

The University of Chicago
Center for Health Administration Studies

**The Windermere Center: Concepts & Implementation of
Geriatric Ambulatory Care**

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The Winter Quarter Workshop Series

28 February 1991

3:30-5:00 P.M.

Rosenwald 405

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OF GERIATRIC AMBULATORY CARE**

CHAS Workshop - February 28, 1991

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Special thanks to Andrea Cowan who helped us prepare for this workshop.

Preliminary draft of Chapters 1-3 of "Ambulatory Geriatric Health Care: Successes and Pitfalls of a Primary Care Model." Please do not cite without authors' permission. Comments will be appreciated.

**AMBULATORY GERIATRIC HEALTH CARE:
SUCSESSES AND PITFALLS OF A PRIMARY CARE MODEL**

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AMBULATORY GERIATRIC HEALTH CARE: SUCCESSES AND PITFALLS OF A PRIMARY CARE MODEL

Introduction

Older people have special health care needs. Ambulatory care programs should be designed and implemented to meet these needs of geriatric patients. This monograph is about one primary care model based on the above assumptions. The model attempts to combine the strong points from previous models of geriatric assessment units and non-geriatric models of primary care to create an ongoing comprehensive multidisciplinary care program for older people that is closely affiliated with an urban teaching hospital.

The monograph describes a geriatric ambulatory health care center developed over a four year period with the support of the University of Chicago Medical Center, its Department of Medicine, and the Retirement Research Foundation. It also discusses the information system crafted for the center to allow the manipulation of data on the patient population for clinical, administrative and research purposes. This information system is particularly important for integrating the center with the complex teaching hospital with which it is associated. The system's capacity to capture information longitudinally and to identify target samples can facilitate a whole range of clinical and health services research studies as well as the clinical management of patients.

This monograph is a case study of the Windermere Senior Health Center from concept through creation and cultivation. It uses data from the information system

but also relies on the ideas and experiences of the founders of the Center, minutes and records related to the development and operations of the Center and special studies of the Center's service area, patients and medical staff.

The volume is meant to describe a concept which the authors obviously have considerable belief in and commitment to. It further portrays an implementation processes and early years of operation enjoying considerable success. Still, the intent is to point out "pitfalls" as well as "successes." What problems were encountered in attempting to bring the concept of a comprehensive geriatric care center to reality? Are there inherent difficulties for a primary care model integrated in a large teaching complex? When and for what possible reasons has the performance of the Center been below expectations? Asking and attempting to answer these questions may help to improve the future performance of the Center as well as increase the value of the monograph for the reader.

Central theses of the monograph concern: (1) the characteristics of an effective geriatric care model; and (2) the costs and benefits of a primary geriatric care center to the sponsoring tertiary care institution. The contribution of communication and comprehensive, continuous and convenient care to meeting the health care needs of the elderly are explored. Persons with multiple disorders, who need multi-disciplinary care, quite obviously benefit from continuity and comprehensive services. However, this monograph also emphasizes convenience and communication which are important and often neglected elements of an effective geriatric care model. The integration of multiple services and the full cooperation of patient and family can be achieved by attention to the personal and logistical aspects of care as well.

Concerning institutional relationships, this monograph challenges a common assumption that the provision of comprehensive health care services to the poor elderly will drain an institution of financial resources. A comprehensive geriatric care center can have a beneficial financial effect if integrated into a hospital system, under current Medicare financing. The center attracts new patients whose costs can be covered and increase the use of both hospital outpatient and inpatient services.

Despite the aging of the U. S. population, the pending fiscal crisis from providing services to this population and the growing recognition of the importance of primary care for the elderly -- there is a paucity of literature on ambulatory geriatric health care. We hope this monograph will have messages for several types of readers: (1) health care administrators interested in the design, financial feasibility and implementation process of creating an ambulatory geriatric primary care center; (2) health care practitioners concerned with the theoretical rationale and development of the geriatric health care model, (3) teachers responsible for the training and preparation of health care professionals in the specialty of geriatric medicine; and (4) health services researchers considering the use of a geriatric care center information system to monitor and evaluate a geriatric health center.

Chapter I of this volume explores the special health care needs of older people by examining what is known about their health status, demographic and social influences on their health and their use of health services. Chapter II discusses existing models of health care and how these models do and do not meet the health care needs of the older person. In Chapter III we develop the concept of the comprehensive geriatric care model. We explain each of the major elements of the

model, how the model draws on earlier models and why we feel it better fits the needs of the older patient. Also discussed here, is how the model is incorporated in a sponsoring tertiary care center. Chapter IV describes the early operations of the Windermere site. How well did it reach its intended service area? What services is it providing? Chapter V recounts the design and operation of the ambulatory geriatric information system (AGIS). What are the goals of the system and to what extent have they been realized in terms of scheduling and treating patients, billing, monitoring clinic performance and relating to the hospital information system? Chapter VI considers the financial viability of the Windermere Center from a number of different perspectives. What are the costs and benefits of operations for the Windermere itself and for the sponsoring hospital? What revenues do the medical staff of the Windermere generate and how are they compensated? The last chapter summarizes the successes and continuing challenges to the Windermere in attaining its objectives. It provides implications from the findings for the future of the Windermere Senior Health Center, other geriatric care centers, provision of health services to the elderly and further research and evaluation for geriatric health care.

CHAPTER 1

THE HEALTH STATUS AND SPECIAL HEALTH CARE
NEEDS OF OLDER PEOPLE

Seventy percent of people 65 years of age or older are relatively healthy, reporting their health as excellent or good (Ries, 1990, 10:174). Still, the ideal model of care for these people requires continued surveillance, because they are increasingly fragile and potentially vulnerable. Fifteen percent have acute episodes serious enough to require hospitalization but not so debilitating or damaging to require extensive or repeated hospitalization in a given year. A few (about 5 percent) suffer acute illness each year requiring lengthy and/or repeated hospitalizations (Adams & Benson 1990). Approximately one half of the latter group die during this high utilization year. Consequently, a geriatric care model needs to respond to policy concerns about reasonable and humane care for this group as well as the "high cost of their dying." Thus far, however, it has not been possible, in any systematic way, to distinguish prospectively, those who will die from those who do not -- a continuing challenge for geriatric care.

The declining health status and greater health care needs of older people set them apart from the younger population. Still, there is greater diversity in health and functional status among older individuals, as well. The challenge in designing medical care programs for elderly people is to be responsive to both their special needs as a group and their heterogeneity as individuals. The geriatric health care model described in this monograph is such an effort.

This chapter presents some key measures of the health status of elderly people and makes some comparisons with younger age groups. The purpose of the documentation is to help draw some inferences about older peoples' need for health services that a geriatric care model should take into account. Needs are also inferred from demographic and socioeconomic characteristics of the group and trends in their use of and expenditures for medical services. Of course, current use of, and expenditures for medical services by elderly people do not directly reflect their current need nor do they necessarily represent appropriate use however we chose to define "appropriate". None-the-less, information on use of health services does provide some information on who is and

who is not getting services, what those services are, and what illnesses and conditions are being treated in the elderly population.

All of the measures related to health care needs (demographics, health status, health care use, and socioeconomic conditions) provide evidence for both the generalized impact of aging and the continued diversity of the elderly population. For example, the common assumption that with aging comes declining health and with declining health comes declining functional ability can be rather easily supported. Thus, the average number of days restricted activity due to acute and chronic conditions for the non-institutionalized population of persons 65 years of age and older is 31 days per year compared to 13 days for those under 65. Further, 17 percent of the 65 and over age group are hospitalized at least once during the year compared to 7 percent of those under 65. (Adams & Benson 1990). However, these same measures of health need point up the heterogeneity of older people as well. For example, 83 percent of those 65 and over have no hospitalizations in a given year, 62 percent report no activity limitations due to chronic conditions, 14 percent have no physician contact within a year, and 4 percent have actually not seen a doctor in five years. (Adams and Benson 1990). This chapter will emphasize this diversity of seniors in terms of health and functional status, socioeconomic status and utilization of health care services. It will also raise questions about how treatment as well as prevention, screening and education programs for elderly people might be responsive to this diversity.

