Innovations in Family Medicine Education

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Editor's Note: Send submissions to jfreeman@kumc.edu. Articles should be between 500–1,000 words and clearly and concisely present the goal of the program, the design of the intervention and evaluation plan, the description of the program as implemented, results of evaluation, and conclusion. Each submission should be accompanied by a 100-word abstract. Please limit tables or figures to one each. You can also contact me at Department of Family Medicine, KUMC, Room 1130A Delp, Mail Code 4010, 3901 Rainbow Boulevard, Kansas City, KS 66160. 913-588-1944. Fax: 913-588-2496.

Areas of Concentration Increase Scholarly Activity: A 15-month Experience

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The Accreditation Council for Graduate Medical Education (ACGME) requires family medicine residencies to demonstrate scholarly activity. A 6-year survey of resident scholarly activity at our residency revealed one regional presentation. We adopted an additional scholarly activity curriculum based on the Association of Family Medicine Residency Directors (AFMRD) Areas of Concentration (AOC) proposal. Residents submitted proposals detailing learning objectives, desired electives, continuing medical education opportunities, and scholarly activity plans. Six of seven PGY-3 residents and seven of seven PGY-2 residents chose the AOC track. In 15 months, residents completed 12 publications or regional conference presentations. AOC tracks can encourage resident scholarly activity and fulfill intellectual curiosity.

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The 2006 Family Medicine Residency Review Committee (RRC) requirements called for all programs to demonstrate resident and faculty scholarly activity.[1] In addition, the Criteria for Excellence from Residency Program Solutions (formerly known as Residency Assistance Program) recommended that all residents have individual education plans (IEPs).[2]

To comply with the above taskings and promote individualized scholarly activity, the Association of Family Medicine Residency Directors (AFMRD) released the Areas of Concentration (AOC) proposal in February 2006.[3] AOCs were intended to provide a framework for residents to (1) create their own IEPs in self-selected areas of interest, (2) complete a related scholarly project, and (3) promote specialty interest among medical students. AOCs should not be confused with certificates of added qualification (CAQs) or post-residency fellowships.

Historically, a majority of residents have preferred not to perform scholarly activity.[4] Of residents who have completed research, one study found the top motivator was intellectual curiousity.[5] DeHaven and colleagues reported that "Programs can expect successful results if they make research a priority."[6] We sought to allow pursuit of self-directed learning, give residents time and training to complete their project, and make scholarly proj-

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ects a priority by instituting AOCs within our residency.

Methods

Curriculum Design and Development

HQ Air Armament Center Family Medicine Residency (HQA-ACFMR) is an 8-8-8 community-based military program based in the southeast United States. Graduates often find themselves in isolated and austere environments, so we felt a duty (based on 2 years of post-graduate surveys) to provide opportunities to enhance their training would meet their own perceived needs. Although our program was not one of the 30% of residencies cited for lack of scholarly activity, we were still struggling to instill a culture of scholarly activity.[7]

Upon release of the AOC proposal letter by the AFMRD Residency Education Committee to US program directors, our faculty considered the merits of allowing residents to pursue areas of interest within the New Model of family medicine.[8] We changed our requirement for residents to complete primary research since it had borne little fruit. Residents were asked about whether the AOC content and practicality of implementation appealed to them, and they gave instant support. As part of a pilot program of the Family Physicians' Inquiry Network (FPIN), our residents were permitted to submit their own questions and complete FPIN clinical inquiries.

Since the AFMRD had released a mature plan, we adopted the proposal letter without modification. We provided the residents an article on how to write learning objectives and worked with faculty advisors to individualize AOC training plans to fulfill all requirements. (While the original proposal had residents submit their AOCs in advance to AFMRD for approval with formal recognition by AFMRD, this was dropped, and formal evaluation and recognition are by the program director, not nationally by AFMRD.)

While many educational interventions only measure change in attitudes, we decided that the primary outcome measure would be successful production of resident scholarly activity.

Results

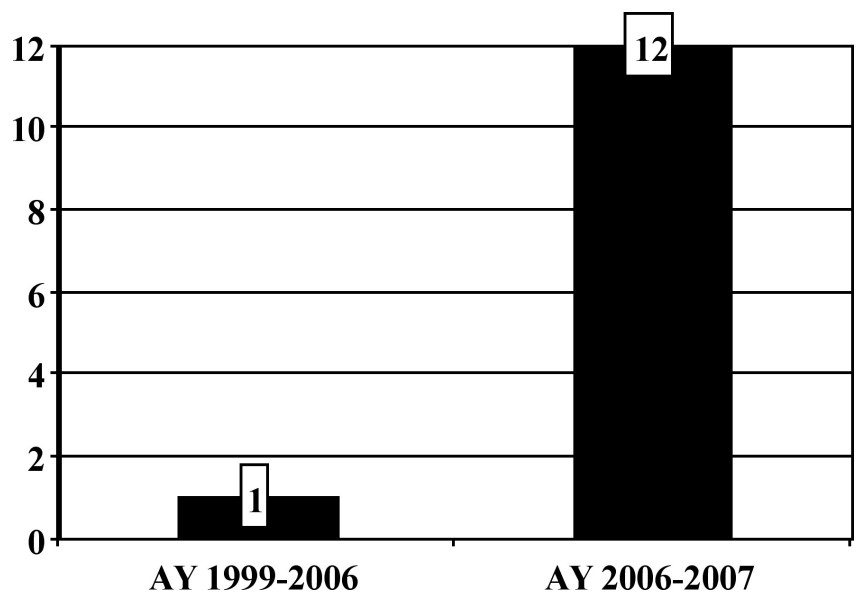
Within 3 months of program adoption, six of seven rising PGY-3s and seven of seven rising PGY-2s had selected AOCs. Areas of interest included dermatology, pediatrics, women's health, wilderness medicine, tropical medicine, emergency medicine, natural family planning, international medicine, obstetrics, and sports medicine. Over the ensuing 15 months, every PGY-3 completed at least one scholarly activity project, and one PGY-2 published a paper. In sum, residents accomplished 10 AOC scholarly activity projects and two non-AOC projects that included continuing medical education (CME) and case report presentations at a state academy meeting (dissemination and discovery) and FPIN clinical inquiries published in the *Journal of Family Practice* (synthesis) (see Figure 1).

