What Is an Academic General Internist?
Career Options and Training Pathways

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The first academic divisions of general internal medicine (GIM) in the United States appeared around 1970. Before 1970, only 5 academic departments of medicine had a section of GIM.1-6 and in 2002, virtually all US medical schools have a division of GIM. Faculty are general internists who provide primary care and inpatient care for patients, teach students and residents, and conduct research. Our goal is to describe the faculty career options in academic GIM, including the typical job descriptions and training pathways for each. In addition, we discuss the rewards and challenges of these career options: clinical educator, clinical researcher, and the emerging role of academic “hospitalist.”

BRIEF HISTORY OF ACADEMIC GIM

The impetus for the development of divisions of GIM in academic medical centers in the 1970s was related to the shift in location of care from the inpatient to the outpatient setting, driven by prospective payment to hospitals. Consequently, an increasing number of patients began to obtain their primary health care and address some of the broader psychological and social aspects of patients’ problems. Concepts of clinical epidemiology were also developing,7,8 and the ambulatory clinic setting created an opportunity to care for an entire population of patients. While general internists expanded their role in ambulatory care settings, they also continued their traditional role of caring for patients on the inpatient wards and on GIM teaching units. However, the discipline of “primary care internal medicine” was taking hold and, thus, faculty became increasingly responsible for providing patient care and for teaching residents in the new outpatient longitudinal model of care.

Faculty in these early divisions of academic GIM also developed fields of scientific exploration. Areas of inquiry that originated in academic GIM include evidence-based medicine,7,8 psychosocial aspects of care and patient-physician communication,9 and measurement of health outcomes.10 New medical organizations and medical publications emerged as mechanisms for GIM faculty around the country to exchange ideas and present their teaching and scientific work. The Society of General Internal Medicine (SGIM; previously the Society for Research and Education in Primary Care Internal Medicine) started in 1977 and the Journal of General Internal Medicine began in 1986.

Growth in the numbers of faculty members in GIM has been fueled largely by the need for academic medical centers to provide primary care for large numbers of patients and teaching for students and residents at ambulatory practice sites. Hence, divisions of GIM have expanded to include clinician educators to meet these demands. However, these academic divisions have not only grown in size, but have become substantially more focused on research and scholarship. For example, general internists have led efforts to computerize physician drug ordering and to decrease medication errors11,12 and to shed light on the problem of racial disparities in health care.13,14 Faculty have tended to specialize as clinical educators, clinical researchers, or hospitalists. We describe the training, as well as

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the rewards and challenges, of each of these 3 career paths. These types of activities are the traditional sources of professional gratification for many academic physicians.\textsuperscript{15,16}

**CLINICAL EDUCATOR**

During the last decade, academic medical centers have recruited large numbers of clinical educators to provide care in the outpatient setting and to teach students and residents.\textsuperscript{17,18} The job requirements vary widely depending on the institution and the responsibilities of the faculty member. Some academic general internists spend 80\% to 90\% of their time seeing their own patients and only 10\% to 20\% of their time teaching. Others have a greater degree of responsibility for directing educational programs and spend 50\% of their time seeing patients and 50\% teaching or leading educational endeavors. Hence, the way a particular faculty member spends his or her time is highly variable depending on the needs of the institution and the experience and skills of the individual physician.

Despite this variation, the job of a typical junior faculty member can be described in a general way.\textsuperscript{19} In terms of clinical responsibilities, he or she will see a panel of patients in an outpatient clinic 5 or 6 half days per week, supervise residents in the same setting 2 or 3 days per week, and spend a variable amount of time devoted to scholarly projects. In addition, he or she will spend 1 to 3 months per year serving as an attending physician on an inpatient general medicine unit; typically during those months, outpatient responsibilities are reduced to no more than a few half days per week. Educational responsibilities of general internists typically include teaching medical students history-taking and physical examination skills, and leading courses for students or residents in evidence-based medicine, patient-physician communication, preventive medicine, medical ethics, and other non-disease-specific courses. General internists may also take leadership roles in the academic medical center as directors of a component of the curriculum, such as first-year courses to introduce clinical medicine, or as leaders in student evaluation programs. Typically, a faculty member who is in charge of a large educational responsibility has more “protected time” to do these jobs.

