SPECIAL ARTICLE

Bridging the Workforce Gap for Our Aging Society: How to Increase and Improve Knowledge and Training. Report of an Expert Panel

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The healthcare workforce is currently unprepared for the increasing number of older persons and the complexities of their healthcare needs. Too few healthcare workers are adequately trained in geriatrics, and developers of educational curricula across healthcare disciplines have been slow to incorporate or require geriatric training. In April 2003, leaders in geriatrics met in Washington, D.C., to discuss and recommend solutions to the growing shortage of an appropriately trained workforce for geriatric research, education, and patient care. After considering data, presenting statistics, and offering insights into the future, the conference concluded by formulating recommendations to meet specific challenges. This report is a summary of the conference proceedings and recommendations, and it serves as a reminder that demographic trends and an everexpanding geriatric knowledge base demand not only attention, but also action. **J Am Geriatr Soc 53:343–347, 2005.**

Key words: healthcare workforce; workforce gap; geriatric trained workers; geriatric training

Projections indicate that by 2030, 71 million of us will be aged 65 and older, representing one-fifth of the U.S. population—the largest proportion of older persons in American history.[1] This aged population presents an array of challenges. Older persons use the healthcare system more often than their younger counterparts. Their needs are more complex because of multiple chronic conditions coupled with acute illnesses, diverse living arrangements, and a variable range of economic, physical, and cognitive abilities. It is crucial to train researchers, educators, and the healthcare workforce in geriatric care, and an interdisciplinary approach is essential.[2,3]

This paper summarizes the April 2003 conference "Bridging the Workforce Gap for Our Aging Society." Geriatricians and other experts from government and the private sector, from clinical and research backgrounds, came together to offer their best advice and predictions for the future. They then formulated recommendations to meet the specific challenges relative to research, education, and patient care.

PREDICTIONS ON AGING

In the United States today, 13%, or approximately 35 million, of our population is aged 65 and older. In just 7 years, the "baby boomers" will begin turning 65. Ten thousand "boomers" per day will reach this milestone over the next 20 years. By 2030, the number of people aged 65 and older will have doubled, swelling to 71 million. One in five Americans will be 65 and older. The fastest-growing segment, and the segment of the population that will place the greatest demand upon the healthcare system, those aged 85 and older, will rise in number from 4 million to 20 million by midcentury.[1] The number of centenarians in the U.S. population will soar to more than 800,000 by 2050.[1]

People are not simply living longer; their healthcare expenses are increasing as well. In 1999, 95% of persons aged 65 and older had some healthcare expense, including prescribed medications.[4] Chronic conditions, often more costly than acute, are more frequent; by age 75, most adults have at least two to three chronic medical conditions.[5] The very nature of chronic conditions means that these costs persist over time. Today's elderly, only 13% of the population, already account for half of all physician visits and hospital stays.[6] One long-standing problem that exemplifies the need for greater knowledge of geriatric care is inappropriate medication use.[7] The U.S. Government Accountability Office estimates that 17% of the medications prescribed to the elderly are inappropriate and result in $20 billion per

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year in unnecessary hospital costs.[8] This is also a segment of the population for whom growing quantities of technology are applied to care, contributing to increased total health care costs.[9]

Sixty percent of all Medicare beneficiaries have two or more chronic conditions. Although 20% of Medicare beneficiaries have five or more chronic medical conditions, two-thirds of total Medicare dollars is spent on this group.[5] Between 2003 and 2012, Medicare spending is projected to increase much faster than the economy as a whole. Spending on Social Security, Medicare, and Medicaid will double from 7.8% of the gross domestic product (GDP) to 14.7% of GDP by 2030.[10]

HEALTHCARE WORKFORCE

Despite the growth of the older population, the healthcare workforce is not prepared for the number of older persons or the extent of their healthcare needs. In 1995, participants at an invitational National Forum on Geriatric Education and Training concluded that no healthcare profession met the minimum number of geriatrically trained personnel necessary to adequately meet the needs of the elderly.[11] *Bridging the Workforce Gap* speaker Daniel Perry, Director of the Alliance for Aging Research, speculated that "the disconnect between the growing numbers of older persons and the professional training of their formal caregivers is nearly as far apart as it ever has been." For example, only 5% of social workers identify their primary practice area as geriatrics,[12] and of 200,000 pharmacists, only 720 have geriatric certification despite higher than average use of prescriptions by the elderly.[6] The number of geriatricians remains low at 9,000 and is predicted to drop to 6,000,[13] despite recent efforts to increase physician training.[14] Although the Alliance for Aging Research estimates that 36,000 geriatricians will be needed by 2030,[6] many educational institutions, including schools of medicine, nursing, pharmacy and dentistry, still do not require geriatric training.

