

geriatric medicine gerontology Report

NEWS FOR THOSE WHO CARE FOR AND ABOUT OLDER ADULTS

Physician Home Visits Increase; Department Takes Lead to Train Residents and Evaluate Outcomes

Two projects study the situation

Physician home visits are on the rise, according to Douglas Smucker, MD, MPH, associate professor and director of research in the Department of Family Medicine. Physician home visits once were commonplace but, for a variety of reasons, decreased over the past decades. With the burgeoning number of people living longer and the increase in the chronically ill who are homebound, there is a need to evaluate how medical care is being delivered to these two “needy” population groups and evaluate the value of the physician home visit.

At the University of Cincinnati Medical Center, the Department of Family Medicine is taking the lead in both, providing physician home visits to the homebound and terminally ill as well as studying the impact of a physician home visit intervention on the healthcare outcomes of the homebound elderly and their caregivers in the community. Both of the projects are under the direction of Dr. Smucker who has received funding for these two different but, overlapping home care projects. Recently the *Report* had the opportunity to talk with Dr. Smucker about his work in physician home visits.

Report: Why, after many years of physician home visits being absent from the healthcare scene, is there renewed interest in this area?

Dr. Smucker: The number of homebound is increasing, not only among the older population, but also of groups of younger people who are experiencing long-term chronic problems which often prevents these people from receiving high quality health care.

What statistics support your hypothesis that physician home visits are needed?

Demographic studies show that 56% of the population 85 years and older report having a chronic disability with nearly half of those people needing assistance with personal care. While many people receive the personal services they need such as help with bathing, food service, etc. they do not receive the medical care they need.

Physician Home Visits

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There is anecdotal evidence that indicates physician home visits improve care and outcomes of the homebound elderly patients by preventing emergency room visits and hospital admissions. This has the added benefit of reducing healthcare costs.

You are involved in two physician home visit projects. Please describe each of them.

Our first project is one called "Home Sweet Home: Helping Cincinnati Homebound and Terminally Ill Avoid Nursing Home Placement." In addition to providing physician home visits

with this project, we will be training our second and third year family residents, through the design and implementation of a highly focused curriculum, to gain the special attitudes, knowledge and skills needed to care for our target population. These residents will provide approximately 100 home and hospice visits a year. They will be supervised by our 17 faculty supervisors who will receive special education in the area of physician home care. Collaborating organization with the "Home Sweet Home" project is VITAS, a local hospice organization that serves patients across the entire Greater Cincinnati Area.

Our second project is research in nature. It is the first of a series of studies with the long term goal of measuring the impact of physician home visits on the well-being of patients. This exploratory study will investigate and define primary care issues for homebound elderly. We hypothesize that homebound patients and their caregivers will identify 1) transportation issues, physical strain of travel to their physician's offices and caregiver limitations as barriers to receiving primary care 2) will express continuity of care as an important value for primary care and, 3) that there will be qualitative differences in primary care needs between two different elderly services programs.

The findings of this project will provide baseline data for designing a 'Components of a Primary Care Home Visit' intervention tool which will then be evaluated in a future study. The Council on Aging of Southwestern Ohio, PASSPORT and the Elderly Services Program are partners on this endeavor. These two programs coordinate home-based personal care services for those 60 years and older who meet the individual eligibility criteria of the programs.

Summarize what you believe will be the "bottom-line" benefit of these two projects.

We believe the most significant benefit is that home visits help patients remain in their own homes rather than be forced to live in a nursing home. ■

PHYSICIAN HOME VISIT PROJECTS

"Home Sweet Home": Helping Cincinnati Homebound and Terminally Ill Avoid Nursing Home Placement"

- design and implement a highly focused curriculum to train second and third year family residents to care for the target population
- direct these residents to provide physician home visits—approximately 100 home and hospice visits a year
- supervise residents with 17 faculty who will receive special education in the area of physician home care.

Collaborating organization: VITAS, a local hospice organization that serves patients across the entire Greater Cincinnati area.

"The Impact of Physician Home Visits on the Well-Being of Patients"

The first in a series of studies with the long term goal of measuring the impact of physician home visits on the well-being of patients.

- investigate and define primary care issues for homebound elderly
- evaluate findings to provide baseline data for designing a 'Components of a Primary Care Home Visit' intervention tool which will then be evaluated in a future study.

