

Strength and Influence of Geriatrics Departments in Academic Health Centers

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Abstract

The United States is establishing new medical schools and increasing class size by 30% in response to the predicted increased needs of the baby boom generation, which will retire soon and live longer than prior generations. Society in general and the medical profession in particular are ill equipped to care for the special needs of the elderly. Since the early 1980s, departments of geriatric medicine have been developed in the United States. However, the prevailing U.S. system for the training of physicians in geriatrics is through sections, divisions, or institutes. This article reviews the advantages and

disadvantages of departments of geriatrics, using case examples from three (University of Oklahoma College of Medicine, Florida State University College of Medicine, and University of Hawaii at Mānoa John A. Burns School of Medicine) of the extant 11 medical schools in the United States with departments of geriatrics. Commonalities among the three departments include a seat at the planning table in academic life, equal treatment and collaboration with other departments in academic and research program development, and direct access to key decision makers and opportunities for negotiation for

funds. Each department has outreach to all undergraduate medical students through its training program. All three departments were launched through the investment of significant resources obtained both internally and externally. The challenge for the future will be to definitively demonstrate the efficacy of the department model versus the more prevalent section, division, and institute approach to training physicians to care for the elderly.

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The United States is establishing new medical schools and increasing class size by 30% in response to the predicted increased needs of the baby boom generation, which will retire soon and live longer than prior generations. Society in general and the medical profession in particular are ill equipped to care for the special needs of the elderly.¹ Thus, there is a need for increased training of all physicians regarding the unique needs of the geriatric aged population. We postulate that this is best accomplished

through the establishment of departments of geriatrics.

In 1982, Mount Sinai School of Medicine was the first medical school in the United States to establish a department of geriatrics. Since that time, several other departments have been established. However, the department model for geriatrics is rare in the United States when compared with western Europe, where geriatrics departments have been prevalent for decades. Most U.S. medical schools choose a section, division, or institute approach to training physicians to care for the elderly. At this writing, departments of geriatrics only exist at seven allopathic and four osteopathic medical schools (see List 1).

There are advantages and disadvantages to developing departments of geriatrics. Proponents of departments note that departmental status allows greater impact on medical school and hospital affairs than might be the case with a division of geriatrics.² However, divisions have the advantage of being well integrated into larger units that generally have greater revenue-generating capacity and stability.³ Determining the advisability of departments versus divisions or sections within departments requires attention to the goals of each—educational, research productivity, or clinical service. In addition,

political forces at the state or university level often play a role in the establishment of a department or a division.

It is clear that the geriatric segment of the patient population is increasing in size and that many physicians do not perceive themselves as adequately trained to meet the needs of the elderly.^{4,5} Care of elderly patients is suboptimal in a vast array of areas, as demonstrated by the American College of Physicians in partnership with the RAND Corporation.⁶ Even if all of the geriatric medicine fellowship training slots that are currently available were full, there would not be a sufficient number of geriatricians to meet the needs of the burgeoning elderly population.⁷ Thus, additional training in geriatrics has been advocated for all physicians in a series of six reports from the Institute of Medicine (IOM).^{1,8–12}

Academic geriatrics programs have increased in size and number since 2001, with most programs having an average of 24 full-time equivalent (FTE) faculty, staff, and trainees, including 9.6 FTE physicians.¹³ Fifty-nine percent of these programs had annual budgets of \$1,000,000 or more. However, the impact of these programs is affected by their position within the academic structure. As noted by Cassel,² “If geriatrics were submerged in a department of internal

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medicine as only 1 of 10 or more divisions, it would not have the resources or the presence to help other departments in the medical school create geriatrics-appropriate services.”

Warshaw et al¹⁴ have conducted ongoing analyses of academic geriatric programs, under the sponsorship of the Association of Directors of Geriatric Academic Programs. Their national surveys have carefully documented the structure and resources available within geriatric academic programs. In 2005, with 98 medical schools reporting, the predominant structure (64%) was divisions or sections within departments. However, as shown in Table 1, the structure of the faculty and resources in geriatric academic programs varies widely. Although data are not available regarding the structure and support of departments as compared with divisions, these authors anecdotally note that resources for departments tend to be on the higher end of the ranges presented in Table 1.