DEMOGRAPHIC IMPERATIVES

Much of the sickness and chronicity of older people is associated with aging after reaching 65 years of age. Plans for service must take into account much greater prevalence of disabling conditions for those, for example, 85 and over. Further, the number of people in that oldest group is increasing much more rapidly than the rest of the population, or indeed the "younger" old population. Between 1990 and 2000 the 85 and over group will increase by 42 percent compared to 7 percent for the population as a whole. In 1990, 9.7 percent of the elderly (65 plus) were 85 or older. By 2000, this will have increased to 12.5 percent and by 2040 to 18 percent. This growth in the very old population portends the need for models and structures of service to provide care for them and for the development of a policy to address the related issues of health care, finance, education and research for the burgeoning older old population (US Dept. of Commerce).

Another demographic characteristic of great import is the increasing number of very old women. Elderly women 85 and older will increase by 41.3 percent between 1990 and 2000, and by 252.4 percent between 1990 and 2040. Thus, by 2040 there will be 8,233,000 women 85 and over (US Dept. of Commerce). The projected increase in the number of very old women suggests there will be many more women widowed and living alone. For people with even moderate functional impairments, this kind of isolation can lead to neglect of health and health care, for many reasons. Isolation breeds depression, a common disorder in the elderly population, which can lead to other medical problems and to death. People who are isolated, particularly the poor, may forego routine or non-emergency care because of lack of readily available transportation. Indeed, transportation may be one of the major determinants of health care utilization by elderly persons, and one of the major limiting factors in access to health care for frail elderly women living alone. (cite Commonwealth study)

Similar problems will apply to men 85 and over, whose numbers will increase with the general increase in life expectancy (from 918,000 in 1990 to 4,017,000 in 2040), but the number of women continues to be much greater. In part, this is because women living longer than men and are more likely to be present in the family to provide support to men but will, themselves, be left without such support after their partner dies.

Changes in overall family composition are also important components of the assessment of the implications of an increasingly aged population. Married people generally appear healthier than either divorced or widowed people. The evidence is not conclusive that health status is significantly influenced by other family demographics such as number of siblings, adult children, grandchildren, and other relatives, but for practical planning purposes it is not unreasonable to expect so. As important as the number of relatives is their "closeness", both emotional and geographic. This constitutes part of the social support system, which clearly can help improve or maintain functional level in an older person regardless of the list of diseases from which the person suffers. In this way functional status is dependent not only on morbidity but also on the availability of certain social resources. In some communities, friends, neighbors or religious affiliate groups provide this kind of support. Thus marital patterns, number of children, other family factors, and social networks affect the resources available to assist with the infirmities of old age, and access to health care. Geriatric health care planning must understand and take advantage of this support, or substitute for it, in providing services to the elderly population.

HEALTH STATUS

There is no single generally accepted measure of health status. Life expectancy and mortality rates capture only the end of the spectrum. Several other measures of morbidity are useful in detecting the health of elderly people: self assessment of health, prevalence of specific chronic conditions, limitation of activities due to chronic conditions, and dependence on others to carry out activities of daily living.

Self-assessments of health capture general feelings of healthiness, regardless of clinical signs, and this measure is a good forecaster of mortality and morbidity (Mossey and Shapiro 1982). Having chronic illnesses or being limited by such conditions is a measure sensitive to moderate levels of disability. Requiring assistance with basic activities of daily living appears only in those with the greatest long-term medical needs.

Death

The reduction in death rates among the aged in the United States has been virtually without precedent. Most of the decrease in mortality is attributable to the substantial declines in death from heart disease and cerebrovascular disease. From 1950 to 1989, the mortality rate for heart disease, the leading cause of death for the aged, dropped by ___ percent, and that for cerebrovascular disease by ___ percent. The decline in deaths from heart disease alone accounted for ___ percent of the overall decline in mortality rates for the aged between 1950 and 1989 ().

Causes of death remain far and away the "chronic degenerative diseases of modern civilization": heart disease, stroke and cancer. While these three diseases accounted for more than 75 percent of the deaths in the over 65 age group, they are also not only fatal diseases but also chronic diseases. With modern treatments, death can be forestalled for years or even decades so that a patient lives with chronic heart failure or angina, or the residual effects of a stroke, or a malignancy kept under check by periodic treatments of one sort or another.

There is considerable dispute about what will happen to the mortality rates of elderly people in future years. Death rates from heart disease and strokes are expected to continue to decline, although at a somewhat slower rate than during the last 10 years. The mortality rate from cancer is expected to continue to rise in the absence of any major breakthrough in the prevention or treatment of its various forms. At advanced ages, people will remain at risk for many diseases and geriatric care must respond to this array of problems.

Chronic Diseases and Disability

The spectrum of diseases experienced by old people is encompassed under the rubric of chronic illness. Some of these are diseases that lead to death and some aren't. If people do not die or at least do not die in their early stages from heart attacks, strokes, or cancer, they have a greater chance of getting one of the progressive neurological diseases (Alzheimer's disease, Parkinson's diseases, etc.) and/or musculoskeletal infirmities (osteoarthritis, osteoporosis and fractures). The leading chronic conditions ranked by the percentage of elderly people whose activity is limited by them are heart disease (8.0 percent), arthritis and chronic rheumatism (7.6 percent), senility (3.0 percent), impairments of lower extremities and hips (2.0 percent), and hypertensive diseases (2.0). Other chronic conditions among elderly people include emphysema, arteriosclerosis and other chronic disease of the circulatory system, cerebrovascular disease, impairments of the back and spine, and diabetes.

In looking at disease prevalence it is, again, useful to distinguish the "young old" (65-74) from the "middle old" (75-84) and "old old" (85+). For example, dementia or Alzheimer's disease is not listed in most national health surveys, but with an incidence of fully 20 percent over the age of 80, it is obviously a major chronic illness causing much disability in this group. The ability of an older person to function in his or her daily activities is dependent on no more than moderate levels of disability and medical needs. Disabilities are often linked to the presence of chronic conditions. Disability due to chronic conditions has been measured in several ways. The most common method is to ask people to report the number of their "restricted activity days". "Bed disability days" is a component of "restricted activity days" and measures the times when a person was confined to bed because of illness or injury. "Limitation of main activity" indicates ability or inability to carry out what people deem they should be doing for their particular age and life status. In the Framingham Study and in the Branch and Jette studies in Massachusetts, people over the age of 65 were found to have an average of 4-1/2 chronic diseases per person. Still, the majority (58 percent) of those 75 and over and 63 percent of those 65 to 74 in the national health survey report they are not limited in activity because of chronic conditions. Why are so many older people with multiple chronic illness not limited in activities? Some may be less likely to adopt the "disabled role" than others with a given level of severity of illness. Thus, many older people perceive that they can cope with their physical problems

and, in fact, do cope and adjust to their impairment to maintain usual social activities. These positive perceptions and coping skills should be explicitly acknowledged and reinforced in a geriatric care program.

However, part of the difference in older people's functional ability is undoubtedly related to the nature and severity of the chronic illnesses experienced. We know that about 1/10 of people 65 and over report they are unable to carry on any major activity because of their chronic illnesses and the disorders that cause the greatest disability are those that result in immobility or problems with movement. These include arthritis, fractures, or stroke and disorders causing impairment of mental function such as dementia and stroke.

As these limitations become more severe, increasing numbers of older persons become residents of nursing and personal care homes. Certainly, a major component of comprehensive geriatric care is to the patient and family in making decisions about the transition. The model also includes provision of primary care to the institutionalized older adult.

In 1985, 5 percent of persons 65 and over resided in these institutions. The rates varied from 12/1000 for people 65 to 74 up to 220/1000 or one/fifth of people 85 and over. Among nursing home residents functional limitation is considerable. Seventy-eight percent require assistance dressing, 63 percent require assistance using the toilet, 40 percent require assistance eating and 55 percent have difficulty controlling bowel or bladder or have an ostomy in either bowel or bladder (Hing et al 1990).

