General Internal Medicine and Geriatrics: Building a Foundation To Improve the Training of General Internists in the Care of Older Adults

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Internists—"doctors for adults"—provide most of the medical care given to older Americans, especially those with serious chronic disease. Nonetheless, the United States lacks an adequate physician workforce with mastery in caring for older persons and with expertise in building knowledge about how best to provide this care. This supplement aims to strengthen the physician workforce by fostering incremental and sustained improvements in the training of internal medicine residents in the care of older adults and in the development of geriatrics-oriented general internal medicine faculty. It identifies 3 major barriers to these improvements: lack of adequately trained teachers and mentors, the belief that explicit training in geriatrics has little to offer the generalist, and inadequate funding. Three strategies offer particular promise in overcoming these barriers: engaging directors of internal medicine residency programs, funding centers to promote collaboration between teaching and research programs in general internal medicine and geriatrics, and providing substantial incremental funding on the national level to pay for the time required to care for frail older patients and to teach and do research about this care. The barriers and strategies identified in this supplement may also inform efforts to enhance the skills of practicing physicians and improve training and faculty development in family medicine and other disciplines.

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Over the next 30 years, the health care needs of older Americans will challenge physicians and other health professionals as the number of older persons explodes, their lifespans lengthen, and they are treated for more and more conditions. The number of Americans 65 years of age or older has doubled every 30 years since 1900 and will double again in the next 30 years, from 35 million (12.4% of the population) to 70 million (20.6% of the population) (1). Persons 65 years of age or older account for 25% of visits to physician offices, 36% of acute hospitalizations, and 50% of hospital expenditures (2). Medicare reimbursement accounts for 27% of physician income. Persons 85 years of age or older are the most rapidly growing part of the population, and they often have challenging combinations of conditions. Yet in an era that aspires to evidence-based medicine, we have little knowledge about how best to care for the very old, and most physicians are not taught the principles and perspectives that come into play in caring for the aged.

This supplement is intended to serve as a foundation for incremental and sustained improvement in the training of internists in the care of older adults. This foundation is based on 3 premises. First, internists—"doctors for adults"—provide most of the general medical care given to older Americans (3). In fact, the proportion of office visits made to generalist physicians by persons 65 years of age or older has nearly doubled in recent years, increasing from 32% of all visits in 1975 to 57% of all visits in 2000 (4). Second, internal medicine faces formidable challenges posed by the rapidly increasing number of older Americans, many of whom have serious chronic disease with its attendant psychological, social, and financial effects. Despite early recognition of these challenges (5, 6), they are surprisingly far from being met: The United States does not yet have an adequate physician workforce with mastery in caring for older persons and with expertise in building the knowledge base of geriatric medicine. Third, meeting these challenges will require a multifaceted approach that engages general internal medicine and subspecialty internal medicine as well as geriatric medicine (3).

The papers in this supplement address 3 topics: geriatrics training for residents in internal medicine (7), geriatrics training for general medicine fellows (8), and the development of geriatrics-oriented generalist faculty (9). These topics were selected because the training cycle of internal medicine (**Figure**) is the "production pipeline" for many physicians who will care for older Americans in the next 30 years. Moreover, internal medicine training produces many physicians who will build knowledge about how best to care for older persons. Each year, more than 7000 medical students become residents in general internal medicine, more than 3000 graduating residents pursue further training as fellows, and more than 4000 graduating residents enter practice. Among the more than 3000 first-year fellows in 2000, only 290 entered geriatric medicine in 2000 (10) and approximately 200 entered research or teaching fellowships to seek the additional training needed to provide leadership as faculty members in general internal medicine. Most graduating geriatrics fellows become practicing physicians, with a modest amount of time for teaching and neither the training nor the time for research (2, 11). In contrast, a large proportion of fellows in general internal medicine pursue academic careers as faculty members with substantial commitments to teaching or research. Faculty members in general internal medicine play large roles in the clinical teaching of medical students and residents and in generating new knowledge about the care of older persons. The training cycle highlights the fact that improved training in the care of older persons during internal medicine residencies will have downstream effects, increasing the number of practicing physicians with knowledge and skill in geriatric medicine. In addition, geriatrics-

