AGING AND LONGEVITY:
RESTRUCTURING MEDICAL EDUCATION
TO CARE FOR AN OLDER POPULATION
Who wants to be a geriatrician? Hardly anyone, by recent estimates. Despite projected shortfalls in the number of physicians trained to care for problems of old age, only half of the available residency positions in geriatrics were filled last year. Since 1987 the number of first-year fellows has been stable at about 100, despite a spate of new programs in geriatrics.

Already people older than 65 years account for 15% of the population, and their numbers will double in the next 30 years. Yet medical students seem unmoved by the opportunity.

Reluctance to pursue a career in geriatrics may be due to fiscal policies that discourage development of academic training programs in geriatrics. Geriatric medicine involves long-term care and disease management, endeavors that do not pay as well as the more interventional subspecialties. Because of low reimbursement, some physicians limit the number of Medicare patients in their practices or do not accept Medicare at all. Undoubtedly, part of the ennui relating to geriatric medicine stems from persistent ageist attitudes—the perception that older patients are difficult, their medical care is often futile, and the prognosis is depressing.

Yet as people live longer, healthier lives, geriatric practice promises to become more multidimensional in the future, requiring physicians to discuss issues such as sexuality, exercise, and rehabilitation with their older patients. While some may feel that older patients are time-consuming, their care tangential, and taking a patient history an exercise in frustration, such patients can also be seen as historical treasures. A typical woman in her 90s may have shocked her parents by listening to jazz; she remembers D-Day, and witnessed the desegregation of the South. In her lifetime alone, the novelty of radio made way for satellite broadcasts; space shuttle launches became commonplace.

Caring for older patients needs to be reframed in terms of the wealth of historical, cultural, psychological, and medical complexity that it is. Geriatric patients do not need geriatric specialists as much as they need competent, caring physicians with skills in managing multisystem chronic conditions over an extended period of time. They need physicians who are informed about the physical and psychological aspects of aging, and how these changes apply to their area of practice. Changing our view of aging begins with medical students, such as those at the University of Kansas School of Medicine, where the curriculum addresses the common myths of aging through lectures and small-group sessions with elderly people. In this issue of Pulse authors examine geriatric education in the preclinical and clinical years and revisit the shortage of physicians trained in geriatrics to see how residency programs are encompassing geriatric education. The spotlight is on the complex social aspects of loss associated with aging and dementia. Whether one practices plastic surgery or gynecology, the emotional toll of caring for the elderly infirm permeates all fields.

The current generation of physicians has led public health efforts that have had dramatic results: substantially lower infant mortality rates, higher rates of pediatric immunization, and greater freedom and independence for mentally or physically disabled adults. Isn’t it time to do the same for the elderly?

References
I recently worked in an infectious disease clinic where I met a patient in her late 60s who was infected with the human immunodeficiency virus (HIV). My surprise at seeing an older woman with HIV, an infection associated with unprotected sex or injecting drug use, made me realize I had preconceptions about aging and the elderly. Uninformed generalizations about a certain group are the basis of prejudice, and in my case, my attitudes could be construed as being ageist in nature.

Exactly what prejudices and misconceptions about the elderly do students have? Some studies have indicated that medical students perceive older people as being dull, disagreeable, inactive, and economically burdensome.\(^7\) Although other data are more positive\(^3,4\) ageism in medicine is a cause for concern. Medical educators are attempting to identify the source of age bias and devise means with which to address it.\(^5\) Engendering positive feelings about older people will presumably lead to better geriatric care. Interactions with the elderly in and out of the classroom help students understand the needs of the elderly and could prevent them from developing ageist attitudes.

The American Geriatrics Society has called for training in geriatrics in each year of medical school,\(^6\) a challenge that has been accepted by curriculum planners at University of Kansas School of Medicine (KU), where I am a second-year student. KU does not pretend to be a model for geriatric education. Efforts here are probably typical of other institutions, where age-sensitive curricula are evolving. For example, our program recruits older people in the community to join students in small-group discussions on aging. Courses in physical diagnosis and pharmacology also devote special sections to caring for older patients. In addition, a new faculty position in physiology funded by the Center on Aging ensures that topics on aging are incorporated into the basic science curriculum.

Year 1 now includes a year-long Clinical Science course with a life-span format, examining life issues from cradle to grave. Four weeks are devoted to aging, end-of-life care, and the historical evolution of societal attitudes toward the elderly. For example, we learned in a discussion of cultural roots of ageism that before the 16th century, for example, most people did not know their exact age. Instead, most identified with a stage of the “life course”\(^7\) that often corresponded to cycles seen in nature. Similarly, William Shakespeare opines that the 7 stages of a man’s life end as it began “sans teeth, sans eyes, sans taste, sans everything.”\(^8\) By the mid-16th century, people began inferring social position from age. Artists depicted the beginning and end of life as ascending and descending staircases. Middle age towered above as the pinnacle of achievement and status.