In sum, nearly all the 1.3 million aged people in nursing homes have some limitations in their ability to carry out the basic activities of daily living. Some of the aged population outside nursing homes (particularly the old-old) also require assistance with one or more of the activities of daily living. Thirty-nine percent of those over 84 needed help in one or more activities, compared with 16 percent of those aged 75-84 and 7 percent of those aged 65-74 (Kovar 1983). If the average prevalence of disabling conditions remains the same, growth in the aged population suggests that there will be a major increase in the number of people with chronic conditions limiting functional ability. For people not in nursing homes, the number with arthritis should increase from 11 million in 1979 to 14 million in 2000, with hypertension from 10 million to _____, and with hearing impairments from 7 million to 9 million.

The assumption that disability prevalence rates by age and sex cohort will stay constant over time is, however, controversial (Liu, Manton and Alliston 1983). Kramer and Gruenberg (1980) argue that the seriously disabled or chronically ill are now living longer because of the success of technical innovations used in disease control. Therefore, the prevalence rate of disabling and chronic conditions will increase. Swedish studies have found some improvement in the health status of people in their seventies (Svanborg 1981). Thus geriatric care must be prepared for the probability that severity of chronic illness will increase but strive toward the possibility of actually reversing the trend and improving health status in some elderly patients.

Self-assessments of Health

Self-assessments of health, while subjective, sometimes tell us more about the capacities and prognosis of elderly people than do the more objective measures. Studies in Manitoba found that self-assessment was a better predictor of subsequent mortality than clinical determinations of health status (Mossey and Shapiro 1982). Perceived discomfort is a subjective gauge of the elder person's health status based almost entirely on self perception. Thirty-one percent of those 65 and over in the National Health Survey report their health as fair or poor compared to 10 percent of the population as a whole.

Even though there is more perceived discomfort according to this common measure among older persons, seven of ten still report their health as good to excellent. Institutionalization rates increase with age. Only those not living in institutions are included in surveys on perceived health status, yet respondents may compare themselves to all their contemporaries, including those who are the sickest and in nursing homes. The amount of pain or worry people experience because of their health does increase with age. A national survey conducted in the early 1980's found about 30 percent of the people under 55 reporting their health had caused worry compared to almost 1/2 of those 55 and over (Andersen et al).

Dissatisfaction is a more generalized assessment of health and well being. Data from the periodic general social survey conducted by NORC at the University of Chicago shows that the proportion of persons 65 and over reporting themselves and generally "not too happy" was 12 percent - almost the same as those under 65 -- 11 percent. Further, if we look specifically at satisfaction with medical care, we generally find the older person more satisfied.

A recent national study showed about 1/4 of people under 65 not completely satisfied with their most recent medical visit while only about 13 percent of those 65 and over were not completely satisfied (Andersen et al).

Thus, while the older persons are in worse health on average by most measures, they are not necessarily less satisfied with the general life situation and show high levels of satisfaction with the care they get. Whether so many should be satisfied with the care they get using external criteria to judge quality of care is a different matter. The generally positive attitude of the elderly and their appreciation for the care they receive is certainly an important attribute in planning and providing their medical care.

DIFFERENCES IN HEALTH BY INCOME, RACE AND RESIDENCE

The prevalence of disability and activity restriction among elderly people, and the rest of the population as well, is greater for people with lower incomes, minorities, and rural residents (Paring et al. 1979). Older blacks report more disability than older whites, although a much lower proportion of them than whites are in nursing homes. The rural elderly report more chronic disabilities than aged residents of urban areas (Butler and Newacheck 1982).

Over 40 percent of elderly whites below the poverty level report fair or poor health, twice that of their upper income counterparts. Nearly half the elderly black people with incomes below the poverty level report fair or poor health. Even among more affluent elderly black people, nearly one third describe their health as fair or poor.

Minority elderly people were more likely to live in poverty than whites: 39 percent of blacks and 26 percent of Hispanics, compared with 13 percent of whites. Of older people who live alone, 30 percent live in poverty, compared with 8 percent of those living in families. Older women without a spouse are especially disadvantaged. One third of those living alone are in poverty (Census 1983).

Recent demographic trends will put more older people at risk of poverty. Increasing proportions will be minorities, and the rising divorce rate could substantially increase the number of impoverished women. Thus, geriatric care will be challenges not only by increasing numbers of older people, but also by increasing proportions who may have problems in meeting the costs of the care they need.

Loss of functional independence accompanied by lack of support from close family members greatly increases the health and long term needs of the aged. Twenty percent of nursing home residents have no living relatives, and over 85 percent are widowed, unmarried, or divorced (Callahan et al. 1980).

While minority and rural elderly people are clearly more likely to have limited financial resources, their family resources may be a major source of support. They are less likely to be in nursing homes, in part, due to inability to pay. However, their culture and family structures may also lead to assistance from family and friends that helps them to maintain independent living. All resources of elderly people (including financial and family) should be assessed and incorporated into their care plans.

USE OF MEDICAL CARE AND LONG-TERM CARE SERVICES

Use of nursing home care, for example, increases sharply for people 75 and over. Use of hospitals also increases, but less sharply. Use of ambulatory care through physicians rises only slightly with age. Elderly women are far more likely to be hospitalized. The rate of visits to physicians is similar for men and women (Pokras et al 1989).

Physicians' Services

Older persons 65 to 74 average 8.2 contacts with physicians per year and those 75 and over average almost ten contacts with physicians. This compares with about 6 contacts per person for those 45 to 64 and 5 for those 25 to 44. About 86 percent elderly non-institutionalized people have at least one contact with a physician during the year (Adams and Benson 1990, 115). Utilization of physician services by older persons varies by health status. Among those with poor health, one-third of those without limitations and one-half of those with limited activity have 6 or more physician visits annually (Kovar 1983).

Older people receive the majority of their ambulatory care in physicians' offices: 62 percent of visits, compared with 14 percent in emergency rooms and hospital outpatient departments. Telephone calls account for approximately 10 percent of the contact, and home services and other care settings for another 16 percent (Health US 1989, 178).

The average number of physician contacts for persons 65 and over has been increasing in recent years. Between 1983 and 1989, the average number of physician contacts for persons 65 and over increased from 5.1 to

5.4 over this 6 year period (Health USA 1989, 138; Adams and Benson 1990, 116). Time per physician encounter is especially important for older patients because of their complex health problems. Between 1980 and 1985 the proportion of office visits to physicians that lasted ten minutes or less declined from 47.3 percent to 42.6 percent. For persons 65 to 74, the proportion declined from 38.0 percent to 34.6 percent. However for those 75 and over the proportion of visits lasting 10 minutes or less actually increased from 1980 to 1985 from 35.1 percent to 36.9 percent (Health USA 1989, 181).

Hospital Services

The average number of days of hospital care each year per person 65 and over are almost seven times those for non-aged people. Although people 75 or older represented only 5 percent of the population in 1985, they accounted for almost more than one-fifth of the days spent in community hospitals (Adams and Benson 1990, 127).

Serious conditions in the aged, are more commonly chronic conditions that require ongoing medical attention. The most common ailments for which elderly people are hospitalized are: heart disease, digestive diseases, neoplasms, cerebrovascular disease, fractures (women), and hyperplasia of prostate (men) (NCHS 1983). Accidents are also a major cause of hospitalization.