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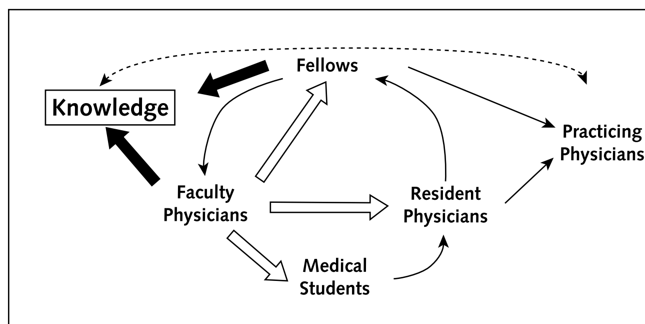
Figure. **The internal medicine training cycle.**



Thin black arrows indicate the evolution of roles: Medical students become resident physicians, residents become practicing physicians or fellows, and fellows usually become practicing or faculty physicians. Thick black arrows indicate the contribution of fellows and faculty to knowledge about caring for patients. White arrows indicate the direct and indirect effects of faculty on the education of medical students, residents, and fellows. The dashed arrow indicates the flow of knowledge to practicing physicians and the reciprocal contributions of practicing physicians to knowledge about how to care for patients.

oriented faculty in general internal medicine can, through their research, produce new knowledge in the care of older persons.

This supplement informs but does not address many key issues in enabling the physician workforce to better care for older persons. For example, enhancing the skills of practicing physicians in caring for older adults and improving the residency training of physicians in family medicine and other disciplines are beyond this supplement's scope. These issues have been addressed elsewhere and require additional work (12).

In this paper, we briefly review the history of geriatrics in internal medicine and the role of internal medicine in meeting the medical needs of older Americans. We then review the major findings of the other papers in this supplement and highlight what we believe will prove to be high-yield strategies to improve the training of general internists in the care of older Americans. In each paper, the authors describe current practices, best practices, goals for optimal training, and barriers to achieving those goals—the "gap" that must be crossed to develop the physician workforce and the knowledge base for the aging population. The authors conclude by proposing solutions to the barriers identified and outlining the implications of those solutions from the perspectives of various stakeholders. Each paper is based on a systematic overview of the medical literature and on qualitative research done to explore issues not resolved in the literature. Stakeholders and experts reviewed and modified these papers on the basis of discussion at 2 national conferences. **Table 1** lists key stakeholder organizations represented at the conferences.

HISTORY OF GERIATRICS IN INTERNAL MEDICINE

Geriatrics developed synchronously and synergistically with internal medicine during the 20th century (13). The term *geriatrics* was coined in 1914 by Ignatz L. Natscher of Mt. Sinai Hospital, New York, 1 year before the American College of Physicians was founded in the same city. The American College of Physicians and internal medicine grew rapidly in the United States. *Annals of Internal Medicine* was founded in 1927, and the American Board of Internal Medicine was founded in 1936. The number of physicians interested in geriatrics increased after the American Geriatrics Society was founded in 1942, but geriatrics floundered as an academic discipline in the United States.

In 1975, 3 events initiated the modern era in geriatrics (14). Robert Butler published the Pulitzer prize–winning book, *Why Survive? Being Old in America* (15); the Veterans Administration funded the first Geriatrics Research, Education and Clinical Centers; and the National Institute on Aging opened under Butler's leadership. These events focused national attention on the plight of older Americans and their unique medical challenges, paved the way for postdoctoral training in geriatric medicine, and led to sustained funding for research in the diseases and care of older persons. In 1978 and 1987, reports from the Institute of Medicine (5, 6) called for the development of geriatrics as an academic discipline and a clinical specialty. These reports led to the development of a test for the Certificate of Added Qualification in Geriatric Medicine, administered jointly by the American Board of Internal Medicine and the American Board of Family Practice, and the initial certification of nearly 10 000 physicians as geriatricians. Academic geriatrics programs were developed at most U.S. medical schools, with 290 trainees in 97 fellowship programs in 2001 (10, 16).