Discussion

When given the opportunity to pursue natural areas of interest while still completing a broad education in family medicine, residents overwhelmingly selected the new AOC scholarly activity option. As these AOCs were being developed and completed, a culture of scholarly activity quickly grew since residents were given training and mentoring on research question formation, writing skills, and professional development. Residents who previously expressed dread at completing the "research requirement" were now eager to develop their own scholarly activity projects. Consequently, when the graduating PGY-3s presented their portfolios locally, newly arrived interns and rising PGY-2s were excited by the prospect of devising their own IEP and completing scholarly activity. These outcomes are consistent with the Future of Family Medicine Guidelines to

Figure 1

Number of Scholarly Citations by Academic Year (AY)



further the vision and mission of family medicine.[9]

Based on vigorous discussions at the AFMRD Program Directors' Workshop, we recognize that some family medicine educators are opposed to the concept of AOCs, since family medicine is a generalist specialty. However, if an AOC is thought as a "minor" within family medicine, it can not only enhance a resident's excitement about his or her own education, but it can increase the academic standing of our specialty as more family physicians complete scholarly activity. In theory, this could lead to increased medical student interest in family medicine.

Another potential benefit of AOCs is as a vehicle to challenge gifted learners, a historically demanding group for medical educators to stimulate. AOCs provide an opportunity to encourage personal development, teach beyond the immediate patient, and invite the resident to educate others.[9] Such self-directed learning fulfills the need to be creative and prevents boredom.

There are financial implications with AOCs. These include the need for institutional support, since sending residents on a regional CME trip in their area of interest is expensive. In addition, residents may incur out-of-pocket expenses in pursuit of out-of-area rotations.

Conclusions

Adoption of optional AOCs within the HQA-ACFMR exponentially boosted resident-derived publications and conference presentations in our program. Although individual training and mentoring is not unique to AOCs, the self-directed nature of the AOCs allowed residents to pursue areas of passion while concurrently bringing the residency into compliance with RRC requirements.

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Table 1

Scholarly Activity Produced by AOC Topics

Resident-selected AOC Topics	*Scholarly Activity Produced*
Wilderness medicine	• Oldham D. Fracture care in austere environments. Uniformed Services Academy of Family Physicians Annual Meeting, March 11, 2007, Hilton Head, SC. • Oldham D. Back-country water purification. Uniformed Services Academy of Family Physicians Annual Meeting, March 12, 2007, Hilton Head, SC. • Oldham DM, Crawford P, Nichols W, Mott T. What is the best portable method of purifying water to prevent infectious disease? J Fam Pract 2008;57(1):46-8. • Kiser J, Paulson C, Nichols W. What is the most effective treatment for giardia? J Fam Pract (under review).
Emergency medicine	• Hennemann S, Crawford P, Nguyen L, Smith PC. What is the best treatment for orbital and peri-orbital cellulitis in children? J Fam Pract 2007;56(8):662-4.
Tropical medicine	• Clark SL, Crawford P, Nichols W. When should travelers begin their malaria prophylaxis? J Fam Pract 2007;56(11):950-1. • Wiltz S, Crawford P, Nichols W. What is the most effective and safe malaria prophylaxis during pregnancy? J Fam Pract 2008;57(1):51-3. • Wiltz S. Fever in the returned traveler. Uniformed Services Academy of Family Physicians Annual Meeting, March 14, 2007, Hilton Head, SC.
Dermatology	• Sheffield R, Crawford P, Wright S, King V. What is the best therapy for cradle cap? J Fam Pract 2007;56(3):232-3.
Obstetrics	• Snyder M, Crawford P, Jamieson B. What treatment approach to intrapartum maternal fever has the best fetal outcomes? J Fam Pract 2007;56(5):401-2.
No AOC chosen	• Richardson EK, Paulson C, Hitchcock K, Gerayli F. How accurate is the clinical diagnosis for acute appendicitis? J Fam Pract 2007;56(6):474-6. • Richardson EK. Eating disorder as a cause for avascular necosis of the femoral head. Resident Research Symposium, Uniformed Services Academy of Family Physicians Annual Meeting, March 12, 2007, Hilton Head, SC.

AOC—Areas of Concentration

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