The use of hospital inpatient services by the older population has undergone dramatic shifts in the last 25 years due to changes in financing and medical technology. In the period just prior to the enactment of Medicare--1963 to 1965--hospital usage by the elderly was not so markedly different from that of people 45 to 64. Discharge rates were 18.6 per 100 persons per year for those 65 and over compared to 14.8 for those 45 to 64 (Gleason 25) average lengths of stay was 12.7 days for older people compared to 11.0 for the younger group 45 to 64. Following the enactment of Medicare in 1965 both discharge rate and length increased considerably for older persons but charged relatively little for those 45-64 by 1968-69. The discharge rate for the elderly had increased to 23.3 and their average length of stay was 15.3 days (Namely and Wilson 22). Further, the relative increase in the 1963 to 1969 period was considerably greater than those 75 and over than for those 65 to 74. Discharge rates for 75 and over group increased by 39 percent to 27.2 while the increase for those 65 to 74 was 15 percent to 20.9 discharges per 100 persons per year. Further, the average length of stay for the older old reached 16.4 days in 1969 an

increase of 29 percent since 1963-65--while the length of stay for those 65-74 reached 14.5 days--an increase of 15 percent.

Discharge rates continued to increase for older persons throughout the 1970's reaching 27.7 in 1980 (National Center for Health Statistics 1982, 103). However, length of stay dropped by more than one-third during this period (from 15.3 in 1968-69 to 10.0 in 1980). This was a period of increased concern about costs associated with more vigorous utilization review activities by the professional review organizations. It was also a period of rapid increases in surgical procedures for the elderly (Drake, 1978). Some of those procedures such as cataract operations have relatively short lengths of stay. This emphasis on surgical intervention for older people is unique to the United States. Coronary by pass surgery, cataract surgery and hip replacements are performed at a substantially greater rate in the United States than in other developed countries.

In 1983 diagnostic related groups (DRG's) were introduced as the payment mechanism for Medicare. This prospective payment approach did appear to be associated with an increase in admission rates for the elderly from 26.8 in 1983 (National Center for Health Statistics 1985, 93) to 31.8 in 1984 (National Center for Health Statistics 1989, 183) and a continued decline in length of stay to 8.3 in 1987 (National Center for health Statistics 1988, 111). Also, the differentiation in length of stay was virtually eliminated by 1985 (8.3 days for those 75 and over vs 8.2 days for those 65-74) (National Center for Health Statistics 1989, 111).

After 1984, discharge rates began to drop as well as length of stay for older people. Part of this decline can be attributed to increased performance of surgical and other procedures on an outpatient basis. Thus, for example, as cataract surgery was more routinely performed on an outpatient basis, inpatient lens extraction for males 65 and over declined by 80 percent from 1980 to 1988 (National Center for Health Statistics 1990, 111; Adams and Benson 127). However, in the most recent time period there have been increases in both admission rates and length of stay (possibly because, on average, people who are being admitted to the hospital are sicker). Thus, between 1987 and 1989 discharge rates rose from 25.6 to 27.0 and length of stay from 8.3 to 8.9 days (National Center for Health Statistics 1989, 111; Adams and Benson 1990, 127).

Hospital patient days for the aged population are expected to reach 273 million in 2000 - almost tripling this group's use of hospital care in just 20 years. The proportion of all hospital patient days accounted for by people

age 65 and over is expected to increase to well over one-half of total hospital days by 2000 (K. Davis 1983).

A SUMMARY OF NEEDS

The needs of elderly people for health services are diverse. As people reach age 65 and beyond they become increasingly fragile and vulnerable to chronic illness, disability, and ultimately death. Still, at any point in time the majority of older persons are relatively active, vigorous and free from debilitating illness. The majority have a positive view of their own health. Older people deserve a health care model which seeks to monitor and protect their health, prevent the onset of chronicity, effectively treat short term acute illness, forestall the physical and mental decline associated with chronic illness and provide comfort and relief and assist in the development of coping abilities for those with serious chronic problems.

Medical and social needs merge progressively as people age. To fit these needs, a geriatric care model should be comprehensive, recognizing the importance and potential barriers to better health status of what people eat, the safety and comfort of their home and community, how they exercise, what means of transportation are available to them, available financial resources, and degree of support from relatives, friends and neighbors. A comprehensive model must assess the deficits in medical and social services of elderly patients relative to their needs. Subsequent steps are to seek out and coordinate available and appropriate social and medical services to reduce that deficit.

Needs of older people also vary according to income, ethnicity, and residential location. In general, poor, minority and rural elderly people are sicker and have greater needs. Further, they often have special difficulties in obtaining services. However, these groups may also have special resources to draw upon such as strong cultural beliefs concerning support of elderly people, extended family and community ties, and eligibility for targeted health and welfare programs. A comprehensive model strives to recognize and adjust to special vulnerabilities and resources of various socioeconomic groups.

Use of medical services by elderly people is much greater than for the rest of the population and continues to expand. Potential barriers to care may be created by cuts in Medicaid and increasing coinsurance and deductibles for Medicare. Geriatric care planning should recognize these barriers. Possibly even more important than the access issue, however, is the mix of medical services provided. Services for elderly people increasingly emphasize

tertiary, high technology and institutionalized services. While these services are often necessary and beneficial; they are always expensive, sometimes unnecessary and occasionally harmful to overall patient welfare. A comprehensive program for elderly people which puts more emphasis on patient education, prevention, primary care, home care and monitoring and control of chronic conditions has obvious potential for improved patient welfare and cost containment.

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Chapter II

Models of Health Care Their Fit with the Needs of the Older Patient

Most Americans receive the majority of their health care in the ambulatory clinic setting (Rabin 1980). The numbers of physician visits by older persons continues to grow both because the elderly constitute a larger percentage of the population and use disproportionately more health care services. According to data from the National Ambulatory Medical Care Survey (NAMCS) in 1985, individuals age 65 years and older who comprise about 11% of the population made 20.5% of all outpatient visits, a total of 130,538,000 visits that year (McLemore 1987). The projected increases in numbers of ambulatory visits according to age group for the years 1980 to 2040 are shown in Table 1. The anticipated percent increase in visits for individuals 65 years of age and older will be almost 6 times those less than 65 years. The greatest percent increase will be among individuals 75 years of age and older.

Ambulatory care is provided to older persons in an array of different settings by physicians whose training is not uniform and whose interests are diverse. The settings range from the private office of a physician in solo practice to the hectic emergency department of a major tertiary care medical center. Some physicians providing primary care to older persons have completed one year of post-graduate training, and others have had five or more years of residency and fellowship training and are

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board certified in a sub-specialty field. The reasons an individual patient is linked to a particular physician in a particular setting are complex. Some of the factors which influence the selection of a physician and health care setting are: the availability of options, convenience, ability to pay, level of illness and personal preferences. This chapter will review the settings where health care is provided to older Americans and the characteristics of the physicians who provide the care. Patient characteristics, utilization rates and reasons for selecting specific health care settings will be discussed. Measures of quality of care and patient satisfaction with services in selected ambulatory care settings will also be reviewed.

Settings for primary medical care of older persons

The physician-patient transaction which is at the core of health care delivery takes place in a wide variety of settings. The five practice settings where most elderly patients receive their care are: the private office or clinic, the hospital outpatient department (OPD), the hospital emergency room (ER), the community clinic and the health maintenance organization. Table 2 shows the percent distribution of these settings reported by elderly individuals as the setting where they last saw a physician. These data are based on the 1986 Robert Wood Johnson

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National Access Study, a national telephone survey of the U.S. population (?RWJ 1986). It is evident that the great majority of visits by older Americans (about 80%) take place in a private office or clinic. Only about 10% of physician visits by older persons are to hospital outpatient departments or emergency rooms. Visits to community clinics (6%) and health maintenance organizations (4%) account for a relatively small proportion of all visits by older persons.

The National Medical Expenditure Survey of households in the United States collected information on the settings people reported as their usual source of medical care (?NMES). The data were collected in 1987-1988 from a sample of the non-institutionalized population of the United States. The distribution of practice settings reported as "usual source of care" is shown in Table 3. Again, the great majority of older persons report being seen in a doctor's office or clinic. Compared to all other age groups, persons 75 years of age and older are most likely to receive health care services in an office or clinic and least likely to regularly receive such services in a hospital emergency room. Older persons are less likely than adults younger than 65 years of age to have no usual source of care.