In addition to the work of clinical care and teaching, most academic centers expect clinical educators to do some scholarly work to meet standards for promotion. This may include developing novel educational programs or materials, writing case reports or review articles on clinical topics, presenting workshops at scientific meetings, or conducting research in medical education. The expectations of academic medical centers in this regard have varied widely and the need to do scholarly work that is recognized nationally or internationally has been a challenging part of this job.\textsuperscript{18,20}

**Training for Clinical Educators**

The appropriate training depends on the specific job description. There is no single uniform training pathway, but fellowships in GIM that focus on training clinical educators are probably the most common.\textsuperscript{19} The SGIM has a directory of fellowship programs, available on its Web site (http://www.sgim.org). Typically, these fellowships provide a didactic curriculum on teaching theory, programs to strengthen teaching skills, and opportunities to teach and receive feedback from peers and students. They offer courses on educational topics including evaluation methods and curriculum development. Several GIM fellowships have a specific content focus (eg, patient-physician communication or evidence-based medicine). Some fellowships teach research methods and expect fellows to conduct projects focused on educational topics. Since the program length is typically only 2 years, the fellows need to weigh the relative time devoted to research methods compared with more practical teaching skills.

In lieu of a fellowship in general medicine, some trainees choose to enroll in a degree program in related disciplines, for example, a master’s program in education. The Robert Wood Johnson Clinical Scholars Program (http://www.rwjf.org), which began more than 25 years ago, trains fellows to pursue careers as both clinical educators and clinical researchers in general medicine. These advanced training programs are particularly geared for individuals who wish to develop skills required to create new educational materials and to conduct educational research.

**Rewards and Challenges**

The rewards of a career as a clinical educator are the traditional and much valued ones of caring for patients and teaching.\textsuperscript{17} These roles have been the essential core values of academic medical centers and their faculty. The rewards can include gratification from personal relationships, the intellectual rigor of teaching, and the sense of a commitment to excellence. There are other opportunities to create new educational methods to meet evolving needs, such as creating Web-based learning methods or curriculum on topics like cross-cultural communication.

The main challenge to this career path is the difficulty academic medical centers have had in adequately recognizing the contributions of clinical educators.\textsuperscript{18,20,21} Traditionally, faculty members’ accomplishments are rewarded through promotion in the professorial ranks. Typical measures of success include publications, grants, and evidence of regional, national, and international recognition. These standards are not well suited to measure excellence in either clinical care or teaching. More appropriate methods to measure teaching excellence include use of teaching portfolios and peer and student evaluations.\textsuperscript{22-23} Good measures of excellent clinical care are less common, but some creative methods have been developed.\textsuperscript{24} Despite the incorporation of new promotion tracks for clinical teachers in many academic medical centers, there continue to be challenges in appropriately measuring excellence and rewarding faculty members. Individuals considering this career option should ask about the specific requirements for promotion at the institution they are
considering so they can assess the match between the specific job description and the institution’s criteria for success.

CLINICAL RESEARCHER

The career of a clinical researcher in GIM is also a relatively new pathway that has evolved in the past 20 years. Prior to that time there were few researchers, who typically trained in other medical specialties and became “generalist researchers” in broad general medical topics not typically addressed by subspecialists. Meetings of this cohort of researchers were very small. Now, there is a large group of general internists who conduct scientific investigations in a broad array of topics that cut across other specialty-oriented fields. Many of the topics fit under the subject of health services research and include both specific topics of investigation and research on methods. Topics of research have included medical ethics, end-of-life care, chronic disease management, health promotion, and patient-physician communication. Areas of investigation have also focused on research methods, for example, measuring quality of life, evaluating the quality of scientific studies, and conducting cost-effectiveness analyses. In fact, the scope of topics has become so broad that faculty attend meetings focused on their specific area of investigation, in addition to the national SGIM meeting (which now has approximately 1500 attendees per year).

A typical job description for a clinical researcher includes 70% to 80% of his or her time devoted to research and 20% to 30% to clinical or teaching activities. Usually, this includes spending a half day per week seeing outpatients and 1 or 2 months per year as the attending physician on the general medicine inpatient unit. Like colleagues in other medical specialties, promotion is related to publications, grants, and regional and national reputation.

Training for Clinical Researchers

Almost all physicians entering these careers will complete at least 2 years of a fellowship program, and many seek additional training. Fellowships in general medicine offer training in research methods and skills, including courses in biostatistics, clinical epidemiology, health services research, health policy/economics, and a variety of related topics. Many offer fellowships to obtain a master’s level degree in clinical epidemiology, public health, or public policy. Programs usually require fellows to design, conduct, analyze, and present their own research. Unlike fellows in medical specialties, these general medicine fellowships do not have uniform standards for their content or structure and they are not regulated by the Accreditation Council for Graduate Medical Education. Hence, fellowships vary based on the goals and interests of the faculty leading them.