Table 1

Structure and Support of Academic Geriatric Programs at U.S. Allopathic Medical Schools, 2005 (98 programs reporting)*

Component	Full-time equivalent staff	Variance (+/-)
Academic staff		
Physician faculty	9.6	8.0
Research faculty	3.0	7.5
Other	11.6	23.4
Component	% of total revenue	Variance (+/-)
Sources of revenues		
College of medicine required support	9.7	19.8
College of medicine discretionary support	10.3	16.1
Direct hospital support	10.2	18.1
Endowments	5.1	8.0
Clinical practice	27.1	26.2
Department of Veterans Affairs	10.3	24.3
Research grants and contracts	8.4	16.4
Educational grants and contracts	9.7	15.5

* Based on a table from Warshaw GA, Bragg EJ, Brewer DE, et al. The development of academic geriatric academic medicine: Progress toward preparing the nation's physicians to care for an aging population. *J Am Geriatr Soc.* 2007;55:2075-2082.

List 1

Departments of Geriatrics Within U.S. Allopathic and Osteopathic Medical Schools*

Allopathic Medical Schools

- Mount Sinai School of Medicine, New York, New York (1982)
- University of Arkansas for Medical Sciences, Little Rock, Arkansas (1997)
- University of Oklahoma College of Medicine, Oklahoma City, Oklahoma (1997)
- Florida State University College of Medicine, Tallahassee, Florida (2000)
- University of Hawaii at Mānoa John A. Burns School of Medicine, Honolulu, Hawaii (2001)[†]
- University of Florida College of Medicine, Gainesville, Florida (2005)
- Wright State University Boonshoft School of Medicine, Dayton, Ohio (2006)

Osteopathic Medical Schools

- Philadelphia College of Osteopathic Medicine, Philadelphia, Pennsylvania (1985)
- Ohio University College of Osteopathic Medicine, Athens, Ohio (1998)
- Edward Via Virginia College of Osteopathic Medicine, Blacksburg, Virginia (2003)
- Nova Southeastern University College of Osteopathic Medicine, Fort Lauderdale, Florida (2005)

* The list of established departments is current as of January 2009. The year of establishment is noted in parentheses.

[†] The board of regents for the University of Hawaii confirmed the department in 2004.

We postulate, as does Cassel, that geriatrics departments can have a much larger impact in training all physicians in the care of the elderly than sections, divisions, or institutes. The 2008 IOM report, *Retooling for an Aging America: Building the Health Care Workforce*,¹ makes the point that there will be too few geriatricians to provide primary care to this population. Training of all physicians to provide effective basic care to the elderly, and to recognize when it is appropriate to refer to a geriatrician, would be of benefit to the populace as a whole. Table 2 illustrates how departments can effectively meet the many recommendations of this IOM report. Through a department, it is possible to train every physician, whether he or she is planning to be a specialist or a generalist, about the physiologic differences in the aged that lead to differences in presentations of pathology, clinical syndromes, and responses to therapy from those of middle-aged and younger populations. This will presumably lead to better-quality care for all elderly individuals, because physicians would have a higher baseline understanding of changes with aging and an appreciation of when it is best to refer to a geriatrics specialist. Departments may also have a greater impact in recruiting future generations of geriatrics specialists than

sections and divisions as a result of their broader outreach. Departments can influence the structure of clinical services for the care of the aged and support the overall research focus of the academic institution. Divisions and sections can often have an impact on service and research, but they are unlikely to have the potential broad impact on physician training that departments can have.

Case studies that substantiate the hypothesis of greater impact on education, research, and clinical care follow. Generalizable principles from these cases follow the descriptions.

Case Study 1: University of Hawaii at Mānoa John A. Burns School of Medicine

The University of Hawaii at Mānoa (UH) is a community-based medical school with most of its clinical departments based in affiliated teaching hospitals. The dean's office geriatric medicine program achieved full status as a medical school department in 2001 and was made a UH Board of Regents (BOR)-approved department of geriatric medicine in 2004. This development was preceded by 20 years of increasing program activity. In 1984, the dean's office developed the geriatric medicine program with National

Table 2

The Role of Departments of Geriatric Medicine in Implementing the Recommendations From the 2008 Institute of Medicine Report

IOM recommendation	Role of department
I. Enhancing competence	
All licensure, certification, and maintenance of certification for health care professionals should include demonstration of competence in the care of older adults as a criterion.	Geriatrics departments, as core units in the medical school structure, are likely to be able to make outreach to trainees, regardless of specialty, to facilitate training in core competencies in the care of older adults.
Hospitals should encourage the training of residents in all settings where older adults receive care, including nursing homes, assisted-living facilities, and patients' homes.	Geriatrics departments are likely to be positioned to facilitate the training of residents from a wide range of disciplines in the continuum where older adults receive care, such as the nursing home, assisted-living facility, and the patient's home.
II. Increasing recruitment and retention of geriatric specialists and caregivers	
	Geriatrics departments, as a result of broad outreach, are likely to be able to inspire young trainees to pursue a career in geriatrics.
III. Implementing innovative models of care	
Promote the dissemination of those models of care for older adults that have been shown to be effective and efficient.	Geriatrics departments are likely to have resources to support research into innovative models of care for the elderly.
Support technological advancements that could enhance an individual's capacity to provide care for older adults through activities of daily living technologies and health information technologies, including remote technologies.	Geriatrics departments are likely to have resources to explore technological advances to assist with the care of the elderly.