Collaborating organizations: The Council on Aging of Southwestern Ohio, PASSPORT, Elderly Services Program ■

EXERCISE AND AGING

Study Investigates Effect of Aerobic Activity on Cognitive Function in Elderly

Robert Krikorian, MD, associate professor in the UC Department of Psychiatry, is investigating the effect of aerobic fitness intervention on cognitive function in elderly individuals with Mild Cognitive Impairment (MCI). MCI is recognized as a transitional condition in the development of Alzheimer's (AD). Dr. Krikorian received initial funding for his study from the Dean's Discovery Fund for pilot studies with the potential for extra-mural funding.

This investigation is stimulated by the fact that recent studies have shown that aerobic exercise potentiates neurogenesis in the hippocampus and neocortex and enhances cognitive abilities mediated by these brain structures in elderly adults. Exercise also has been shown to increase neurotrophic factors. Furthermore, inverse relationships have been observed in the aged between glucocortical levels and hippocampal and neocortical integrity, and elevations of cortisol have been implicated in AD.

Dr. Krikorian explains that the study is evaluating the efficacy of a moderate aerobic conditioning intervention in enhancing cognitive abilities that characteristically decline in individuals with MCI. A secondary goal is to assess the effect of the intervention on modulation of basal cortisol level, an indirect index of hippocampal and neocortical integrity. The study is a randomized controlled trial in which a 12-week aerobic conditioning program is conducted with previously sedentary men and women with Mild Cognitive Impairment. Non-aerobic muscle stretching will be the control task.

Dr. Krikorian is also assessing changes in mood, cardiac function and aerobic capacity as possible mediating factors.

Dr. Krikorian says, "The findings of this study represent an initial but essential step in evaluating the efficacy of aerobic exercise as a behavioral factor that ultimately may be found to delay, arrest or conceivably reverse progression of age-related cognitive decline." Furthermore, Dr. Krikorian believes the findings will yield data indicating the effectiveness of the intervention in modulating cortisol elevation, which is

associated with substantial risk for cerebral deterioration in the elderly. The demonstration of an ameliorating effect provides the basis for future investigations examining the specific nature of the cognitive-cerebral adaptations to exercise, the relative benefits of different forms of exercise and

issues of dosage and duration of effect.

Recently, Dr. Krikorian received word from the National Institutes of Health (NIH) that his application on Exercise and Cognitive Aging is being funded for a two year period, October 2004 to January 2005. Receiving the NIH funding is commensurate with the mission of the Dean's Discovery Fund, which was established by William J. Martin, Jr., MD, while he served as the dean of the UC College of Medicine. ■

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*Robert Krikorian, MD
associate professor
UC Department of Psychiatry*

REYNOLDS GRANT UPDATE:**Meeting Goals, Exceeding Expectations**

Over the past year, educational endeavors at the University of Cincinnati (UC) College of Medicine in the area of Geriatric Medicine have been enhanced and expanded "ten fold" according to Gregg Warshaw, MD, Director of the Office of Geriatric Medicine. "This growth is the result of a four-year, 2 million dollar grant received in September of 2003 from the Donald W. Reynolds Foundation," he explains. The Dean's office of the College of Medicine, the

Office of Geriatric Medicine, participating UC Departments and the Health Alliance committed \$1 million in new matching funds for geriatric education.

"Many of our goals for year one have been realized and in some areas we have exceeded our expectations," Dr. Warshaw says. "This is due to the remarkable cooperation we have had from many different members of our medical community."

University President Visits Affiliate, Praises Partnership

University of Cincinnati President Nancy Zimpher toured the Alois Alzheimer Center in July, spending time with residents, staff, families, students and faculty. She met students currently involved in clinical training at the Center as well as the UC faculty preceptors who were present with the students.



left to right: Michelle Angel, assistant director of nursing, Alois Center; UC President Nancy Zimpher; Robert J. Cluxton, Jr., PharmD, MBA, CGP, associate professor of pharmacy practice and family medicine; Tine Forton, fourth year pharmacy student; Jill Bartkowiak, fourth year pharmacy student; and Dr. Stewart Zakem, MD, medical director, Alois Center.

"I was very impressed with the Center and especially the excellent colleagues that you work with," commented Dr. Zimpher. "We are very fortunate to have the best facility in the nation in Cincinnati. I am so glad we have a partnership between the Center and UC."

Partners for Research and Education

The Alois Center, located in the Cincinnati suburb of Greenhills, and the University of Cincinnati have a long history together. Formally affiliated since 1986, the Alois Center has served as a setting for education and research at UC for the past 18 years.

Over 100 students visit the Alois Center each year, spending from a few hours up to as much

as 6 months in internships. These students come from a variety of disciplines including medicine, nursing, architecture, psychology, psychiatry, social work, dietetics, administration, business, engineering, gerontology, and physical, speech and occupational therapy.