The Doctor's Office or Clinic

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On the basis of results from a national sample of physicians primarily involved in patient care, 50.9% are in solo practice, 17.8% in a partnership and 31.3% in other settings (McLemore 1987). The observation that the most common practice setting is an office or clinic staffed by one or two physicians provides little information about important specific characteristics of the practice. The organization and administration of the practice combined with attributes of the physicians who work there can influence access to care, continuity, health promotion/disease prevention activities, patient satisfaction and cost of care. A primary care solo practice or partnership may be closely affiliated with physicians in specialty practice; patients would, therefore, have ready access to a larger range of services. Alternatively, small primary care offices could be in more remote areas with fewer specialty consultants and hospital resources available to patients. In some urban settings, it is common for older persons to see a series of specialty physicians in their private offices. Each physician provides care in the area of her/his expertise. In contrast, in medically underserved areas, the private office may be that of a busy general practitioner who does not have subspecialty consultation or advanced medical technology readily available to her/him.

Similarly, a "doctors' clinic" can be anything from a huge multispecialty group practices' like the Mayo Clinic to an office

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staffed by a general practitioner, a pediatrician and a general surgeon. The diversity of practice settings within the category of "doctor's office or clinic" makes it difficult to generalize about potential advantages and disadvantages. However, if the older person has a personal physician, there is at least the potential for an emphasis on continuity of care and a close patient-physician relationship. If the private physician has a primary care orientation, it is likely that the patient will receive comprehensive health care services with an emphasis on disease prevention and health promotion. According to a study of people of all ages living in Washington, D.C., those cared for in fee for service solo practice offices or clinics tend to be well educated, have a favorable economic status, see their physicians frequently and be very satisfied with their care (Dutton DB, 1979). The Norwood-Montefiore Aging Study followed 1855 patients 65 years of age or older living in the Bronx (Kelman HR, 1988). Those cared for in private or group practices were better educated, more affluent, and used fewer health care services than the patients followed in hospital based clinics.

The Hospital Outpatient Department

Fewer than 5% of older persons report a hospital outpatient department as their usual site of health care, and about 10% report the hospital OPD as the site of their last doctor visit (RWJ 1986). Hospitals which support active outpatient

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departments are most often teaching centers which also provide secondary and tertiary inpatient care. A potential advantage of this setting, then, is the opportunity for continuous care through various stages of health and functional status. Routine care, including preventive and health maintenance measures, can be delivered in the outpatient setting, and if specialized care becomes necessary, it is available in the same setting. Coordination of this care by one primary physician is desirable but is often not possible over the long term in a teaching medical center because of the exigencies of medical training. Physicians-in-training commonly provide medical care in the outpatient departments of teaching hospitals. These physicians often rotate among various services and specialties so that their relationships with patients may be brief. The responsibility for the individual patient is often shared by physicians at different levels of training and among physicians with different subspecialty interests. The shared responsibility for patient care and the ready access to specialty consultation may limit physician concern for the "whole patient." This is particularly hazardous in the elderly who may have multiple interacting illnesses and for whom functional rather than pathophysiologic outcomes may be paramount.

The care delivered in hospital outpatient clinics tends to be more expensive than that delivered in other settings. At

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least two important factors contribute to these high costs. First, physicians providing ambulatory care in the clinics are the same physicians providing elaborate tertiary care to patients on the hospital wards. They are familiar with and have ready access to expensive technology which is so commonly used in the inpatient setting. This emphasis on medical care involving elaborate and expensive technology often extends into the outpatient setting. Second, the costs of providing primary care in medical centers is inflated due to the expenses associated with caring for sicker patients and the those necessary to educate physicians-in-training. Patients seen in hospital clinics tend to be less well educated, have a lower socioeconomic status, have less frequent follow-up visits and to be less satisfied with their care than patients seen in fee for service private settings (Dutton DB, 1979).

Hospital Emergency Rooms

Hospital emergency rooms are the primary site of health care for fewer than 1% of the elderly population. The only potential advantage to an emergency room is that patients know that it is always accessible. There are several disadvantages including lack of preventive and comprehensive orientation, lack of continuity and the expense of care.

Community Clinics and Health Centers

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Community clinics account for about 5-6% of physician visits by the elderly (RWJ 1986). It is likely that this setting refers to public health clinics often funded by local and federal government agencies. These clinics tend to service the poorest segment of the population and are frequently located in urban areas. Physicians who choose to work in these clinics are usually committed to the concepts of primary care and emphasize close patient-physician relationships, continuous and comprehensive care. There may be limited referral opportunities and lack of access to tertiary care facilities for some patients seen in community clinics. However, to the extent that limited access to specialty care is due to inability to pay, older persons cared for in community clinics should have fewer problems because of Medicare benefits. Frequency of follow-up visits and patient satisfaction with care are comparable to those of patients seen in hospital outpatient departments and emergency rooms (Dutton DB, 1979).

Health Maintenance Organizations

Medicare beneficiaries are generally underrepresented in HMO's. This is partly due to the fact that early in its development, the health maintenance organization market targeted large employers and generally healthier individuals (Feinson MC, 1988). Managed care alternatives are attractive because of their emphasis on prevention, continuity and ambulatory care; an

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attempt is made to substitute less expensive outpatient care for traditionally expensive inpatient care. Through the Tax Equity and Fiscal Responsibility Act of 1982 and additional regulations in 1985, the government has attempted to remove financial disincentives for Medicare beneficiaries to participate in HMO's. In 1985, between 3% and 4% of Medicare recipients received care through health maintenance organizations, by 1987, the percentage had risen to 5.5% (Feinson MC, 1988). There are now over 1 million older Americans enrolled in HMO's.

The expectations of cost savings through managed care have not always been realized. Especially in the first year of service, the frequency of visits has been observed to increase in all prepaid plans, and this increase is exaggerated in the elderly (Langwell KM, 1990; Gillick MR, 1987). An increase in utilization may suggest improved quality of care for the elderly: the recognition of previously undiagnosed and treatable conditions. The use of hospital and ambulatory services is not uniform within the various types of pre-paid health plans. Results from the Norwood-Montefiore Aging Study, a prospective cohort study of 1855 older persons living in the Bronx, suggest that length of hospital stay is markedly less for patients enrolled in a preferred provider organization compared to those of patients followed in fee-for-service practices, or network or hospital-based health maintenance organizations (Thomas C, 1990).

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In contrast, ambulatory care rates were greatest in the network HMO compared to the other three health care delivery systems.

Despite their high disenrollment rate, older persons are generally satisfied with the care they receive in HMO's (Rossiter LF, 1989). Compared to older patients receiving fee for service care, HMO enrollees expressed more concern about the competence of the health care providers and their willingness to take the time to discuss problems. On the other hand, they were more satisfied about waiting times to see their physician and the billing process. A recent survey found that physicians in staff/group type HMO's more consistently use preventive health measures among older persons than do their counterparts in individual practice associations and fee for service practices (Retchin SM, 1990).

The Veterans Administration Programs

The number of older veterans is expected to increase from about 6 million in 1987 to a peak of 8.9 million in 1999 (Hollingsworth 1990). Only about 10% of veterans use the VA health care system so that relatively few older Americans take advantage of its benefits. The VA health care system was at the forefront of understanding the clinical challenge posed by the demographic transformation. The dramatic increases in numbers of older people will occur in the veteran's population earlier than in the general population: the World War II veterans precede the

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"baby boomers" by a generation. In response to the growing needs, the VA developed some of the most important early programs in geriatric training, research and clinical care. The Geriatric Research, Education and Clinical Centers (GRECC) were established at 15 sites throughout the country; in addition, a number of specialized fellowship training programs were developed.

The VA clinical programs have several important characteristics. Most prominently, many VA centers cared for a defined population so that they were able to develop coherent care systems with continuity and coordinated care. Within the outpatients clinics, veterans could be seen by geriatric specialists and followed with all of their multiple problem care coordinated by that physician.