Institute on Aging Geriatric Medicine Academic Award funding and a community medical center contribution for the salary of 1.0 FTE faculty member and 0.5 FTE clerk. In that same year, a division of geriatric medicine was developed in the department of internal medicine to house the academic appointments because academic appointments could only be housed in BOR-approved departments. The dean's office program director became the division chief. Some financial support was provided for geriatrics through grants; the division of geriatric medicine received no funding from the department of internal medicine. Yet, the faculty in geriatrics provided teaching services for medical students and residents. The geriatrics faculty also participated in grand rounds and served on internal medicine department committees.

In 1985, chronic disease and aging epidemiology became the research focus of the program, beginning with the Systolic Hypertension in the Elderly Population study¹⁵ and collaboration with the Honolulu Heart Program.¹⁶ In 1986, the geriatric medicine fellowship program was initiated. In 1987, the state of Hawaii appropriated line-itemed funds for 3.0 new faculty FTE and for completion of a floor in a new building at the community medical center at which the geriatrics program was based. Also in 1987, the program was successful in competing

for an interdisciplinary geriatric education center (GEC) grant and has continued as a GEC ever since. In 1988, a geriatric psychiatry fellowship was initiated in the department of psychiatry, with assistance from the geriatrics program.

From the beginning, the dean intended to apply to the BOR to change the program to a department once the geriatric medicine program was of sufficient size and strength. The increasing number of geriatrics faculty and the management of faculty, state appropriation, and grant funding remained in the dean's office. The program director functioned as an assistant dean as well as the program director and division chief.

Over the years, the program continually increased its administrative responsibilities and its teaching, research, clinical, and service programs, and, in 2001, a new dean authorized the program to function fully as a department. Over the next three years, the department underwent the formal approval process through the medical school and UH faculty senates and the UH Mānoa administration and received formal BOR approval. The year after BOR approval, the size of the faculty in geriatrics increased as a result of the growth of its clinical program and as faculty members from other departments and schools transferred their academic appointments or received joint appointments in the geriatrics department, at their own initiation. The department

now claims to its credit 12 funded geriatric medicine fellowship positions, 57 regular and clinical faculty, 10 staff members, and more than 100 geriatric medicine fellowship graduates. It is also a John A. Hartford Foundation Center of Excellence in Geriatrics and was a Cohort 1 grantee for curriculum development in geriatrics from the Donald W. Reynolds Foundation. The medical school curriculum now contains requirements in geriatrics in all four years, culminating with a required four-week, fourth-year clerkship in geriatrics and palliative medicine.

Case Study 2: Florida State University College of Medicine

The department of geriatrics at Florida State University College of Medicine (FSUCOM) is the first geriatrics department to be created as an original department during the development of a college of medicine. FSUCOM was established by legislative statute in 2000 as the first new medical school in the United States in 23 years. The medical school was developed with "a principal focus on recruiting and training medical professionals to meet the primary health care needs of the state's elderly, rural, minority, and other underserved citizens."¹⁷ The department of geriatrics is one of only five departments comprising FSUCOM. The other departments include departments of biomedical sciences, humanities and

social sciences, family medicine and rural health, and clinical sciences (which includes internal medicine, surgery, pediatrics, obstetrics–gynecology, psychiatry, and emergency medicine). The chair of each department sits on the FSUCOM executive committee; the committee also includes the president of the faculty council, the assistant and associate deans, and the dean.

The state legislature mandated by statute that there be (1) continuing focus on the aging human throughout the four-year curriculum, (2) incorporation of curriculum guidelines of the American Geriatrics Society, (3) establishment of academic leadership in geriatrics, (4) establishment of a faculty development plan, and (5) recruitment of students who have expressed an interest in elder care. In response to these mandates, FSUCOM has recruited a core faculty who maintain a continuing focus on the integration of geriatrics into the education programs of the medical school, through curriculum oversight, collaborative development of curriculum and experiences, and team teaching. They work cooperatively with faculty in other departments for general teaching and course direction.

