, 995 Potrero Ave., San Francisco, CA 94110; telephone: 415-269-5021; email: Thomas.Bodenheimer@ucsf.edu.

Funding/Support: This work was supported by the Josiah Macy Jr. Foundation (grant #127672A).

Other disclosures: None reported.

Ethical approval: The project was reviewed by the University of California, San Francisco, Committee on Human Research and deemed exempt.
Abstract

In this issue, Brandt and colleagues and Uhlig and colleagues highlight barriers faced by health professional schools implementing interprofessional education and describe how clinical learning environments can overcome those obstacles. Primary care residency teaching clinics provide an excellent opportunity for interprofessional education and patient care, with teachers and learners from various professions caring for patients together. This Invited Commentary offers three interprofessional education strategies used by five “bright spot” family medicine teaching clinics: (1) separate clinics for patients with complex healthcare needs during which learners from various professions see patients together; (2) interprofessional interactions in day-to-day patient care; and (3) case conferences across professions to discuss patients. The vignettes presented here demonstrate how the concepts outlined by Brandt and colleagues and Uhlig and colleagues can be put into practice.

In this issue, Brandt and colleagues and Uhlig and colleagues underline the difficulties of implementing interprofessional education within the curricula of health professional schools.\textsuperscript{1,2} Barriers include difficulty coordinating curricula among health professional schools; a paucity of clinical sites that model interprofessional collaboration; and lack of interest among educators in medical schools. On the bright side, these authors describe how interprofessional education is taking hold in clinical learning environments, where learners from different professionals have the opportunity to care for patients together.

Primary care residency teaching clinics provide an excellent opportunity to merge learning and patient care into interprofessional collaborative practice. The logistics of interprofessional education are easier to implement in residency teaching clinics, where faculty and trainees of various health professions work together in one place caring for the same group of patients. This Invited Commentary builds on the work of Brandt and colleagues and Uhlig and colleagues by offering examples of high-performing residency teaching clinics that have implemented interprofessional education and care. These examples are bright spots that can illuminate the way forward.

**Our Journey to Residency Teaching Clinics**

Between 2013 and 2018, our Transforming Teaching Practices team completed site visits at 44 teaching clinics associated with internal medicine and family medicine residencies. The 2-day site visits involved interviews with clinic leadership, residents, faculty, nurses, behaviorists, pharmacists, social workers, and other clinic staff. The team observed front-line clinicians and staff in their daily work. Site visitors used a semi-structured interview guide based on a Building Blocks of Primary Care framework.\textsuperscript{3} The project was reviewed by the University of California, San Francisco, Committee on Human Research and deemed exempt.
We reviewed the site-visit reports and identified 5 exemplar programs for interprofessional education and care. In October 2017 we sent a questionnaire to clinic leaders at those 5 sites, asking them to elaborate on the observations made during the site visits. All 5 sites responded, with respondents including residency directors, pharmacists, social workers, and behaviorists. (The site visit guide and the questions asked of the 5 residency directors are available on request.) We present these findings as bright spots of interprofessional education and care.

**Strategies for Interprofessional Care and Education**

The 5 exemplars are University of Colorado A.F. Williams Family Medicine Clinic, Crozer-Keystone Center for Family Health, East Tennessee State University (ETSU) Family Medicine Associates at Johnson City, ETSU Family Physicians of Kingsport, and Maine Medical Center’s Family Medicine Center. These programs offer three strategies for interprofessional care and education: (1) separate clinics for patients with complex health care needs during which patients are seen by an interprofessional team that includes learners; (2) day-to-day interprofessional interactions in clinic settings; and (3) case conferences across professions to discuss patients.

**Interprofessional care clinics**

Interprofessional care clinics are patient care sessions in which learners (medical and pharmacy residents; psychology and social work students; and medical students) see patients together with other members of an interprofessional team. The patients utilizing these clinics have either been recently discharged from the hospital or are patients with multiple chronic conditions and high health care costs.

**Crozer-Keystone.** Crozer-Keystone established its “SuperUtilizer” program for high-needs, complex patients in 2011. The program involves two interprofessional project teams—one focused
on frail elderly individuals generally on Medicare, and the other assisting patients generally on Medicaid with comorbid physical and mental health issues, substance abuse, and/or social problems including homelessness. Team leaders are an RN for the frail elderly team and a social worker for the team caring for patients with complex physical and mental health problems. Teams include RNs, behaviorists, social workers, pharmacists, residents, and social work and psychology students. The maximum case load per team is 30 patients. This intensive program is conducted primarily through home visits or visits to homeless shelters or community locations. The home visits are interprofessional and include medical and pharmacy residents. Most patients are discussed at weekly interdisciplinary team meetings.

**Maine Medical Center.** This residency program rotates all residents through the interprofessional “Hospital to Home” (H2H) group visit for patients recently discharged from the hospital. This weekly clinic includes a faculty clinician; 1-2 medical residents at each session; a lead RN; a medical assistant; a clinical pharmacist and a pharmacy resident; a social worker and occasionally a social work student; and a nurse chronic care manager. The interprofessional team meets for the initial 30 minutes and the lead RN presents and leads a discussion of each patient. Then patients arrive, and for the next 60 minutes different team members, who are co-located in one space, have individual time with the 1-8 patients who attend. Each patient meets with a pharmacist, social worker, care manager, and physician (resident or faculty). During the final 30 minutes, after patients depart, the team discusses care plans and follow-up for each patient.