Mutually beneficial research is also a goal of the affiliation, with both institutions interested in expanding knowledge in the field of Alzheimer's disease as well as determining enhanced mechanisms of treatment and care. Projects have included a variety of clinical work, from determining the effects of music on mealtime behavior to experimental drug studies. Many of the studies have been national in scope involving other universities around the country. ■

REYNOLDS GRANT UPDATE, *continued from previous page***GERIATRIC MEDICINE STUDENT SCHOLARS**

One of the first projects to be implemented was the Geriatric Medicine Student Scholars initiative. Eight year one students and 6 year two students elected to participate in a four year enrichment program. Each of the 14 students was paired with a geriatrician mentor. The students spent time at the practice site of their mentor observing the role of the geriatrician and practicing some of their clinical skills. The mentors and students spent time together outside of the clinical setting in a "mentoring relationship."

Each of the Scholars maintained an on-line journal where they reflected about their age-related curricular and non-curricular activities as well as aging interest areas and their personal ideas and thoughts about aging. Dr. Margolin, one of the coordinators of the Scholars program, remarked that the students' journals are a treasure chest full of rich and warm stories about aging. The writings revealed very deep insights into the issues of aging and over 40 age-related topics were addressed by the students. Bi-monthly discussion groups were held where specific aging topics were discussed. The highlight of the year was a dinner meeting with Peter Boling, MD, Professor of Medicine, Virginia Commonwealth University, on February 11, 2004. Dr. Boling spoke with the students about physician home visits, a topic which created a great deal of interest among the students and allowed for a lively discussion.

CLINICAL CARE ENHANCEMENT

As part of the Reynolds award, Alliance Primary Care (APC) agreed to partner with the UC Geriatric Medicine program, acknowledging the shared goal of enhancing the quality of clinical care for older adults in APC offices. Robert Cluxton, PharmD, collaborated with geriatric medicine faculty to develop a "medication management" curriculum. During the spring of 2004, a team of geriatric experts made two presentation visits to 14 different APC offices. Practicing APC physicians participated in these lunch time intervention presentations with relevant questions about medication management and welcomed the opportunity to discuss

general health care concerns regarding older adults. Actions to further enhance and maintain a strong relationship with APC physicians will be through the APC newsletter, continued office communication and each APC will receive a "medication management" curriculum CD-ROM.

GERIATRIC MEDICINE FACULTY SCHOLARS

For the first two years of the Reynolds award, eight physician leaders from the departments of Internal Medicine, Physical Medicine & Rehabilitation (PM&R), OB-GYN, Family Medicine and Psychiatry were recruited to be Geriatric Medicine Faculty Scholars (GMFS). The GMFS are devoting 10% efforts per year to faculty development in creating and implementing new required geriatric medicine curriculum for their respective residents.

STANDARDIZED PATIENT CASE

One of the four goals of the Reynolds award was to develop a standardized patient case to be available in September 2004 for residents in Internal Medicine, PM&R, OB-GYN, Family Medicine and Psychiatry during their geriatric care month. The resident will have three, two hour encounters with the same patient and family member, illustrating the progressive nature of Alzheimer's disease over a ten year period. The case will include competencies demonstrating an understanding of the natural progression of Alzheimer's disease, the ability to work effectively with other caregivers, administering a thorough comprehensive geriatric assessment, and understanding the financial, ethical and legal aspects of chronic care of older adults. The training sessions will be held in the Center for Competency Development and Assessment at the UC College of Medicine. Residents will have this experience after receiving training in assessment and management of dementias. Each two hour standardized patient case period will include debriefing meetings with the resident and faculty to enhance the educational value.

The second year of the Reynolds funding will be focused on further developing and enhancing each component of the grant. ■

FROM THE DIRECTOR:**Effective Medical Care Must Include the Home Setting**

The maintenance of functional independence into late life is a central goal of geriatric medicine.



GREGG WARSHAW, MD

Although the practice of geriatric medicine includes preventive medicine and the diagnosis and treatment of reversible diseases, it is dominated by the challenge of caring for patients with chronic illness. The geriatrician's goal in managing chronic

illness is maximizing the older adult's productivity, well being, and happiness. As discussed in this issue of the *Report*, an area critical to maintaining the independence of older adults in the community is the availability of comprehensive home health services, including physi-

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cian care. Although physician care in the home was common until the late 1950s, in recent years it has become rare for physicians to make home visits.