Additional geriatric training for the current healthcare workforce is another important issue, but many healthcare institutions are slow to embrace such training. According to Captain Kerry Nesseler of the U.S. Public Health Service, the Bureau of Health Professions, "its Geriatric Education Centers has trained more than 400,000 health profession faculty, students and practitioners in the diagnosis and treatment of seniors' health problems."[15] Unfortunately, many more workers still need geriatric training.

The current workforce itself is aging; in 1970, there were 4.6 workers for every Medicare recipient, whereas today, there are approximately 3.7 workers per Medicare recipient, and by 2030, the number of workers is projected to be 2.4 per Medicare recipient.[16] Geriatric nursing leader Dr. Terry Fulmer reported that the average age of nurses in America is 45, with only 10% younger than 30. Nursing faculty is older still, averaging age 50.[17] As the age wave rises, retirement and attrition will deplete the already insufficient healthcare workforce that has been trained in geriatrics.

The shortage of geriatric-trained workers is only part of the story. Too few academic geriatricians exist to provide training for others, and this trend is not expected to change in the near future.[18] Fewer than 1% of medical school faculty list geriatrics as their primary specialty.[13] Only nine allopathic and osteopathic medical schools have full departments of geriatrics, although many schools have divisions within departments of medicine or multidisciplinary aging programs.[13] (According to Association of Directors of Geriatric Academic Programs (ADGAP), the six allopathic medical schools with departments of geriatrics are Mt. Sinai, University of Arkansas, University of Oklahoma, University of Hawaii, Florida State University, and Wright State University. The three osteopathic medical schools with departments of geriatrics are Philadelphia College, Ohio University, and Western University. Many other schools have divisions of geriatrics within their family medicine or internal medicine departments.

Nationwide, health profession educational institutions are struggling with the daunting task of integrating geriatric training into already overcrowded curricula. Some suggest that systematic integration of geriatric material into existing courses is the only way to assure an interdisciplinary approach to aging concerns. However, Dr. Fulmer argued, "If you integrate it, you can't find it. Nobody is accountable." While the debate over an "embedded" or "separate" approach to geriatrics continues, both sides agree that the need for more geriatric content in the curriculum is critical.

OBSTACLES

Medicare reimbursement is the single most influential force shaping medical practice today. In 2000, 26.7% of all physician income was derived from Medicare.[13] The current Medicare system, with relatively low reimbursement rates for geriatric care, remains a significant obstacle to recruitment into and retention of physicians in geriatrics. Medicare paperwork discourages practicing physicians from caring for older adults. Medical trainees are choosing more-lucrative, procedure-driven specialties rather than the time-consuming, lower-paying field of geriatrics. "Clinical reimbursement through Medicare is challenging these programs. Research fellows are hard to recruit, and junior research fellows are hard to sustain," stated geriatrics leader Dr. Gregg Warshaw. In addition, because the Medicare payment system is weighted heavily toward medical tests and procedures, crucial services provided by those in fields such as social work, an area well-suited for patient care coordination, counseling, and education, are also not adequately reimbursed. Although the need for interdisciplinary team care for the elderly has been acknowledged, reimbursement for such care is not available through Medicare.

The scarcity of geriatric-trained academic leaders creates additional obstacles.[18] Despite the efforts of government agencies and private foundations (Table 1), lack of infrastructure in academics, curriculum overcrowding, and an inability to give geriatric content priority in the classroom continue to hinder geriatric training. Licensure and board examinations are also slow to incorporate geriatric questions, making some critics question the importance of geriatric content in curricula.