Even with the development of successful academic programs in geriatrics and the expansion of geriatrics fel-

Table 1. **Stakeholder Organizations Represented at 2 National Conferences on Planning for Sustained Improvement in the Training of General Internists in Geriatrics**

Professional organizations
Accreditation Council for Graduate Medical Education
Alliance for Academic Internal Medicine
American Board of Internal Medicine
American College of Physicians
American Geriatrics Society
Association of American Medical Colleges
Association of Directors of Geriatric Academic Programs
Association of Program Directors of Internal Medicine
Association of Professors of Medicine
Association of Subspecialty Professors
Society of General Internal Medicine
Philanthropic foundations
Donald W. Reynolds Foundation
John A. Hartford Foundation, Inc.
Robert Wood Johnson Foundation
Federal agencies
Agency for Healthcare Research and Quality
Department of Veterans Affairs
Health Resources and Services Administration
National Institute on Aging

lowships, it will be impossible to supply the projected number of geriatricians that will be needed to care for older persons in the United States in the near future (17, 18). Most physicians with added qualification in geriatrics do not practice geriatrics predominantly, and the number of certified geriatricians began to decrease in 1998, when the geriatricians who did not renew their certifications outnumbered the recent trainees certified (19). It is now clear that internists rather than geriatricians will provide most medical care for older Americans, and a major function of academic geriatrics programs is to train internal medicine trainees in the care of older persons (20).

Role of Internal Medicine for Older Adults

The skills of the internist may be especially relevant to 2 aspects of the care of older persons in the 21st century: complexity and treatability. The complexity of illness often increases with age, and internists are well schooled in caring for patients with complex illness. With increasing age, "atypical presentations" of common diseases and complicating comorbid diseases become more common. The subtentorial diseases that are the bailiwick of the internist—the acute and chronic diseases affecting the internal organs—become increasingly complicated and confounded by supratentorial diseases, primarily neurodegenerative conditions and affective disorders, all of which can have difficult behavioral and social effects. The combination of subtentorial and supratentorial diseases magnifies the effects of illness on patients, family, and society, frequently complicating medical management, increasing risk for iatrogenic events, and increasing the time required from the caring physician.

The treatability of age-associated conditions has increased as well: Previously refractory diseases are now amenable to drugs and procedures prescribed by internists. For example, in the past decade, efficacious pharmacotherapy has become available for benign prostatic hypertrophy, erectile dysfunction, dementia, osteoporosis, and heart failure. Procedures performed by internists, such as placement of stents in obstructed arteries and ducts, are replacing some surgical procedures.

Eric Larson recently described general internists as being "at the crossroads of prosperity and despair" (21). Although medical advances have made internists' practices increasingly effective, practice itself has become fraught for many with nonclinical hassles and financial uncertainty. Challenges to internal medicine and its role in caring for frail older adults include the declining number of U.S. medical school graduates applying for internal medicine residencies, lack of meaningful increases in Medicare reimbursement, and the growing educational debt of young physicians. Sox (22), writing on behalf of the Association of Professors of Medicine, agreed that general internists should be concerned about challenges to their role and livelihood, in large part because of the expansion of independent practice by nurse practitioners and physician assistants and evidence that these nonphysician providers give care similar in quality to that provided by general internists. These threats would be met, Larson and Sox agreed, by taking geriatrics to the heart of internal medicine. "A focus on geriatric medicine could help general [internal] medicine continue to flourish" by setting practicing general internists apart from nurse practitioners and physician assistants and by providing academic general internists with a domain in need of their teaching and research expertise (15). Sox urged internal medicine to "take full advantage of the opportunity provided by the aging population" by teaching mastery of the competencies of geriatric medicine in residency programs (22).