The effective delivery of medical services to older adults should occur not only in the familiar office and hospital settings, but also must take place in the patient's home, retirement home, rest home/assisted living facilities, day care,

nursing home, and hospice settings. Effective medical care for older adults in all settings requires that physicians work cooperatively with practitioners representing many health care disciplines such as nursing, social work, and the various therapies.

Health and Function of Older Adults

Common chronic health problems among older adults include arthritis, heart disease, and diabetes. Although limitations in activity associated with these chronic conditions have been declining in recent years, they remain significant. In 1999, 6.3% of adults age 65 and over reported at least one limitation in Activities of Daily Living (ADL), and 12.4% reported at

least one limitation in Instrumental Activities of Daily Living (IADL). Sex, race, and poverty status appear to be related to the occurrence of functional limitations, with women, non-whites, and the poor all reporting higher rates of ADL and IADL deficits (Table 1.13).

Home and Community-Based Services for the Elderly

Beginning in the 1970s federal and state governments promoted demonstration programs to reduce the institutionalization of older adults and to improve the integration of health and social services for the aged. The overall goals of these initiatives have been to reduce government expenditures and improve the health and function of the participants. Geriatricians have been integral to the development and implementation of many of these programs. In Greater Cincinnati our aging network community agencies provide a wide array of support services for older adults living at home.

In 1999 in the U.S., more than 1.9 million nursing home beds were available, and the occupancy rate was 83%. The rates of nursing home utilization varied from 11/1000 people age 65-74 to 183/1000 people age 85 or over. During 1998, 1.82 million people utilized some type of home health care service, for an overall rate of 70 patients/10,000 people. This rate increased to 407/10,000 people age 75-84 and 885/10,000 for people age 85 or over. Tables 1.17 and 1.18 show trends in skilled nursing facility utilization and the growth of nursing homes.

During the past decade there has been a nationwide rapid growth of assisted living facilities. While definitions of assisted living vary across states, it was estimated in 1998 that 600,000 residents were living in 25,000-30,000 assisted living facilities. The typical assisted living resident is an 83-year-old female requiring assistance with 3 ADLs.

The use of home health services by older adults and the enrollment of aged patients in hospices continue to grow as shown in Table 1.21. The Veterans Health Administration also operates 73 comprehensive home-care programs throughout the U.S. As more adults

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Table 1.13 Limitation of Activity Caused by Chronic Conditions in Non-institutionalized Older Adults, by Selected Characteristics: United States, 1997-2001

Characteristic	ADL Limitation (%) ¹				IADL Limitation (%) ²			
	1997	1999	2000	2001	1997	1999	2000	2001
Age: 65-74 years	3.4	3.1	3.3	3.4	6.9	6.2	6.6	6.7
75 years and over	10.4	9.9	9.5	9.6	21.2	19.1	19.3	18.9
Sex: Male	5.2	4.9	5.1	6.1	9.1	8.4	9.2	9.6
Female	7.7	7.2	7.0	6.6	16.9	15.1	15.1	14.6
Race and Hispanic Origin:								
White only	6.3	5.8	5.8	5.7	13.1	11.6	12.1	11.8
Black or African American only	11.7	12.0	10.2	11.7	21.3	20.9	19.2	18.7
Hispanic or Latino	10.8	8.6	8.6	11.2	16.3	14.1	13.4	17.0
Poverty Status³:								
Poor	13.0	10.1	9.6	12.7	26.9	22.3	20.2	24.8
Near Poor	7.5	6.7	7.1	7.4	16.3	15.1	15.3	15.0
Non-Poor	5.3	5.5	5.2	5.0	10.1	9.7	9.4	9.7

¹Activities of Daily Living (e.g., bathing, dressing, toileting, transferring, continence, feeding)

²Instrumental Activities of Daily Living (e.g., managing finances, shopping, preparing meals, traveling)

³Poverty status is based on family income, family size, number of children, age of adults in family. Poor persons are below the poverty threshold, near poor persons have incomes of 100 percent less to less than 200 percent of the poverty threshold.

Source: CDC, National Center for Health Statistics. Health, United States, 2003. Special Excerpt: Trend Tables on 65 and Older Populations, Hyattsville, MD: US Department of Health and Human Services. November 2003. (Data from National Health Interview Survey)

Trends show in skilled nursing facility utilization and the growth of nursing homes.