RECOMMENDATIONS

Aging experts agree; in the face of the overwhelming demographic imperative, doing nothing is no longer an

Table 1. Current Infrastructure

Program	Purpose
Alliance for Aging Research	Promotes public and private medical research into human aging through advocacy for improving the health and independence of older Americans
American Federation for Aging Research	Promotes healthier aging through biomedical research and helping scientists begin and further careers in aging research and geriatric medicine
Donald W. Reynolds Foundation	Donated millions to establish departments of geriatrics and other programs to strengthen physician training in geriatrics.
Health Resources and Services Administration	Administers several programs focusing on interdisciplinary education and training for more than 35 health-professions disciplines and for nursing as a specific discipline
John A. Hartford Foundation	Donated millions to improve geriatric training for physicians, nurses, social workers, and interdisciplinary training programs
National Institute on Aging	Approximately $1 billion dollars in annual budget for research, education, and training
Veterans Affairs	Founded Geriatric Research, Education and Clinical Centers and Interdisciplinary Team Training Programs; provides Geriatric Fellowship programs

option. National Institute on Aging (NIA) Director Dr. Richard Hodes said, "Geriatrics represents the greatest opportunity for improving the quality of care for older persons." Seizing this opportunity is critical. During 2 days of presentations, deliberation, and thought, conference participants prepared the following recommendations regarding two important professional workforce needs: increasing the numbers of researchers in aging and healthcare practitioners in aging.

A. Researchers in Aging

1. Translating research into practice.

Researchers and clinicians must work together more effectively to translate evidence-based knowledge into clinical solutions. They must prioritize key evidence-based advances and work toward increased dissemination. An ongoing discussion between researchers, clinicians, and patients must exist to test theories and implement evidence-based solutions. Research must not only include clinical studies, but should also address the biology of aging and social and behavioral issues.

2. Maintaining research activity despite competing academic demands.

Established and well-funded clinical research faculty must allocate their time between investigation, clinical practice, teaching, and mentoring. They should assist their junior colleagues in negotiating more time for research and be willing to share responsibilities on research projects, including serving as the principal investigator and mentors. Students and fellows alike must be afforded meaningful research opportunities, because research training directly relates to later independent research success. Existing collaborative efforts, such as that between the NIA and the John A. Hartford Foundation in cosponsoring the Beeson Career Development Program, must be sustained and expanded.[19]

3. Attracting and retaining new academic researchers.

The road to becoming an academic researcher is a long one; financial support must exist to encourage this journey, not only for the student, but also for the mentor. Expanding T35 (short-term training grants for health profession students) and K12 (mentored clinical scientist development award) funds and developing new pre-K (research career development awards) and post-K funds to support new academic researchers are the first steps. Awareness of and access to loan forgiveness programs and eligibility for other financial awards must also be increased for junior investigators.

4. Mentoring and supporting new researchers.

Once recruited, new academic researchers must continue to be supported through the process. Models and programs for successful mentoring must be developed and promoted at national conferences or through national publications. Mentors must help to ensure a steady stream of research support for junior investigators until their progress is sufficient to result in independent funding.

B. Healthcare Practitioners in Aging

1. Increasing the number of formally trained clinical practitioners in geriatrics

Most healthcare providers receive little or no formal education and training in geriatrics. A severe shortage of healthcare faculty capable of teaching geriatrics compounds this lack of health profession education and training. Efforts must be made to address the needs of the aging population by supporting interdisciplinary education and training in geriatric care. Areas in geriatric education and training that should be emphasized include faculty development, increasing the number of geriatric healthcare providers, and integrating geriatric content into health professions curricula to promote access to quality health care and services. Content on care of the older adult, as well as discipline-specific and interdisciplinary structured clinical learning experiences focusing on older adults, must occur

early in the educational process and should be integrated into the health professions core curricula. The interdisciplinary nature of geriatrics must be clearly demonstrated through example, and health professions students must be challenged to see geriatrics as a viable career choice.

The healthcare community at large should be informed of the benefits of geriatric education and training in providing quality health care to older adults. Geriatric practitioners should take an active role in building partnerships with academia, health professions students, faculty, practitioners not specializing in geriatrics, and community-based healthcare organizations to provide education in the care of the older adult.