**ETSU Kingsport.** A pharmacist and social worker duo run ETSU Kingsport’s weekly Interprofessional Transitions of Care clinic (IPTC). All patients discharged from in-patient services attend the IPTC once and then return to their primary care clinician for ongoing care. The IPTC includes a medical resident; an attending physician; a pharmacist and a pharmacy resident; a social
worker; and sometimes medical and psychology students. The social worker contacts patients discharged from the hospital, obtains records, and asks patients to bring medications. Each week the team sees about 11 patients, sometimes overbooking up to 14. The team huddles to discuss all patients from 8 A.M. to 9 A.M. Each patient is then seen by several team members together or one after another. The pharmacy team may talk with each patient about medications and complete a thorough medication reconciliation. The social worker goes over mental health issues and resource needs. The medical resident does a standard history and pertinent physical exam and discusses each patient with the faculty preceptor and the social worker. This example shows that physicians need not be the champions of interprofessional care; the IPTC was pioneered by a pharmacist and social worker.

**ETSU Johnson City.** The Transitions of Care clinic (TCC) meets weekly to serve up to 11 patients just discharged from inpatient facilities. The TCC team includes medical faculty, pharmacist, psychologist, social health specialist, pharmacy residents and behavioral health externs. All medical residents complete two block rotations in TCC clinic during their second and third years. Each second-year pharmacy resident and psychology extern completes a yearlong longitudinal experience with TCC clinic. The 8 A.M.–9 a.m. team huddles are led by the pharmacy resident. During the TCC, each patient sees the medical resident, pharmacist, behavioral health specialist, and social health specialist. The team discusses the care plan for each patient and the medical resident discusses the plan with the attending physician. After one TCC visit, patients return to their primary care clinician.

**Day-to-day interprofessional care**

During daily primary care clinic visits, interprofessional interactions take place as learners, clinicians, nursing staff, support staff, behaviorists, and pharmacists connect with one another about
patients needing the variety of skills that interdisciplinary team members provide. Three mechanisms that promote these interactions include huddles, warm handoffs (one team member introducing patients to another team member who becomes involved in their care), and co-location.

**University of Colorado.** At the A.F. Williams Family Medicine Clinic, interprofessional care is infused throughout the clinic day. Working in the clinic are an RN care manager, social worker, behavioral health faculty and trainees, pharmacy faculty and residents, a psychiatrist available for telehealth and case conferences, and two patient navigators. As medical residents and faculty see patients, these interprofessional team members are regularly utilized for co-consults, warm handoffs, and electronic consultation. Interprofessional team members are co-located in the precepting room and may join precepting conversations between faculty and residents. A care manager and social worker are available for warm handoffs and often meet with patients before, after, or during the provider visit.

**Crozer-Keystone.** Just prior to seeing patients, 30-minute interprofessional huddles—including medical residents, and social work and psychology students—review four patients with complex health care needs. The residents make care plans together with the social work and psychology students.

**Case conferences**

Even though patients are not present during case conferences, these sessions allow for interdisciplinary input on patients with complex health care needs, creating the opportunity for individuals across the care team to exchange perspectives and make care plans.

**University of Colorado.** The residency program offers regular interdisciplinary case conference formats. Care Team, meeting twice a month, is attended by RN care managers, social workers, behavioral health faculty and trainees, and pharmacy faculty and residents. Trainees of any
profession present cases of patients with complex health care needs. Attendees give suggestions for the presenter to consider. Another venue is the weekly interprofessional learning session where learners (medical students; medical and pharmacy residents; behavioral health trainees) present a case and trainees discuss the management from the perspective of their role.

**Maine Medical Center.** At the 20-minute Afternoon Report, taking place four days each week, residents present complex ambulatory cases. The clinical pharmacist and behavioral health clinicians attend some of these sessions to share their perspective and wisdom. In addition, interprofessional care is a regular feature of the monthly patient safety and quality case presentations.

**Putting Interprofessional Education and Care Into Practice**

This Invited Commentary describes how the concepts outlined by Brandt and colleagues and by Uhlig and colleagues have been implemented in several primary care residency training clinics around the country. More is required than didactic lectures or intermittent consultations; repeated longitudinal collaborative care of patients is needed. The benefit of longitudinal interprofessional training, as part of patient care, is supported by a study of family medicine residents, nurse practitioners, and social work students assigned to interprofessional teams who were compared with learners who did not receive interprofessional training. During the first year, team learners saw patients separately and discussed them at monthly meetings and by phone and e-mail; posttest scores did not change from their pretest levels. During the second year, the learners cared for patients together in an interprofessional clinic, enabling them to collaborate closely and frequently, learn from each other, create and implement care plans, and build relationships with one another. After the second year, posttest scores significantly improved, and team learners had significantly more favorable attitudes toward interprofessional teams compared to non-team learners and
compared to assessments after the first year. This study strongly suggests that interprofessional clinics are an effective way to provide interprofessional education, with learners from distinct disciplines caring for patients together.

In conclusion, the case vignettes presented here demonstrate that primary care residency teaching clinics provide fertile ground for trainees from various health professions to learn together.

Acknowledgements: The authors would like to thank the site leaders who contributed to this report: Aimee English, MD, from University of Colorado; Barry Jacobs, PsyD, Kim McGinness, NP, and William Warning, MD, from Crozer-Keystone; McKenzie Calhoun, PharmD, and Jesse Gilreath, LCSW, from East Tennessee State University (ETSU) Kingsport; Alicia Williams, MA, CSAC, and Ryan Tewell, PharmD, from ETSU Johnson City; and Alison Samitt, MD, from Maine Medical Center.
References