The VA clinics foster a multidisciplinary approach even so far as to develop training programs in which different health care disciplines train together. Rehabilitation specialists, in particular, were easily available to the VA patients and their doctors. The emphasis on multidisciplinary evaluation within the VA led to studies of multidisciplinary consultation and inpatient services. One of these studies demonstrated dramatically improved outcomes among patients who received post-acute hospitalization care in a geriatric evaluation unit (Rubenstein 1983). Interest in this approach to hospital care led to programs throughout the country both within and outside the VA

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system. Thus far, there have been no studies with such dramatic results as the original geriatric evaluation unit. However, of interest is the current controversy about the degree to which outpatient follow-up after the hospitalization is a key contributor to the positive outcomes. A recent study of geriatric outpatient consultation demonstrated no significant difference between the study and control groups (Epstein 1990). Thus, it appears that continuity and comprehensiveness of care are essential elements in the geriatric care model; one or more consultation visits with return to a usual care setting will not achieve this.

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The physicians who provide health care to the elderly

As shown in Table 4, the results from the National Ambulatory Care Survey of 1985 indicate that about half the office visits made by older persons are to physicians who traditionally have a primary care orientation: general practitioners, family practitioners and general internists. Between 10% and 20% of visits are to ophthalmologists and fewer than 5% of visits are to the listed surgical, medical and psychiatric subspecialists. An additional 10% to 15% of visits are to specialists not included in the table. The very small number of visits to geriatricians is notable. These data were collected prior to the first Geriatric Medicine Certifying Examination in 1988. It has been estimated that by the mid-1990's there will be approximately 5,000 board certified geriatricians in this country, about half the projected need for the year 2000 (Reuben DB, 1990; Committee on Leadership for Academic Geriatric Medicine, 1987).

There are attributes common to most generalists or primary care physicians which affect the type of care they provide. They have been allocated the role of gate-keeper and, thereby, assume responsibility for coordinating the overall care to patients. They exert considerable control over health care resource utilization, such as referrals to other physicians, preventive health measures, admissions to hospital and diagnostic and

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therapeutic maneuvers. There is accumulating evidence that generalists with a primary care orientation may not provide optimal care for the complex geriatric patient (Lowther CP, 1970; Tulloch AH, 1979; Brocklehurst JC, 197; Reifler BV, 1980). Special skills are often required to recognize and manage common geriatric syndromes such as confusion, incontinence, falls, isolation and dysmobility. Failure to recognize these problems can result in suboptimal diagnostic and therapeutic intervention leading to poor patient outcomes. The lack of expertise in managing common geriatric syndromes commonly leads to increased referrals, diagnostic tests and hospitalizations.

Subspecialists in both medical and non-medical fields provide a substantial proportion of care to the elderly. The advantage of subspecialists is the state of the art care they provide in their field of expertise. Problems such as cataracts, glaucoma, macular degeneration, presbycusis, hip fractures, prostate disease and arthritis are prevalent in the elderly, and management of these conditions often requires the skill of a specialist. In addition to the previously mentioned lack of training in common geriatric syndromes, care provided solely by specialists has other disadvantages for the older person. Specifically, because of their relatively limited field of interest, specialists may tend to neglect some preventive health measures and refer patients to other specialists for care as new

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problems, outside their area of expertise, arise. This fragmentation and lack of continuity of health care can be particularly detrimental to the elderly. Problems arise when multiple providers prescribe medications without careful consideration of the patient's complete drug regimen. The elderly are at increased risk for adverse reactions to medications, including drug-drug interactions.

Early Geriatric Care Models

As previously noted, geriatricians, physicians who are board certified in either family practice or internal medicine and who have passed a qualifying examination in geriatric medicine, provide care to a very limited number of older Americans. The model of care espoused by many geriatricians is now referred to as geriatric assessment and has features specifically designed to meet the special health care needs of the elderly. In particular, geriatric assessment regularly involves a coordinated interdisciplinary approach by multiple health care professionals: physician, social worker, nurse, nutritionist and therapists are frequently involved in assessing and caring for the older patient. This team of professionals addresses an array of problems which extends beyond the physical health problems to encompass psychological, social and functional problems. The team plays an important role as advocate for the patient seeking special services from the health care system or from community

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social service organizations. Considerable attention is focussed on preventive measures and on efforts to preserve or recover functional abilities.

The benefits of this model of geriatric care are still to be proven in this country, though there are promising results from early studies. In a controlled trial of an ambulatory geriatric unit in England, there was a significant increase in the number of diagnoses made, and the majority of the newly uncovered problems were ones for which management interventions were possible (Tulloch AH, 1979). The investigators also report increased use of social and ambulatory health care services and a reduction in total hospital days among patients enrolled in the geriatric assessment program. In this country, a study of an ambulatory geriatric assessment unit documented significant reductions in health care costs compared to a usual care clinic (William ME, 1987). The reduction in annual hospital costs for patients in the assessment group was largely responsible for this finding. It is important to note that when the ambulatory assessment was tested as a consultative service in a health maintenance organization, health status of patients was not significantly affected (Epstein AM, 1990). Limited follow-up by the geriatricians and inadequate targeting of the service were suggested as the likely reasons for failure to demonstrate a benefit. Uncontrolled studies of ambulatory geriatric assessment

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units have claimed enhanced diagnostic accuracy, improved functional status of patients, and avoidance of unnecessary nursing home placement (Lowther CP, 1970; Brocklehurst JC, 1978; Reifler BV, 1980).

While more information about the potential benefits of geriatric assessment units needs to be gathered, there is evidence that this model of care is proliferating, at least among academic institutions in this country. A recent survey of American medical schools and Veterans Administration facilities identified 124 units, 71 outpatient and 53 inpatient (Epstein AM, 1987). To qualify as a geriatric assessment unit, the program had to offer interdisciplinary care to older persons through a team composed of at least one physician and one additional health practitioner. Only about 50% of the physicians in these units had special training in geriatrics. The number of ambulatory care units tripled between 1980 and 1985. The reported availability of activities in the outpatient units were: assessment in 95%, education in 92%, research in 79%, continuing care in 71%, acute care in 51% and rehabilitation in 46%. Respondents believed that their unit had an impact on patient care through education/counseling (94%), diagnosis of new treatable problems (90%), improved drug regimens (89%), optimizing social support services (89%) and arranging rehabilitation services (79%). Most respondents acknowledged

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that the time required to provide geriatric assessment generally exceeded the patient encounter time in traditional care. It was the impression of most respondents that compared to routine care, geriatric assessment was associated with increased patient satisfaction, prevention of nursing home placement and hospitalization, and improved or maintained physical, psychosocial and cognitive functioning. These impressions clearly need to be substantiated by controlled trials designed to evaluate the process and outcome of care in these diverse units.

Table 1 The increase in the numbers of ambulatory visits by elderly Americans

Numbers of Patient Visits to Physicians
According to the Patient's Age
(millions)

<u>Year</u>	<u>all ages</u>	<u>under 65</u>	<u>65-74</u>	<u>≥75</u>	<u>Total ≥65</u>
1980	1,102	936	100	66	166
2040	1,621	1,193	187	241	428
1980-2040 % increase	47.1	27.5	87.0	265.2	157.8

Table 2 Where older persons reported that their most recent medical care visit occurred
 RWJ National Access Study, 1986 (n=1,165)

Percentage of times respondents report selected practice settings as the site of their last doctor visit

<u>Age</u>	<u>Private MD/clinic</u>	<u>Hospital OPD</u>	<u>Hospital ER</u>	<u>Community clinic</u>	<u>HMO</u>
65-74 (n=804)	79.2	10.1	0.1	6.1	3.9
≥ 75 (n=361)	81.7	9.1	1.4	4.7	3.0
≥ 65	80.0	9.8	0.9	5.7	3.6

Table 3 Where the elderly go for their health care NMES survey, 1987-1988

Percentage of Times Respondants Report Selected Practice Settings
As Their Usual Source of Care

<u>Age</u>	<u>Doctor's Office/Clinic</u>	<u>Hospital OPD</u>	<u>Hospital ER</u>	<u>Health Center</u>	<u>HMO</u>	<u>Other</u>	<u>None</u>
0-17	76%	4%	0.8%	6%	1%	2%	10%
18-44	61%	4%	2%	4%	0.7%	3%	26%
45-64	75%	4%	0.7%	3%	0.7%	2%	15%
65-74	80%	4%	0.5%	2%	0.3%	2%	10%
75+	86%	4%	0.3%	2%	0.1%	1%	7%
Total	71%	4%	1%	4%	0.7%	1%	18%

Source: Unpublished data from the National Medical Care Expenditure Survey based on a sample size of 26,756. The percentages are weighted.