FSUCOM is a community-based, distributed model. It focuses primarily on medical student education, though it does have two affiliated residencies (obstetrics–gynecology and pediatrics) at one of its regional campuses. FSUCOM does not operate a university medical center or faculty practice. Instead, it partners with community hospitals and practices to provide educational opportunities for its students and practice opportunities for its faculty. Six regional campuses are spread across the state of Florida at which third- and fourth-year medical students take their rotations, working one-on-one with community clinical faculty. Starting in 2001, FSUCOM started admitting students, with an entering class of 30. The class size increased each year thereafter, with the class entering in 2007 being the first class for which the full complement of 120 students was accepted. Dedicated geriatric experiences include a required fourth-year geriatrics rotation (four weeks), a rural geriatric rotation, a first-year preceptorship rotation of three weeks with a primary care physician or geriatrician, and multiple geriatric

electives. Outcomes of geriatric education have been monitored using the Association of American Medical Colleges graduation questionnaire,¹⁸ and students consistently rate their satisfaction with the education in geriatrics as significantly above the national average.

The FSUCOM geriatrics department enjoys a \$1.4 million annual budget from the state. Funding is provided for seven full-time geriatricians and four staff positions. Geriatricians who serve as clerkship directors at the six regional campuses are funded at 0.4 FTE. Clinical faculty who provide the fourth-year required clerkship (approximately 45 positions) receive \$500 per week per student when they are on rotation.

A retired physician, Charlotte Edwards Maguire, has endowed a chair in geriatrics, which allows for expanded activities beyond those created from state funding. The department has been successful in garnering a Donald W. Reynolds grant (third cohort) to extend geriatric education in undergraduate, graduate, and continuing education. It has also received federal funding for a GEC. However, because of very heavy teaching loads, the faculty have not focused extensively on research. Clinical service, of course, is minimal because of the design of FSUCOM.

Case Study 3: University of Oklahoma College of Medicine

The department of geriatric medicine at University of Oklahoma College of Medicine was established October 1, 1997 with funding from the State Board of Regents and the Department of Veterans Affairs. The department was initiated with 2.0 FTE physician faculty and 1.0 FTE PhD educator. As of July 1, 1999, it was renamed the Donald W. Reynolds Department of Geriatric Medicine with an \$11.25 million grant from the Reynolds Foundation to develop a required geriatrics rotation for all third-year medical students. Ten million dollars of the grant was allocated for the development of 10 endowed chairs for clinician educators, fully matched by the state. The department met and exceeded the provisions of the grant, launching a four-week, required geriatrics rotation for all third-year medical students (more than 150 per year) by the 2003–2004 academic year. The rotation continues

as one of the core expectations for University of Oklahoma medical students, with excellent student feedback regarding the faculty and instruction. Outcomes from the instruction provided by faculty have been published, demonstrating high student satisfaction with the training^{19,20} and better student attitudes toward the elderly than among students who were not exposed to department training programs.²¹ The department now has 20 faculty primarily appointed to the department and 45 adjunct faculty. There is curricular content for students throughout the four years of training, including (1) a prematriculation program for select students the week before they enter medical school, (2) an experiential activity simulating many of the problems that may accumulate with aging for all second-year students, (3) lectures on the physiology of aging and the geriatric patient exam in the first two years, (4) the four-week core clinical rotation in the third year, and (5) elective opportunities in the fourth year. In the four-week, core rotation, students are exposed to the continuum of care of the elderly, which includes home care, nursing homes, adult day care, outpatient clinics, and acute inpatient care. Training is also provided for internal medicine residents, geriatric medicine fellows, and practicing physicians. The department is home to the Oklahoma Geriatric Education Center, which has been funded almost continuously since 1989, and supports the training of health care professionals throughout the state and region.

Currently, the department enjoys a stable financial picture, with a \$20 million corpus for the endowed chairs for clinician educators and a recent \$7.5 million grant from the Reynolds Foundation establishing six additional endowed chairs (\$1 million per chair) for research. When these chairs are matched by the state, the corpus for the endowment will rise to \$32 million. Additionally, the department receives approximately \$1.25 million from the state via the college of medicine, and it continues to be sustained by the Department of Veterans Affairs through the support of 3.25 FTE and space to headquarter departmental activities.

The Pros and Cons of Geriatrics Departments

As is evident, each department described is uniquely configured. However, the departmental structure provides continuity for the contributions in each case. Very significantly, having a seat at the planning table gives a strong voice to the geriatric position.

In each case, departmental development was influenced by the resources that were available at the time, and to meet the local need—whether perceived internally, as in the case of UH, or externally, as in the cases of FSUCOM and University of Oklahoma. In each case, significant resources were accrued to facilitate the launch of the department—whether over the course of many years or by the intervention of the state or a private foundation.