Compensation for geriatric practitioners will need to be made comparable to other specialty-care areas. Medicare should consider reimbursement for interdisciplinary team–based care.

2. Developing academic leaders

Universities must provide incentives to encourage interdisciplinary geriatric education, practice, research, and faculty development. Academia should acknowledge and be encouraged to address tenure and promotion criteria in light of the interdisciplinary nature of geriatrics, including work in interdisciplinary education, practice, research, and mentoring. Communication between deans and geriatric program directors must improve. Successful leadership programs, such as the Health Resources and Services Administration's Geriatric Academic Career Awards Program and the Hartford Leadership Scholars program coordinated by ADGAP should be expanded. Public recognition and awards should be given to successful academic leaders for their work in interdisciplinary geriatrics.

3. Integrating aging content into health professional training

Credentialing and licensing boards must include geriatric content on entry and recertification exams. All relevant disciplines (nursing, pharmacy, dentistry, social work, medicine, etc.) must require geriatric content in their core curricula. Geriatric content should be embedded into all relevant courses, including pediatrics, given the frequency with which grandparents are raising children. Additionally, each health professions training program should have a geriatrics specialist teaching a required class on geriatrics. While national debate on geriatric departments continues, the need for required, clinical geriatric rotations and practica coordinated by geriatric faculty is becoming widely accepted. When geriatrics is offered as an elective, only 3% of students choose it.[20]

4. Enhance the skills of healthcare practitioners

Healthcare professionals should be afforded the opportunity to participate in discipline-specific and interdisciplinary continuing education offerings to increase their knowledge and skills in caring for the older adult. In addition, a broad coalition of advocates for quality geriatric health care should come together to influence national agendas for professional education, licensure, credentialing, quality improvement, performance measurement, and reimbursement. In addition, we must evaluate opportunities to recognize enhanced provider skills in geriatric care for all willing providers.

SUMMARY

The healthcare workforce is unprepared for the growing number of older Americans, both current and future. Daniel Perry summed up the conference: "The lack of training in the professions that govern the care and treatment of older people constitutes an immediate and continuing crisis. Now is the time to coalesce our efforts." Rather than take a "wait and see" approach or, worse, do nothing, leaders prepared recommendations for training the workforce for aging research and healthcare. Demographic mandates and an ever-expanding geriatric knowledge base demand not only our attention, but also action.

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Appendix 1. Recommendations on Research in Aging

1. Putting research into practice
   - Researcher and clinician teams work to implement evidence-based solutions.
   - Prioritize key evidence-based solutions and work to increase dissemination.
2. Maintaining research activity despite competing academic demands
   - Balance time between research, teaching, and mentoring.
   - Share responsibilities on research projects.
   - Include students and fellows on research opportunities early in training.
3. Attracting and retaining new academic researchers
   - Increase financial support for students and mentors.
   - Expand T35 and K12 funds.
   - Develop new Pre-K and Post-K funding.
   - Increase awareness of loan forgiveness and other financial awards.
4. Mentoring and supporting new researchers
   - Continue support through training process.
   - Develop programs for successful mentoring.
   - Promote mentoring through national organizations and publications.
   - Model methods to receive continuous research awards.

Appendix 2. Recommendations on Education and Training

1. Increasing the number of formally trained clinical practitioners
   - Increase the number of geriatric healthcare providers. Early exposure to older adults through discipline-specific and interdisciplinary structured clinical learning experiences
   - Clearly model interdisciplinary education and training benefits.
   - Project geriatrics as viable specialty area with comparable financial incentives.
   - Have geriatrician practitioners take an active role in building partnerships with others.
2. Developing more academic leaders
   - Have universities provide incentives to encourage interdisciplinary geriatric education, practice, research, and faculty development.
   - Acknowledge work in interdisciplinary geriatric education, practice, research, and mentoring toward tenure.
   - Expand successful leadership programs (Health Resources and Services Administration Geriatric Academic Career Awards Program and Hartford Leadership Scholars).
   - Publicly recognize successful academic leaders for work in interdisciplinary geriatrics.
3. Integrating aging content into health professional training
   - Include geriatric content on entry exams.
   - Include geriatric content in core curricula across disciplines.
   - Consider required geriatric clinical rotations and practica.