Major Findings of This Supplement

The papers in this supplement identify 3 major barriers to improving training in geriatric medicine for internal medicine residents and to developing geriatrics-oriented fellows and faculty (7–9) (**Table 2**). These barriers are 1) lack of adequately trained teachers and mentors, 2) the belief that explicit training in geriatrics has little to offer the generalist, and 3) inadequate funding.

Faculty who are clinical experts and effective teachers, and who have the time to teach and mentor, are a key factor that is often missing in the development of geriatrics-oriented fellows and faculty in general internal medicine and in the training of internal medicine residents. The authors in this supplement conclude that whether a faculty member is identified primarily as a geriatrician or as general internist is less important than whether he or she has all 3 necessary attributes: expertise, effectiveness, and time.

Some believe that the specialty of geriatrics has little to offer in residency training, in the development of faculty teachers and researchers, and in general medical practice because internists already care for (or teach or do research about) older patients; this belief is not new (23). The authors in this supplement found substantial evidence that this belief persists, probably for many reasons. Internal medicine residency programs do, in fact, provide substantial experience in caring for older patients, and many general internists do research in older patients. In addition, the authors identified concerns about the epistemologic boundaries and social standing of geriatrics: The field is not defined by a focus on an organ or a disease, as other subspecialties of internal medicine are, and some general internists thought geriatricians were "not of similar intellectual caliber" compared with general internists (8). These beliefs may be promoted by the stigma of aging and disability (24), which may taint geriatrics as the field caring only for the aged and often for disabled elderly persons.

Insufficient funding is a fundamental barrier. Funding is currently inadequate to ensure the development and retention of skilled teachers to train internal medicine residents, fellows, and faculty in the sophisticated care of older persons. Teaching itself, and the ongoing development of

Table 2. **Major Barriers to Improving Training in Geriatric Medicine, and Strategies To Overcome Those Barriers***

Goal	Major Barriers	Strategies to Overcome Barriers
Better training of internal medicine residents in the care of older adults	Lack of faculty with content expertise, teaching skill, and time to teach	Develop geriatrics-oriented faculty in general internal medicine Develop and maintain geriatric faculty members who are skilled teachers
	"We already do it"	Engage the residency program director and help solve his or her challenges Place learning in the clinical setting Use nonphysician teachers
	Lack of funding for teaching	Change reimbursement system to pay for time-consuming geriatric services
	Logistic difficulties of off-site rotations	Implement site-specific solutions
Development of geriatrically sophisticated general internal medicine fellows	Ignorance of colleagues and their work	Provide collaborative center grants Provide combined fellowships in general internal medicine and geriatric medicine
	Perception of no benefit to interaction	Provide collaborative center grants Provide combined fellowships in general internal medicine and geriatric medicine
	Lack of support or interest from chief	Provide collaborative center grants
	Belief that geriatrics is not a distinct scholarly discipline	Provide collaborative center grants
	Perception of low intellect among geriatrics fellows	Provide combined fellowships in general internal medicine and geriatric medicine
Development of geriatrics-oriented faculty in general internal medicine education	Lack of time during clinical encounter	Facilitate use of existing tools to incorporate geriatric assessment into primary care visits Fund research on effects of geriatric assessment tools on patient outcomes
	Lack of time for teaching	Issue statements of importance of geriatrics Establish curricular goals and objectives Fund teaching in nursing homes and house calls
	Lack of time for faculty development	Disseminate core educational materials Fund career-development awards for general internal medicine faculty teaching geriatrics
	Lack of geriatrics faculty	Develop alternative pathways to achieve eligibility for Certificate of Added Qualification in Geriatrics
	Belief that there is no defined body of knowledge exclusive to geriatrics	Define geriatrics-specific content Promote value of faculty development in geriatrics
	Inadequate resources	Fund core geriatric-assessment teams Fund research on best geriatrics primary care