There are a number of benefits to be derived from being a department. First, departmental status confers on the geriatrics program a role in the planning and development of activities for the medical school and hospital system. There is an “automatic” position of the department chair on key school-level committees, such as the executive, clinical chairs, budget, faculty practice, and various selection committees. There is direct access to key medical school decision makers, such as deans, vice deans, and chief financial officers. As a result of this direct access, there is no “filtering” of information regarding medical school operations. There is an opportunity for direct collaboration with other chairs as equals and for cooperation in academic and research program development. There is no competition from other divisions for department funds. There is also direct negotiation for department budget allocation and for control of funds that are generated by the department. Given the interdisciplinary nature of geriatrics, there is an opportunity to develop departmental criteria for recruitment, retention, and promotion, including an opportunity to promote and retain nonphysician faculty members of interdisciplinary educational and research teams. The interdisciplinary nature of geriatrics requires that nonphysician faculty members be granted equal academic standing because they are critical to advancing the academic mission. There is also direct control of

staff job descriptions, selection, evaluation, and promotion.

However, there are a number of challenges associated with departmental status. As an independent department, the complete responsibility for funds, faculty, staff, planning, and paperwork exists within the unit. Thus, if a department is launched without sufficient resources and without assured means of revenue generation, it can falter. Additionally, although geriatric academic units have budgets averaging \$1,000,000 and 24 staff members, this is approximately half the size of an average department of family medicine and one-fifth the size of an average department of medicine.¹³ Nonetheless, the allocation of work at the medical school level often discounts differences in department size. Additionally, there can be challenges with trainees and colleagues from other disciplines considering geriatrics to be coequal to other departments,²² as well as the relatively smaller department budget and faculty number.

We believe that departments of geriatrics will continue to be established in the United States. They will have a role in shaping the preparation of future generations of physicians in the care of our aging society. The challenge will be to definitively demonstrate the efficacy of the department model versus the more prevalent section, division, and institute approach to training physicians to care for the elderly. Future research needs to consider the impact of departments in the educational process for medical students and residents and the outcomes of that contact—that is, the frequency with which those physicians choose geriatrics as a specialty or use geriatrics concepts in the care of frail elders. Data need to be accumulated regarding the competitiveness of departments versus divisions, centers, and institutes with federal research funding. Preliminary data from the case studies reported in this article suggest that as a result of the establishment of geriatrics departments, more medical students would either choose to go into geriatrics or bring greater awareness of geriatrics into the fields they choose. The 2008 IOM report would suggest that these are desirable outcomes.¹ However, definitive proof that the departmental model can accomplish this goal more efficiently than more prevalent current models for academic geriatrics programs is lacking.

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Teaching and Learning Moments

Diversity & Metaphase: Artist's Statement

As a faculty member at Indiana University School of Medicine, one of my goals is to incorporate the arts into the curricula. By paying attention to the arts, we can help students to develop and nurture the skills of observation, analysis, empathy, and self-reflection that are essential humanistic attributes for humane medical care.

In addition to studying art, the process and products of actually creating art can increase awareness of self and others. The practice of art therapy, for example, can aid us as healers and facilitate our patients in coping with symptoms, stress, and traumatic experiences. The arts give people a tool for self-expression and provide a way of processing emotions that we may not fully understand or that have been so overwhelming that they can only be handled indirectly or in small increments. Creating art is an important vehicle to help understand social and cultural differences that exist in society. The arts can also provide us insight into the human

condition, suffering, and personhood, as well as foster a feeling of our responsibility to each other.

My own colorful and often whimsical glasswork transports the observer to a place that reflects my personality. Each piece I make is a new expression, as I constantly evolve forms, sizes, shapes, and colors. It is the process, however, which attracts me as much as the product—taking ordinary ingredients like sand, ash, and heat, and transforming them into feathery, liting works of glass, I am intrigued with how this amorphous material can change proportions according to its environment. In glasswork, one continually has to deal with the force of gravity as the honey-like glob of molten glass has an energy of its own and needs to be coaxed into the desired form. By incorporating small bits of color and texture I create functional works of beauty that evoke the fragility inherent in life, which I experience all too often in my profession. Through my work in the “hot shop” (and yes, it is hot—really,

really hot), I have learned patience and the true joy of artistic expression. Each piece I make is a unique work of art, just as each patient that I see is a unique human being.

Medicine as a discipline is finally beginning to recognize that we deal with people, and an understanding of literature, the arts, history, ethics, and philosophy is essential to becoming a better, more empathetic physician and caregiver. My hope is that I can continue to translate my avocation and experiences as an artist into my vocation as a physician.

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