Table 1.17 Skilled Nursing Facilities,¹ 1980-1999

Year	Number	Beds (1,000s)	Beds/1,000 Medicare Part A Enrollees
1980	5,155	448	16.0
1990	9,008	512	15.2
1995	13,281	657	17.7
1996	14,177	672	17.8
1997	14,860	685	18.0
1998	15,037	723	18.8
1999	14,913	837	21.6

¹Facilities and beds certified under Medicare

Source: U.S. HCFA, 2001 and U.S. Census Bureau, 2001

Table 1.18 Nursing Homes and Related Care Facilities,¹ Selected Characteristics, 1985-1999

Year	Number of Homes	Number of Beds (100s)	Beds/NH	Occupancy Rate ¹
1985	19,100	1,624	85	91.8
1990	16,700	1,771	106	87.4
1995	17,000	1,821	107	88.4
1999	18,000	1,965	109	82.8

¹Nursing and related care homes with 3 or more beds and routinely provided nursing and personal care services. Excludes places providing only room and board and places serving specific health problems.

Source: U.S. NCHS, National Nursing Home Survey, 1999

Use of home health services by older adults and enrollment of aged patients in hospices continue to grow.

Table 1.21 Home Health and Hospice Care of the Aged Patients, 1998

Characteristic	Home Health	Hospice
Number of Patients ¹		
65 and over	6,598,000	440,000
85 and over	1,594,000	108,000
Percent of Total Patients ²		
65 and over	69	77
85 and over	18	20
Payment Source (percent)		
65 and over Medicare	85	
85 and over Medicaid	6	
Private insurance	6	
Own income	3	

¹Active and inactive patients, patients could be included more than once if multiple episodes of care.

²Aged patients/Total patients of any age.

Source: U.S. National Center for Health Statistics, 2001

receive health services in assisted living and in their own homes, more physicians trained to provide care in the home setting will be needed. ■

As more adults receive health services in assisted living and in their own homes, more physicians trained to provide care in the home setting will be needed.

Faculty and Staff News

Steven Bartz, MD, gave a presentation entitled "The Physician-Caregiver Relationship" at the annual meeting of Georgia Area Agencies on Aging, Atlanta, Georgia, July 2004. Dr. Bartz is an Assistant Professor of Clinical Family Medicine.

Timothy Lewis, MD, is the recipient of a 5-year, \$285,000, Geriatric Academic Career Award from the Department of Human Services. Over the next five years, Dr. Lewis will be focusing on acquiring skills and knowledge in teaching geriatrics evidence-based medicine, developing excellence in the creation and implementation of new clinical geriatrics curriculum and building a focus on interdisciplinary teaching to improve inpatient care with a concentration on transitions. Gregg A. Warshaw, MD, Mark Eckman, MD, and Gordon Margolin, MD, will serve as mentors. Dr. Lewis is in his second year of serving as medical advisor to the UC Student Chapter of the American Geriatrics Association, overseeing the planning and coordination of activities and programs as well as giving presentations on aging issues. Dr. Lewis is the co-author with Dr. Gregg Warshaw of an article, "Visual and Hearing Impairments: Diagnosis and Treatment," Current Geriatrics, McGraw and Hill, 2004. Dr. Lewis is an Instructor in the Department of Internal Medicine and serves as a Hospitalist at University Hospital.

E. Gordon Margolin, MD, received the Albert Rendsberg Recognition of Senior Citizens by Rockdale Temple, Blue Ash, Ohio, April, 2004. Dr. Margolin continues to lecture to all levels of medical students and residents on topics of aging. He holds a monthly conference series for University of Cincinnati fourth year medical students in Internal Medicine, Neurosciences, residents at the Veterans Administration Nursing Home, Fort Thomas, and Surgery and Jewish Hospital House Staff. Dr. Margolin is also a popular speaker on aging at Cincinnati area community groups. Dr. Margolin is a Professor in the Department of Internal Medicine

Gregg Warshaw, MD, was a Visiting Professor at the University of Oklahoma, Oklahoma City, Oklahoma. Dr. Warshaw spoke on "Transitions: Helping the Older Adult Navigate the Health System" and "The Nursing Home-Hospital Relationship." Dr. Warshaw addressed the "Physician's Role with Caregivers" to members of the National Association of Area Agencies on Aging via a teleconference, "Making the Link." Dr. Warshaw is co-author with Timothy Lewis, Instructor, Department of Internal Medicine, of "Visual and Hearing Impairments: Diagnosis and Treatment." Current Geriatrics, McGraw and Hill, 2004. Dr. Warshaw is a Professor in the Department of Family Medicine and Director of the University of Cincinnati Office of Geriatric Medicine in the College of Medicine. ■

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