These images still prevail. We tend to think of our lives in discrete stages by which we chart our “progress.” When people say, “Act your age,” they are asking that you conform to a cultural expectation of a stage in life. Not coincidentally, these stages often are linked with economic power. Those in their 40s or 50s are considered to be at the top of their game not only because they enjoy better health, but also because they often have the most financial resources.

At KU, students are encouraged to use the term “life course” rather than “life cycle” because there is little that is cyclical about life. The human life course may be better thought of as the course of a river or the branching of a mature tree.\(^9\) By the time we see elderly patients in clinic, they have developed complex networks of life decisions: whether to marry, to have children, to leave college, to enter military life, to relocate, or to stay near one’s place of birth—all choices apparent in the stems that have flourished and those that have withered away. And for most, the branching continues.

The older people who joined our small-group discussions surprised me with their candor about life choices. We asked how they felt about dying. A retired pastor, Henry Croes, said simply that he had learned in physics that no matter is created nor destroyed; therefore, dying must just be a conversion of sorts. Another woman described losing her child to illness. Another told of a lifetime of physical abuse. These confessions may not be so different from those we hear from younger people with one exception: with age comes perspective and wisdom that cannot be taught except through living.

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References
8. Shakespeare W. As You Like It. Act 2, scene 7, line 165.
The Geriatrics Imperative: Meeting the Need for Physicians Trained in Geriatric Medicine

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The need for training in the care of geriatric patients is reshaping graduate medical education. Primary care residencies are moving toward mandatory training in geriatrics, but it is not clear whether such training has improved either the quality or quantity of physicians caring for the elderly.

The increasing proportion of health care expenditures for people older than 65 years has been widely documented.1 But despite growth in this segment of the population, few new physicians are seeking training in geriatrics. More geriatric fellowships are available, yet the percentage filled decreased from 90% in 1990 to 74% in 1992.2 More than 20% of slots in the 16 top geriatric fellowship programs went unfilled from 1991 to 1994 for lack of qualified applicants.3 Since fellowship training is now a requirement for certification in geriatric medicine, the number of certified geriatricians is likely to decrease as those currently certified retire or defer recertification.4

Fortunately, most elderly patients today can be appropriately cared for by primary care generalist physicians.3 These successfully aging individuals comprise 30% to 40% of patients in primary care practices.5 But health care workforce research predicts that the supply of board-certified geriatricians will fall short of the number needed to care for all elderly patients.2 Generalists will need to fill the gaps and provide the vast majority of medical care for older people. It is essential that new physicians, especially those planning careers in primary care medicine, have adequate clinical skills to provide the highest quality care for their older patients.

How well prepared are generalist physicians to manage the problems associated with aging? Research on the quality of geriatrics education has found significant shortcomings. While family medicine residents can correctly identify nonpathologic changes associated with normal aging, they are not as proficient at identifying nonpathologic changes associated with disease.6 For example, impaired proprioception, a normal consequence of aging, was frequently misclassified as pathology, while diminished far vision was often identified incorrectly as normal in the elderly.

A study of 93 internal medicine residents indicated that an intensive 4-week clinical rotation in geriatrics significantly improved residents’ knowledge of geriatric medicine as measured by pretest and posttest scores on a 35-item quiz.7

The principal source of geriatric fellows who may subsequently enter academics are internal medicine and family medicine residencies.8 With a projected deficit in full-time geriatric faculty needed for postgraduate educational needs,9 the improvement of geriatric training in internal medicine and family medicine residencies would not only produce more generalist physicians competent in geriatric care, but perhaps also foster new faculty who are the cornerstone of education within these residency programs.

Elective or Mandatory Training?

As recently as 1990, 80% of family practice and 36% of internal medicine residencies included a formal curriculum in geriatrics.10 Among those with geriatrics curricula, only 61% of the internal medicine programs required residents to participate in the geriatrics training, compared with 92% of the family medicine residencies. Not surprisingly, fewer internal medicine residencies had certified geriatricians on the faculty (42% compared with 68% of the family medicine programs). Residency directors cited lack of faculty, low rating of geriatrics in importance by department chairs and program directors, and the perception that residency curriculum was too full as the most common reasons for failing to implement geriatrics curricula.