Table 4 Percentage of total physician visits by older persons according to specialty of the physician.
(National Ambulatory Care Survey 1985 *)

Specialty (# of visits)	Age Group			
	55-64 <u>75,043,808</u>	65-74 <u>75,426,965</u>	75-84 <u>45,626,303</u>	>85 <u>9,530,135</u>
General practice	17.1	15.5	14.3	18.0
Family practice	14.2	13.3	14.5	14.2
Internal medicine	16.9	22.2	22.0	22.5
Ophthalmology	7.9	11.1	16.3	18.1
General surgery	6.6	6.4	6.3	4.5
Dermatology	3.9	3.5	3.1	3.9
Urology	2.8	3.6	3.6	2.4
Orthopaedic surgery	5.7	3.5	3.2	2.6
Cardiology	3.8	3.9	3.9	3.1
Psychiatry	2.2	1.1	0.6	0.1
Geriatrics	0.03	0.02	0.03	-

* unpublished data from NCHS

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Chapter III

The Concept of the Comprehensive Model

As the Windermere Health Care Center was conceptualized and developed, certain fundamental principles were incorporated from the beginning. These included convenience, coordinated comprehensive care and communication. In the three years of its development, two concepts of continuity emerged in addition: one is continuity over time, a concept fundamental to primary care and to the doctor/patient relationship, and the other is continuous care over different sites of care, such as home care, nursing home and hospital-based care.

We offer the patient and family a choice between consultative geriatric assessment and primary care by a geriatric care team. Most geriatric outpatient settings in which multidisciplinary team assessment or evaluation was conducted had been developed on a consultant model. This was probably done for several reasons, among them to avoid turf wars with practicing physicians in the community worried that their patients would be stole from them, and because the inevitably small group of geriatric specialists did not want to become over-burdened with night and weekend coverage necessary for a primary care model. In the Windermere Health Center, we imagined we would be providing some consultative care, particularly for those patients who came from far away to receive a thorough evaluation with a report going back to their primary care physician. From the very beginning, however, very few patients expressed interest in this service and very few physicians referred their patients for this service. There are aspects to this observation that may be unique to the University of Chicago and South Chicago environment and others which undoubtedly are more generalizable. For example, even though in the first year we marketed to physicians and gave a number of presentations to physicians groups about the availability of this consultation service, there were very few physician initiated referrals. This replicates the experience of many other places where the concept of the geriatric consultation still remains difficult for most physicians in primary care practice to

understand. They think that they are already doing geriatric care since they care for so many elderly people. There is not an organ-based specialty or procedure which geriatricians offer, so it is hard to understand what special information might be forthcoming from a geriatric evaluation.

Secondly, the majority of the patients who came to us did not have a primary care physician and were delighted at the offer of comprehensive and continuous care. Others did have other physicians and were dissatisfied with those physicians and that is why they were seeking alternative care. These people did not want to return with an evaluation to their other doctor, but wanted to transfer their care to us.

Finally, this point perhaps somewhat unique to the full-time system at the University of Chicago, many university physicians caring for older patients, particularly specialists such as urologists, orthopedic surgeons, or even busy medical subspecialists welcomed the opportunity to refer their elderly patients who obviously had multiple and complex care needs to our continuing care. These physicians were not interested in providing that continuing care and did not see any professional or financial advantage to trying to do so.

Coordinated-Comprehensive Care: Fundamental to the Windermere was the core model of a multidisciplinary geriatric assessment which by 1986 had been widely touted throughout the country and studied in several different models. While there seemed a prima facie validity to the idea that older people with multiple chronic illnesses and complex socioeconomic as well as psychological problems affecting their health would need assessment and care from multiple disciplines and specialties, there was a good deal of controversy in the literature about the cost effectiveness of the multidisciplinary team concept. (Kane, others?) The size of such multidisciplinary teams varies from what most people consider the core team (physician, nurse and social worker) to expanded teams including multiple physician specialists (geriatric medicine, psychiatry, physiatry) as well

as the nurse, social worker, physical therapist, occupational therapist, speech therapist, psychologist, pharmacist and others (Cassel, et al., Geriatric Medicine). The team concept on which the Windermere was based was a streamlined one. We included physician geriatricians, a nurse clinical specialist who had a special focus on patient and family education, and a full-time social worker as the core team. Multiple other subspecialty health care providers would see patients at the Windermere during the week, but these providers did not work on a day-to-day basis in the team concept.

In recognition of the complexity of problems facing many older patients, one of our major priorities was to provide comprehensive care encompassing basic primary care, subspecialty care from head to foot (ophthalmology and dentistry to podiatry), support services for dealing with losses and stressful situations such as caregiving of a dependent family member, access to community services ranging from senior day centers to extensive in-home services and nursing home services). While this is not an HMO or PPO system in which patients are required to use our physicians and other health professionals for their care, we also made a commitment to communicate with providers from other health care systems if the patient wished to remain in the care of a person from another part of town, or to initiate care at one of the other locations because of a preference for an individual physician or because of a service that we did not offer. An example of this was rehabilitation. Our rehabilitation capability, at the University of Chicago, has been predominantly focused on inpatient and immediately post discharge physical therapy. There is no occupational therapy service offered and no physician rehabilitation specialists. Thus, we would use services from other institutions and remain in contact with those service providers to ensure optimum communication about the patient's prior medical history and to stay in touch with the patient's family. This resulted in excellent relationships with the physicians within the other systems and led to a high rate of return of those patients back into our system.

But even within our own system, patients going to multiple different specialists require coordination of that care and we were committed to providing that coordination. The administrative and clerical personnel who knew the patients well and who were often involved in helping them make appointments with other specialists would keep the primary care physician and nurse specialist informed about the patient's other medical appointments. The nurse specialist could then help the primary care geriatrician stay in communication with those other specialists.

Communication: Communication with the patient and the family as well as with multiple other care providers is part of the fundamental concept behind the Windermere Senior Health Center. In light of the commitment to the coordination of comprehensive care, communication with multiple specialists is a must and a norm for us. But in addition, we have a commitment to communication with the patient and the family about the patient's care. Most of this communication occurs through the primary care geriatrician. Our primary care physicians have a felt commitment to the patient and family to be available and to return phone calls and have a very good track record of doing so as demonstrated by the patients' satisfaction surveys. But inevitably with a physician practice where no one is full-time in the clinic and people are based in different locations and many also travel in the service of their academic and research work, there could be gaps in communication. These are often filled by the nurse clinical specialist who knows the patient personally and is able often to help fill prescriptions, answer questions or track down someone who can.

Another aspect of communication is allowing the time for it to occur. We have established an hour as the time for a new appointment and comprehensive evaluation, and a half hour as a time for return visits. This is significantly longer than in most clinical settings, and we have done so explicitly to make possible adequate communication with the patient and family. This communication concerns medical and functional history,

psychiatric and psychological issues, advance directives planning for end-of-life care and the necessity, in general, of fulfilling informed consent for the patient who needs to understand as much as possible about health care decisions.