Fellows have increasingly chosen to seek additional training either by adding a third year to their fellowship or by obtaining further training in advanced degree programs. The Robert Wood Johnson Clinical Scholars Program, which has been a leading training program for generalist researchers, will be extending training from 2 to 3 years for some individuals. Additionally, some fellows continue studies to obtain a doctoral degree in epidemiology, medical sociology, health economics, or other disciplines. As competition for junior faculty positions increases, individuals may find that longer training, which increases their skills and adds to their track record in terms of publications and small grants, improves their job opportunities.

Rewards and Challenges

Research in the field offers intellectual opportunities for discovery in a range of topics related to patient care and the health care delivery system. In particular, research in GIM often addresses issues of importance to society by exploring topics such as smoking cessation, substance abuse and treatment, or care of disadvantaged populations. As a marker of this success, in 2001 the SGIM received more than 1700 scientific abstract submissions for presentation at the national meeting (written communication, David Karlson, PhD). In addition, GIM research is presented at many other meetings, including those of the Society for Medical Decision Making, the Association for Health Services Research, and a variety of specialty societies.

One challenge in the field is the lack of a single large funding source for this type of work. Some research is funded through the National Institutes of Health or the National Institute on Aging. The Agency for Healthcare Research and Quality funds studies pertaining to the health care delivery system and to quality of care, but its budget is small relative to that of the National Institutes of Health. In addition, GIM researchers often seek funding from philanthropic foundations that focus on health issues. Hence, general internists tend to explore a variety of sources for potential grant funding.

HOSPITALIST

An increasing number of general internists are becoming hospitalists, who spend more than 25% of their time caring for patients in the hospital setting. The National Association of Inpatient Physicians was formed in 1998 and now has more than 2300 members. The specialty is growing very rapidly. Sixty-five percent of internists in a recent survey described the potential for collaborating with hospitalists, and a workforce project estimates that ultimately there will be 19000 hospitalists in the United States, approximately the same as the number of cardiologists.

The majority of hospitalists work in community settings, but some practice in academic hospitals. Typically, the job of an academic hospitalist is to serve as the attending physician on the general medicine units for 4 to 6 months per year. Most hospitalists have a minimal amount of responsibility for outpatients. In addition to caring for inpatients, some hospitalists become leaders of quality improvement initiatives and lead efforts to improve the hospital systems of care. They are expert inpatient teachers of the house staff and they have the opportunity to lead new educational programs focused on the inpatient setting for students and...
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residents. Academic hospitalists conduct research pertaining to issues of quality and cost of inpatient care. While not all hospitalists are internists, the majority (75%) are trained as general internists since much of the traditional training in internal medicine focuses on care of inpatients. At present, there is no separate US residency program for individuals planning this career path. A few institutions have developed hospitalist residency tracks or fellowship programs. The University of California, San Francisco, for example, has a hospitalist track for residents interested in careers in hospital medicine. Residents enter the track in their second year and participate in a curriculum that includes hospital-oriented quality improvement, patient safety, and end-of-life care, in addition to clinical training. The fellowship is oriented toward training academic hospitalists with research skills in key areas related to care of hospitalized patients.

Since the hospitalist career is a young specialty, it is difficult to articulate the long-term rewards and challenges. Certainly, the rewards include a sense of personal and emotional engagement in the care of patients. Also, there are concerns about whether faculty members will “burn out” after some years as hospitalists since it is a demanding job physically and emotionally. Follow-up of the early cohorts of hospitalists will be needed to understand the long-term career path.

CAREER ADVICE

Each of the career paths in GIM offers rich opportunities for long-term career satisfaction and professional rewards. Individuals considering these options must weigh the advantages and disadvantages by reflecting on their own values and preferences, talking to faculty members presently in these positions, and discussing the choice with trusted mentors and role models. Ultimately, career choices must be based on an individual’s sense of his or her own strengths and passions. In exploring particular jobs in academic GIM, prospective faculty members should look carefully at the expectations of the employer (usually chiefs of GIM) in terms of the time allocation to patient care, teaching, and research. In particular, the allocation of time to scholarly endeavors should be adequate to meet the institution’s expectations for productivity and promotion. Furthermore, residents aspiring to an academic career in GIM should obtain further training through a fellowship or appropriate advanced preparation. This recommendation is based on our experience that in the present economic market, individuals with advanced training are more likely than applicants without additional training to obtain jobs with time dedicated to scholarly endeavors. The breadth of the field offers a variety of pathways for faculty members to pursue their specific interests and to develop as mature academicians contributing to their patients, students, and intellectual fields.

REFERENCES