Most graduate training in geriatrics is elective, and only a small portion of residents pursue it. A study by the Trustees of Boston University in 198911 found that approximately 25% of US residency programs in internal medicine, family medicine, neurology, psychiatry, and physical medicine offered elective geriatric rotations, but fewer than half of all residents in these programs actually take the elective. Some programs had mandatory geriatrics rotations, ranging from 55% in family medicine to 2% in neurology. Overall, 62% of family practice residents, 48% of psychiatry residents, 26% of internal medicine residents, 17% of physical medicine residents, and 3% of neurology residents had taken either a required or an elective rotation in geriatrics.

In 1992, a survey of primary care residencies found that long-term care experience in geriatrics was required in 86% of family practice residency programs vs 25% of internal medicine programs.12 In addition, most geriatric curricula in the programs surveyed were taught in nursing home settings with less emphasis given to rehabilitation, organization, health care financing, and coordination of care between acute and chronic settings. Barriers to implementation of nursing home rotations included the lack of available faculty and scheduling conflicts with other rotations.

Changing Standards

Since 1994, the Accreditation Council for Graduate Medical Education has required that internal medicine residencies offer elective didactic and clinical curriculum in geriatrics.13 In addition, 12% of questions on the American Board of Internal Medicine certifying examination now test specific knowledge of geriatric medicine.14 The Institute of Medicine in 1993 recommended that all residencies in internal medicine and family medicine have a mandatory 6 months of geriatrics training by 1996.
Vanguard Programs in Primary Care Medicine

Several new projects that address the inadequacies in geriatric education are now under way. The American Academy of Family Physicians (AAFP) Foundation program provides training by a group of family practice geriatric consultants in 2-day visits focused on direct clinical teaching, modeling, curriculum development, and faculty development. The project is expected to reach 30 to 40 family physicians and geriatric medicine faculty and 100 to 160 family practice residents each year. Another set of workshops is to be held at regional meetings of the Society of Teachers of Family Medicine. Regional meetings will review effective teaching strategies, distribute teaching materials, and develop new geriatric curriculum with faculty from community hospital residency programs.

The Hartford Foundation recently funded geriatrics curricula development at 7 sites through its Geriatrics in Primary Care Training Initiative: University of Rochester School of Medicine, Baylor College of Medicine, Harvard Medical School, University of California Los Angeles (UCLA) School of Medicine, Johns Hopkins University School of Medicine, University of Chicago Pritzker School of Medicine, and University of Connecticut School of Medicine. The programs will emphasize clinical skills and topics in geriatrics not usually covered in traditional internal medicine and family training programs. For example, the internal medicine program at UCLA requires 2 to 4 half days in outpatient geriatrics, comprehensive geriatric assessment, or home visits in the first year; 22 afternoons of nursing home, subacute, and geriatric psychiatry training in year 2; and a 4-week inpatient/outpatient geriatrics rotation in the third year of residency. In addition, changes in knowledge and personal attitudes toward older patients will be evaluated.

These programs are at the cutting edge of medical training that is committed to addressing imminent workforce issues. As the need for geriatrics-trained generalists increases, more changes in residency programs undoubtedly will follow.

References

In Samuel Shem’s classic novel The House of God,1 elderly demented patients were scornfully called gomers—short for “Get out of my emergency room.” With apparent disdain for the debilitated elderly, it is not surprising that American society has failed to make elder care a priority in policy as well as in practice. While modern medicine has prolonged life expectancy, it has not made comparable progress in addressing the psychosocial consequences of aging. Unfortunately, the incidence of dementia and other cognitive impairments is predicted to increase as the population ages. By a recent estimate, 4 million Americans will have Alzheimer disease (AD) by the year 2000.2 The impact of AD and other forms of dementia on patients’ families and caregivers is substantial and their needs must also be addressed.

Identifying Dementia

The dementia of AD is typically gradual in onset, so insidious that families and afflicted individuals may not recognize the disease until glaring deficits have appeared. Such mental and personality changes contribute to the patient’s and family’s experience of loss; lifelong identity and social roles are forgotten or invalidated. Caring for patients with dementia has created a whole new category of research—the impact of dementia on patient’s families and caregivers.

Families often attribute early signs of dementia to forgetfulness secondary to old age or temporary physical illness. One woman interviewed during my summer research project recalls that she did not realize anything was truly wrong with her husband until she received a call from his workplace of 30 years. Although he had been retired for several years, he appeared at his old office and became angry and agitated when told he no longer worked there. Thus, early AD disrupts the fabric of everyday family life through significant personality changes and behavioral idiosyncrasies. How successfully families and individuals cope with such disruptions depends on their personalities and available support network.

Shattered Social Roles

Caring for an individual with AD is a full-time job. The patient often lacks insight about intellectual or physical deficits, requiring close supervision to prevent harm. As dementia progresses, the patient’s social role in the family is altered. They may forfeit their autonomy when a child or spouse takes over their responsibilities.2 The patient, in turn, may exhibit frustration and anger, often directed at loved ones. The unpredictable natural course of AD contributes to family role ambiguity. Some family members who live outside the home may withdraw from family interaction as the affected individual’s personality changes.