Continuity: The conventional sense of continuity was at the core of the Windermere Senior Health Center concept from the beginning. In this sense, those patients who chose our center as their primary care site could be ensured of ongoing care from the same providers over a significant period of time. Thus, they would come to have personal knowledge of everyone working in the clinic as well as of their own physician, fostering a personal atmosphere and humanistic context for health care. One area where the provision of continuity of care immediately became a challenge was in the training of geriatric fellows. The fellows came for two to three years of advanced training in geriatric medicine after completing their residencies in internal medicine, osteopathic medicine and, in one case, surgery. Since the fellows were with us for an explicitly limited period of time, we felt it important to let the patients know that that was the case and that they may "lose their doctor" after two or three years. In order to provide a link to continuity, each fellow had a preceptor assigned for every clinic session and it was the job of that preceptor to also get to know the patient working in conjunction with the fellow as the primary physician. Thus, if and when the fellow were to depart, the patient would already have a doctor who knows him and his problems. The patient could decide to take another fellow as his/her physician or could stay with the faculty member and not have to develop a new relationship. Interestingly, many of the patients, perhaps because they are used to the teaching hospital system, were open and even enthusiastic about working with the fellows.

After the first years of establishing the clinic, there began to be more interest from medical students and residents in doing elective training at the Windermere. The construction of a one-month elective block was not difficult because there was not a threat to the continuity of the relationship of the patient. A senior student or resident may see a

new patient and do an evaluation, but that patient on that first visit would also be evaluated by the attending and would expect to continue a relationship with that attending physician. Now as we focus more on expanding ambulatory care continuity experiences for residents in the Department of Medicine, we are challenged to incorporate yet another layer of training into the close, personal atmosphere of the Windermere Center. We believe that this is a very important kind of training for the residents to receive, but we must do this without jeopardizing the quality of care advantages we have created and continuity care as a major part of this challenge.

Continuous Care: This refers to our ability and willingness to continue to see the patient regardless to the site of care. Our goal is as much as possible to fulfill this standard, but we are also aware that this is one of the areas where logistic limitations inevitably exist. Almost uniformly, we can provide continuous care with hospitalization. Even though in the full-time system of the university, the primary care physician is not always responsible for daily rounding on his/her own patients when they are admitted to the hospital, nonetheless, all of our physicians make a practice of seeing their patients when they are in the hospital. When the patients are on a non-medical service, these visits can be billed as consulting internist visits.

In addition, the nurse and social worker make rounds twice a week in the hospital to provide continuous care and communication with other health professionals involved in the nursing and social work aspects of the patients' hospital stay. Within the last two years, we have developed a home care service which is part of our training program in conjunction with the Chicago Visiting Nurses Association. In addition, we have relationships with the Community-based Hospice Program and the VNA Hospice Program. Thus, for patients who are receiving home care through any three of these systems, we are able to be in very close touch with the nurses involved, and when the patient's home is within a reasonable geographic radius of the Windermere Center and the University of Chicago most physicians

will make home visits when indicated. This is also a mandatory part of the fellowship training program to give the fellows experience in working with the home care nurse and doing home assessment. As the new residential center at Montgomery Place with its 200 residential units is filled, two blocks from the Windermere Center, it is likely that we will be making more home visits within that setting. Within the Windermere, itself, in fact, a number of our patients who live there can be visited in their apartments. We have not found this availability to be abused by patients. Quite the contrary, home visits are usually suggested by the health care professional rather than by the patient.

Finally, the continuousness of care extended to the nursing home is still a great challenge for us. There are not a number of high quality nursing homes within the geographic area and thus most of our patients who are referred to nursing homes go elsewhere in the city making it difficult if not impossible for us to follow them there. We are in the process of establishing relationships with two existing nursing homes within our geographic area in hopes that we can establish more availability of continuous care in this sense. In addition, there will be a 90-bed nursing home component to the Montgomery Place construction which because of its close proximity and commitment to quality will allow us to provide that kind of continuous care for those nursing home residents or those patients of ours who transfer into the Montgomery Place nursing home facility.

Convenience: While this factor may not be seen as profound or as critically important as the others discussed above, it is a significant reality contributing both to recruitment of patients and to the humanistic approach to patient care. In the modern competitive health care environment, convenience plays a very important role in attracting patients into a system. Our location, with an easy drive from a major scenic highway through the city, close to a major city landmark, the Museum of Science and Industry, and with free parking and easy access on the first floor could not be more convenient. This is in contrast to the main hospital where the clinics are spread throughout a complex maze of

buildings, where parking is difficult unless you pay a valet parking service, and where laboratory and x-ray often can take half a day of waiting in different places to get finished. It is a very common thing to see older people wandering lost in the hallways of our hospital looking for one or another subspecialty clinic. The smallness and convenience of the Windermere Center are among its most attractive features as reported in patient satisfaction surveys. This is so much the case that often when patients need a procedure or specialty visit that can't be provided at the Windermere setting, it takes some persuasion to convince them to go through the hassle of encountering the hospital system. We find to give serious thought in planning clinical services to patient convenience is not only wise marketing, it also exhibits concern for the well-being of one's patients and patient families who accompany patients to clinic visits. This message of personal care is one we feel is very important to be transmitted in all aspects of the design and conduct of our health care center. Patients can thus come to the Windermere to get blood tests done and have those blood or urine tests done and have those specimens sent over to the hospital laboratories if they are tests we cannot do ourselves. Similarly, x-ray and EKG tests can be done on site and read at the hospital. Some indication of how important this is from a preventive standpoint was the success of mobile mammography screening. When the mammography van was scheduled to be at the Windermere Center, it was immediately fully booked suggesting that many of our patients might be more likely to get mammography if we made it more convenient and personal for them.

B. Geriatric Care in a Hospital-based Care Center

1. Medical record integration
2. Specialists communication
3. Physical convenience

Geriatric Care in a Hospital-based Center: The fact that the Windermere is a hospital-based clinic, rather than a free-standing one, has many implications both financial and organizational. The financial aspects are dealt with in Chapter X.

One potential advantage from the point of view of information systems to a hospital-based ambulatory care center, like the Windermere, is the integration of medical records. The success of this effort has to date been only partial, but there is a definite progression towards improvement of the system.

The University of Chicago Hospitals and Clinics maintains its own hard copy medical records which are, as in many such large medical centers, very difficult to reliably retrieve, especially on short notice. Thus, to have the entire record of someone who has a long history or perhaps multiple recent hospitalizations before the physician sees the patient is not always possible. It takes considerable savvy on the part of the staff to be able to anticipate this need and to have the necessary contacts in the medical records department to effectively have the chart there. If it is not requested by the physician, these charts are not present at routine return visits. There is an attempt to have the medical chart there when a patient is newly being seen for the first time.

Current data that is generated, such as laboratory reports and x-ray readings, can be called up through the BHIS system that is in communication with the Windermere computers. Thus, we are able to retrieve laboratory information and x-ray data without having to go through telephone communication systems. Not all laboratories, however, relate to this system.

We also have a "shadow record" at the Windermere which is a medical chart in which we keep records of all of the laboratory tests we generate and all of the patient's visits to us and communications with other physicians. It would be ideal if this chart were available to physicians in the hospital, particularly when our patients are admitted acutely. Because the Windermere is a smaller system, it is easier to find these records and get them to the

physicians who need them, but unfortunately this cannot be done nights and weekends which is often when it is most relevant.

Communication with subspecialists and other specialists has gone very well from the Windermere, in spite of our distance from the main hospital. This happens in a number of ways. First, and foremost, are those specialists who practice part-time at the Windermere who we are able to have contact with, both at the level of physician-to-physician, and also nurse and social worker to physician. This is the most direct, informal and effective kind of communication; it also enhances the learning of medical students, residents and housestaff. Care planning conferences which involve more than one physician can often be best accomplished in this manner.

For specialists who are based at the medical center and do not practice at the Windermere, we use conventional methods both telephone communication and letters. We have encouraged our physicians to routinely dictate letters with the patient's history and the request for information when the patient is being referred to us especially for a procedure. Generally, the physician consultants will return this favor, and a record of the visit and the consultant's impressions, procedures done and their findings will then be easily located in the chart.