* Collaborative center grants = grants for centers of collaboration between academic programs in general internal medicine and geriatric medicine.

teaching skills, requires funding; funding geriatrics training for residents, for example, will increase time and attention given to this area. In addition, funding for geriatrics training for internal medicine residents, fellows, and faculty may prove to be iatropic, overcoming stigma, overcoming the belief that geriatrics training has little to offer, and attracting trainees. Funding for the clinical care of frail older persons is also inadequate, providing a disincentive both to teaching others how to care comprehensively for older patients and to choosing a career that will involve their care. Supporting general internists in the clinical care of frail older persons requires funding for the time needed to provide this care and for work to evaluate and integrate geriatrics assessment tools into practice. As long as the comprehensive medical care of frail elders is financially nonviable, this care will not develop beyond boutique programs.

The papers in this supplement identified several strategies that can overcome the 3 major barriers to improved residency training and faculty development. We believe that 3 of these strategies are likely to be especially potent.

First, Thomas and colleagues (7) argue that engaging the residency program director is essential to advancing geriatrics substantially in a program's formal and informal curricula. Using established geriatrics programs to help meet the needs of program directors may be an especially attractive approach. For example, providing training in the care of frail older persons can help a residency program meet the requirements of the Accreditation Council for Graduate Medical Education, such as the requirement for training in system-based practice.

Second, funding for centers to promote collaboration between teaching and research programs in general internal medicine and geriatrics will help eliminate many barriers. Such collaborative centers can attract and develop young faculty as they rise to become star teachers or investigators; they can overcome ignorance about potential collaborators and opportunities; they can win the attention of colleagues and leaders; and they may facilitate generalists' learning and transform their beliefs about the scholarly domain of geriatric medicine.

Third, substantial incremental funding on the national

level is required. Funding is needed to pay for the time required to care for frail older patients and to teach about their care. To promote the development of teachers, we need a long-term strategy, as proposed by the International Longevity Center and begun by the Health Resources and Services Administration through its program of Geriatric Academic Career Awards for junior clinician-educators (19, 25). These awards, which supplement the salary and benefits of each awardee by approximately $350 000 over 5 years, are unique in their support of the development of academic clinician-educators.

Next Steps

Building the physician workforce to care for the 70 million persons in the United States who will be 65 years of age or older in 2030 will require substantial and sustained effort in many domains. Generalist physicians in internal medicine and family medicine will provide primary and comprehensive care for many older Americans, and internists will supply an increasing proportion of this care. Academic general internal medicine is positioned to play a key role in training the next generation of practicing internists and in building the knowledge we need to care effectively and efficiently for older adults.

The papers in this supplement 1) define the state of the art in training internal medicine residents in the care of older adults and in developing geriatrics-oriented general internal medicine fellows and faculty, 2) identify barriers to improving residency training and faculty development, and 3) propose strategies to overcome those barriers. Building on the discussions in these papers and among key stakeholders at two national conferences (**Table 1**), the Society of General Internal Medicine has begun a program to improve the training of internal medicine residents and the development of general internal medicine faculty to advance care of older adults. Supported by a grant from the John A. Hartford Foundation, Inc., this program includes the following initiatives: 1) funding collaborative centers in academic institutions, centers in which general internal medicine and geriatrics groups work together to focus leading generalist clinician-educators and generalist physician-researchers on critical issues in the care of older Americans (26). 2) Working with directors of internal medicine residency programs through the Association of Program Directors in Internal Medicine, national leaders in geriatrics education, the American Board of Internal Medicine, the American College of Physicians, and the American Geriatrics Society to better understand the challenges and opportunities we face in improving the geriatrics content of general internal medicine training (27).

These initiatives are designed to enrich training and increase the number of physicians who will lead efforts to improve care for older adults. These initiatives are only first steps, however, and they require complementary initiatives in undergraduate medical education, in residency training and faculty development in other specialties, and in enhancement of the skills of practicing physicians.

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