Families often choose institutional placement for the patient with AD when care requirements exceed their capabilities. A common belief is that institutionalization relieves the physical and emotional burden placed on caregivers. However, studies have shown that improvement in caregiver mental and physical health does not always follow.3 Families frequently experience guilt and anxiety about the decision.4 Commuting to the nursing home places additional time commitments on spouses, and distance and cultural objections may further isolate friends and family once placement is made.

Depression and Dementia

In the absence of dementia, self-evaluations by geriatric patients correlate well with the caregiver’s assessment of his or her ability to perform activities of daily living. But with the increasing severity of dementia, patients tend to think they are doing better than they really are.5 These findings support earlier evidence that patients with dementia underreport depressive symptoms.6 Finding an accurate method of assessing depressive symptoms in cognitively impaired patients is essential, since depression may be treated with good results.

Depression and dementia coexist in 30% of patients with AD.7 Treating depression is important since depression in AD patients leads to greater mental suffering, earlier institutionalization, and earlier death than does AD alone.7 Behavioral approaches appear to decrease depression, improve self-care, mitigate the fear of progression of the disease, and increase feelings of hope.8,9 Logsdon and Teri10 propose that depression in dementia is secondary to loss of ability to engage in enjoyable activities. Early in the disease, patients often relinquish responsibilities and privileges, such as driving, financial management, and caring for grandchildren. If they work or volunteer, AD may preclude continuing in the same role. Thus, patients with AD experience inerexable loss of responsibilities, control, and status that may have previously defined their self. Clearly, feelings of uselessness and loss of self are prevalent in AD. Yet, little is known how patients with AD adjust to their changing functional and cognitive status.

Since AD may not be diagnosed until symptoms have progressed, assessing patient attitudes earlier in the natural history of the disease proves extremely difficult.

Some researchers believe that the lack of insight among AD patients can be traced to frontal lobe and right hemisphere deficits.11 Often, it is this lack of self-awareness that distresses caregivers and family members most, contributing to family and physician disengagement.

Caregiver Stress

In recent years, a new realm of dementia research has emerged that focuses on the effects of caring for a family member with dementia.12,15 Caregivers have an increased incidence of depression and alcohol use.14 The emotional and physical stress of caregiving appears to increase sus-
ceptibility to disease. Caregivers have a higher prevalence of physical symptoms and poorer self-rating of health than non–caregivers.15,16

While most research has focused on the wife as caregiver, new research on the effects on husbands and the impact of culture and ethnicity is emerging.17-19 Some positive aspects of caring for patients with AD have also emerged with the finding that sibling and parent-child relationships are strengthened.20,21 In addition, new strategies of intervention to reduce caregiver stress and reduce early institutionalization are being developed.22

By the year 2040, 7 million to 12 million patients with dementia will be cared for primarily by spouses or adult children. Nearly half will require complete custodial care before death, sometimes for years.23 As physicians in the 21st century, we must remember the psychosocial factors that optimize care for patients with AD and their families and try to obtain appropriate early intervention.

References
22. Mittelman MS, Ferris SH, Shulman E, Steinberg MS, Levin B. A family intervention to delay nursing home placement of patients with Alzheimer disease: a randomized controlled trial. JAMA. 1996;276:1725-1731.

Resources in Geriatric Education
American Foundation for Aging Research
1414 Avenue of the Americas
New York, NY 10019
(212) 752-2327
• Geriatric Pharmacology Program awards up to $4000 each year for medical student research.
• Geriatrics Scholars Program awards up to $3000 for student research.
• Biology of Aging program awards up to $4000 to a student and $7500 for faculty mentor to fund 3-month research project.
American Association of Retired Persons
601 E Street NW
Washington, DC 20049
(800) 424-3410
http://www.aarp.org
• Andrus Foundation Graduate Fellowships are available to students studying gerontology or interested in entering aging-related careers.
Gerontologic Society of America
1275 K Street NW, Suite 350
Washington, DC 20005
(202) 842-1275
Clinical Medicine Person-in-Training Awards for student research are presented at the society’s annual scientific meeting.
American Geriatrics Society
770 Lexington Ave, Suite 300
New York, NY 10021
(212) 308-1414
http://www.americangeriatrics.org
National Aging Information Center
Administration on Aging
330 Independence Ave SW
Washington, DC 20201
(202) 619-7501
http://www.aos.dhhs.gov
National Institute on Aging
National Institutes of Health
Bldg 31, Room 5C27
31 Center Dr, MSC 2292
Bethesda, MD 20892
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